

ART INTEGRATED LEARNING



HANDBOOK for Teachers Teaching Classes VI-VIII

Art Integrated Learning

Handbook for Teachers Teaching Classes VI–VIII
(MIDDLE STAGE)



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

**13243 – Handbook for Teachers Teaching
Classes VI-VIII (Middle Stage)**

ISBN 978-93-5292-397-7

First Edition

February 2023 Phalgun 1944

PD 1T BS

**© National Council of Educational
Research and Training, 2023**

₹ 380.00

*Printed on 80 GSM paper with NCERT
watermark*

Published at the Publication Division
by the Secretary, National Council of
Educational Research and Training,
Sri Aurobindo Marg, New Delhi
110 016 and printed at Saraswati
Art Printers, E-25, Sector-4, Bawana
Industrial Area, Delhi -110 039

ALL RIGHTS RESERVED

- No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.
- This book is sold subject to the condition that it shall not, by way of trade, be lent, re-sold, hired out or otherwise disposed of without the publisher's consent, in any form of binding or cover other than that in which it is published.
- The correct price of this publication is the price printed on this page. Any revised price indicated by a rubber stamp or by a sticker or by any other means is incorrect and should be unacceptable.

**OFFICES OF THE PUBLICATION
DIVISION, NCERT**

NCERT Campus Sri Aurobindo Marg New Delhi 110 016	Phone : 011-26562708
108, 100 Feet Road Hosdakere Halli Extension Banashankari III Stage Bengaluru 560 085	Phone : 080-26725740
Navjivan Trust Building P.O. Navjivan Ahmedabad 380 014	Phone : 079-27541446
CWC Campus Opp. Dhankal Bus Stop Panighati Kolkata 700 114	Phone : 033-25530454
CWC Complex Maligaon Guwahati 781 021	Phone : 0361-2674869

Publication Team

Head, Publication Division	: <i>Anup Kumar Rajput</i>
Chief Production Officer	: <i>Arun Chitkara</i>
Chief Business Manager	: <i>Vipin Dewan</i>
Chief Editor (In charge)	: <i>Bijnan Sutar</i>
Production Assistant:	<i>Prakash Veer Singh</i>

Cover

Fatma Nasir, DEAA

FOREWORD

Art Integrated Learning is an innovative and constructivist learning approach which is based on learning ‘through the arts’ and ‘with the arts’. Through art integration, students do engage in different art experiences and construct personal meaning through their learning. Art experiences provide every learner with the needed opportunity and freedom to observe, imagine, explore, create, recreate and express. This resonates with the experiential learning approach where teachers use different art experiences, both in visual (drawing and painting, clay modelling, pottery, paper crafts, mask and puppet making, heritage crafts, etc.) and performing arts (music, dance, theatre, puppetry etc.) to teach and learn a variety of academic concepts and subjects in a more engaging and joyful way.

The National Education Policy 2020 emphasises that the curriculum and its pedagogy should provide experience which makes learning holistic, integrated, enjoyable and engaging. Realising the importance of art integration for providing experiential learning, NEP 2020 recommends the use of hands-on learning and arts integrated education as standard pedagogy within all subjects and with explorations of relations among different subjects. NEP 2020 states that “As, a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level”. In view of NEP 2020’s recommendations on art integrated education and NCERT’s experience on implementation of the Art Integrated Learning as pedagogy, this handbook for the teachers’ teaching at Middle Stage of school education has been developed.

The present handbook is a successive step to the AIL Guidelines for elementary stage published in the year 2019. The handbook has been designed to facilitate teachers of the Middle Stage on integration of arts in the teaching learning of their subjects. It provides conceptual clarity and key strategies of its effective implementation. The handbook encompasses an understanding of certain concepts of AIL in the form of FAQs and contains stage specific exemplars, which are designed keeping in view the competencies and learning outcomes of the subjects.

The handbook intends to broaden the reach and accessibility of AIL as a pedagogy to all teachers (subject teachers including art and health education teachers) of Middle Stage and in the successful implementation of AIL pedagogy to make learning joyful, experiential and holistic.

DINESH PRASAD SAKLANI

Director

New Delhi
December 2022

National Council of Educational
Research and Training

(iv)

ACKNOWLEDGEMENTS

The handbook on Art Integrated Learning (AIL) as pedagogy of experiential and joyful learning is the successive step in the journey of AIL after publication of the AIL-guidelines for Elementary level of school education and Training Packages for all stages of school education. AIL as a process has witnessed extensive efforts undertaken by our subject teachers, including art teachers and educational administrators of schools who have been actively practising this pedagogy for few years now. The handbook has been designed in a way which can facilitate teachers in effective implementation of the AIL pedagogy in their classroom and make teaching-learning of their subject/s joyful, experiential and facilitate in the holistic learning and development of learners of the middle stage of school education.

Development of this handbook wouldn't have been possible without the valuable inputs received from various individuals associated with this program in one way or the other. First of all I would like to thank Dinesh Prasad Saklani, *Director*, NCERT and Sridhar Srivastava, *Joint Director*, NCERT for their timely advice and support at every step of the development to complete the handbook successfully.

I would also like to acknowledge the guidance gained from the *National Educational Policy 2020* for its clear recommendations on implementation of 'Art Integrated Education as pedagogy for all levels of school education'. And due mention to the *National Curriculum Framework, 2005* for flagging issue of 'arts as an approach to learning'. A special mention is due to UNESCO, the Seoul Agenda: Goals for the Development of Arts Education for its recommendations cum guidelines for the promotion of arts in education, and to all the scholars whose researches have been referred to validate and strengthen the use of AIL pedagogy in this document.

I am indebted to those teachers, teacher educators and school principals who participated in the focus group discussions and in the development of AIL exemplars. The exemplars given in this handbook have been selected from a pool of activities designed by the AIL teachers and teacher educators. My sincere thanks to all the teachers and school principals who participated in the field testing process of the handbook and also for their constructive feedback for making handbook more user friendly.

Acknowledgements are also due to the contributors of photographs of the AIL classrooms/schools seen in this publication. These pictures are not just visual representations of art practices in the schools but an important part of the handbook content which helps reader comprehend the concept of AIL being explained.



My sincere thanks to Soumma Chandra, Editor (Contractual) and Surender Kumar (Incharge, DTP Cell, NCERT) Publication Division, for helping us in the final editing. I appreciate the hard work put in Anu Narang and Nishan Chakrabarty; *JPFs*, who were associated with the programme and have contributed at each stages of its development. My sincere thanks to Fatma Nasir, *Graphic Designer* and Sanjid Ahmad, *DTP Operator* for helping in the final layout and formatting of the handbook. Last but not the least, my humble gratitude to the children of the middle stage, for their priceless joy of learning through AIL, which kept me motivated throughout.

This handbook will help in extending the outreach of experiential learning as recommended by the NEP 2020 in general and will facilitate teachers of middle stage to implement AIL in teaching learning of their subjects specifically.

Pawan Sudhir
Professor and Head
DEAA
NCERT

LIST OF CONTRIBUTORS

CONCEPT OF ART INTEGRATED LEARNING AND CO-ORDINATOR

Pawan Sudhir, Professor and Head, DEAA, NCERT, New Delhi

EXEMPLARS ON ART INTEGRATED LEARNING

1. Akshay Kumar Dixit, GBSSS, G Block, Saket, New Delhi
2. Anupama Chand, Gyan Bharati School, Saket, New Delhi
3. Divya Kapoor, Pragyan School, Sector Gamma 1, Greater Noida, Uttar Pradesh
4. Gulshan Kaur and her team of teachers, Bhavan Vidyalaya, Panchkula, Haryana
5. Rajendra Kumar Khajuria, Jammu, Jammu & Kashmir
6. Suman, Government Model Senior Secondary School, Sec 19C, Chandigarh.
7. Sunitha Rao and her team of teachers, Delhi Public School, Nacharam, Hyderabad, Telangana
8. Vidhu P Nair, NSS LP School, Kappu, Muvattupuzha, Ernakulam, Kerala

REVIEW COMMITTEE OF THE HANDBOOK

1. Asha Singh, University of Delhi
2. Gayatri Menon, National Institute of Design, Ahmedabad, Gujarat
3. Gulshan Kaur, Bhavan Vidyalaya, Sector 15, Panchkula, Haryana
4. Lata Singh Munshi, Yaman Academy of Fine Arts, Bhopal, Madhya Pradesh
5. Mamoon Nomani, Faculty of Fine Arts, JMI, New Delhi
6. Monal Jayaram, Kaivalya Education Foundation & Piramal Foundation for Education Leadership, India
7. Nishan Chakrabarty, Asian Academy of Film and Television, Noida
8. Sharda Kumari, DIET, R. K. Puram, SCERT, New Delhi
9. Sangeeta Choudhary, DIET, Moti Bagh, SCERT, New Delhi
10. Sunitha Rao, Delhi Public School, Nacharam, Hyderabad, Telangana

MEMBERS OF FOCUS GROUP DISCUSSION

1. Argha Kamal Ganguly, Cambridge School, Noida, Uttar Pradesh
2. Arvinder Kaur, Gyan Bharati School, Saket, New Delhi
3. Deepika Malhotra, DIET, Rajinder Nagar, SCERT, New Delhi
4. Mithu Thimothy, DIET Kozhikode, Kerala
5. Mridula Kumari Sinha, Middle School, Sinduar, Daudnagar, Aurangabad, Bihar
6. Mritunjayam, Upgraded High School, Nawabganj, Sameli, Katihar, Bihar
7. Mukesh Bharti, Kendriya Vidyalaya, Dogra Lines, Meerut Cantt, Uttar Pradesh
8. Naimisha Parmar, Kalyanji nu Paru Kumar Primary School, Gandhinagar, Gujarat
9. Naresh Kumar, GSSS Pairi, Mandi, Himachal Pradesh
10. Nisha Mahajan, Mayur Vihar, New Delhi
11. Praggya M Singh, CBSE, New Delhi
12. Purnima Sampat, Art 4 All, Mumbai, Maharashtra
13. Rajendra Andhale, Maharashtra Board of Open Schooling, Pune, Maharashtra
14. Ravijot Sandhu, Navyug School, Laxmi Bai Nagar, New Delhi
15. Sanjay Gupta, Govt. High School, Kot Garhi, Akhnoor, Jammu & Kashmir
16. Sanjeev Kumar, DIET, Shimla, Himachal Pradesh
17. Shoaeb Abdullah, JMI, New Delhi
18. Sonu Garewal, Bhutta College of Education, Ludhiana, Punjab
19. Sulekha Bhargava, Satya Global Regd. Society, Delhi
20. Ujjwal Ankur, Satyam Fashion Institute, Noida, Uttar Pradesh
21. Vikram Kumar, *Lecturer*, DIET, Daryaganj, Delhi

PHOTOGRAPHS IN THE HANDBOOK

1. Akshay Kumar Dixit, Government Sarvodaya Co Education Vidyalaya, Dakshinpuri Extension, New Delhi
2. Anupama Chand, Gyan Bharati School, Saket, New Delhi
3. Dileep Karakulam, Govt. UPS Kalakkode, Kollam, Kerala
4. Gulshan Kaur, Bhavan Vidyalaya, Panchkula, Haryana
5. Kala Utsav-2021, DEAA, NCERT, New Delhi
6. Mohd Imam, Middle school, Nathuni Ahir Ka Dera, Dumraon, Buxar, Bihar
7. Nitali Hargude, Mitramandal Education Society, Sarita Vidyalaya & Sou Sunder Devi Rathi High School, Pune, Maharashtra
8. Phool Kumari, Govt. Pry School, Kolukhedi, Icchawar, Sehore, Madhya Pradesh
9. Pramod Aduthila, Kovval A. U. P. School, Cheruvathur, Kasaragod, Kerala
10. Rajkumar Dahiya, Government Middle School, Biwan, Nuh (Mewat), Haryana
11. Sajikumar VS, Jawahar Navodaya Vidyalaya, Chennithala P. O., Mavelikara, District Alappuzha, Kerala
12. Dr. Suman Kumar Singh, Middle School, Kaudiya Basanti, Siwan, Bihar
13. Sunil Hindurao Desai, Annasaheb Kalyani Vidyalaya Camp, Satara, Maharashtra
14. Dr. Sunitha Rao, Delhi Public School, Nacharam, Hyderabad, Telangana

NEP 2020 SAYS

Art-integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects. As a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture.

(NEP 2020)

CONTENTS

<i>Foreword</i>	<i>iii</i>
<i>About the Handbook</i>	<i>xiii</i>
CHAPTER 1 INTRODUCTION	1-14
1.1 AIL: The Pedagogy	1
1.2 Research in Related Areas	6
1.3 Art Integrated Curriculum and Its Objectives	11
1.3.1 Middle Stage (Classes VI-VIII)	12
CHAPTER 2 IMPLEMENTATION OF AIL PEDAGOGY	15-29
2.1 Strategies for Effective Implementation of AIL	15
2.1.1 Planning AIL Based Activities	16
2.1.2 Planning Time for AIL	17
2.1.3 Planning Resources	18
2.1.4 Classroom Management	19
2.1.5 Display of Art Work	20
2.1.6 Visits for Educational Exposure	21
2.1.7 Museum Corner in School/Class	22
2.1.8 Community Involvement	23
2.2 Assessment and Learning Outcomes	23
2.3 Suggested Format to Plan AIL Activity/Session	26
2.4 Role of Teacher in Implementation of AIL	27
CHAPTER 3 FREQUENTLY ASKED QUESTIONS	30-55
CHAPTER 4 EXEMPLARS	56-157
4.1 HINDI	
Activity 4.1.1 निबंध (साँस-साँस में बॉस, Class VI)	57
Activity 4.1.2 कविता (कठपुतली, Class VII)	64
Activity 4.1.3 व्यंग्य-लेख (बस की यात्रा, Class VIII)	73

4.2 ENGLISH

Activity 4.2.1 Poetry (Meadow Surprises, Class VII)	80
Activity 4.2.2 Poetry (Dad and the Cat and the Tree, Class VII)	83
Activity 4.2.3 Prose (The Best Christmas Present in the World, Class VIII)	86
Activity 4.2.4 Poetry (Geography Lesson, Class VIII)	89

4.3 SCIENCE

Activity 4.3.1 Plants— Forms and Functions (Class VI)	93
Activity 4.3.2 Transportation in Animals and Plants (Class VII)	97
Activity 4.3.3 Acids, Bases and Salts (Class VII)	102
Activity 4.3.4 Light (Class VIII)	107
Activity 4.3.5 Force and Pressure (Class VIII)	111

4.4 SOCIAL SCIENCE

Activity 4.4.1 Motions of the Earth (Class VI)	117
Activity 4.4.2 Diversity and Discrimination (Stereotype, Class VI)	121
Activity 4.4.3 Environment (Class VII)	125
Activity 4.4.4 Understanding Secularism (Class VIII)	129

4.5 MATHEMATICS

Activity 4.5.1 Types Of Angles (Class VI)	132
Activity 4.5.2 Understanding Elementary Shapes (Class VI)	136
Activity 4.5.3 Fractions (Class VI)	140
Activity 4.5.4 Perimeter (Class VI)	144
Activity 4.5.5 Rotational Symmetry (Class VII)	147
Activity 4.5.6 Mensuration (Class VII)	151
Activity 4.5.7 Fractions (Class VII)	154

SUGGESTED LINKS FOR ACTIVITIES

158

ABBREVIATIONS USED

159

REFERENCES

160

ABOUT THE HANDBOOK

This handbook has been developed after completing the rigorous process of capacity building of teachers teaching Classes VI-VIII (Middle Stage) on the 'Art Integrated Learning' model of experiential pedagogy across the country. During its journey since inception, AIL has been subjected to various researches on the process of its implementation and effectivity. It is a model designed to promote experiential learning where every learner is provided with opportunity to undergo an art experience (in visual or performing arts) to understand and learn different concepts/subjects.

AIL after completing the journey of successful implementation in the seventeen states of different regions was incorporated as pedagogy for competency based learning in the Block-level research project of NCERT in the five regions of the country in collaboration with Regional Institute of Education (RIE) Ajmer (Rajasthan), Bhopal (Madhya Pradesh), Bhubaneswar (Odisha), NERIE Shillong (Meghalaya) and Mysuru (Karnataka).

The AIL has been included as an important part of NISHTHA (National Initiative for School Heads and Teachers Holistic Advancement), an initiative of Department of School Education and Literacy, MoE, to prepare teachers of different stage (including middle stage) for the experiential and competency based teaching-learning. The Department of Education in Arts and Aesthetics, NCERT, developed the capacity building training modules and the guidelines for effective implementation of the AIL in December, 2019. The digital copy as well as hard copy of the AIL guidelines have been circulated for the use of different stakeholders across the country and received active feedback on its positive effects on improving the learning process.

Following the process of capacity building of all teachers on AIL, there was a growing need for the teachers' handbook that could facilitate teachers in planning and organising art integrated learning in their classroom. The National Educational Policy 2020, also recommends 'Art Integrated Education' as pedagogy, strongly. It suggests that, "Art-integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects. As a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms, but also for imbibing the Indian ethos through integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture." With this handbook, we aim to increase the outreach and accessibility of AIL as pedagogy to all teachers (subject teachers including art teachers and health education teachers) of the middle stage in the country. There are two separate handbooks to address the stage specific concerns of Foundational and Preparatory Stage (Classes I-V) and Middle stages (Classes VI-VIII). Both handbooks contain stage

specific exemplars, which are designed keeping competencies and learning outcomes of the subjects in view. It will help the teachers gain access to the multiple examples so that they can acquire skills of AIL. The outlook of the handbook has been kept simple and suggestive in nature. The teachers are free to experiment with their own ideas and design strategies for classroom implementation.

This handbook can facilitate teachers in the following:

- Introduce art integrated learning and its application at the middle stage of school education. The introduction also provides research background on learning through the arts and its impact. To provide conceptual clarity, the stage wise objectives of Art Integrated Learning are also stated in the document.
- Handbook also covers the Key Points of effective implementation of AIL in detail. Under this heading, the focus is on resource generation and management, time allocation and classroom management, community involvement, methods of display and assessment techniques that provide the framework of planning AIL activities. Each segment is provided with specific follow up points that can benefit teachers to further enhance their skills of applying this pedagogy.
- The suggested format of AIL based activities which can help them as a ready reckoner for preparing themselves for AIL is part of the handbook. Outlining inclusiveness and gender sensitivity, the activities here are designed keeping in mind the diversity of a classroom. The essence of participatory approach i.e. teacher and students alike take equal part in the experiential learning process. At every step of the activities conducted, equal participation across the classroom ensures the effective implementation of this pedagogy.
- FAQs given in the handbook provide a crisp understanding of certain concepts of AIL that may require meticulous soliciting. The role of performing and visual arts is extensively dealt with so that the target audience of this book can acclimatise themselves with the basics of Art Integrated Learning. Important elements of AIL session like ice breakers, brainstorming, discussion, team work, presentation, are dealt with. In addition to a conceptual document, this handbook will help in providing an important insights into the functions and parameters those are prerequisite for a teacher to implement Art Integrated Learning.
- A good number of subject wise exemplars which can handhold and enable teachers to practice AIL in their classroom form a major part of the handbook. The activities also contain suggestions for online transaction keeping emerging thrust for online education in mind.
- QR codes of online educational resource and list of suggested readings provided in this handbook makes the learning experience more robust.



1

INTRODUCTION

“We rob the child of his earth to teach him geography, of language to teach him grammar. His hunger is for the Epic, but he is supplied with chronicles of facts and dates.”

Rabindranath Tagore

1.1 AIL: THE PEDAGOGY

Art Integrated Learning (AIL) is a pedagogy based on learning ‘through the arts’ and ‘with the arts’. The term ‘**Art Integration**’ denotes combining art with teaching-learning of different curricular areas. Subjects, such



Students participating in outdoor activities

as, Languages, Social Studies, Sciences and Mathematics can be easily linked with art experiences of a learner and clarify the concepts. Art experiences are natural to all learners and can actively engage them, leading to a better understanding and construction of knowledge about different concepts. '**Integration of arts for learning**' implies that arts, that is, both visual arts and performing arts, become an integral part of the teaching and learning process. Hence, Art Integrated Learning is a process where art becomes the medium of teaching-learning, through which the learner explores creatively while building connections between different concepts.

Art Integrated Learning provides learning experience that engages the learner's mind, heart and body ***making learning 'holistic' 'joyful' and 'experiential'***. While engaging with arts, the learner goes through different stages such as; observing, thinking, imagining, exploring, experimenting, deducing, creating, re-creating and, finally, expressing. These stages need definite involvement of all three domains of learning —the Cognitive, Psycho-motor and Affective. Hence, it is experiential in nature and leads to the holistic development of every learner where they are engaged with arts and encouraged to experience art as a process without less worries about the product. This process of art experience helps them overcome the subject fear and enhances joy of doing and learning. Arts also address the diverse learning needs of learners and provide them with alternative means of expression where they can explore a topic more deeply without much pressures of performance, which results in joyful learning. The National Education Policy (NEP) 2020 recommends that "*pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible and of course, enjoyable. The curriculum must include basic arts, crafts, humanities, games,*

sports and fitness, languages, literature, culture and values, in addition to science and mathematics, to develop all aspects and capabilities of learners" (p.3). In view of NEP 2020's this recommendation, the pedagogy of Art Integrated Learning is a way forward to implement this aspect of the national policy.

Art Integrated Learning is a cross-curricular, interdisciplinary and multidisciplinary pedagogical approach, where learners get adequate space and scope for exploring their cultural traditions and cultivating free expression. NEP 2020 states the virtues of Education through Arts like this; "Art-

In ALL, the focus is more on exploration of traditional and folk arts, as our learners are more familiar with their local art and culture.

integration is a cross-curricular pedagogical approach that utilizes various aspects and forms of art and culture as the basis for learning of concepts across subjects” (p.12). AIL looks at teaching as facilitation and learning as experiential. It promotes student—centred education, where the learner becomes the focus of the teaching-learning process. NEP 2020 states that “*it is becoming increasingly critical that children not only learn, but more importantly learn how to learn. Education thus, must move towards less content, and more towards learning about how to think critically and solve problems*” (p.3). In this context, the AIL pedagogy provides open space for critical thinking and help students/learners to identify their likes and dislikes. NEP 2020 further emphasizes that “*education must build character and enable learners to be ethical, rational, compassionate, and caring*” (p.3). Hence, the objective of AIL pedagogy is not only to facilitate learners achieve desired learning outcomes but also to provide them space for their humane and emotional development.

Renowned philosophers and psychologists worldwide have recognized experience as the nucleus for learning and arts as a natural tool to make the learning organic. The father of the nation, Mahatma Gandhi believed in an education that ought to develop a person’s mind and soul through lived experience and practical knowledge. For him, Literacy – or simply learning to read and write by itself did not count as education and people had to work with their hands, learn a craft, and know how different things operated. Thus, Gandhiji wanted to teach children handicraft. He conceptualised a curriculum which was activity centred and aimed to prepare the child for practical work, conduct experiments and do research so that child is able to develop physically, mentally and spiritually and become a useful member of society. Gandhiji’s scheme of education also envisaged a close integration between the school and community so as to make child more social minded and co-operative. He recognized art and artists according to his own philosophy of life. He did not believe in art for art’s sake. For him, art is a harmony between the soul and the outer appearance of a human being.

Parallel to Gandhiji’s way of education, the celebrated Indian Philosopher Sri Aurobindo Ghosh also recommended education to be student-centred. His philosophy of education aimed at modifying the school curricula, maximising the learning modalities, helping students to achieve their potentiality at their own pace and level and devote their time to discover themselves. Sri Aurobindo advocated for a curriculum which should be interesting and motivates the student to learn, activates their creative potentials and promotes their mental and spiritual development. Like Western philosophers Rousseau, Pestalozzi and Froebel, Sri Aurobindo also believed that the child’s senses are the gateways of their knowledge and should be trained in a proper manner to help them grasp the soul of education. He considered student participation in music, fine art, dance, drama and craft as vital education and learning by doing as the guiding principle of this education. He argued that the child should be educated from the known to the unknown and from what he is to what he shall

be. All new knowledge must be built around the child's daily experiences directly connected with his environment-local as well as national. He also forwarded the alternative approach to education, where the teacher is the guide, who will show the students how to perfect their instruments of knowledge and instead of imparting knowledge, shows how to acquire knowledge by themselves.

One of the pioneers of Modern Indian Art, Nandalal Bose's ideas on art and art education were influenced to a large extent by the ideas of his distinguished contemporary Gandhiji. Nandalal Bose posited that learning to create art should be given the same rank and importance as learning to read and write if the goal of our education is entire growth. In his seminal text, '*The Place of Art in Education*' he stressed upon the attachment of students with nature. He says that student should be in contact with the nature and its different elements like flower, fruits, trees etc. This will help them in enriching their minds and also develop a sense of aesthetic knowledge. He argued that aesthetic knowledge develops when the students get properly acquainted with nature. He believed that a variety of expressions could be achieved through art as it contributes in the development of human expression. Different branches of art like painting, dance, music and theatre can be great medium for the amalgamating language, literature and innate expression. In terms of classroom learning, he espoused that students should be introduced to great paintings, sculptures and other artworks. They should be displayed in the classroom for the students to develop an intimate connection with them. He also suggested that they should watch films that show artworks from across the world. Children should visit museum and galleries accompanied by art teachers. These visits and visual interaction will strengthen the student's ability to discern and also enhance their aesthetic sense. Another art educator, Devi Prasad worked on creating an environment wherein a child can express freely without any constraint. In his work '*Art: The Basis of Education (1998)*', he wrote "*real art should find its expression in our daily life. It should not have a "superficial" existence*".



Students engaged in making kites as part of AIL session

In the west as well, it has been realised by great educationists, philosophers and psychologists that experience is at the core of learning. A renowned philosopher and educational reformer John Dewey, in his classic book '*Experience and Education*' (1938), justified education based on learning by doing. He advocated a curriculum which is primarily hands on and experiential endorsing a holistic approach to learning. He promoted an active approach to learning, encouraging children to explore outside, to use nature as the laboratory and tool kit, and to emphasise physical movement as a way to stimulate interest and thus laying importance on the need for direct experience in education system. He noted that the quality of experience which child was receiving was of prime importance. For learning to happen, an experience must include two key dimensions. The first is continuity, where the learner needs to be able to connect aspects of the new experience to what they already know, in ways that modify this knowledge. The second is interaction where the learner needs to be actively interacting with their environment for testing out lessons developed in that environment; making both these aspects of experience as imperative for Art Integrated Learning.

Eminent cognitive psychologists Jean Piaget and Lev Vygotsky also advocated discovery learning, the idea similar to humanistic psychologist Carl Rogers (1969) that children learn best through doing and actively exploring. Piaget (1970) believed that all learning calls for organisation of materials or of behaviour on the part of the learner, and the development of mental structures is an inevitable result of that experience. Vygotsky believed that given proper help and assistance, children could perform a problem that Piaget would consider to be out of the child's mental capabilities. The zone of proximal development is the area at which a child can perform a challenging task, if given appropriate help. Vygotsky (1971) believed that aesthetic emotion is the key to humanity's future and commented that art enables us to experience things we wouldn't otherwise experience. They all argued that problem-solving, inquiry based learning and simulation are all congruent with experiential learning. Based on their theories, many concepts such as student-centred learning, formative assessment, active learning, discovery learning, and peer interaction have been influenced in curriculum and policy documents worldwide. In the present times, born from the philosophies of international philosophers, scholars, and art educators, InSEA (The International Society for Education through Art) is an organisation that advocates for art education as a means of "*fostering values and disciplines essential for full intellectual, emotional and social development of human beings*". It is based on the philosophy that all students are entitled to an art education that deeply connects them to their world and to their cultural history.

Art Integrated learning (AIL) as pedagogy is developed by constant efforts of the Department of Education in Arts and Aesthetics (DEAA), NCERT, by keeping the suggestions from National Curriculum Framework (NCF) 2005 as a baseline and is rooted in the concepts of constructivist theory of learning, where each learner will go through an age-appropriate

experiential process of learning using art as a medium. The Seoul Agenda: Goals for development of Art Education (2010), an output of UNESCO's second world conference on Art Education, held in Seoul, also highlighted the role of art in enhancing the creative, cognitive, aesthetic and social development of children, and the need of transformation in education system using art education to introduce innovative pedagogies. It has proved to be a key document in the development of pedagogy around school curriculum and arts. Art Integrated Learning is well rooted in NEP 2020 as it recommends pedagogy "*to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis-based learning. Teaching and learning will be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more fun, creative, collaborative, and exploratory activities for students for deeper and more experiential learning*" (p.12).

Art Integrated Learning as joyful and experiential pedagogy has evolved from the above highlighted developments in the field of art education and experiential learning and in due course of time has carved its own space as an effective and holistic pedagogy.

1.2 RESEARCH IN RELATED AREAS

The importance and effects of Art Integrated Learning is growing in terms of study and research. AIL as already stated, effectively enhances all the three domains of learning of the student/learner i.e. cognitive, socio-emotional, and psychomotor. Research has proved the efficacy of integrating of arts for the development of these domains. The glimpses of few are being shared below:

Many researches have showed the impact of art integration on to the achievable capabilities of students'/learners' cognitive skills. A study titled 'The arts and cognitive development' concluded that an education that uses various art forms and art materials gives the students a space to exercise the skills of imagery and deepen their conceptual understandings (Ives and Pond, 1980). In a qualitative pilot study, 'Art integration and cognitive development', the focus was to examine and describe how the arts are integrated with curriculum concepts to promote cognitive development. Curriculum concepts were taught through experiential methods and hands-on projects. The study concluded that, art – based instruction produces better cognitive and intellectual abilities. The study further explains that, through art integration, use of context and culture can be incorporated across instructional units to promote cognitive variables related to intellectual development (Baker, 2013). Another research study titled 'Learning to think critically: A visual art experiment', suggested that students who had exposure to visual arts had significantly stronger critical thinking skills when analysing a painting and the effect was found larger for disadvantaged groups of students (Bowen, Greene & Kisida, 2014).

In an experimental study which explored the contribution of art experiences and cognitive development among elementary school children

concluded, that the experimental group students who received creative curriculum based on arts, showed better willingness to invest structure and meaning into learning experiences and showed a change toward a creative production than the control group students (Louis, Pickens and Welkowitz, 1984). In another study titled 'Teaching cognitive skill through dance: Evidence for near but not far transfer', by Keinanen, Hetland and Winner (2000), a metanalysis of collected research studies concluded a positive correlation between dance experiences and non-verbal reasoning skills. In the Indian context, Benegal (2010) in his work stated that arts lead to dramatic changes in the brain such as strengthening the 'attention network'. Brain areas involved in music are also active in processing language, auditory perception, attention, memory and motor control suggesting that art education is a much-needed way of promoting balanced mental development in today's knowledge-based world.

There are empirical evidences showing the impact of art integration on the development of socio-emotional skills and abilities of the students/learners. An art-based program conducted over a period of eight weeks on the social and emotional development among children of age group 11-12, concluded that the art-based methods had a positive influence over students as they became more confident in expressing themselves by the end of the study (Mynaříková, 2012). Another study conducted by Mason, Steedly and Thormann (2008), the authors observed that arts-integrated instruction fosters opportunities for students to explore their voice, communicate and share ideas, express themselves, make decisions, and create new methods for solving problems. Arts integrated learning enabled all students/learners to feel comfortable and motivated to participate.

In the Indian context, a pilot project that incorporated art integration for socio-emotional development in teaching-learning process was found to be immensely successful. Raghuvanshi and Shah (2021) studied the impact of the arts for all by conducting an eight-week long pilot project that disseminated socio-emotional learning focused art activities to over 1.4 Lacs children daily. They observed a significant increase in students'/learners' creative confidence from the beginning of the program as compared to the end. By the end of the evaluation process, they found that the addition of art into education has a profound effect on children's learning because art never tells them they are wrong. Instead, it provides them with a space where their ideas, feelings and identity are accepted without iteration. Another study conducted by Farokhi and Hashemi (2012) to assess the impact of art integration in language learning skills concluded that the arts contribute to social and emotional growth. Students who participated regularly in the arts developed self-confidence. Arts provide them with opportunities to develop courage; enhance multicultural awareness; take pride in heritage; recognise their role and responsibility and contribute globally. They further explained that students through arts develop the capacity to integrate many aspects of the self and translate that integrated self into action.



Art- A Brain Developer (This video is a study shared on brain based learning and role of arts in mental development.)

Furthermore, because of the influential nature of artistic experiences, 'Art' has also been used as a strong therapeutic tool. A study on 7th grade students who were diagnosed with Learning Disability (LD), emotional/behaviour disability and Attention Deficit Hyperactive Disorder (ADHD), showed how the integration of 'dance movement therapy' with Mathematics, not only improved the Mathematical learning aspect but also developed social emotional dimensions such as motivation, engagement, attention and self-regulation (Anderson, 2015). In a case study conducted by Shouma (2020) in one of the schools in the UAE to examine the impact of Art Integration on the academic and social development of 4 elementary students with different disabilities indicated that Art Integration has indeed a positive impact on the academic and social development of students with disabilities; i.e. on their confidence, self-expression, and excitement to show their knowledge of basic arts skills. Moreover, the results of the teachers' survey showed an incredible level of teachers' awareness and willingness to increase the integration of art in their classrooms. The caregivers' survey also showed how parents strongly encourage Art Integration as they can see its impact on their children's abilities and their attitude in social environments inside the house and inside the school. The study concluded that educators consider Arts Integration as a key factor in their classroom as it provides information to a wide range of learners, multiple means for all students to learn and express their understanding. It engages students in participatory, collaborative and developmental learning experiences and hence educator needs to be qualified and have adequate knowledge to integrate arts with subject learning.

Apart from strengthening cognitive and socio emotional domains, integration of arts in learning plays an equally important role in enhancing physical development of the students/learners. A study conducted at Baskent University, concluded that there is significant effect of visual art lessons in the achievement of cognitive, affective, and psychomotor skills. The study focused on visual arts classes from standard 1st to 8th, and pointed out that psychomotor skills are gained rapidly through the process of 'learning by doing', (Tataroglu, 2012). Based on Howard Gardner's theory of multiple intelligence, a study conducted by University of Illinois, to analyse the influence of dance on Bodily-kinaesthetic Intelligence concluded that a development of such an intelligence requires a significant engagement of an individual in finding their self, through participating in motion-based activities; and only then, should there be an exposure of accessing such potentials for everyone in a society (Blumenfeld-Jones, 2009).

Over and above the development of all domains of learning, numerous researches have pointed to the effectiveness of art integration in enhancing learning of all school subjects and as an essential tool for the teachers in the classroom. Baird (2015) concluded in her study that, students who were taught through art integration tend to be more actively involved in the process of learning and tend to score higher in Mathematics on various levels of assessment. The study also provided the recommendations for an effective art integration for teachers, such as; importance of using students'

expertise while integrating arts, utilising the skills and resources from colleagues from school community, and considering art integration as a way to teach holistically and use students' multiple intelligences. Further, an action research explored integrating students' choice and art activities in social studies classroom for 6th standard students, the findings showed increase in grades in response to the implementation of art activities. The teacher implemented activities which explored visual intelligence through creating maps, kinaesthetic intelligence through acting, verbal intelligences through story telling etc. The study suggested that giving students choice to decide about activities had great impact on students' motivation and participation (Kosky, 2008). Another study on integration of arts and social studies by Taylor, Monck and Ayoub (2014) titled 'Arts Integration in the Social Studies: Research and Perspectives from the Field' observed that educators were teaching with a variety of art forms with some frequency in instruction, and they viewed the study of art as having positive effects on students' motivation and learning. Images appealed to students, and they offered clarity. Several social studies educators observed that many of their students responded particularly well to artistic representations. The educators made references to Howard Gardner's Theory of Multiple Intelligences, expressing a desire to reach students with different aptitudes. Teachers were of the opinion that lessons may be made more engaging and memorable through the use of art. As noted, 80.4% of the social studies teachers agreed or strongly agreed with the statement that arts integration increases the students' interest in the content area. When asked to describe common reactions by their students to images of art and artefacts in class, the educators wrote that their students become "interested," "excited," and "curious." The teachers related that their students enjoy viewing works of art. The study concluded that studying images of art improves students' comprehension of concepts, enhances their understanding of the past, and stimulates dialogue.

Nobori (2012) was also amazed at how the arts unlock pathways to learning. The process of integrating arts may seem like conducting art projects in classroom settings, but becomes a teaching strategy that seamlessly merges art experiences with core curricula to build connections in engaging learning contexts. For instance, students choreographed a dance using loco motor and non-loco motor movements to demonstrate their understanding of the solar system. In a research study conducted by Walker, Tabone and Weltsek (2011), 'When Achievement Data Meet Drama and Arts Integration', the authors found that 78% of eighth graders whose language arts instruction as seventh graders included the use of theatre strategies were proficient in language arts on the eighth-grade assessment, compared to 69% of students who were instructed using traditional pedagogy. In the content area of mathematics, 49% of students who were part of the arts integration project as seventh graders passed the state assessment, while the percentage of students who were not in the project who passed the math assessment was only 35%. Although not statistically significant, the 14% difference in passing rate was substantial. The study

concluded that systematic infusion of drama strategies enables students to orally, physically, and visually generate ideas for writing; develop the voice of a particular piece; clarify the intended audience; and create a “rehearsal” for the intended genre of writing. Students in a role have a clearer picture of identity or voice as a writer, as well as a sense of audience, making it easier to write. In a study by DeMoss and Morris (2002), the authors tried to understand the students’ perspectives on support of art integration in academic learning. The study concluded that art integrated instructions:

- Created more independent and intrinsically motivated investment in learning,
- Fostered learning for understanding as opposed to recall of facts for tests,
- Transformed students’ characterizations of ‘learning barriers’ into ‘challenges’ to be solved and;
- Inspired students to pursue further learning opportunities outside of class.

This study included students from variety of socio-economic backgrounds, different age groups and variant achievement levels. Another study titled ‘Learning in and through arts: Curriculum implication’ concluded that, teachers from high-arts schools (more art exposure) were more open, flexible and knowledgeable and engaged in their own on-going learning than were teachers in low-arts schools (less art exposure). The study also pointed out the need to make arts the curriculum partners with other subject disciplines in ways that will allow them to contribute richness and complexity to the learning process (Burton, Horowitz, and Abeles, 1999). In the Indian context, Narang (2018) focused her attention on school learners to ascertain the significance of experience based learning in arena of education through drama experience. The author explored student’s reflections through drama experience for meaningful understanding of ‘Gender’ as social issue. The findings reflected the impact of drama experience to the extent of students challenging stereotyped attributes, stereotyped careers, traditional distribution of household chores, stereotypical roles and parent’s decisions for gender parity between girls and boys.

Moreover, researches have also studied the impact of Integration of arts for learning in young adolescent learners. Anderson et al. (2019) in their research ‘Mistakes Can be Beautiful: Creative Engagement in Arts Integration for Early Adolescent Learners’ studied a sample of 86 students of grade 6-7 using a grounded theory approach to explore how creative engagement takes shape for the early adolescent learner. The study found that students valued opportunities in arts integration for (a) choice, (b) the expression of their unique interpretations, (c) taking risks and making mistakes, (d) recognising and applying their Studio Habits of Mind, and (e) enhancement of motivation and engagement in learning. The need for competency, belonging, and autonomy were important conditions of the

learning environment and the need for meaning making was paramount in the process of creative engagement. The study; ‘Using the visual and performing arts to complement young adolescents “close reading” of texts, (McDermott, Falk-Ross and Medow, 2017), explored the role of visual and performing arts in academic experiences. The study concluded that visual and performing arts could be particularly effective for those students who are often uninvolved and unfocused when asked to closely read classroom texts. The study urges that the middle school teachers should not limit their classroom interaction to isolated test preparation and practice and rather explore visual and performing arts.

1.3 ART INTEGRATED CURRICULUM AND ITS OBJECTIVES

“The first principle of true teaching is that nothing can be taught.”

Aurobindo Ghosh

Arts in India are living examples of our country’s secular fabric and cultural diversity. They include a variety of folk and classical forms of music, dance, theatre, puppetry, clay work, visual arts, and crafts from every region of India, each being unique in its own form. Initiating a learning process through various art forms and art experiences becomes imperative in the formative years of a child. Arts at the centre of the curriculum help in simplifying and clarifying various concepts naturally. All subjects and their abstract concepts can be linked, concretised and learnt effectively through the arts. Art Integrated curriculum provides means to bridge content between different subjects seamlessly in a logical and learner-centric manner. Learning by this method becomes joyful and experiential, hence holistic.

In the 21st century, art integrated curriculum is vital for the holistic development of a student/learner as it is flexible in approach, and it makes learner think and create beyond the syllabus and textbooks. The National Education Policy 2020 consolidates this fact by stating that, *“the key overall thrust of curriculum and pedagogy reform across all stages will be to move the education system towards real understanding and towards learning how to learn-and away from the culture of rote learning as is largely present today. The aim of education will not only be cognitive*

*Students involved
in creative art
practices*



development, but also building character and creating holistic and well-rounded individuals equipped with the key 21st century skills” (p.12). The position paper on Music, Arts, Dance and Theatre, of NCF-2005, also outlines the need of such art integrated curriculum in education. It advocated for the integration of arts so that other subjects can be understood through art activities such as music, dance, drama etc. The position paper further recommended that children should be involved in various creative activities which can be used as a method for teaching different concepts in subjects.

The structure of school education has been changed by NEP 2020 fundamentally. The curricular framework for school education will be guided by a 5+3+3+4 design, consisting of the Foundational Stage (in two parts, that is, 3 years of *Anganwadi/pre-school*+2 years in primary school in Grades 1-2; both together covering ages 3-8), Preparatory Stage (Grades 3-5, covering ages 8-11), Middle Stage (Grades 6-8, covering ages 11-14), and Secondary Stage (Grades 9-12 in two phases, i.e., 9 and 10 in the first and 11 and 12 in the second, covering ages 14-18). The NEP 2020 recommends that, “*the Middle Stage will comprise three years of education, building on the pedagogical and curricular style of the Preparatory Stage, but with the introduction of subject teachers for learning and discussion of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities*”. It further adds that “*Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasised despite the introduction of more specialised subjects and subject teachers*” (p.11). Keeping all the above recommendations in mind, an art integrated curriculum becomes increasingly important for the holistic development of students/learners as prescribed by NEP 2020. Drawing from such developments, some of the objectives of art integration in school curriculum at middle stage are highlighted below to give a structural framework for pedagogical strategies.

1.3.1 MIDDLE STAGE (CLASSES VI-VIII)

At the middle stage, the purpose of the art integrated curriculum is aimed at developing learner’s ability of exploration of the scholastic concepts via the process of arts. The emphasis is to promote in the learners, socio-emotional development; enhancement of life skills; creative exploration; sensitivity to various art forms and cultural heritage; aesthetic appreciation, and integrating knowledge of art with other subjects. As this age group is the beginning of adolescence, their growing up concerns are also addressed naturally and effectively through integration of arts. As put forward by NEP 2020, education at all levels must integrate and include “***ethics and human and constitutional values*** like *empathy, respect for others, cleanliness, courtesy, democratic spirit, spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice*” and “***life skills*** such as *communication, cooperation, teamwork, and resilience*” (p.5).

OBJECTIVES OF AIL AT MIDDLE STAGE ARE TO

- Explore multiple perspectives of concepts.
- Learn about the remarkable unity of most of the major Indian languages under the '*Ek Bharat Shreshtha Bharat*'. NEP 2020 recommends that "*The teaching of all languages will be enhanced through innovative and experiential methods... by weaving in the cultural aspects of the languages - such as films, theatre, storytelling, poetry, and music - and by drawing connections with various relevant subjects and with real-life experiences. Thus, the teaching of languages will also be based on experiential-learning pedagogy*" (p.15).
- Construct knowledge of themes, subjects and concepts and be aware of the inter-disciplinary connections.
- Experience process of engagement and expression that infuses joy in learning.
- Promote teamwork and mutual appreciation.
- Enhance communication skills, language skills and problem solving skills.
- Build sensitivity towards environmental and societal concerns.
- Learn inclusive practices of respect, care, empathy and compassion.
- Develop an orientation towards aesthetic appreciation.
- Follow a heterogeneous approach in the learning process to ensure no discrimination on the lines of social prejudice and gender stereotypes.
- Make them familiar with various local and cultural specific art forms based on the recommendation of NEP 2020, "*The arts form a major medium for imparting culture. The arts— besides strengthening cultural identity, awareness, and uplifting societies— are well known to enhance cognitive and creative abilities in individuals and increase individual happiness*" (p. 53).
- Understand and take enthusiastic participation in collaborative work and peer groups.
- Foster socio-emotional and cognitive competencies.
- Resolve social conflict and develop tolerance and universal acceptance.
- Develop emotional maturity.
- Exhibit values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.



Student's active engagement reflect their competencies

This chapter deals with how NEP 2020 looks at the possibilities of developing a holistic educational experience for students where they understand

their interests and learn through experiences. It also describes how and why Art Integrated Learning acts as a natural ingredient for Experiential Learning. Several education practitioners' ideas and researches regarding the efficacy of integrating arts for development of the learning domains, for learning of the subjects, as an indispensable tool for teachers and for handling adolescent learners' specific concerns have also been highlighted. The upcoming chapters in the handbook discuss how AIL pedagogy helps in resolving the specific issues of the adolescent learners at the middle stage of school education. For clarity on AIL pedagogy, a comprehensive FAQ section has been added. The implementation and application of AIL pedagogy in the classrooms and hand-holding of the teachers has been focused and provided through subject wise exemplars.



2

IMPLEMENTATION OF AIL PEDAGOGY

2.1 STRATEGIES FOR EFFECTIVE IMPLEMENTATION OF AIL

Consolidating the NEP 2020's recommendation that "in all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects" (p. 12), Art Integrated Learning provides a unique opportunity to learners for exploring various themes and concepts through visual and performing arts. In Art Integrated

Learning, focus is on the art experience, which is flexible in nature and provides space for the experimentation and exploration to each learner. This pedagogy facilitates learners to express their feelings, emotions and thoughts freely. To make effective use of the AIL approach, one needs to learn and apply the teaching-learning design and skills as described in the AIL guidelines and in this document. The conceptual framework of AIL familiarises teachers/teacher educators/facilitators with the basic concept of AIL and a suggestive format which is flexible and can easily be modified and improved upon depending on the need of the learner and learning. It is a step-by-step process, where each stage is equally important for holistic learning that AIL strives for. Steps suggested for the effective implementation of the AIL at middle stage are mentioned below.

2.1.1 PLANNING AIL BASED ACTIVITIES



Students and teacher involved in group discussions

Planning of AIL sessions/activities beforehand will help in enhancing quality of the classroom transactions of the pedagogy. This will help teachers/facilitators organise learning resources, art material, share responsibilities with groups of students and create readiness for the planned learning. Identifying the learning outcomes to be achieved, the competencies to be mastered and possible tools and techniques to assess the learning, are some of the important parts of the planning of AIL based activities. Pre-planning of AIL activities can help

better in saving on learning time and achieving goals of holistic learning. Since AIL is fully experiential in nature, it helps in making assessment ‘as learning’, ‘for learning’ and ‘of learning’ simpler and easier. In tune with the recommendation of NEP 2020 that, “teaching and learning will be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more fun, creative, collaborative, and exploratory activities for students for deeper and more experiential learning” (p. 12), activities of AIL are specifically designed to follow the NEP 2020 recommendations on experiential learning.

Art Integrated Learning in its natural process does suit to the multi grade teaching-learning situation very well. Activities designed or conducted on a specific theme or subject get integrated across different grades easily. The teacher/facilitator can plan linking of the art experience to the learning outcomes of different grades/classes. It is suggested that teachers/facilitators discuss the AIL concepts with each other in advance for better understanding, exploration and utilisation of the art

You can add your own
folklore in classroom
while planning AIL
activities

experience. In essence, the planning of art activities can be done in such a way that teachers/facilitators can use one art experience to teach and learn multiple subjects and topics. While planning activities the learner profile of the middle stage students (age group 11-14) should be kept in view. At this stage, learners look more for self-gratification, they may get involved in bullying others or get irritated easily; hence it's necessary to develop tolerance and empathy in the learners of this age group by planning activities which cater to their intra and interpersonal skills, emotional balance, respect for multiple perspective, compassion and co-existence.

KEY POINTS

- Activities planned and conducted should have direct link with the learning outcomes of the specific themes/concepts/subjects.
- Create an environment of inclusive learning and of non-discrimination.
- Inter-disciplinary approach in a way that one experience can be integrated across different themes/concepts/subjects.
- Club classes/grades and plan for team teaching.
- Explore online mode of conducting AIL activities, keeping in mind the guidelines for digital education namely PRAGYATA released by Ministry of Education in collaboration with NCERT.
- Time allotment for AIL activities: while designing activities explore club periods keeping multidisciplinary benefits in view, where one art experience can facilitate learning of different subjects and concepts.
- Encourage and engage learners in individual activities/projects along with the group activities at this stage.
- Activities should promote use of local resources.
- Integration of Indian knowledge, traditions and practices in the field of art and design should be promoted in Art Integrated Learning. This will make students and facilitators aware of the regional art resource on one hand and feeling of pride having rich cultural heritage on the other.

Special Assembly formation made by students



2.1.2 PLANNING TIME FOR AIL

Time management is an essential factor that determines a teacher's professional expertise and proficiency in organising their learning experiences. There are some interesting time-slots available in schools such as; morning assembly, celebration of festivals, special assemblies, excursions, zero period, etc. which can be utilised for art experiences and can be linked to the subject learning. For AIL, it is preferred to plan club periods (two or more periods in a go) for conducting art experience once a week. Teachers/facilitators of different subjects can enjoy team teaching during such arrangements and benefit from multidisciplinary learning. Use of 'Bagless Days' at middle stage

can be also be explored for deeper learning of the subjects and concepts through AIL workshops.

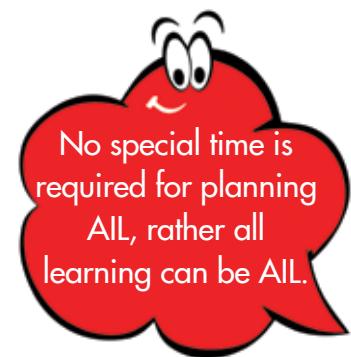
KEY POINTS



Trip to local artisan as a part of art experience

- Morning assemblies, *Bal Sabhas*, Zero Periods, mid-day meal breaks can be utilised for conducting AIL activities.
- Block periods (slab of 2-4 periods) can be planned for providing art experiences.
- 10 bagless days can be utilised for art experiences as per NEP 2020. It states “*Bagless days will be encouraged throughout the year for various types of enrichment activities involving arts, quizzes, sports, and vocational crafts*” (p.16).

- Holidays can be utilised for planning excursions or local trips to historical places, architectural sites, galleries, museums, artisans, nature walk, exhibitions, concerts, craft *melas* (fairs), state level *melas* (fairs) etc.
- Organise periodic ‘Art Camps’ as per school’s convenience.
- Special Interaction with experts/local artisans can be organised once a month after school hours as per school’s convenience.
- It is imperative to respect the individual learning pace of students/learners. While planning the time slots, needs and concerns of special children should be kept in mind.



2.1.3 PLANNING RESOURCES

Planning resources for art experiences in AIL pedagogy is as enriching an experience as the main activity itself. Purposive research of the resources/material for the planned activities enable the teachers/facilitators to create a diverse archive of local resources which can enhance novelty of the art experience, hence of learning. Resources planned/explored should be easy to

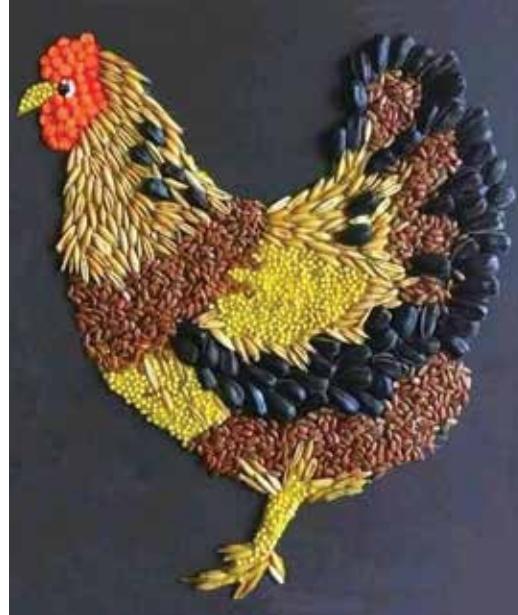


Students working with locally available resources

acquire, local/region specific, economically viable and environment friendly. It is suggested to conduct a brainstorming session on resource generation for the planned activities. Participation of students in this process makes them learn about their existing resources, pride of their cultural heritage, and realisation of ones dependence on nature and vice versa.

KEY POINTS

- Resources for the AIL activities should be eco-friendly, locally available and should be region and culture-specific so that students/learners can appreciate, learn and practise their local art traditions.
- Students/Learners should be involved in exploration and generation of resources for the activities.
- Periodic Interaction with local artist and artisans is necessary for the deeper knowledge and learning of skills at this stage.
- Material used for the AIL activities should preferably be reusable and recyclable.
- Students should be encouraged to make their own colours, tools, costumes, props etc. for the AIL activities.
- Students should be motivated to get involved with community members on their own for obtaining local resources.



Use of natural material as resources

2.1.4 CLASSROOM MANAGEMENT

The classroom is always an important area of school where the process of teaching-learning takes place. Every classroom should have an inclusive environment and innovative methods for taking attendance, display of art works/learning materials and, seating arrangement, activity corners etc. The classroom should also have a performing area where students/learners can perform and/or make presentations. Artwork, activity sheets of students/learners should be displayed and to make use of this huge learning resource by the teacher/facilitator and students. This will also help in breaking the monotony of stereotypical classroom set ups. In AIL, teachers/facilitators are encouraged to explore and experiment with new seating arrangements. It has been seen that periodic change in seating arrangements help in building positive learning environment in the class. The thumb rule for classroom arrangement

Students working together collaboratively in groups



is the easy reach of facilitator to every learner in the class. While making arrangements or changing seating arrangements, there should be special concern to the needs of *Divyang* learners, if any. Since AIL is more of hands-on-experience, teacher/facilitator needs to ensure participation of all students including those with special needs. Display of art work should accommodate work of all students and not of the selected ones. This helps them in self and peer assessment on one hand and promotes the culture of self-learning and self-improvement.

KEY POINTS

- Student/learners with special needs should be given more space and time to acclimatise themselves with the activities being conducted.
- Students should be encouraged to form their own groups for group activities. They should be guided to keep changing members in the groups to learn better and enhance interpersonal and social skills. If teacher/facilitator is forming the groups, then they should keep the learning capacity of every student/learner in mind.
- Periodic changes in the group formation provides every student/learner a chance to work with all of their peers. No same group should continue for more than a weeks' time. New group has potential of learning new things and practice new dynamics.
- Ensure to create space for resource material and display areas for artwork of students in the classroom.
- Seating arrangement should be conducive and supportive to the need of art experience to be conducted.
- Independent sessions for group discussions and brainstorming need to be emphasised at this stage. This helps them in enhance their analytical and problem solving skills, along with social skills.
- To practice an inter-disciplinary and multi-disciplinary approach, in AIL, periodic arrangement of clubbed periods and team teaching should be practice.
- Explore areas outside classroom walls to add freshness and dynamics.
- Observe every student and appreciate their efforts to encourage engagement in the learning process.
- Lastly, but very important is participation of students in the display work, change of seating arrangements, creating new areas for performances etc.

2.1.5 DISPLAY OF ART WORK

AIL activities involve a lot of creative thinking that enables students/learners to create their artwork be it in the form of drawing, sketching, painting, poster making, mask making, crafts making, etc. In performing arts they can create props, costumes, jewellery, head dresses etc. All such creations can be displayed in the classroom, meaningfully. For the display there can be bulletin or notice board. Students should be encouraged to think of innovative ways of display. Style and methods of display can

keep changing for more creativity. The artwork should bear name of the student creator. This display can also be used for assessing students'/ learners' progress. For setting up the displays, teacher/facilitator should involve students/ learners. The focus here is to involve students at every step of AIL activity. The displays should be changed frequently while ensuring participation of all the student/learners in classroom.

Since, there are subject specific teachers at Middle stage and students create their art work for each subject; so specific walls can be designated to display subject specific art work of the students. For example, one side of wall can be designated to Language and Social Science art works and similarly other side for art with Science and Mathematics. The periodic approach for updating display boards is suggested to be followed to ensure equal participation.



Display of students artwork



Students displaying their artwork

Digital display of art works can also be prepared by students. It can be done either individually or in a groups. A website/page can be created where students can post pictures of their art works.

2.1.6 VISITS FOR EDUCATIONAL EXPOSURE

The NEP 2020 recommends that, “*children will be given periodic exposure to activities outside school through visits to places/monuments of historical, cultural and tourist importance, meeting local artists and craftsmen and visits higher educational institutions in their village/Tehsil/District/State*” (p.16). In consonance with this recommendation of NEP 2020, it is recommended that students are taken on field trips and excursions which include places like; historical monuments, ancient and innovative

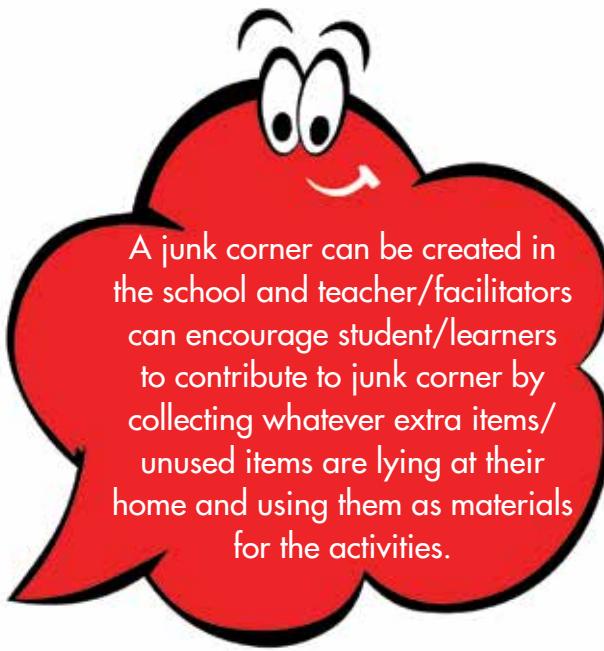


Field visit to local artisan (crafting Lac Bangles)

architectural examples, hospitals, post office, bus depots, railway stations, metro stations, *panchayat ghar*, local market, *melas* (fairs), heritage sites, studios/workshops/workplaces of artists (visual and performing) and artisans etc. so that they familiarise themselves with their local resources. This is applicable to rural, tribal as well as urban areas to make students/learners well versed with the social dynamics of their region and their cultural roots. These visits should be cautiously planned as per the needs of learners. In case visits are not possible, then videos/films/slides/presentations available can be explored for the online

virtual learning. The idea is to devise ways for a guided exposure to students about places around them. To make these visits interesting and effective for students of this stage, it is important to have a brainstorming session, followed by a discussion with students to explore different ways to know the place/s selected. This can trigger their curiosity and interest to explore the places for deeper learning. They can be arranged in teams of two to four each and given a set of questions related to the place/s of visit. Students can carry their cameras/mobiles on visits and document information about the visits, for making presentation to be submitted as class assignment. A holistic documentary can also be prepared of the visit, integrating inputs of different teams, for the later use.

2.1.7 MUSEUM CORNER IN SCHOOL/CLASS



A junk corner can be created in the school and teacher/facilitators can encourage student/learners to contribute to junk corner by collecting whatever extra items/ unused items are lying at their home and using them as materials for the activities.

Students/Learners should be encouraged to collect objects from various excursions that increase their interaction with their immediate environment. They should explore traditional crafts at home and in the community, like; old hand fans, caps, wooden and carved combs, embroidered items, old coins, woven bags, old sandals, old costumes, old watches, old wall clocks, old radio sets, old television sets, old handmade craft items etc. and add it to the school museum corner. This collection can be exhibited in the class/school periodically. National Museums, National Gallery of Modern Art (and their branches nationwide) do have schemes to help schools develop their museum corners by providing them with replicas of the famous artifacts, posters relevant for school education. Schools should explore these schemes to benefit

their students and staff. These collections can then be displayed under the name of ‘School/Class Museum’. Collectibles can act as an active tool of delivering academic content in the classroom or school across different disciplines using variety of activities by the teacher/facilitator. Using collectibles as part of the teaching-learning process will not only fulfill the pedagogical needs of the students but bring them pride of being part of their local heritage. This will help in achieving learning outcomes and enhance their life skills, while sustaining interest in the learning process. This collection can be used for storytelling also. Apart from being part of the learning process the collection of artifacts can encourage students/learners from ‘search’ to the ‘research’.

2.1.8 COMMUNITY INVOLVEMENT

Involvement of local community can make the exchange of ideas vibrant and inclusive. Art Integrated Learning cogently executes the NEP 2020’s recommendation that “*Efforts will be made to involve community and alumni in volunteer efforts for enhancing learning by providing at schools: one-on-one tutoring; the teaching of literacy and holding of extra help sessions; teaching support and guidance for educators; career guidance and mentoring to students; etc. In this regard, the support of active and healthy senior citizens, school alumni and local community members will be suitably garnered*” (p. 11). Through the suggested community involvement, students/learners can familiarise themselves with local art forms and will have due respect towards artists, artisans, service providers and professionals in the community. While interacting with local community of artists, artisans and other professionals, students/learners get opportunity to learn about different professions and their rich cultural heritage. Special Interaction with experts/local artisans should also be organised atleast once a month. School can invite selected members of the community to interact with students/learners and for the hands-on-experience workshops as a part of AIL pedagogy.



Association
with local
community

2.2 ASSESSMENT AND LEARNING OUTCOMES

AIL pedagogy provides tremendous scope of exploration, experimentation, creation and of free expression. In fact it encourages facilitator to bring in their own outlook and skills to make this pedagogy more vibrant and effective. AIL as a tool of assessment, moves away from the pen and paper based evaluation and paves the way to competency-based assessment. The NEP 2020 states “*The aim of assessment in the culture of our schooling system will shift from one that is summative and primarily tests rote memorization skills to one that is more regular and formative, is more*

competency-based, promotes learning and development for our students, and tests higher-order skills, such as analysis, critical thinking, and conceptual clarity. The primary purpose of assessment will indeed before learning; it will help the teacher and student, and the entire schooling system, continuously revise teaching-learning processes to optimize learning and development for all students. This will be the underlying principle for assessment at all levels of education” (p.17). Thus, every art experience designed under the AIL pedagogy, needs to fulfill the target learning outcomes depending upon the subject concepts. Assessment through art integrated learning helps teacher/facilitator to move towards a continuous and comprehensive assessment which is formative in nature and helps in 360° assessment. The suggested AIL sessions on different subjects, given as exemplars in this handbook have been designed keeping all these indicators in focus. Teachers/facilitators are requested to use them and also evolve their own techniques to add quality to the assessment. AIL pedagogy supports the concept of holistic report card at middle stage.



Teacher as facilitator for assessing the learning

KEY POINTS

- Provide equal opportunity to all students/learners to do hands-on activities and give more time (if required) to facilitate students with special needs.
- Try not to compare one student with the other in class for assessing their performance. Each learner should be assessed based on their growth/learning records. Assessment techniques should address individual learning pace of the student/learner.
- Assessment in AIL is woven in the learning and is seen as a continuous process and can be explored ‘as learning’, ‘for learning’ and ‘of learning’.
- Assessment should be a non-threatening activity where students/learners are welcome to put forward their own ideas, thoughts and expressions.

- Both individual and group performances can be assessed for the learning outcomes.
- Assessment of both verbal and non-verbal expressions of the student/learner needs to be taken care. The ‘verbal’ expressions include speeches, presentations, announcements, performances, narrations, replies to the questions, ideas shared during discussions and brainstorming activities, writing answers’ assignments etc. The ‘non-verbal’ expressions include; active participation, initiative, engagement, curiosity, cooperation in group work, punctuality, facial expressions during performance, body language, care for nature as practice, no wastage of material or other resources, kindness etc.
- AIL is an effective tool to evaluate life skills and interests of the student/learner.
- Art work of each student needs to be acknowledged and their original and unedited work should be displayed in the class. This work is a great help in the assessment hence needs to be maintained as portfolio by the students.
- Appreciate every student/learner irrespective of their performance and expression for motivating them for learning.
- Recording of individual pace of learning of each student/learner and assess their achievements based on that.
- Flexibility in timings so that students/learners (especially *Divyang* students) get adequate time to finish their work.
- Constantly assess the student’s/learner’s work and provide holistic feedback.
- Involve students in the process of their assessment (self and peer assessment) to complete 360 degree evaluation.

NEP 2020 recommends that “*to close the gap in achievement of learning outcomes, classroom transactions will shift, towards competency-based learning and education. The assessment tools (including assessment ‘as’, ‘of’, and ‘for’ learning will also be aligned with the learning outcomes, capabilities, and dispositions*” (p. 12). It further recommends that “*the progress card will be a holistic, 360-degree, multidimensional report that reflects in great detail the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains. It will include self-assessment and peer assessment, and progress of the child in project-based and inquiry-based learning, quizzes, role plays, group work, portfolios, etc., along with teacher assessment*” (p. 18). Art integrated learning efficaciously fulfills the recommendations laid down by the NEP as AIL weaves in and enables assessment of all three stages of assessment (“as”, “of”, and “for” learning) seamlessly. AIL by its nature provides teachers/facilitators with an access to monitor the continuous and comprehensive process of learning. Further, AIL helps to democratise the process of assessment, in which students/learners are offered multiple modes to express themselves. Quite

naturally, that makes it an effective tool of assessment. Assessment for learning implies a process that enables teachers/facilitators to understand the learning capacity of each student/learner. Assessment as learning enables teachers/facilitators and students/learners to monitor their own growth. In other words, it is a method of self-assessment. Assessment of learning is a process wherein teachers/facilitators are able to evaluate the student's/learner's development in terms of their understanding and their application of the concepts/subjects. Art integrated learning promotes task-based performance and helps in assessing competencies developed, wherein all the domains of learning are assessed in a non-threatening and non-judgmental environment. The tools of assessment in AIL can be:

- Drawing/painting of the student/learner
- Role play, drama and puppetry activities
- Music and dance activities performed as a process
- Portfolios of finished or unfinished artwork
- Individual or group projects of AIL
- Presentation and performance by students/learners
- Stories, poetry, recitation, etc.
- Descriptive analysis of a student's/learner's presence, participation, response and eagerness of students/learners in the art experience and in learning process.
- Classroom observations and anecdotes
- Rubrics

2.3 SUGGESTED FORMAT TO PLAN AIL ACTIVITY/SESSION

AIL activity plan is flexible in nature. Teachers/Facilitators may adopt and adapt as per the need of learning situation and their personal preference and ease. The suggested format given here is dynamic and commonly used format for planning and conducting AIL activities in the field. The suggested format is as follows:

- **CLASS:** The class for which the AIL activity has been designed.
- **SUBJECT/S:** The specific subject/s on which the AIL activity has been designed.
- **THEME/CHAPTER/TOPIC:** AIL activities can be designed keeping themes/chapter/topic or even concepts to be learnt in mind. This helps in permeating subject boundaries and accessing knowledge holistically.
- **ART FORM/S BEING USED:** The teacher/facilitator may specify whether the art forms being used are visual or performing or both. Integration of regional knowledge, traditions and practices in arts need to be given importance.

- **RESOURCES:** The resources proposed to be utilised for the AIL activities should be local specific and environment friendly. The cost of acquiring these resources should be bare minimum. Students and community should also be part of generating these resources.
- **TIME REQUIRED:** It is essential that the teacher/facilitator works on a time-bound plan to ensure effectiveness of the teaching-learning process. However, if any student or a group requires more time, it should be allowed respecting the individual pace of the learner. Rigid time limit can disturb the learning process.
- **LEARNING OUTCOMES:** The AIL activities being designed should be clearly linked with achievement of target learning outcomes. It should be a blend of knowledge, experience and application skills derived from the curriculum.
- **PLANNING OF ART EXPERIENCES/ACTIVITIES STEP WISE:** The teacher/facilitator can design AIL activity for facilitating learners of the middle stage through well designed art experiences. Some art experiences can be in the shape of ice-breakers, which can be conducted and completed in 10 to 15 minutes and others can be longer to suit the need of the target learning outcomes.
- **FOLLOW-UP EXERCISE/S:** Every art experience should have follow up exercise/s which can be in the form of questionnaire, brainstorming activities, presentations, performance, assignments and projects, etc.
- **ASSESSMENT:** AIL as a pedagogy provides opportunity and spaces for '*assessment as learning*', '*assessment for learning*' and '*assessment of learning*'. Therefore, while preparing an AIL plan, the teacher/facilitator can think of creating easy to follow and seamless spaces for assessment and also maintain records.
- **LINKING OF ART EXPERIENCE/S WITH THE CONCEPT/S OR THEME/s:** While preparing the AIL plan, the teacher/facilitator can think of the suitable points where the targeted theme or concept can be seamlessly linked to the art experience of students.



Do not look for prescriptive format. All suggestions are suggestive in nature. They vary in structure.

2.4 ROLE OF TEACHER IN IMPLEMENTATION OF AIL

The NEP 2020 states that “*teachers will be given more autonomy in choosing aspects of pedagogy, so that they may teach in the manner they find most effective for the students in their classrooms. Teachers will also focus on socio-emotional learning—a critical aspect of any student’s holistic development*

” (p. 21-22). AIL effectively conforms to these principles laid down in the policy for the teachers/facilitators. The teacher/facilitator plays an integral role in the pedagogy of AIL and in building positive learning environment for experiential learning. They have to constantly motivate students/learners to participate in activities, take initiative,



Teacher plays an integral role in AIL sessions

freely express themselves without any inhibitions. The teacher/facilitator should hand-hold and help students/learners find ways while engaged in experimentation and exploration. They should identify the potential of each student/learner and help them discover and hone their interests in learning. The facilitator at middle stage should have a conceptual understanding of the AIL pedagogy and must think of using AIL activities to deal with adolescence related concerns/issues. Activities for them should be engaging and little challenging in nature to sustain their interest.

KEY POINTS

- In AIL approach, the focus should be more on the process than the product.
- AIL creates inclusive and vibrant classrooms using ‘arts’ as means to learn.
- Keep exploring different methods and material of arts forms, especially Indian traditional arts and crafts as part of teaching-learning process.
- Plan AIL activities well in advance to create a better learning environment and for the smooth conduct of it.
- Plan and work as team with other teachers/facilitators for multidisciplinary learning.
- Make team with teachers teaching different art forms and teacher teaching health and physical education. They will know many skills required for integration of arts and games.
- Promote use of cost effective and local-specific resources for activities.
- Use AIL as an assessment tool to assess and evaluate student’s/ learner’s work without being judgemental.

- Pay attention to making of groups for activities. Composition of the groups should include, variety; students who are active performers, who are good in documenting, good narrators, good organisers, explorers, gender balance, inclusion etc. In case of multi-grade teaching learning, formation of the groups becomes even more important. (Classrooms where students of different standards learn together).
- Encourage the process of peer learning by forming groups, in tune with the recommendation of NEP 2020 that “*peer tutoring can be taken up as a voluntary and joyful activity for fellow students under the supervision of trained teachers and by taking due care of safety aspects*” (p. 9).
- Providing ample time to every student/learner so that they learn at their individual pace.
- Encourage students to participate in display work and share their art for display.
- Utilise the space in classroom creatively for performances and other art activities. Explore open spaces in the campus for providing new situations and maintaining curiosity level of students of this stage.
- Encourage students maintain their portfolio to assess their achievements and holistic development.
- There should be no comparison among art works/performance among the students. Rather each and every learner should be appreciated for their efforts and their growth from their earlier art works/performance.
- No remarks shall be given on the skills of the learner or quality of their art work/performance.



Baatcheet ek adhyapak se
 (This video presents a conversation with a teacher practicing Art Integrated Learning (AIL), and attempts to understand nuances of art integrated pedagogy through questions.)



3

FREQUENTLY ASKED QUESTIONS

FAQs section of the handbook consists of questions which are frequently asked by the teachers and teacher educators of the middle stage (teachers teaching Classes VI, VIII and VIII) answered in an easy to follow manner.

1. What is the difference between Art Education and Art Integrated Learning?

'Art Education' as a term is used to define 'Art' as a curricular area and refers to specialised knowledge of the grammar of art, theory of art, methods and material of doing arts, where learner masters skills to express themselves through visual and performing arts, whereas 'Art Integrated Learning' implies to adopting an art integrated curriculum where art becomes basis of the learning. Art, in art integrated learning, at the centre of the curriculum helps in clarifying concepts. The abstract concepts of different subjects are linked, concretised and learnt effectively with arts as medium. Hence, 'Art Integrated Learning' is a pedagogy and 'Art Education' is a subject.

2. Does integration of arts with other subjects mean using art as teaching aids?

Integrating arts with other subjects does not mean to make a learning model or a chart to demonstrate a concept or theme. It would mean learning through the arts. For example, topics such as; pollination and movement of science can be learnt better with music and movement activities, wherein physical movement is set according to the process of pollination. Students/Learners could hum the sound of bees while doing this. Involvement of learners is greater when they are physically involved in the learning process. Learners get engaged in art activities naturally and start enjoying the process. After the art experience (or in between) as per the activity design teacher/facilitator explains the link and application part of the concept with the particular art experience. This makes abstract concept/learning concrete thus retention of the lesson taught and learnt in this manner is of permanent nature. This method, teaching learning makes arts pedagogy. Using art as teaching aid is a different concept, wherein art is used as a skill to prepare a model/chart/cards etc. to explain the concept to be taught. Teaching aids are mostly prepared and used by the teachers, whereas in art integration learners themselves engage in the process of doing and making art. Integration of arts as learning process is much more than a commonly known teaching aid.

3. What are the common techniques used in the AIL pedagogy?

BRAINSTORMING: It is an interesting practical method of exercise to stimulate creativity in a group, and proves to be useful as a training technique. The aim of brainstorming activity is to collect as many ideas as possible on a specific topic within a given time, in an uninhibited way. The process of brainstorming demands guidelines to benefit from it. Points such as;

- There is no right or wrong in the brainstorming exercise,
- It has to be facilitated well to get ideas from even those, who are introvert and do not like to participate voluntarily and;
- Control the temptation to pass judgment on ideas as soon as they are revealed.

ICE BREAKERS: This is an activity that is conducted for building a favourable environment for joyful learning. Ice Breakers in AIL are preferred to be based on different art forms and of very short duration. These activities are useful for initiating art based experiences with ease as they help in creating interactive atmosphere in the classroom. Purpose here is to engage learners in the process of thinking and doing. For a better understanding of ice breakers, you can refer to the training package (Vol. I) which contains about 200 odd ice breakers. (<https://ncert.nic.in/deaa/pdf/tpaev101.pdf>)



Engaging and joyful group activity

GROUP ACTIVITY: This is a very common method which can be combined with other methods in any activity. Discussions in small groups are useful for learning from the experiences of other members of the group. Group work is seen as an important tool for collaborative learning and AIL pedagogy suggest to use it at all levels of school education. Experience shows that students of middle stage benefited more on their social skills, on creative skills and in overall learning when they were given opportunity to work in small groups of 4-5. Their life skills enhance dramatically while working together.

PRESENTATION: This is a technique which can be effectively used by both the teacher/facilitator and the taught/learner. Teachers/Facilitators can use this method to impart information, knowledge or ideas to the students/learners. This technique is quite effective in a situation where a lot of information is required to be passed on in a relatively short time. In AIL, the presentation by an individual or a group is designed to give students opportunity to share their knowledge and skills on a specific topic/s concept. AIL suggests all presentations are to be attended by other groups/teams of the class for their appreciation and observations on the same. This helps all students learn more from their peers and view it critically as they have to appreciate it and also give suggestions for further improvements. It has been seen that presentations help the group of presenters build confidence of sharing their views from the stage and also develop the spirit of listening to healthy criticism and respect for suggestions from others to improve the quality of their presentation/s. All AIL practitioners of middle stage have appreciated the technique for multiple gains to the learners.

4. What is an ice-breaker?

People do not always feel free in front of others—strangers, students/learners, colleagues, relatives or even friends because of inhibitions and doubts about ‘what people will think of them’ and innumerable such barriers that do not allow people to connect to each other, communicate with each other and feel comfortable in company of others. Ice-breakers in a way helps in ‘breaking these barriers’ and connecting people with each other.

An ice-breaker is formally defined as a stimulating, easy-to-do and thought-provoking activity that educates and entertains simultaneously. It helps shed inhibitions, gets one physically and mentally ready for work, and prepares the body-mind instrument of the child for artistic endeavour and increases communication and cohesiveness among students. Ice-breakers are variously called warm-up, energising, opening-up, participatory activities or ‘open process technique’. These are used to spark imagination, reasoning, creativity, reflection, exploration and provide a platform for free expression in a non-judgmental and perceptual way. AIL pedagogy integrates ice-breakers strategically to explore different competencies, sustain the learning interest and provide space for the formative assessment.

5. How to use an ice-breaker?

An ice-breaker is a magic tool—an aid to all teachers and facilitators. One can use ice-breakers to overcome barriers and connect learner with the learning process. Ice-breakers are fully dynamic and can happen in many ways. You may start with a transformation game which can be played with any age group, even with absolute strangers. By transformation, it means symbolically changing an object to something different from what it actually is. For instance, let’s take a pen and demonstrate how it can be transformed into a flute. Just imitate the action of flute-playing as vividly as possible. Next, let others do different transformations. There can be hundreds of transformations with one single object. Give the pen to one person and it goes to other and yet other in the row in turn. Following this game, you will feel the magic created among participants/learners within a minute. They gear up; they start thinking, imagining, creating and expressing. You can try out this game with any object—a tray, a book, a piece of cloth, etc. This game is fun, and makes people confident of ‘inventing’ things.

For a better understanding of ice breakers, you can refer to the training package (Volume I) which contains about 200 odd ice breakers. (<https://ncert.nic.in/deaa/pdf/tpaev101.pdf>)

6. How many days a teacher should continue with one form of art in AIL classroom?

It is suggested to change one art form to another after a week to avoid monotony. Efforts should be made to integrate different art forms, and not focus on any one of the art forms because students appreciate change, newness, challenge, and new materials. Learners differ in their liking for one or the other art form. One student may like singing more than dance or vice versa. Therefore, exposure to different art forms will provide an opportunity to every learner to create, learn and develop.



Once started an activity with one art form, it is suggested to change the materials, resources and methods at regular intervals, so that the activities remain dynamic and provide student/learners with multiple avenues to learn from.

Moreover, it is not necessary that every teaching-learning exercise should have an art activity compulsorily, teacher can connect it with the previous art experience of the student/learner.

It has been seen that one art experience serves for multiple concepts and multiple grades/classes. Teacher is the best judge to use it keeping classroom situation in view.

7. Why AIL is more focused on Indian Arts and Culture?

Art Integrated Learning through various art forms makes the education more informative and livelier, effectively following the principles laid down by NEP 2020. It states that “*As a part of the thrust on experiential learning, art-integrated education will be embedded in classroom transactions not only for creating joyful classrooms but also for imbibing the Indian ethos through the integration of Indian art and culture in the teaching and learning process at every level. This art-integrated approach will strengthen the linkages between education and culture*” (p. 12). Artistic and cultural traditions being practised by the communities around are called the ‘Living Traditions’ of Indian arts and culture. Making living traditions of Indian art a part of AIL, means integrating various regional/folk art forms in the school curriculum. For example, *Chau* dance is a living tradition in the rural areas of Jharkhand, Odisha and West Bengal. This art form heavily derives its narrative from mythology where mask making is an integral part of it. When students of these states/region are given opportunity to make masks of *Chau* characters, they will explore mythology, try to understand and learn the skill of making *Chau* masks. They can even use the masks prepared by them to narrate a specific part of the story from mythology. This method of integrating regional arts will help students connect with their cultural roots, value them and learn new concepts through them. The example given above is just one, students have treasure of performing and visual arts around them and it belongs to them. AIL focuses more on integration of Indian Arts than any art.

Student engrossed in painting activity

8. What are the visual arts activities that can be used for AIL sessions?



When we think of visual arts, we think of tangible creations. Some of the visual art activities and methods of expression are:

DRAWING: This is the method of putting marks on paper, or any other surface. The marks can be made with any material such as pencils, crayons, felt pens or chalks. These marking which are to show images of different objects are known as drawings. Drawing can be as simple as doodles and stick drawings and as complicated as a portrait or a full composition on thick forest, architectural

site or a huge procession of million people. Drawing covers them all. Students of middle stage can explore drawing to a great extent as their skills of drawing by now become finer and they can use different materials such as; pencil, pen and ink, crayons, coloured chalks, charcoal etc. to draw.

PAINTING: This is a practice of putting pigment on a surface. Students of middle stage may like water colours and poster colours for painting as they have picked up skill to handle painting with wet colours. Teacher can even try to experiment and explore with techniques such as; blot painting, straw blowing, sponge painting, hand painting, brush painting, etc.

COLLAGE: It is a term used for art created by pasting/sticking different materials on the surface (paper/board/canvas). The materials used can be like; used newspaper and magazines, other found objects such as fabric, buttons, feathers, seeds, dry leaves and flowers etc. For pasting, it is suggested to go for regional techniques/methods and materials of pasting. Tree based adhesive, paste created with white flour etc. is very common due to its effectiveness, especially in rural areas. Students should be encouraged to explore new methods of their own to avoid synthetic preparations.

MODELLING AND CONSTRUCTION: Art falling under this category are those created using clay, papier-mache, wire, cardboard boxes, three-dimensional plaster of paris, soft wood etc.

- **CLAY MODELLING:** Learner of every age or stage enjoy working with clay. It is liked and preferred for activities related to exploration due to its three-dimensional nature. Clay Modelling activities as AIL tool for students of middle stage may consist of:
 - a. **MAKING OBJECTS:** Make round balls, cylinders, cones of different sizes and carve out objects such as; fruits vegetables, birds, animals, human figures, etc.
 - b. **MAKE COILS:** Roll cylindrical pieces to make coils to create small pots and containers of different shapes and sizes by placing coils on one another and joining them for giving finished look. It's a very common and popular method of making big size earthen pots since ancient times.
 - c. **PRESS AND PINCH:** Press and pinch is another interesting method of modelling. Learners appreciate the tenderness of clay and like to create art with the help of their thumbs, fingers using press and pinch technique. This method is used by sculptors to create portrait head and big human sculptures.
 - d. **SLABS:** Patting with hands to make slabs, and create tiles of different designs and patterns is common and much appreciated



Students experimenting with clay in group

art since old times. Making slabs, taking impression of small objects on it or creating relief on slab is easier and useful in AIL activities. Students of middle classes can explore the use of slabs to make different objects like pots, containers, houses, animals, etc.

- **CONSTRUCTION:** In arts, it is the creation of three-dimensional objects, using different materials like junk, wood pieces, etc. Construction activities at middle stage may consist of:

- a. **PAPER SCULPTURE:** Paper can be used as a medium for sculpture at all levels of education. Students can be made to explore different kinds of paper to understand its qualities as material for construction. Paper can be folded, curled, twisted, rolled and scrolled. It is an ideal medium for experimentation.
- b. **BOX SCULPTURE:** The simplest kind of paper sculpture can be made by using an assorted collection of boxes. Students can glue, stick, or stack the boxes to make the required structures. They can use tape or glue to join their boxes. Create angles joining it with the help of cloth piece pasted on it. These can then be painted or decorated using colours or coloured papers.
- c. **PIPER-MACHE:** Tear newspaper into small pieces. Soak the paper in water overnight. In the morning, mash the paper by manually grinding it to pulp and add glue to it. Students can model this papier-mache into fruits, vegetables or any other form. These forms can be painted once they are dry. Acrylic paints are the best for this medium. Papier-mache can also be layered on a basic armature like a balloon to create a mask.
- d. **WIRE SCULPTURES:** They are made using flexible wire as basic material, folded and covered with jute, paper, thread, cloth, etc. to create desired shapes/sculptures. These can later be painted using poster paints or enamel paint.
- e. **ASSEMBLAGE OF DIFFERENT OBJECTS:** Different three-dimensional structures can be created with the help of empty match boxes, kitchen roles, old toys, clothing/dress, old hats, spectacles, household objects, etc. They can also create tableaux in old shoe boxes.
- f. **CARVING:** It is done with material such as stone or wood, where the basic form is chipped away to create the sculpture. It is a process of shaping by subtracting.



Paper Tortoise



Sculpture with waste material

Students of middle stage can easily work on Plaster of Paris (POP) due to its easy availability and joy of soft carving, this can be used for creating blocks for printing, toys, decorative plates etc. Similarly soft wood is yet another material that can be explored for making objects, toys, architectural structures, carts and other moving vehicles, puppets etc. Students can also create utility pieces of crafts with soft wood.

PRINTMAKING: This is the art of producing multiple images from one plate. It is fascinating to make multiple prints of an image to make an all-over pattern. There are many simple print-making techniques that can be explored by students of this stage;

- **LEAF PRINTS:** A leaf or a fern can be covered with paint. Paint is usually applied on the back side of the leaf and pressed on the paper. In a similar manner, prints can be made with a feather or an old piece of weathered wood. Students love creating border designs, curtain designs, overall designs etc. with this technique.
- **POTATO AND VEGETABLE PRINTS:** Design can be carved on half cut piece of a potato to create a stamp/block. Press the potato block onto a newspaper to remove moisture. Apply colours on it and press onto the paper to make a print. Students can explore and choose other vegetables also for taking prints.
- **ERASER PRINTS:** Small erasers can be carved with a pencil point and inked on a stamp pad to make a repeat pattern.
- **FOUND OBJECT PRINTING:** Students can look for different objects in their environment which they can use for printing on paper.
- **MONOPRINTS:** A simple monoprint can be made by dipping a finger into thick paint, and drawing with it on a sheet of glass or a washable table top. Once done, a fresh paper is pressed onto it to get a print. In this method, one can get only a single print and that is why it is called monoprint.

CRAFTS AND DESIGN: The crafts are most common art experience, which is appreciated for its design and utility component by the students and teachers both. Students of this age like to get engaged in craft activities. Moreover India has a huge resource of heritage crafts which is still in practice. There are different kinds of craft that can be explored at this stage:



- **PAPER CRAFTS:** Origami, paper folding, paper sculptures, stencils, mobiles, decorative hangings, doll making, kites, flower making, etc.

Paper folding Toys



- **WEAVING:** Simple stitches and embroidery, weaving work with paper strips/jute/thread/cloth-waste or old cloth, etc.
- **MASK-MAKING AND PUPPET MAKING:** Students enjoy making masks and puppets, and also like to perform with them as props. Students of this stage can make masks and puppets using ordinary local materials. They can also make paper and papier-mache masks. Similar to mask making there are different techniques of making puppets. Some common techniques are:

Use of Paper and Papier-Mache



- a. **FINGER PUPPETS:** This can be as simple as tying a piece of cloth on the finger and creating a character by painting the eyes, nose, mouth, etc. on thumb and fingers. There can be simple finger puppets made of paper to be worn on finger tips and played.
- b. **GLOVE AND SOCK PUPPETS:** As per the name, these puppets are made in glove style to be worn on a hand using the thumb and two fingers.
- c. **STICK PUPPETS:** Any drawing/picture of people or animals can be converted into a puppet by simply cutting it out and pasting on a flat stick. The drawing can be made more decorative by adding

bits of fabric, wool, sequins or fur. Students of middle stage do like to make three-dimensional stick puppets, which needs more skills to make but it has refined movements when played.

- d. **PAPER BAG PUPPETS:** Stuff brown paper bags with torn newspapers and tie up the top to create the head of the puppet. This can be embellished with buttons, wool, fabric or paper scraps. A stick should be inserted into the bag before tying up the head. A piece of gathered fabric can be attached to the stick at the base of the head. There is other type of puppets which can be created with paper bags and played by inserting hand in it. Student should be encouraged to explore old time puppets for learning about the traditional puppets.
- e. **PAPER PLATE PUPPETS:** Paper plates can be folded into half glued to the top and bottom of the folded plate to hold in the fingers. Paper and other scrap material can be used to create hair, teeth, eyes and other features. While manipulating the puppet, the hand can be covered with a handkerchief or any such fabric.
- **Toys:** Any object which can engage a child in play can be termed a toy. All students have the potential to explore toys. Toys are available in various forms but we propose the use of local and indigenous toys in education. Indigenous toys are toys that are native to specific regions in India. These are made from the locally available materials and are unbreakable and eco-friendly as there are no artificial or synthetic materials used in its making. Educational relevance of indigenous toys is both economic and cultural. The exposure in formal educational settings raises cultural familiarity, nourishes cultural confidence and opens avenues for low-cost learning materials and toys. While there is innovative use of time and material, student/learner have their own playful mediation. With the focus in play-based learning and local heritage and crafts in curriculum, toys can stand out as a definitive feature that can merge both these elements to create an environment of joyful learning.



Traditional Toy making

Keeping in view the recommendations of the NEP 2020, traditional toys having pedagogical implications can be promoted from *Anganwadi* to every stage of school. The students/learners of middle stage (classes VI, VII and VIII) can be provided with do it yourself kits to play and create objects themselves. They also need to be given opportunity to create toys and games of their own. They should be encouraged to explore the indigenous toys and games of their region or even of other regions, understand the basic principle behind working and/or making of the toy. Teachers can facilitate students in this direction. Playing with toys and making toys, both can benefit students in learning difficult concepts of subjects in simpler and interesting ways. Toys help in development of all three domains of the learner:

Educational Toy and Game



- COGNITIVE DEVELOPMENT:** Toys can help learners in developing certain cognitive skills easily. Skills such as; attention, observation, memory, comprehension, thinking, imagining, creating, logical thinking and reasoning, solving problems etc. are enhanced with the use of arts and toys as pedagogy. It helps the learners to articulate their sensory experiences.
- SOCIO-EMOTIONAL DEVELOPMENT:** Toys can help learner in developing the affective skills such as self-awareness, social awareness using sensory experiences. It helps in developing skill of cooperation and coexistence while working in groups, developing competencies such as expression of feelings to others, listen and pay attention. For example: learner attempts to demonstrates sensitivity and acceptability towards others in group from diverse backgrounds, also shows caring behavior and shares belongings with others.

Educational Toys with waste material



- c. **PHYSICAL AND MOTOR DEVELOPMENT:** Toys can help learners in developing physical skills such as improved fine motor skills and gross motor skills, overall body coordination, hand-eye coordination, body balance and spatial awareness.

WALL PAINTING: Walls are good canvases for exploration and creation of ideas. The scale of wall painting can encourage student/learner to work collectively and create different forms of expression. Students/Learners can draw and paint objects and subjects of their liking from the immediate environment. They can be given a theme/topic from their textbooks or otherwise. Students/learners in the group can also paint any traditional painting styles (like *Warli*, *Madhubani*, *Sanjhi*) or any other folk wall painting style with cow dung, mud and locally available natural colours.



Wall Painting
as a part of AIL

RANGOLI MAKING: *Rangoli* is the traditional floor decoration of India. There are different kinds of decoration practiced in different States such as *Kolam*, *Mandana*, *Alpana*, etc. It is considered auspicious and is made every day in the morning, or on special days and occasions. *Rangoli* materials differ from state to state; usually it is made with dry powder colour and rice powder/paste. At some places, they use flour paste on mud applied on the floor/ground. But students should be encouraged to explore and use other eco-friendly materials such as flowers, leaves, sand and stones, saw dust, etc. They should find out the significance of *Rangolis* in different states. This will help them understand the cultural knowledge behind this tradition.



Rangoli for
Mathematics learning

9. Which of the performing arts are used in AIL sessions?

Performing arts include those art forms that can be viewed, heard, or performed such as music, drama, dance, mime, puppetry, etc.

MUSIC: We hear different types of sounds all around. They are of varied types—loud, soft, harsh, melodious, romantic, pathetic, joyful and so on. But, the type of sound which is pleasing to the ear, has melody and rhythm or *Sur* and *Taal*, has a systematic frame of an ascending and descending order, giving a variety of patterns and conveying emotions.

DANCE: It is a movement that possesses rhythm and beauty. It may or may not have a theme or a story. Movement, rhythm, design and expression are the basic elements of dance. Movement can be in rhythm or different rhythms. It can be in style (that is, different from the way one would move

in real life; in dance, a walk would have to be more beautiful than it would be in real life). Design would refer both to rhythm patterns made, as well as the movement patterns created. Expression refers to different emotions or feelings that are expressed through the dance.

MIME: Playing a scene or situation with the help of body movements and facial expressions only, and without dialogues is mime.

PUPPETRY: It is considered an important art form (dramatic) for any age or stage of the learner. First of all, learner immediately connects with puppet as a fellow being. Secondly, it is often easier for the learner of all ages to speak their mind out through the mouth of puppet-characters. Apart from this, they learn many things like handling the objects and if the puppets are made by themselves, it gives them a sense of great artistic and creative satisfaction. In order to incorporate some sensitive issues in terms of adolescent education, responsible behaviour and exploration of the emotional side, puppetry is considered to be an effective medium.

DRAMA AND THEATRE: Drama is the most natural form of arts that a learner can associate with. It facilitates listening to the learners and to allow them talking and communicating. It provides them with space to engage joyfully. They become more expressive, communicative (verbal and non-verbal), self-confident, co-operative and creative. Drama tends to combine all arts, but the element of drama that distinguishes it from other art forms is ‘acting’ or ‘enactment’. In other words, transformation of a person into a role of another person is drama. The inclusive nature of drama gives more opportunity to be more imaginative and creative. In drama, we deal with the lives of other people and the conditions surrounding us and them. This enhances student’s/learner’s understanding towards the



Students
expressing
themselves in
classroom drama

life around. Theatre and drama are the two terms which are widely used interchangeably. But each of the term has a different connotation. When we say ‘theatre’, we mainly think of a play performance for an audience. To express what students/learners know, feel and think, is an essential part of their development. A well thought-out drama activity can develop students in multiple ways, like; physically, mentally, emotionally and spiritually. Drama and theatre give experience of expressing thoughts and feelings by wearing the ‘shoes of others’. Drama can be used in teaching learning process multiple ways:

- As a classroom resource,
- As a tool to understand the learner (favourable in the adolescence learning)

STORY-TELLING: Story-telling is a process, which makes use of recitations and oral skills to create an immersive narrative which is drawn from curriculum prescribed textbooks. It helps in increasing the attention span of students/learners and makes them eager listeners who critically reflect on the happenings around them.

STORY-MAKING: Story-making is a process where students/learners are asked to create their own stories. It can be characters from their lessons, or people they have interacted with. Moreover, they can use various inanimate objects and infuse them with life through this process. The aim here is to give the student/learner an opportunity to explore their creativity and navigate within their own interests. It provides them with a confidence voiced through their own self-expression.

10. How should I include activities of performing arts in my class?

Begin with performing art based ice-breakers to gear up the class into an active and joyful learning mood. For example, it would be interesting to encourage them dance on a regional folk song which connects to the concept to be learnt. Teacher can even select a piece of folk music (instrumental) which has favourable beats to motivate them to dance. Ice-breaker could be that they dance when music is played and freeze when it stops. Gradually, teacher can facilitate them towards planned activities.

These are actually '**dance and movement games**' as students enjoy doing dance and movement and it works on their mental readiness for the creativity and for new learning. They can choose and change the movement pattern with the chosen song/s, and create a performance. Even without going for a public performance, students can be provided the opportunity to perform on stage and face the public by dividing the class into groups. Each group can be given an assignment, for example, to work with one movement of the hand and one movement of the leg, and set it to different patterns. Let groups work on their own for a while, then call everyone together. Each group then performs as per the given/taken assignment, while the rest of the class becomes the audience. Telling a story with action and expression is **drama**. Learner can be asked to express common feelings and emotions like; love, anger, sadness, joy etc., using body movements and facial expressions. They can also be encouraged to enact a story of their choice. **Music** is a natural part of their day-to-day experience. They listen to melodious sounds of chirping birds, wind blowing through trees, water in the river and the rain drops, sound of running machines, motor vehicles etc. They listen to the traditional instruments and songs on special days, celebrations and festivals. They listen to the film music, music on television and radio. They sing themselves and sometimes, they create their own songs when at play. Researchers have found that music can help students in learning mathematical concepts such as; additions, subtractions, multiplication, patterns, fractions etc. with interest.

It is very interesting to create work that involves more than one performing art. Involve students in dramatising a story from the textbook or day-to-day situations, with some of them playing background music created by humming or drumming on their table. They can be asked to make their own songs describing events, body systems, seasons, social/political/



Students doing each other's make-up for Mime activity

historical/geographical situations, great personalities, etc. Students of this age would like to make their own musical instruments, using empty cans and cardboard boxes, pots, spoons, wooden blocks and so on. They should be exposed to the regional and folk musical instruments. Subject teaching becomes very interesting when performing art is used to illustrate the topic. When learners have experienced the concept/subject through their singing and playing, they are able to learn it better and for longer duration. These experiences get imprinted in their mind forever.

11. I have never performed dance, music or acted in drama, how will I incorporate these art forms in my class?

To be a facilitator and organise art experiences for your students, what you need the most is the understanding of art integration, and its role in the holistic development of the learner, and not necessarily be a performing/practicing artist yourself. To facilitate art experience you need to understand the pedagogical needs for doing art and integrating arts, the need of exploration, experimentation and free expression; the need of observing, imagining and creating their own world; the need of having space and time to construct their own knowledge. As a facilitator you need to help in their natural process of learning.

Dance can be initiated by asking students to imitate nature. For example, clouds floating in the sky, dancing flowers, birds flying high in the sky, trees swaying to the breeze, a pond with a lotus with a bee hovering over it, a river in flow, a rabbit hopping around – all of this is dance. A simple rhythm can be given through clapping, changing the tempo of the claps to suit different moods.

Similarly, **music** can also be created. They can imitate sounds from nature, and put them into a tune, or else create any tune that they want. They can be asked to hum a tune to any of the dances that they have created or they can be asked to sing their names in three different tunes! They can also play with some popular songs or melodies that they have heard and are fond of!



Dance movements as a part of AIL session

Drama, too, can be incorporated very easily. With just a little bit of observation, we can, again by imitation, or imagination, create different moods and actions. Students may either be given a story-line to enact, or even better would be to encourage them to come up with their own stories (individual or group efforts). They should be encouraged to opt for roles, or else, distribute roles among themselves. It is important to remember that a finished end-product is not what we are looking for. The process should help them explore their imagination, increase their vocabulary, and inculcate in them the confidence to share whatever comes to their minds. Students of this stage can be encouraged to create detailed presentations, helping them to look for deeper understanding of the process and skills.

At the end, facilitator should always remember that objective here is not to judge students for their artistic skills, but focus on the Target Learning Outcomes decided for the session.

12. How does drama and theatre help in developing team spirit?

We generally work in groups in drama. To continue a dialogue, one has to listen to the other person first. Students have to co-ordinate with one another to execute the dialogues, and the movements in the right sequence, and at the right time. Theatre as a collective art needs co-ordination, not only among actors, but also among all others involved in the play, like musicians, set designers and others. Each performance binds them together. Appreciation from others makes them celebrate the success together. The sheer joy of performing together, further, motivates them to work in a team.



Students performing a skit in classroom

13. How can drama improve creative ability of students?

Doing drama helps in breaking the physical and mental barriers of learners, and sets the ground for them to explore their creativity. The most important effect of doing drama by students is to set them free from the fear of doing mistakes. As one can never proceed on the path of creativity with fear such as; What if it goes wrong, What if I fail, What if I lose etc. Drama naturally helps them in decision making, taking risks and problem solving, which is the foundation for creativity. Their ideas get spontaneous flow in drama when they build situations from the experience of their life. Through drama, they enter into new situations of life, and prepare themselves to face the unexpected. All this tremendously helps them to be more creative.

14. Can we do a play without makeup, costumes, background music and a stage?

Of course, we can. In fact, teacher should make it a habit to motivate students perform without formal props or routine makeup, costumes or background music. This will make them go through a deeper experience of ‘make believe’ art of drama or theatre. But, we should also remember that students like to dress up differently and decoratively. To have a new face, new expression, background music to support the mood and specific emotions is always appreciated and adds quality to performance. Moreover, by using all these aids, they get added benefits related to management, coordination and a feeling of celebration.

15. Why should dance be offered to students of middle stage?

Dance is a celebration of life. It is a joy to use movements to create beautiful rhythms. It is an eloquent expression of the emotions that we discover as



Cheerful students during their dance performance

we experience life. Exploration of the self in terms of movement control and inner feelings leads to the greater self-confidence. The element of coordinating steps with movement and glance (a very important feature of dance) results in improved psychomotor wellness (head and body co-ordination). Dance is also an area where emotions can be expressed freely. It helps in releasing pent up emotions in a positive manner without harming anyone, and liberating the learner to express freely. Students can create more beauty through dance. It enhances their aesthetic sensibility (awareness of beauty) and it affects their lives in a meaningful manner.

16. What can be the different techniques to explore sounds and movements in our surroundings?

The world of sounds

- **EXPLORING SOUND:** Exploring sound in the surroundings; imitation and reproduction of sound; recognising voices of your friends; machines, vehicles, animals and birds, wind and rain etc. And producing a sound by holding on to a note and letting others follow.
- **RECALL:** Any sound you have heard as strange, interesting, unique; bird and animal sounds; hawkers and interesting variations in human voices; sounds in nature.
- **RHYTHM AND TEMPO:** From a simple walk to a variety of footsteps, and the meanings that these convey; from simple to complex units of *Taal*; group activity on rhythm and tempo.

There is so much to listen to

- **LISTENING TO MUSIC:** Music of different kinds— from classical to experimental, from popular to seldom heard. At this stage they should be motivated to listen to the folk and regional music, sounds of folk instruments. Try to make instruments.
- **RESPONDING TO MUSIC:** Play some regional/folk music (preferably instrumental music), and ask the students/learners to listen and respond to it physically for free movements and spontaneous expression, basic music for simple choreographic movements. They should choose music as per their liking, for its sweet melody, rhythm, or for the beats of different instruments played in it. Teacher should participate in all such activities for better impact.

Creating sound

- **RECITATION:** The art of reciting a poem, with a sense of music and rhythm can also be used to inspire visualisation of the meaning of the poem.
- **OBSERVE DIFFERENT QUALITIES OF SOUND BY STRIKING DIFFERENT OBJECTS TOGETHER:** Two hands, the hand and the table, the feet and the floor,

the twang of a rubber band across a box, two spoons, hands on mouth of pitcher, and so on.

Music in life

- **POPULAR MUSIC :** Our folk and classical traditions of music. Even selected compositions of film music can be explored.
- **MUSIC FOR ALL OCCASIONS:** Folk music related to birth, marriage, festivals, rituals, and seasons.

17. Can we make our own musical instruments, costumes, and jewellery for our classroom activity?

Yes, students of this stage like to make their own musical instruments, costumes and jewellery. And making of instruments can be easily linked with new learning, especially with mathematics and sciences. They can be encouraged to explore the sound producing objects and create their own percussion and string instruments. A guitar can be made with the help of a shoebox, some rubber bands and a piece of wood. Eight glasses filled with different quantities of water can be set up as a *Jal Taranga* and different compositions can be tried. Make jewellery by using flowers, leaves and feathers. Make bangles and earrings. Cardboard, glazed paper, glitter and sequins can also be used to make inexpensive jewellery. Sophisticated musical instruments (folk and creative) can be made under the guidance of local artisans. For costumes and jewellery, there are innumerable artists and craftsmen in every region who can be identified, and proper guidance can be taken for learning the above skills.



Ornaments made with cotton and beads

18. How much time should be set aside for art experience at middle stage?

The time for art experiences for the Art Integrated Learning does not need special time. It is being organised for the learning of different concept/subjects therefore time allocated for those subjects can be utilised for this. Timetable for the Arts Education can also be clubbed with the subjects for Art Integrated Learning activities, if planned well in advance. There is a suggestion to utilise time allocated for the morning assembly, special assembly and festival celebrations if planned as a team with other teachers. Further, the teacher has to keep in mind that AIL does not mean that each sessions needs to be include new art experience. One can even link it with art experiences conducted previously. Students of this age can also be given home assignment/s to increase the community involvement and save teaching-learning time at the school. Please see the details in chapter 2 of this handbook under the subtitle —Planning time for AIL.



Morning assembly formation as a part of AIL

19. We do not have enough of resources/facilities (ground/money/electricity/musical instruments/support from parents, administrators, etc.) for art activities. What alternatives would you suggest?

There are activities which can be done without spending money and buying material. You can also plan your own activities with the help of other teachers/facilitators and students (you can refer to the 'Training Package on Art Education for Primary Teachers' Volume I and Volume II for learning about methods and material for art experiences). AIL strongly promotes the regional and local resources, self-made colours, local adhesive, agricultural waste, used/waste material. Students of this age like to hunt for the new material and innovate their own tools, and we should encourage them.

20. Can we take help of art teachers/facilitators and subject experts to plan and organise art activities, for our classes?



Team teaching as an integral part of AIL

Definitely, art teachers/facilitators should work together with the subject teachers/facilitators to plan, and organise AIL based art experiences. There is a great need of adequate public awareness about the art integrated learning and the holistic development of the learners to motivate all stakeholders of school education, including parents and the community. Subject experts from the field of art and design, especially local human resource should be invited and involved in the school activities.

21. How does AIL help in building an inclusive environment?

In AIL pedagogy, the focus is always more on the process of learning than the making of the final product. AIL in its approach provides equal space and opportunity to every student/learner irrespective of their learning abilities, gender, caste or their socio-economic or socio-cultural background. AIL capably implements the NEP 2020's recommendation of "*ensuring the inclusion and equal participation of children with disabilities in ECCE*" (p. 26). 'Divyang' (children with special needs) is given conscious attention to promote their participation in the AIL process of teaching-learning on an equal footing with their peers.

AIL discourages any kind of comparisons of one student/learner with another. It gives them freedom to go beyond rigid formal boundaries of the school and express their thoughts in their known medium, which they may not do in subject teaching-learning otherwise. Art activities help them engage with each other, so gradually barriers are broken, and students belonging to different backgrounds do develop meaningful communication and interaction. This makes students/learners learn, appreciate and value each other and create a healthy environment of unity in diversity.

22. Do we (teachers/facilitators) have to take special care while organising art activities for 'Divyang' (children with special needs)?

Absolutely. While organising any art classes, it is important for the teacher/facilitator to be sensitive to the needs of 'Divyang' (children with special needs). The teacher/facilitator should identify the talent and other abilities in 'Divyang' (children with special needs), and appreciate them. It is always good to include them with others for heterogeneous grouping of students. Care needs to be taken in the classroom while doing dance and theatre activities:

- Ensure that the work space is clear and free of obstacles like tables or open doors/windows, which the students could accidentally bump against and hurt themselves from.
- If there is any floor covering like mats/carpets, make sure the students are not in danger of tripping over them while moving.
- Keeping 'Divyang' (children with special needs) in mind, try to ensure that you begin with movements that everyone can take part in.
- If there are students who are unable to stand without help, try movements in a sitting position such as moving the arms, torso, head, etc.
- For visually impaired ones, you could begin with activities that emphasise sound and rhythm, like striking the ground with the feet, clapping the hands, patting the table, or snapping the fingers, singing, dancing and so on.

23. What is the importance of art appreciation in school education?

With the diversity of our cultural heritage, it is very important that we imbibe sensibilities of one another to live in harmony and grow as human beings. The school is the first place that makes space for this diversity to come together under one roof. We therefore, first and foremost, must develop a more inclusive school education system, that gives representation to a wide range of cultural experiences. However, art appreciation should not just consist of information of facts alone, but be a way of keeping the spirit of curiosity and enquiry alive in learners. Much can be achieved by way of giving space for free expression.

24. Can a museum be used as a resource for Art Integrated Education?

Museums are often related to the display and preservation of the artifacts from different periods, but they are the cultural roots of our civilization. Knowledge and pride of the generations partially depends on the foundation of our past. And museums are the ideal of such places for maintaining that glorious and vibrant past. Museums bring in focus; the knowledge, traditions and practices of our cultural heritage which are very much part of our today, but we are not aware of that. Museums can provide ideal opportunity to make subject learning interesting, and add drama, and colour to the learning process. Such experiences at museums will leave a permanent impact on students'. Now-a-days, museums also have

several educational programmes for different age groups. Museum visits have become a necessary part of the present curriculum; so museums also conduct educational activities accordingly.

25. Can students/learners build their own museums?

Yes, students/learners of this age group can start building their own museums with the help of school. And for this, we do not need a big building/space or special infrastructure or training, because here we are not talking about creating big institutional museums or galleries. We are talking about the extended form of the museum which can be possible easily with available resources in the community. Schools can request to utilise the village *panchayat ghar*, or a room of any given house.

These school museums need not have permanent exhibits. They can keep changing the exhibits as per the need of the curriculum and other activities. Changing the exhibits from time to time will keep up their enthusiasm, develop observation and a sense of design as well as help teach them how to care for different kinds of artifacts. This museum-making activity need not be confined to the school premises only. Students/Learners can go out and connect themselves with the cultural activities of their own locality. So it will not be restricted only to looking and enjoying the events, but it will also engage students/learners in observing, recording and documenting, by drawing or collecting pictures of the costumes, jewellery, makeup, musical instruments, props, rituals, etc. Museum-making activity gets schools involve the local community, and they will be happy and proud to display their local culture in a museum which will connect their next generation with their cultural roots.

26. What kind of museums can students/learners build?

Students/Learners can build various types of museums from their day-to-day activities at school, as well as at home. Students have a natural tendency to collect various objects. Even this collection of theirs can be converted into museum objects, supported with basic information. For example, different types of stones, sand, leaves, flowers, feathers, stamps, shells, seeds, coins, etc. Teachers/Facilitators can ask students/learners to collect and arrange their collection in the classroom and convert the classroom into an art gallery. Students/Learners can also be encouraged to bring unused objects from home like old lanterns, lamps, shells, combs, hand-fans, caps and turbans, dolls and other pieces of crafts, etc. and arrange them with basic information in written form. For cultural programmes of the school, students/learners create costumes, jewellery, props which can also become part of the museum.

27. Can museum visit be counted as a curricular activity?

Museum visits are very much part of the curriculum and promotes integrated approach to learning where logical, visual, and audio faculties of learning get activated simultaneously. Museums have plenty of learning resource for every school subject. Every subject teacher/facilitator can

relate their classroom teaching to the museum exhibits. Art Integrated Learning as a pedagogy designs and promotes well designed activities (based on work-sheet/drawing and sketching, projects on replication of selected artifacts etc.) at the museum or at the end of the museum visit. Students can also make power point presentations on different periods of the history and submit as an assignment for evaluation.

28. What are the tools and techniques of AIL based assessment?

Observation records, oral questions, interactions and interviews, checklist on display, presentation and performance of students. Portfolios with samples of work done over a period is another important resource for assessment.

OBSERVATION: This technique involves observing the learner during work, so as to gather relevant information about their work habits, involvement, progress, etc. It is useful to observe the learner without them knowing that they are being assessed. It is also useful to understand the thought process of the learners, their ability to work consistently, and their interactions with their peers. The teacher/facilitator can facilitate the learners better by providing them timely support.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool will be effective when learners are working on a project, either individually or in groups, after the teacher/facilitator has initiated the lesson. Any kind of art activity can be assessed through this method of observation.

PROJECT OR SMALL ACTIVITY: A project or a small activity can be given at the end of the unit. It can be a project that sums up the learning of the unit. This method is useful for assessing how well the learner has understood the entire unit. It assesses the learning that has occurred and its application in real situations. It helps to recap all that has been learnt.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool is effective when many different lessons that have been taught are related to each other, and where the learning builds from previous knowledge. The teacher/facilitator gets an overview of the learner's understanding of the concepts taught through the project.

PORTFOLIO: It is a collection of the work done over a longer period of time, maybe a term. This kind of assessment provides a cumulative record of learner's performance. It also shows how the development of the learner has occurred over a period, and which areas have been consistently weak and needs improvement. It tells the teacher/facilitator how the learner constructs knowledge, and this can help the teacher/facilitator decide on further strategies for teaching.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This method can be used for the term-end assessment, when the teacher/facilitator has to look at the overall performance and assign holistic grades.

CHECKLIST: It is a systematic way of recording specific actions that can help focus attention on particular aspects of an assignment. Checklists are a

list of criteria that the teacher/facilitator thinks are important to observe a learner at a particular time. It is quick and easy to implement, and provides specific information about specific objectives.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool can be used either for self-evaluation, or when the teacher/facilitator has set objectives which they want to assess in an objective manner.

RATING SCALES: They have the same use as observation checklists. They record the degree to which the presence or absence of a particular knowledge, or skill are found. It is used to record and assess the quality of work against specified criteria. Holistic rating scales require a single, overall assessment of a piece of work. You can assess various aspects of development in a single assessment. This method is found useful for both individual as well as group work.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool is effective in understanding the overall performance of a learner, as also the way the different aspects of the assignment have been approached. It gives the teacher/facilitator an insight into the strong and weak areas of a performance. It is effective when an assignment requires various levels of work, thinking, analysing, creating, etc.

ANECDOTAL RECORDS: They refer to written descriptions of learner's progress that a teacher/facilitator keeps on a day-to-day basis. It provides observational and narrative records of the significant incidents in a learner's life. It provides a wealth of information across different developmental areas. It provides an insight into the social and emotional development of the learner and also of their strengths and weaknesses.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool can be used to make holistic reports of the learner's overall development over a period. The narratives give a clear idea about their understanding and knowledge of the topic/subject, their choices, interests and relations with others.

DISPLAYS: They can be in the form of wall mounts or table top installations. They can display the work done by the student/learner for a particular project or a theme. This tool allows students display their work, and thus ensures that the work is of good standard. It helps the students feel pride in their work. It is also advantageous as the rest of the class gets to learn from displays of one another, and thus learning is expanded.

- **SITUATIONS WHERE IT IS EFFECTIVE:** This tool can be used when group work has been assigned, or each group has been assigned a different aspect of the lesson, which can then be shared with the rest of the class. This kind of a lesson can be assessed by peer evaluation.

29. How beneficial is digital media for conducting AIL sessions?

Digital media is a highly interactive medium that can be used to explain various concepts of different subjects. Students/learners are intrinsically drawn towards interactive media and films. Media is an important part of

their life since childhood. Students/Learners of this age can be guided to explore educational resource readily available on television and YouTube channels to enhance their knowledge. Teachers/Facilitators and parents can access a vast pool of video materials available in NCERT website, DIKSHA, ePathshala and make its generous use while facilitating the art activities. Teacher/Facilitator can document the classroom transactions and create a pool for future references. ICT resources need to be encouraged in this process and AIL is constantly attempting to integrate interactive media into educational methods.

Digital media becomes conducive for the AIL pedagogy as it enables online transaction of the activities where parents could help their wards. The online resource is just a click away as the links of instructional and educational material can be shared and accessed without constraints. Educational films can be used across the entire curriculum. Subjects like history, geography can be made interactive by showcasing films pertaining to historical and geographical concepts. This will help the student/learner to develop a long-lasting interest in these subjects and find their own ideas related to it.



*Use of ICT
as tool in AIL
pedagogy*

30. What are the online resources that can be accessed to gather material for AIL activities?

Apart from YouTube, educational videos and open space platforms of educational resources, we have;

DIKSHA: Digital Infrastructure for Knowledge Sharing is an online portal which aids teachers/facilitators to learn and train themselves and help them create teaching aids, assessment resources and connect with the teacher/facilitator community. (<https://diksha.gov.in>)

ePATHSHALA: The ePathshala, a joint initiative of Ministry of Education, Govt. of India and National Council of Educational Research and Training (NCERT) has been developed for showcasing and disseminating all educational e-resources including textbooks, audio, video, periodicals, and a variety of other print and non-print materials for students/learners, Teachers/Facilitators, Parents, researchers and educators. It provides access to digital textbooks for all classes, graded learning materials and enables participation in exhibitions, contests, festivals, workshops, etc. (<https://epathshala.nic.in>)

NCERT WEBSITE (<https://ncert.nic.in>) and its official YouTube channel (<https://www.youtube.com/channel/UCT0s92hGjqLX6p7qY9BBrSA>) contains a lot of online sessions conducted by experts on how to conduct sessions and relate to the learning outcomes of the subjects. It can be easily accessed by one and all.

SWAYAM: Swayam is an Indian Massive Open Online Course (MOOC) designed with the objective of providing best teaching learning resources

to all through seamless access equity and quality. It has video lectures, specially prepared reading material and self-assessment tests which can be easily downloaded for personal use. (<https://swayam.gov.in>)

PM e-VIDYA: PM e-Vidya also called as one Nation one digital platform is a program launched by Government of India after the nationwide lockdown to provide online education to all the students/learners of the country. Its special features included launch of Diksha platform involving e-content and QR code energised books for all the classes, TV channel called one class one channel for students/learners studying in class I to XII, launch of *Swayam Prabha* TV channel for students/learners who do not have access to internet, online coaching for competitive exams, special content for visually and hearing impaired and extensive use of radio, community radio and podcast. (<https://pmevidya.education.gov.in>)

NISHTHA: The introduction of AIL is done under NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement) to prepare teachers/facilitators of elementary classes for holistic and competency-based teaching and learning. 'AIL Guidelines-Elementary' have been developed and launched to ensure the effective implementation of AIL in all schools of the country. The users can explore Art Integrated Learning modules of NISHTHA, Elementary for demonstrations of Art Integrated Learning. (<https://itpd.ncert.gov.in>)

31. What specific changes need to be made in the AIL pedagogy at middle stage?

Students of this stage (10+ to 14) fall in the category of adolescence. It's considered to be the beginning of adolescence, where student/learner starts believing and showing that they are no more a child. The feeling of 'I know' starts building up and ego related issues are on the increase. This situation demands more creative space for the learner. They need to get into situations where there are more challenges to engage them, more space for exploration and experimentation, resulting into creation. And AIL pedagogy being based on the art experience, provides the natural mixture of their active engagement in the process on one hand and celebration and acknowledgment of their creative potential on the other. In AIL, teachers/facilitators are encouraged to limit their role of teaching and increase the time for planning and facilitation so as to provide more time and space for experiential learning of the students and very less time to teach theory. This will not only help them learn their subject/s better but may also help in enhancing their 21st century skills and socio-emotional skills.

32. Till preparatory stage, one teacher is teaching all the subjects which makes multidisciplinary approach easier. How AIL can help in multidisciplinary/inter-disciplinary approach at the middle stage, where there are different teachers to teach different subjects?

AIL activities can be planned in such a way that teachers/facilitators can use one art experience to teach and learn multiple topics/subjects and concepts. To follow an inter-disciplinary and multi-disciplinary approach, the teachers of different subjects, including those of art education and physical education

need to work as a team. They are suggested to plan their activities and club periods and practice team teaching atleast once a week. This will not only make students learn better but also save on the quality learning time which is otherwise spent on moving from one compartment to another.

34. Learners at the middle stage get more adept in skills of art. Should the 'product' created be given emphasis at this stage?

The focus of Art Integrated Learning at every stage is on the process rather than product. It is true that their skills of making and performance get refined and they like to be appreciated for the fineness in their work of art, but we the teachers/facilitators have to be focused throughout on arts as the learning process. It's difficult at times but we do pick up the skill of general appreciation towards each learner which keeps their interest intact and they stay motivated and engaged in the process. Of course they need to know that their skills in arts shall be evaluated in Art Education, which is a curricular area.

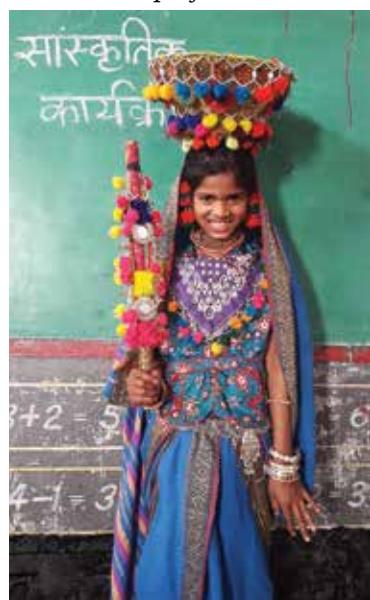
35. How does theatre exercises/warm-ups help learners of this particular stage?

Drama and/or Theatre exercises help in releasing the inhibitions of the learners, confidence to perform and face the viewers. These exercises aid students to look at the positive aspects of each other in the group. For example: when all students are doing these exercises together, it can help them to overcome gender stereotypes and gender differences, as all of them are equal as team. Drama and theatre exercises provide students with the experience of expressing their thoughts and feelings by being in different roles and situations, thereby imbibing the values of tolerance, compassion and empathy, which is the need for learners at this particular stage.

36. Why regional arts and cultural knowledge, traditions and practices are considered important in AIL?

The best way to learn about any culture is through its arts. The arts are the universal language spoken and understood by everyone. They blur the boundaries between individuals from different cultural, social, and economical backgrounds. India has rich reservoir of regional and folk arts and each of these forms represents the cultural ethos of a particular region or a group of people. Unless the students of this stage understand and appreciate their own cultural heritage, how will they develop required sensitivity towards diversity in Indian culture? Art integrated learning has other important objective behind promoting regional arts and cultural knowledge, traditions and practices as an approach, and that is familiarity of the learner and community with their arts and traditions. We are enhancing the value of regional and folk arts by providing them centre stage in learning of different subjects at school level. Another important aspect in promoting regional arts is connecting school with the community and community with schools. NEP 2020 strongly recommends inviting prominent artists and artisans from the community to work with students, interact with them to make them learn the methods and techniques of regional art forms for in depth learning of arts.

A student ready for
cultural programme
performance





4

EXEMPLARS

4.1 HINDI

ACTIVITY 4.1.1

विषय	हिंदी
कक्षा	VI
पाठ्यवस्तु	निबंध (साँस-साँस में बाँस)
प्रयोग में लाई गई कला	दृश्य कला एवं प्रदर्शन कला



0644CH17

‘कला समेकित अधिगम’ योजना का सामान्य परिचय

‘साँस-साँस में बाँस’ लेख में भारत के, विशेषकर उत्तर-पूर्वी राज्यों की बाँस-कला के बारे में जानकारी दी गई है। इस पाठ में दी गई प्रक्रियाओं और अवधारणाओं की जानकारी को समझने और मूर्त करने के लिए विशेष योजना बनाना आवश्यक है। इसी दृष्टिकोण से आगे दी गई योजना को सुझाया गया है।

इस योजना में विद्यार्थी स्थानीय संसाधनों का प्रयोग करते हुए अपने हाथों से कलाकृतियों की रचना करेंगे। इस प्रक्रिया में वे पाठ में दी गई शब्दावली और प्रक्रियाओं से अच्छी तरह परिचित हो जाएँगे और जब पाठ के वाचन का चरण आएगा, उसे अधिक बेहतर समझ के साथ पढ़ सकेंगे। इस योजना में मंचीय प्रदर्शन की तैयारी हेतु समूहों में कार्य करेंगे। इन कार्यों को करते हुए वे भाषा और पाठ की विषय-वस्तु के साथ सक्रिय रूप से लेन-देन करेंगे और इस प्रकार भाषा और विषय-वस्तु पर अपनी पकड़ मजबूत करेंगे।

अधिगम प्रतिफल

सत्र के अंत तक, शिक्षार्थी —

- अपने से भिन्न भाषा, खान-पान, रहन-सहन संबंधी विविधताओं पर बातचीत करते हैं।
- किसी पाठ्यवस्तु की बारीकी से जाँच करते हुए उसमें किसी विशेष बिंदु को खोजते हैं, अनुमान लगाते हैं, निष्कर्ष निकालते हैं।
- विभिन्न विधाओं में लिखी गई साहित्यिक सामग्री को उपयुक्त उतार-चढ़ाव और सही गति के साथ पढ़ते हैं।
- अपने परिवेश में मौजूद लोककथाओं और लोकगीतों के बारे में जानते हुए चर्चा करते हैं।
- विविध कलाओं, जैसे—हस्तकला, वास्तुकला, खेती-बाड़ी, नृत्यकला आदि से जुड़ी सामग्री में प्रयुक्त भाषा के प्रति जिज्ञासा व्यक्त करते हुए उसकी सराहना करते हैं।
- विभिन्न विषयों, उद्देश्यों के लिए उपयुक्त विराम-चिह्नों का उपयोग करते हुए लिखते हैं।

उद्देश्य

- ध्यानपूर्वक सुनकर समझना।
- निर्देशों को सुनकर/पढ़कर उनके अनुसार कार्य करना।

- आत्मविश्वासपूर्वक अभिव्यक्ति करना (मौखिक/दैहिक)।
 - दूसरों की अभिव्यक्ति में रुचि उत्पन्न करना।
 - दूसरों की अभिव्यक्ति, समस्याओं, परिवेश आदि के प्रति संवेदनशीलता का विकास करना।
 - किसी अवधारणा से जुड़ी शब्दावली का विकास करना।
 - विराम-चिह्नों और व्याकरणिक नियमों को ध्यान रखते हुए स्वतंत्र लिखित अभिव्यक्ति करना।
- शिक्षक को सलाह दी जाती है कि वे सुझावात्मक प्रदर्शिका को पढ़ें एवं कला समेकित सत्र के सुचारु संचालन के लिए पूर्व व्यवस्था करें।

सामग्री

नियमित कक्षा के लिए— व्यर्थ सामग्री जैसे पुराने अखबार, पुरानी बोरी की धागे, सुतलियाँ, बाँस आदि जो भी परिवेश में आसानी से उपलब्ध हो। सामग्री का प्रबंध अध्यापक और विद्यार्थियों दोनों के द्वारा किया जा सकता है।

(छात्रों को स्थानीय विशिष्ट सामग्रियों का सदृपयोग करने एवं सामग्री को व्यर्थ न करने के लिए प्रोत्साहित करें।)

ऑनलाइन कक्षा के लिए— इंटरनेट कनैक्शन, टैब, मोबाइल फ़ोन, लेपटोप आदि।

तैयारी

पाठ को अच्छी तरह पढ़ लें। जिस वस्तु का सृजन किया जाना है, उसके लिए पहले से तैयारी कर लें।

यदि ऑनलाइन माध्यम का प्रयोग किया जा रहा है तो इंटरनेट कनैक्शन, उपकरण आदि की व्यवस्था और जाँच पहले से कर लें। विद्यार्थियों को पहले से निम्नलिखित के लिए सूचित कर दें—

- समय,
- तिथि,
- तैयारी में विद्यार्थियों की भूमिका,
- किस माध्यम द्वारा कक्षा आयोजित की जाएगी, आदि।

क्रियान्वयन

चरण 1 (आइस ब्रेकर – करामाती टोपी)

एक टोपी पहनकर प्रसन्नचित्त भाव से कक्षा/ऑनलाइन माध्यम/प्लेटफॉर्म में प्रवेश करें। विद्यार्थियों से कहें— मैं इस टोपी को उछालूँगा। आपको अपनी जगह पर खड़े-खड़े इस टोपी को अपने सिर पर ‘कैच’ करना है। जो अपने सिर पर टोपी को ‘कैच’ कर लेंगे, उन्हें बाकी विद्यार्थियों से एक पहेली पूछने का अधिकार होगा। पहेली इस तरह की होगी— ‘मैं अचार भी हूँ, फल भी’ या ‘मुझसे रस्सी भी बनती है और टोकरी भी’। गतिविधि करवाने से पहले विद्यार्थियों के प्रश्नों और जिज्ञासाओं का समाधान करें। इसके बाद इस गतिविधि को करवाएँ।

गतिविधि का उद्देश्य विद्यार्थियों को आगामी पाठ के लिए उत्साहित करना और मानसिक रूप से तैयार करना है। इस पाठ में इन कौशलों का बड़े स्तर पर प्रयोग किया जाना है। ऑनलाइन कक्षा के दौरान किसी अन्य तरीके से विद्यार्थी पहली पूछने का क्रम निर्धारित कर सकते हैं, जैसे जो विद्यार्थी सबसे पहले आया, वह सबसे पहले पहली बूझेगा।

अपने हाथ से बनाएँ

विद्यार्थियों से पूछें— टोपी किस-किस सामग्री से बनाई जाती है? आपके घर में कौन टोपी पहनता है? टोपी जैसे सिर पर पहनने वाले और परिधानों के नाम बताइए (जैसे पगड़ी, खण्डवा)। कुछ टोपियाँ हाथ से बनती हैं, कुछ मशीनों से। हाथों से कौन-कौन-सी चीज़ें बनाई जा सकती हैं?

इसके बाद विद्यार्थियों से कहें— कल हम अपनी कक्षा में अपने हाथ से कुछ चीज़ें बनाएँगे। जो चीज़ हमें बनानी आती है, वह दूसरों को भी सिखाएँगे और उनसे सीखेंगे भी।

विद्यार्थियों से चर्चा करें कि वे क्या बनाना चाहते हैं और कैसे। हो सकता है कि कोई कागज के लिफ्टाफ़े बनाना चाहे, कोई टोपी और कोई नाव। विद्यार्थियों के साथ मिलकर चिंतन करें कि जो वे बनाना चाहते हैं, उसके लिए क्या सामान चाहिए और वह कहाँ से मिल सकता है। स्पष्ट कर दें कि ये चीज़ें व्यर्थ सामान के उपयोग से ही बनाएँगे। विद्यार्थियों के समूह बनाकर उत्तरदायित्व बाँट दें कि कौन, क्या लाएगा। अधिकतर विद्यार्थी स्वयं ही बता देंगे कि वे क्या कर सकते हैं और क्या नहीं।

ऑनलाइन कक्षा के दौरान विद्यार्थियों को पहले से उन चीज़ों का प्रबंध करने के लिए कह दें, जिनकी आवश्यकता अगले दिन पड़ने वाली है। वे परिवार के किसी सदस्य के साथ टीम में निर्माण कार्य कर सकते हैं।

अगले दिन विद्यार्थियों के समूह बनाकर उनसे उनकी पसंद की वस्तुएँ बनवाएँ। जब विद्यार्थी समूहों में कार्य कर रहे होंगे, तो उनके बीच जाकर, उत्साहवर्धन करके, उनकी सहायता करके, उनके कार्य में योगदान दें। यदि कोई सामान नहीं है तो उसका विकल्प सुझाएँ। इस कार्य में कला-अध्यापक की भागीदारी भी ली जा सकती है। ऑनलाइन वीडियो कार्यक्रमों का उपयोग भी सीखने-सिखाने में किया जा सकता है।

ऑनलाइन समूह बनाने के लिए निम्नलिखित में से किसी वेबसाइट का निःशुल्क प्रयोग किया जा सकता है—

<https://www.aschool.us/random/random-pair.php>

<https://www.classdojo.com/en-gb/toolkit/groupmaker/?redirect=true>

<https://www.transum.org/software/RandomStudents/>

<https://www.randomlists.com/team-generator>

<http://chir.ag/projects/team-maker/>

<https://www.superteachertools.us/instantclassroom/#.WIO-A1Q-eL8>

अगले दिन विद्यार्थी/समूह सामने आकर अपनी-अपनी वस्तुएँ दिखाएँगे और बताएँगे कि उन्होंने उसे क्यों और कैसे बनाया। इसके बाद प्रत्येक विद्यार्थी अपनी बनाई हुई वस्तु को बनाने की प्रक्रिया अपनी कॉपी में लिखेगा। इस प्रक्रिया के प्रत्येक चरण में उन्हें आपका सहयोग मिलता रहेगा।

इस चरण द्वारा विद्यार्थी अपने पूर्व अनुभवों का प्रयोग करते हुए स्वयं सृजन करेंगे और उसे बनाने के दौरान भाषा का मौखिक और लिखित प्रयोग करेंगे। आनंद और सक्रियता से भरपूर इस वातावरण में वे भाषा का सृजनात्मक उपयोग करते हुए पाठ से मानसिक रूप से जुड़ जाएँगे। साथ ही वे सृजन से जुड़े शब्दों का प्रयोग भी समझेंगे और करेंगे।

विकल्प

- विद्यार्थियों से दो दिन पहले कहा जा सकता है कि वे अपने-अपने घरों से कुछ ऐसी चीजें लेकर आएँ जो हाथों से बनी हैं, जैसे — हाथ का पंखा, बंधनवार, टोपी, झोला, सजावट की वस्तुएँ।
- यदि उनके परिवेश में बाँस का अधिक प्रयोग किया जाता है तो बाँस से बनी वस्तुएँ मँगवाई जा सकती हैं।
- पहले से पता किया जा सकता है कि कक्षा का कौन-सा विद्यार्थी अपने हाथ से क्या बना सकता है। फिर कक्षा में समूह बनाकर प्रत्येक समूह को कोई एक वस्तु बनाने के लिए भी कहा जा सकता है। विद्यार्थी जोड़ों में भी कार्य कर सकते हैं।
- बनाने के लिए कुछ सुझाव आप भी दे सकते हैं, जैसे — कागज से चटाई, सजावट का सामान बनाना, अखबारी कागज की मोटी पट्टियाँ बनाकर उनसे टोकरी बनाना, लंबी रस्सीनुमा चीजों से बुनाई करना, कागज से खिलौने बनाना, बैग बनाना, पेपर मेशी का सामान बनाना आदि। (जो भी विद्यार्थियों के परिवेश में सामान्य हो)

चरण 2

अब विद्यार्थियों से बातचीत करें और उन्हें बताएँ कि उन्होंने जो वस्तुएँ बनाई हैं, उनका प्रयोग करते हुए उन्हें कक्षा के सामने एक दृश्य प्रस्तुत करना है, जैसे— बाज़ार, दुकान, घर, स्कूल, मंगल ग्रह के लोग; कुछ भी जहाँ तक उनकी कल्पना जा सके। उदाहरण के लिए— यदि किसी समूह ने टोपी, फिरकी, नाव आदि बनाई है तो वे मेले का दृश्य भी प्रस्तुत कर सकते हैं।

विद्यार्थियों को तैयारी के लिए समय दें और निर्धारित समय के बाद प्रस्तुति करवाएँ। प्रत्येक प्रस्तुति के लिए दो मिनट का समय दिया जा सकता है।

इस गतिविधि के दौरान एक-दूसरे को सुनने, एक-दूसरे से सीखने, धैर्य आदि कौशलों का विकास होगा। साथ ही ध्यानपूर्वक सुनने और समझने के कौशल का भी विकास होगा। इस प्रक्रिया में विद्यार्थी स्वयं संवाद गढ़ेंगे, पढ़ेंगे और उस पर प्रतिक्रिया करेंगे।

विकल्प

- यह कार्य भी समूह बनाकर करवाया जा सकता है। इससे विद्यार्थियों में सामूहिकता की भावना का विकास भी होगा।
- यदि कोई समूह/विद्यार्थी आपसे सलाह माँगता है तो उसे सलाह अवश्य दें।

यदि विद्यार्थी पहली बार इस प्रकार की स्वतंत्रता का अनुभव कर रहे हैं तो शायद वे लीक से हटकर सोचने के आत्मविश्वास का प्रदर्शन नहीं कर सकेंगे लेकिन कक्षा में इस प्रकार का उन्मुक्त वातावरण बने हुए कुछ अरसा हो गया है तो विद्यार्थी इतनी कुशलता से अभिनय कर सकेंगे कि आप भी आश्चर्यचकित रह जाएँगे। अतः कक्षा में जितना जल्दी हो सके, स्वतंत्र रूप से सोचने और बोलने का परिवेश बनाना आवश्यक है। स्वतंत्रता के साथ उत्तरदायित्व की भावना का जन्म अपने-आप हो जाता है, अतः इस बात से चिंतित न हों कि ऐसी स्वतंत्रता से कक्षा का वातावरण सीखने-सिखाने लायक नहीं रहेगा।

चरण 3

विद्यार्थियों से कहें कि हाथ से चीजें बनाने में अनेक प्रकार की सामग्री का उपयोग किया जा सकता है। जिस स्थान पर जो भी वस्तु आसानी से मिल जाती है, लोग उसी का प्रयोग कर लेते हैं। कुछ स्थानों पर बाँस आसानी से मिल जाता है, वहाँ उसी से अनेक प्रकार की वस्तुएँ बना ली जाती हैं। अब हम इसी के बारे में पढ़ेंगे।

विद्यार्थियों को यह पाठ भावों और उचित विराम आदि के साथ पढ़कर सुनाएँ। बारी-बारी से विद्यार्थियों को पाठ स्वयं पढ़कर सुनाने के लिए आमंत्रित करें। ध्यान रखें कि इस कार्य के लिए उन विद्यार्थियों को अवश्य आमंत्रित किया जाए, जिन्हें हिंदी पढ़ने में अभी दिक्कत है या आत्मविश्वास की कमी है। चूँकि पाठ के वाचन की गतिविधि प्रत्येक पाठ के साथ अवश्य की जानी है, इसलिए ध्यान रखें कि ऐसा न हो कि कुछ विद्यार्थियों को पठन का बार-बार अवसर मिल जाए और कुछ को कभी अवसर न मिले।

पाठ पर चर्चा द्वारा पाठ के अर्थ को विद्यार्थियों से प्राप्त करने का प्रयास करें। इसके लिए कुछ प्रश्नों का प्रयोग भी किया जा सकता है, जैसे —

- क्या आपके घर में भी पाठ में आई लोककथा जैसी कोई कहानी सुनाई जाती है? यदि हाँ तो कौन-सी?
- यदि आपको बाँस को छीलना हो तो कौन-से औज़ार का उपयोग करोगे?
- आपके घर में किन-किन औज़ारों का उपयोग किया जाता है और किन कार्यों में किया जाता है?
- क्या आपके घर में हाथ से कुछ बनाया जाता है? क्या? किस मौसम में? क्यों? आदि।

प्रयास करें कि आप स्वयं उत्तर न दें और कक्षा में विद्यार्थी ही आपस में बातचीत करें, आप केवल उसे दिशा देने तक सीमित रहें। अपेक्षा यह है कि विद्यार्थी एक-दूसरे से खुलकर प्रश्न करें, तर्क करें, अपने विचार रखें, अपने अनुभव साझा करें। आप चाहें तो विद्यार्थियों जैसे ही एक प्रतिभागी की तरह चर्चा में भाग ले सकते हैं।

इस चर्चा का उद्देश्य विद्यार्थियों को पाठ से जोड़ना है। प्रत्येक विद्यार्थी की प्रतिक्रिया का सम्मान करें। ध्यान रखें कि आपके भाव या शब्द विद्यार्थियों को किसी प्रतिक्रिया को सही या गलत की श्रेणी में डालने का संकेत न कर दें। इन प्रश्नों के एक से अधिक उत्तर सही हो सकते हैं और ये मुद्दे ऐसे हैं जिनका उत्तर खोजने की प्रक्रिया इनके उत्तरों से अधिक महत्वपूर्ण है क्योंकि प्रक्रिया ही विद्यार्थियों के भावों को सक्रिय करके उनके विचार गढ़ने का कार्य करेगी, उनके मन में संवेदनशीलता का विकास करेगी। अतः यदि उन्हें कोई आदर्श उत्तर बता दिया जाएगा तो उस उत्तर का कोई लाभ नहीं होगा। जब विद्यार्थी प्रतिक्रिया दे रहे होंगे तो उन्हें आपस में चर्चा करने, सवाल पूछने और एक-दूसरे की बातों को तर्कों से काटने की पूरी आजादी होनी चाहिए। इसी दौरान उनकी अभिव्यक्ति और भाषा का आकलन अवलोकन द्वारा किया जा सकता है।

चरण 4

विद्यार्थियों से जो बातचीत की गई है, उसके आधार पर चर्चा के बिंदुओं को प्रश्न-उत्तर के रूप में लिखवाया जा सकता है। चूँकि प्रत्येक विद्यार्थी को प्रत्येक प्रश्न का उत्तर पता है; उसने अपना उत्तर स्वयं खोजा है, इसलिए वे स्वयं उन्हें लिख सकेंगे। जिन विद्यार्थियों को लिखने में दिक्कत है, उनकी सहायता उनके साथी या आप भी कर सकते हैं। इस चरण के लिए निम्नलिखित क्रियाकलाप भी करवाया जा सकता है—

पाठ में से ऐसे वाक्य खोजिए, जिनके द्वारा लेखक ने —

- बाँस की बुआई के बारे में बताया है।
- बाँस के उपयोग के बारे में बताया है।
- बाँस के औजारों के बारे में बताया है।
- बाँस प्राप्त होने वाले इलाके के बारे में बताया है।

आकलन

इस पूरी योजना में प्रत्येक चरण के साथ-साथ आकलन जारी रहेगा। आकलन को मुख्यतः अवलोकन और विद्यार्थियों के साथ बातचीत द्वारा किया जाएगा। आकलन में विद्यार्थियों की अभिव्यक्ति और श्रवण कौशलों के साथ-साथ उनके आत्मविश्वास, तर्क, चिंतन आदि पहलुओं को ध्यान में रखा जाएगा। चूँकि हिंदी भाषा का एक प्रमुख पक्ष लेखन भी है, अतः लिखित कार्य द्वारा विद्यार्थियों के लेखन कौशल का आकलन भी अपेक्षित है। लेखन और मौखिक कौशलों के आकलन का सबसे प्रमुख पक्ष अभिव्यक्ति की मौलिकता है। अतः यांत्रिक पक्षों के स्थान पर आकलन में मौलिकता, कल्पनाशीलता और भाषा के सौंदर्य पर अधिक बल दिया जाए।

भाषा से संबंध

कला समेकित अधिगम की इस योजना द्वारा विद्यार्थी विविध तरीकों से आपस में संप्रेषण और भाषा का सार्थक संदर्भों में प्रयोग करेंगे। इसके द्वारा पाठ्यपुस्तक के पाठ और उसकी अवधारणाओं को समझने, दोहराने और उन पर प्रतिक्रिया करने में सहायता मिलेगी। किसी अन्य पाठ को लेकर भी इस प्रकार की गतिविधि करवाई जा सकती है जो कक्षा में नवीनता और ऊर्जा भर देगी। इनके द्वारा किसी अवधारणा से संबंधित शब्दावली का विकास भी संभव है, जैसे — ‘बाँस’ या हाथ से बनने वाली वस्तुओं (हस्तशिल्प) से संबंधित शब्द और वाक्य।

अन्य विषयों से संबंध

इस पाठ के दौरान जिन कौशलों का विकास होगा, वे प्रत्येक विषय के अध्ययन में उपयोगी सिद्ध होंगे, जैसे — तर्क करना, अनुमान लगाना, निष्कर्ष निकालना, अनुभवों के बीच समानता और अंतर की पहचान करना, व्याख्या करना आदि।

इसके अतिरिक्त, कुछ विषयों के कुछ पाठ सीधे ही इस लेख की विषय-वस्तु से जुड़ाव रखते हैं। यदि अन्य विषयों के अध्यापकों से चर्चा करके योजना इस प्रकार बनाई जाए कि इन पाठों को किसी अवधि विशेष में समानांतर रूप से लिया जा सके तो यह समग्र अधिगम के दृष्टिकोण से अत्यंत उपयोगी रहेगा। विभिन्न विषयों को समेकित रूप से पढ़ाने का एक लाभ यह भी है कि इससे दोहराव से बचाव होता है और बचे हुए समय को विद्यार्थियों द्वारा अन्य उपयोगी कार्यों में लगाया जा सकता है।

1. विज्ञान- अधिगम प्रतिफल – डिजाइन बनाने, योजना बनाने एवं उपलब्ध संसाधनों का उपयोग करने में रचनात्मकता का प्रदर्शन करते हैं। ईमानदारी, वस्तुनिष्ठता, सहयोग, भय एवं पूर्वाग्रहों से मुक्ति जैसे मूल्यों को प्रदर्शित करते हैं। वैज्ञानिक दृष्टिकोण का दैनिक जीवन में उपयोग करते हैं।

2. सामाजिक विज्ञान- अधिगम प्रतिफल – अपने आस-पास मानवीय विविधताओं के प्रति स्वस्थ दृष्टिकोण विकसित करते हैं। सामाजिक कठिनाइयों को दूर करने की समझ एवं कौशल विकसित करते हैं।

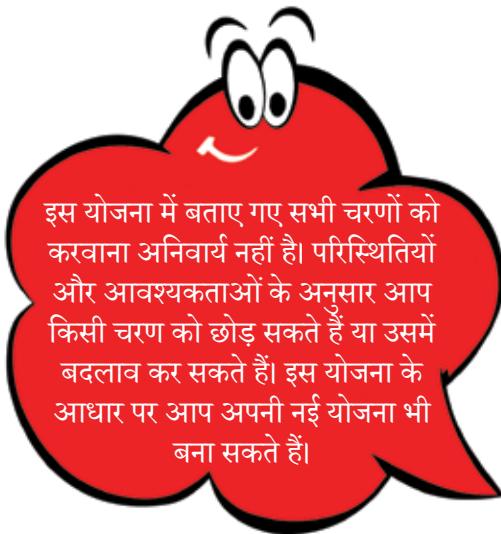
इकाई 1 – विविधता की समझ, इकाई 4 – आजीविकाएँ (सामाजिक एवं राजनीतिक जीवन, भाग 2)

विज्ञान – तंतु से वस्त्र तक – बुनाई (पाठ 3), कच्चा संग्रहण एवं निपटान – व्यर्थ सामग्री का उपयोग करना (पाठ 16)

3. कला- कला अध्यापक हस्तकला और अभिनय संबंधी गतिविधियों के कौशल विकास पर केंद्रित कार्य कर कला शिक्षा में गुणवत्ता ला सकते हैं।

विस्तार के लिए कुछ रुचिकर सुझाव

- विद्यार्थियों के परिवेश में उपलब्ध हाथ से बनने वाली वस्तुओं का उपयोग भी किया जा सकता है, जैसे — जूट, ऊन, सूत एवं कतरनों आदि के उपयोग से बनी वस्तुएँ।
- विद्यार्थियों के परिवेश में उपलब्ध बाँस से बनी वस्तुओं का संग्रह करके प्रदर्शनी लगवाई जा सकती है।



ACTIVITY 4.1.2

0750CH04

विषय	हिंदी
कक्षा	VII
पाठ्यवस्तु	कविता (कठपुतली)
प्रयोग में लाई गई कला	दृश्य कला एवं प्रदर्शन कला

‘कला समेकित अधिगम’ योजना का सामान्य परिचय

यह एक विस्तृत योजना है जिसका उद्देश्य यह रेखांकित करना है कि किसी पद्य-पाठ को कला समेकित अधिगम के सिद्धांतों के आधार पर कितने विविधतापूर्ण तरीकों से विद्यार्थियों के समक्ष प्रस्तुत किया जा सकता है। इस योजना में पद्य-पाठों की शिक्षण-अधिगम प्रक्रिया के लिए अनेक गतिविधियाँ और उन गतिविधियों के अनेक विकल्प सुझाए गए हैं ताकि पाठकों को अपनी आवश्यकताओं के अनुरूप मार्ग का चयन करने या अपना स्वयं का मार्ग बनाने के लिए सुझाव मिल सकें। इस योजना का आधार-बिंदु स्वतंत्रता और आनंद है, अतः कोई भी सुझाव बाध्यकारी नहीं है — न तो शिक्षकों के लिए, न ही विद्यार्थियों के लिए।

इस योजना में विद्यार्थी एक कविता को समूह में गाएँगे। वे अपने शब्दों की गति और तीव्रता नियंत्रित करने के तरीके खोजेंगे। वे मंचीय प्रदर्शन की तैयारी हेतु समूहों में कार्य करेंगे। इसके अतिरिक्त वे मिलकर अपनी संकेत भाषा, कठपुतलियों, चित्रों आदि का सृजन करेंगे। इन सभी कार्यों को करते हुए वे भाषा और कविता की विषय-वस्तु के साथ सक्रिय रूप से लेन-देन करेंगे और इस प्रकार भाषा और विषय-वस्तु पर अपनी पकड़ मजबूत करेंगे।

अधिगम प्रतिफल

सत्र के अंत तक, शिक्षार्थी —

- पढ़ी गई सामग्री पर चिंतन करते हुए बेहतर समझ के लिए प्रश्न पूछते हैं/परिचर्चा करते हैं।
- किसी पाठ्यवस्तु की बारीकी से जाँच करते हुए उसमें किसी विशेष बिंदु को खोजते हैं।
- विभिन्न संवेदनशील मुद्दों/विषयों, जैसे— जाति, धर्म, रंग, लिंग, रीति-रिवाजों के बारे में मौखिक रूप से अपनी तार्किक समझ के बारे में बताते हैं। (कक्षा 7)
- विविध कलाओं, जैसे— हस्तकला, वास्तुकला, खेती-बाड़ी, नृत्यकला और इनमें प्रयोग होने वाली भाषा के बारे में जिज्ञासा व्यक्त करते हैं, उन्हें समझने का प्रयास करते हैं।
- भाषा की बारीकियों/व्यवस्था तथा नये शब्दों का प्रयोग करते हैं, जैसे— किसी कविता में प्रयुक्त शब्द विशेष, पदबंध का प्रयोग।

उद्देश्य

- लय और बलाधात का अभ्यास।
- ध्यानपूर्वक सुनकर समझना।

- निर्देशों को सुनकर/पढ़कर उनके अनुसार कार्य करना।
 - आत्मविश्वासपूर्वक अभिव्यक्ति करना (मौखिक/दैहिक)।
 - क्रिया शब्दों का अभ्यास करना।
 - दूसरों की अभिव्यक्ति में रुचि उत्पन्न करना।
 - दूसरों की अभिव्यक्ति, समस्याओं, परिवेश आदि के प्रति संवेदनशीलता का विकास करना।
- शिक्षक को सलाह दी जाती है कि वे सुझावात्मक प्रदर्शिका को पढ़ें एवं कला समेकित सत्र के सुचारू संचालन के लिए पूर्व व्यवस्था करें।

सामग्री एवं सामग्री के संभावित स्रोत

कठपुतली बनाने का सामान, कार्ड बनाने के लिए गते या मोटा कागज, कैंची, लिखने के लिए मोटा पेन/मार्कर आदि। क्षेत्रीय सामग्री के उपयोग को प्रोत्साहन दें। ऊन, पुराने कपड़े, बोतलें, लकड़ी के टुकड़े, बिंदियाँ, रंग, ब्रश, गोंद, पुरानी कॉपी-किताबों के गते, पुराने चार्ट पेपर, कैलेंडरों के पीछे का हिस्सा आदि। सामग्री को विद्यार्थियों से भी मँगवाया जा सकता है और स्वयं भी इसका प्रबंध किया जा सकता है।
(छात्रों को स्थानीय विशिष्ट सामग्रियों का सदुपयोग करने एवं सामग्री को व्यर्थ न करने के लिए प्रोत्साहित करें।)

तैयारी

गतिविधि में जिन कार्डों का प्रयोग किया जाना है, उन्हें पहले से तैयार करा लें। विद्यार्थियों को कठपुतली बनाने/चलाने का अभ्यास करने को प्रेरित करें। यदि ऑनलाइन माध्यम का प्रयोग किया जा रहा है तो इंटरनेट कनैक्शन, उपकरण आदि की व्यवस्था और जाँच पहले से कर लें। आवश्यक वीडियो का प्रबंध करें। समय, तिथि एवं सामग्री की तैयारी आदि की सूचना विद्यार्थियों से समय पूर्व साझा कर लें।

वैकल्पिक— संकेत-भाषा का परिचय पहले से होना रुचिकर होगा।

चरण 1 (आइस ब्रेकर)

प्रसन्नचित्त भाव से कक्षा/ऑनलाइन माध्यम/प्लेटफॉर्म में प्रवेश करें। ट्रेफिक पुलिस से सिपाही के बारे में बातचीत शुरू करें कि वह किस तरह ट्रेफिक को सँभालता/ सँभालती है। विद्यार्थियों को हाथ के इशारों से ट्रेफिक नियंत्रित करने की झलक दिखाएँ, जैसे — रुको, चलो आदि। एक विद्यार्थी सिपाही बन जाएगा और बाकी विद्यार्थी वाहनों की तरह चलना शुरू करेंगे। रुकने-चलने का इशारा होने पर वैसे ही करना होगा। कुछ समय के बाद सिपाही विद्यार्थी को और रुकने-चलने के संकेतों को बदला जा सकता है, जैसे — रुकने का इशारा होने पर चलना और चलने का इशारा होने पर रुकना।

ऑनलाइन माध्यम पर संकेत प्रदर्शन का कार्य किसी एक विद्यार्थी के द्वारा या आपके द्वारा भी किया जा सकता है।

कठपुतली से परिचय

विद्यार्थियों से कहें— मैं एक शब्द बोलूँगा। उसे सुनकर आपको उसका अभिनय करना है। इसके बाद विभिन्न शब्द बोलें, जैसे— रोबोट, कार, गुड़िया, पेड़, तार पर लटकी कमीज, पेड़ पर बैठी चिड़िया आदि। अंत में कहें— कठपुतली।

इस कविता को समझने के लिए आवश्यक है कि विद्यार्थी कठपुतलियों से परिचित हों। अपने विद्यालय के परिवेश के अनुसार आपको अंदाज़ा होगा कि विद्यार्थी पहले से कठपुतली से परिचित हैं या नहीं, लेकिन

इस गतिविधि द्वारा आपको यकीनी तौर पर पता चल जाएगा कि विद्यार्थी कठपुतली से कितने परिचित हैं। यदि विद्यार्थियों ने कठपुतली को कभी नहीं देखा है तो विभिन्न विकल्पों में से किसी भी विकल्प को चुना जा सकता है।

विकल्प

- संभव हो तो किसी वास्तविक कठपुतली वाले (क्षेत्रीय कलाकार) को कक्षा/विद्यालय/ऑनलाइन माध्यम में आमंत्रित करके कठपुतली का खेल करवाया जा सकता है। विद्यालय के कला शिक्षक की सहायता भी इस कार्य में ली जा सकती है।
- संभव हो तो विद्यार्थियों को कठपुतली बनवा कर या बनी बनाई कठपुतली दिखाएँ। कठपुतली का प्रबंध न हो तो कठपुतली या कठपुतली के खेल के चित्र का प्रदर्शन किया जा सकता है। चित्र के साथ/नीचे लिख दें—कठपुतली। पूछें—यह क्या है? यह कैसे बोलती है? कैसे चलती है? क्या इसे कहीं देखा है/ कहाँ देखा है? विद्यार्थियों की अभिव्यक्ति को नज़रअंदाज न करें और प्रत्येक विद्यार्थी के उत्तरों का स्वागत करें। विद्यार्थियों के उत्तरों को श्यामपट्ट/श्वेतपट्ट पर लिख दें। ‘कठपुतली’ शब्द को रेखांकित कर दें।
- निम्नलिखित ऑनलाइन श्वेत-पट्ट सुविधाओं का प्रयोग किया जा सकता है—
 - <https://jamboard.google.com/>
 - <https://awwapp.com/>
 - <https://info.flipgrid.com/>
 - <https://canvas.apps.chrome/>
 - <https://app.learncube.com/app/create/>
 - <https://whiteboardfox.com/>
 - <https://conceptboard.com/>
 - <https://ziteboard.com/>
 - <https://miro.com/>
 - <https://whiteboard.fi/>
 - <https://idroo.com/>
- स्वयं पुतली अभिनय किया जा सकता है।

इसके बाद विद्यार्थियों को कठपुतली बनाने के लिए प्रेरित करें। उन्हें बताएँ कि कठपुतली बनाना बहुत आसान है और हम बिना खर्चे के कठपुतली बना सकते हैं।

कठपुतली को लकड़ी के टुकड़ों/ टहनियों, कपड़े, ऊन या अन्य व्यर्थ सामग्री आदि की सहायता से बनवाएँ। ऑनलाइन कक्षा के दौरान विद्यार्थियों को पहले से सामग्री का प्रबंध करने के लिए निर्देश दे दें।

इस दौरान विद्यार्थी विभिन्न निर्देशों को समझकर उनके अनुसार कार्य कर सकेंगे। इस गतिविधि के दौरान एक-दूसरे को सुनने, एक-दूसरे से सीखने, धैर्य आदि कौशलों का विकास होगा। साथ ही ध्यानपूर्वक सुनने और समझने के कौशल का भी विकास होगा। इस प्रक्रिया में विद्यार्थी कठपुतलियों को बनाने (हस्तशिल्प) से जुड़े शब्दों का प्रयोग भी समझेंगे और करेंगे।

आकलन

अवलोकन और बातचीत।

विकल्प

- यह कार्य भी समूह बनाकर करवाया जा सकता है। इससे समय और संसाधनों की भी बचत होगी और विद्यार्थियों में सामूहिकता की भावना का विकास भी होगा।
- यदि कठपुतली बनवाना संभव न हो तो विद्यार्थियों से उसका चित्र भी बनवाया जा सकता है।
- कठपुतली ऐसी हो जो धागों द्वारा ही हिलती-डुलती हो, लेकिन यदि ऐसी कठपुतली बनाना संभव न हो तो किसी भी प्रकार की कठपुतली बनवाई जा सकती है।
- यदि कक्षा के दौरान यह कार्य पूरा न किया जा सके तो उसे कक्षा के बाद घर पर पूरा करके अगले दिन साझा करने के लिए कहा जा सकता है।

चरण 2 (कठपुतलियों का प्रयोग)

अब विद्यार्थियों से निम्नलिखित कार्य कठपुतलियों से करवाने के लिए कहें—

- **सोचना** — बाजू को सीधे ऊपर उठाओ और सिर की तरफ संकेत करो।
- **बोलना** — सिर को हिलाना।
- **गुस्सा करना** — बहुत तेज़ी से हिलते हुए ऊँची आवाज़।
- **सुनना** — एक हाथ को कान तक ले जाना।
- **चलना** — हाथ-पैर सीधे रखते हुए चलना।
- **पकड़ना** — दोनों हाथों को सामने लाकर किसी वस्तु के दोनों ओर रख देना।
- **छोड़ना** — वस्तु के दोनों ओर से तुरंत हाथ हटा लेना।
- **रुकना** — झटके के साथ जिस अवस्था में हैं, उसी में रुक जाना।

विद्यार्थी सामूहिक रूप से इन कार्यों को करेंगे। अध्यापक विद्यार्थियों को एक वाक्य में बता दें कि आप जिन शब्दों को सुनकर कार्य कर रहे हैं, उन्हें क्रिया कहते हैं।

इस चरण का उद्देश्य विद्यार्थियों के श्रवण कौशलों का विकास करना और आगे की गतिविधियों की तैयारी करवाना है।

विकल्प

- यदि विद्यार्थियों ने कठपुतलियाँ नहीं बनाई हैं तो वे स्वयं भी कठपुतलियों की तरह अभिनय करके इन कार्यों को प्रस्तुत कर सकते हैं।
- दिव्यांग विद्यार्थी भी समान रूप से सभी कार्यों में भाग लेंगे। पहिया-कुर्सी पर बैठे विद्यार्थी ये क्रियाकलाप बैठे-बैठे कर सकते हैं।

अब विद्यार्थियों को अपने साथ-साथ पाठ्यपुस्तक में दी गई कविता ‘कठपुतली’ गाने और अपनी-अपनी कठपुतली का कविता के अनुसार संचालन करने के लिए प्रेरित करें। इसकी तैयारी पिछले चरण में हो चुकी है इसलिए अब इस कार्य को आसानी से करने में किसी को दिक्कत नहीं आएगी।

इस चरण का उद्देश्य विद्यार्थियों को कविता की भावना और संदर्भ से परिचित करवाना और उसका रसास्वादन करवाना है जो कि कविता शिक्षण का प्रमुख उद्देश्य है।

सुझाव

- यह आवश्यक नहीं है कि इस गतिविधि को कठपुतली कविता के साथ ही करवाया जाए। इस गतिविधि को किसी भी कविता के साथ करवाया जा सकता है।
- कविता गाने का अर्थ उचित लय-ताल और भावों का प्रयोग करके कविता को प्रस्तुत करना है। इसके लिए वाद्य-यंत्रों की भी आवश्यकता नहीं है। ताल के लिए ताली या आस-पास मौजूद किसी भी वस्तु, जैसे — डेस्क, डस्टर, डिब्बा, कुर्सी आदि का प्रयोग किया जा सकता है।
- कविता को साथ-साथ पंक्ति-पंक्ति करके श्यामपट्ट/श्वेत-पट्ट पर लिखा भी जा सकता है।

चरण 3

प्रत्येक विद्यार्थी मोटे कागज एक-एक कार्ड बनाएगा और उस पर कविता का एक शब्द लिखेगा। प्रत्येक समूह को कविता की अलग पंक्ति दें ताकि ऐसा न हो कि कोई शब्द छूट जाए। इस कार्य के पूरा हो जाने के बाद सभी कार्डों को आपस में मिला लें। अब प्रत्येक विद्यार्थी को एक-एक कार्ड दें। संभावना यही है कि प्रत्येक विद्यार्थी के पास एक नया कार्ड आएगा, अर्थात् जो कार्ड उसने बनाया था, वह किसी अन्य विद्यार्थी के पास जाएगा। कार्ड देते समय उस पर लिखा शब्द सबको दिखाएँ और उसे पढ़ने में विद्यार्थियों का साथ दें ताकि जिन विद्यार्थियों को पढ़ने में कुछ दिक्कत है, वे भी जान लें कि कार्ड पर क्या लिखा है और सभी विद्यार्थी कार्डों पर लिखी सामग्री से परिचित हो जाएँ।

विकल्प

कार्डों और विद्यार्थियों की संख्या में अंतर होने पर यह कार्य समूह बनाकर या जोड़े बनाकर भी किया जा सकता है। कार्ड बनाने में विद्यार्थियों के साथ मिलकर कार्य किया जा सकता है।

अब विद्यार्थियों को बताएँ— मैं जो शब्द बोलूँगा, जिस विद्यार्थी के पास वह कार्ड है, वह अपना कार्ड ऊपर उठाकर सबको दिखाएगा। अब कविता के शब्द बोलें, जैसे — ‘कठपुतली’। प्रत्येक विद्यार्थी की सराहना के लिए मुस्काएँ/तालियाँ बजाएँ/सकारात्मक टिप्पणी करें, जैसे — बिलकुल सही, सुरेश के पास है यह कार्ड, रानी का कार्ड देखो आदि।

अब विद्यार्थियों को कविता की पंक्तियाँ एक-एक करके सुनाएँ। जिन विद्यार्थियों के पास उस पंक्ति के कार्ड हैं, वे विद्यार्थी सामने आकर क्रम से खड़े होकर कविता की पंक्ति प्रदर्शित करेंगे।

ऑनलाइन कक्षा के दौरान आप स्वयं कविता की पंक्तियों को प्रदर्शित कर सकते हैं और विभिन्न विद्यार्थियों को उन्हें पढ़कर सुनाने के लिए आमंत्रित कर सकते हैं।

इन गतिविधियों का उद्देश्य कविता को पढ़ना और उससे अच्छी तरह परिचित करवाना है। जिन विद्यार्थियों को अभी हिंदी पढ़ने में दिक्कत है, जिनकी मातृभाषा हिंदी नहीं है या हिंदी पढ़ने को लेकर जिनमें आत्मविश्वास की कमी है, उन विद्यार्थियों के लिए यह गतिविधि विशेष रूप से उपयोगी होगी। यहाँ विद्यार्थियों को खेल-खेल में नये शब्दों की पहचान हो जाएगी।

चरण 4 (आकलन – अवलोकन)

जब सब विद्यार्थी कविता से अच्छी तरह परिचित हो जाएँ तो उन्हें अलग-अलग तरीके से कविता को गाने के लिए प्रेरित करें। उदाहरण के लिए— ऊँची आवाज़ में गाना, नीची आवाज़ में गाना, धीमी गति से शुरू करके गति बढ़ाते जाना, ऊँची आवाज़ में शुरू करके आवाज़ नीची करते जाना आदि।

इसके लिए ट्रैफिक के सिपाही की याद दिलाते हुए विद्यार्थियों को कहा जा सकता है कि अब हम हाथों के इशारे के हिसाब से कविता को गाएँगे। उन्हें बताएँ कि हाथ के किस संकेत से उन्हें धीमा, ऊँचा, तेज़ या नीचा गाना है। इन संकेतों का विद्यार्थियों के साथ पहले अभ्यास करें और जब वे संकेत समझ जाएँ, तब कुछ विद्यार्थियों को सामने आकर बाकी विद्यार्थियों को हाथों से संकेत देने के लिए कहें। उन्हें बताएँ कि संकेत स्पष्ट हों और दो संकेतों को एक साथ न दें। परंतु यदि कोई विद्यार्थी ऐसा कर भी दे तो उसका भी आनंद लें।

चरण 5

मंचीय प्रस्तुति के लिए विद्यार्थियों के समूह बना लें और उन्हें तैयारी करने का समय दें। उन्हें स्पष्ट कर दें कि वे कविता को अपनी रुचि, कल्पना और इच्छा के अनुसार अपना अनूठा रंग दे सकते हैं। जब समूह तैयारी कर रहे हों, कक्षा में घूम-घूमकर प्रत्येक समूह के पास जाएँ और उनकी बातचीत में रुचि लें। अनावश्यक दखलांदाजी न करें। उनकी बातचीत में यदि कोई शब्द या वाक्य ऐसा है जिस पर आप पूरी कक्षा का ध्यान दिलाना चाहते हैं तो उसे ‘नोट’ कर लें। प्रदर्शन के बाद उनका उत्साहवर्धन करें और जिन बिंदुओं को आपने दर्ज किया था, अंत में उन पर चर्चा करें।

विकल्प

जब एक समूह प्रदर्शन कर रहा हो तो अन्य विद्यार्थी गायन में उनका साथ दे सकते हैं। विद्यालय-सभाओं में भी प्रदर्शन करवाया जा सकता है। ॲनलाइन समूह बनाने के लिए निम्नलिखित में से किसी वेबसाइट का निःशुल्क प्रयोग किया जा सकता है:

[https://ww w.aschool.us/random/random-pair.php](https://www.aschool.us/random/random-pair.php)

<https://www.classdojo.com/en-gb/toolkit/groupmaker/?redirect=true>

<https://www.transum.org/software/RandomStudents/>

<https://www.randomlists.com/team-generator>

<http://chir.ag/projects/team-maker/>

<https://www.superteachertools.us/instantclassroom/#.WIO-A1Q-eL8>

यदि विद्यार्थी पहली बार इस प्रकार की स्वतंत्रता का अनुभव कर रहे हैं तो शायद वे लीक से हटकर सोचने के आत्मविश्वास का प्रदर्शन नहीं कर सकेंगे, लेकिन यदि कक्षा में इस प्रकार का उन्मुक्त वातावरण बने हुए कुछ अरसा हो गया है तो वे किसी भी कविता को इतनी अधिक विविधता से प्रस्तुत कर सकेंगे कि आप भी आश्चर्यचकित रह जाएँगे। उदाहरण के लिए, हो सकता है कि कोई समूह इसे नृत्य-नाटिका के रूप में प्रस्तुत करना चाहे तो कोई इसे रैप या स्वयं के संगीत में बाँधकर प्रस्तुत करना चाहे।

चरण 6 (आकलन, अवलोकन और बातचीत)

कविता पर चर्चा— विद्यार्थियों के साथ कविता पर चर्चा करें और निम्नलिखित बिंदुओं पर उनका ध्यान आकर्षित करें—

- कठपुतली को गुस्सा क्यों आया?
- कठपुतली को अपने पाँवों पर खड़ी होने की इच्छा है लेकिन वह खड़ी क्यों नहीं हो पाती?
- पहली कठपुतली ने स्वयं कहा कि— ये धागे क्यों हैं मेरे पीछे-आगे? इन्हें तोड़ दो, मुझे मेरे पाँवों पर छोड़ दो; तो फिर वह चिंतित क्यों हुई कि ‘ये कैसी इच्छा मेरे मन में जगी?’
- कठपुतली जैसी भावना किन-किन में आ सकती है और क्यों— ढाबे पर काम करने वाले छोटू में, ढाबे के मालिक में, ट्रैफिक सँभालने वाले सिपाही में, चौराहे पर खड़े कार-सवार में, किसी मिल के मालिक में या फिर मिल के मज़दूर में आदि?
- जो लोग कठपुतली जैसा बंधन महसूस करते होंगे, वे कौन-कौन से काम अपनी मर्जी से कर सकते हैं और कौन से नहीं?
- कविता में आए शब्दों ‘मन के छंद’ का क्या अर्थ हो सकता है— मन की उमंग, गाने की इच्छा, मन की खुशी, मन की कविता।
- ‘सुनकर बोलीं और-और कठपुतलियाँ’ यहाँ ‘और-और’ का क्या अर्थ है?

इस चर्चा का उद्देश्य विद्यार्थियों को कला अनुभव द्वारा कविता के गहरे अर्थों की ओर ले जाना है। प्रत्येक विद्यार्थी की प्रतिक्रिया का सम्मान करें। ध्यान रखें कि आपके भाव या शब्द विद्यार्थियों की किसी प्रतिक्रिया को सही या गलत की श्रेणी में डालने का संकेत न दें। इन प्रश्नों के एक से अधिक उत्तर सही हो सकते हैं और ये मुद्दे ऐसे हैं जिनका उत्तर खोजने की प्रक्रिया इनके उत्तरों से अधिक महत्वपूर्ण है क्योंकि प्रक्रिया ही विद्यार्थियों के भावों को आंदोलित करके उनके विचार गढ़ने का कार्य करेगी, उनके मन में संवेदनशीलता का विकास करेगी। अतः यदि उन्हें कोई आदर्श उत्तर बता दिया जाएगा तो उस उत्तर का कोई लाभ नहीं होगा। जब विद्यार्थी प्रतिक्रिया दे रहे होंगे तो उन्हें आपस में चर्चा करने, सवाल पूछने और एक-दूसरे की बातों को तर्कों से काटने की पूरी आज़ादी होनी चाहिए। इसी दौरान उनकी अभिव्यक्ति और भाषा का आकलन, अवलोकन द्वारा किया जा सकता है।

चरण 7

विद्यार्थियों से जो बातचीत की गई है, उसके आधार पर चर्चा के बिंदुओं को प्रश्न-उत्तर के रूप में लिखवाया जा सकता है। चूँकि प्रत्येक विद्यार्थी को प्रत्येक प्रश्न का उत्तर पता है; उसने अपना उत्तर स्वयं खोजा है, इसलिए वे स्वयं उन्हें लिख सकेंगे। जिन विद्यार्थियों को लिखने में दिक्कत है, उनकी सहायता उनके साथी या आप भी कर सकते हैं।

आकलन

इस पूरी योजना में आकलन प्रत्येक चरण के साथ-साथ चलेगा। आकलन मुख्यतः अवलोकन और विद्यार्थियों के साथ बातचीत द्वारा किया जाएगा। आकलन में विद्यार्थियों की अभिव्यक्ति और श्रवण कौशलों के साथ-साथ उनके आत्मविश्वास, तर्क, चिंतन आदि पहलुओं को ध्यान में रखा जाएगा। चूँकि हिंदी भाषा का एक प्रमुख पक्ष लेखन भी है, अतः लिखित कार्य द्वारा विद्यार्थियों के लेखन कौशल का आकलन भी अपेक्षित है। लेखन और मौखिक कौशलों के आकलन का सबसे प्रमुख पक्ष अभिव्यक्ति की मौलिकता है। अतः यांत्रिक पक्षों के स्थान पर आकलन में मौलिकता, कल्पनाशीलता और भाषा के सौंदर्य पर अधिक बल दिया जाए।

अन्य विषयों से संबंध

इस पाठ के दौरान जिन कौशलों को मजबूती मिलेगी, वे प्रत्येक विषय के अध्ययन में अत्यधिक उपयोगी होंगे, जैसे— तर्क करना, अनुमान लगाना, निष्कर्ष निकालना, अनुभवों के बीच समानता और अंतर की पहचान करना, व्याख्या करना आदि। इस योजना के अंतर्गत बनाई गई कठपुतलियों की सहायता से अन्य विषयों के पाठों को भी रोचक और आनंददायक रूप से प्रस्तुत किया जा सकता है जैसा कि सामाजिक अध्ययन के अधिगम प्रतिफलों में उल्लेख किया भी गया है।

इसके अतिरिक्त, कुछ विषयों के कुछ पाठ सीधे-सीधे इस कविता की विषय-वस्तु से जुड़ाव रखते हैं। यदि उन विषयों के अध्यापकों से चर्चा करके योजना इस प्रकार बनाई जाए कि इन पाठों को किसी अवधि विशेष में विभिन्न विषयों के पीरियडों में समानांतर रूप से लिया जा सके तो यह समग्र अधिगम के दृष्टिकोण से अत्यंत उपयोगी रहेगा। विभिन्न विषयों को समेकित रूप से पढ़ाने का एक लाभ यह भी है कि इससे दोहराव से बचाव होता है और बचे समय को विद्यार्थी अन्य उपयोगी कार्यों में लगा सकता है।

1. सामाजिक विज्ञान— अधिगम प्रतिफल— समाज के विभिन्न वर्गों की महिलाओं के सामने आने वाली कठिनाइयों के कारणों और परिणामों का विश्लेषण करते हैं।

स्त्रियों की दशा (पाठ 9, हमारे अतीत, भाग 2) भारतीय लोकतंत्र में समानता (इकाई 1, सामाजिक और राजनीतिक जीवन, भाग 2) लिंग बोध-जेंडर (इकाई 3, सामाजिक और राजनीतिक जीवन, भाग 2) हस्त-कलाएँ, स्वतंत्रता आंदोलन।

2. गणित— कठपुतली-निर्माण के दौरान मापन, तुलना, ज्यामितीय कौशल आदि के उपयोग और अभ्यास की आवश्यकता होगी।

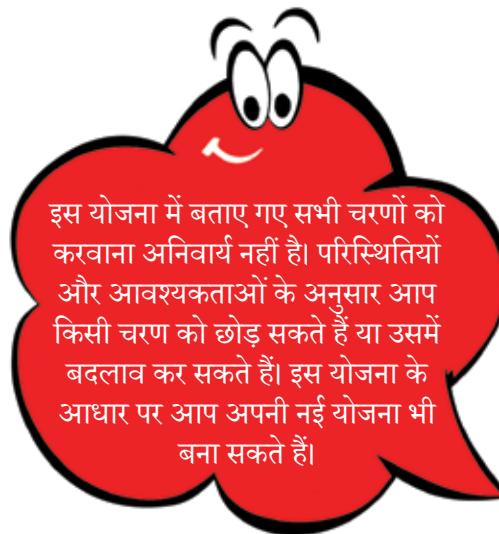
3. संस्कृत— एक समय ऐसा था जब महिलाओं को पढ़ने-लिखने तक की आज्ञादी नहीं थी। उस दौर में एक महिला ने अपने बंधनों को तोड़ने का कार्य किया और पंडिता कहलाई। (रुचिरा-पंडिता रमाबाई)

4. कला— कठपुतली-निर्माण, अभिनय, गायन आदि के लिए कला-अध्यापक या कला/कार्य-अनुभव के कालांश का प्रयोग किया जा सकता है।

5. विज्ञान— अधिगम प्रतिफल— डिजाइन बनाने, योजना बनाने एवं उपलब्ध संसाधनों का उपयोग करने में रचनात्मकता का प्रदर्शन करते हैं; ईमानदारी, वस्तुनिष्ठता, सहयोग, भय एवं पूर्वाग्रहों से मुक्ति जैसे मूल्यों को प्रदर्शित करते हैं।

गतिविधि विस्तार

- विद्यार्थियों के साथ संकेतों की भाषा के बारे में बात करें। उनसे कहें— हम कौन-कौन-सी बातें बिना कुछ बोले-सुने समझ जाते हैं? जो लोग कभी कुछ नहीं बोल-सुन पाते, वे कैसे बातचीत करते हैं? संभव हो तो मूँक-बधिरों की ‘संकेत-भाषा’ से संबंधित वीडियो दिखाएँ। कुछ शब्दों/वाक्यों को ‘संकेत-भाषा’ में किस प्रकार अभिव्यक्त करते हैं, यह सीखकर आप स्वयं भी विद्यार्थियों के सामने उदाहरण प्रस्तुत कर सकते हैं।
- इसके बाद विद्यार्थी अपनी संकेत भाषा स्वयं बना सकते हैं। इसके नियम बनाने में विद्यार्थियों की सहायता करें। यदि कुछ विद्यार्थियों ने पहले से अपनी कोई संकेत भाषा बना रखी है तो उसका भी प्रयोग किया जा सकता है। विद्यार्थियों के समूह बनाएँ और उस भाषा का उपयोग करके उनसे रोचक पोस्टर बनवाकर कक्षा में प्रदर्शित करें।
- नृत्य में प्रयोग की जाने वाली मुद्राओं (Gestures) के विषय में नृत्य वीडियो द्वारा जानकारी कराएँ। बेहतर हो, यदि किसी नृत्य गुरु से प्रदर्शन विधि द्वारा सीखा जा सके।
- **संकेत भाषा से संबंधित खेल**— विद्यार्थियों को समूहों में बाँट दें। प्रत्येक समूह में से एक प्रतिनिधि कक्षा की संकेत भाषा का उपयोग करके कोई शब्द अभिव्यक्त करेगा। बाकी समूह उसका अनुमान लगाएँगे।
- विद्यार्थियों को ‘कठपुतली’ की बजाय मैं/हम/तुम/सब/कौन जैसे सर्वनामों या संज्ञाओं का प्रयोग करते हुए कविता को बदलकर गाने के लिए कहा जा सकता है।
- कविता गाने के बाद कविता के भाव को चित्र में दर्शाया जा सकता है, जैसे— कविता के बाद क्या हुआ होगा? कठपुतली के मन के भावों का चित्रण करें।
- विद्यार्थियों को कठपुतली के चित्र या वीडियो भी दिखाया जा सकता है। इसके लिए मोबाइल फ़ोन, टैब, कंप्यूटर या जो भी सुविधा उपलब्ध हो, उसका प्रयोग किया जा सकता है।



ACTIVITY 4.1.3

विषय	हिंदी
कक्षा	VIII
पाठ्यवस्तु	व्यंग्य-लेख (बस की यात्रा)
प्रयोग में लाई गई कला	प्रदर्शन कला



0846CH03

‘कला समेकित अधिगम’ योजना का सामान्य परिचय

‘बस की यात्रा’ हिंदी के सबसे प्रसिद्ध व्यंग्यकार श्री हरिशंकर परसाई की अद्भुत रचना है। व्यंग्य विधा को समझना सरल नहीं है। कभी-कभी व्यंग्य को मात्र हास्य का दूसरा नाम समझ लिया जाता है लेकिन यह यदि रखना आवश्यक है कि व्यंग्य का उद्देश्य समाज की विसंगतियों को उजागर करना है। इस महान कार्य के लिए व्यंग्यकार बहुत सरल शब्दों में और कभी-कभी कहानीनुमा शैली के प्रयोग से अपनी बात कहता है लेकिन जब तक लेखक के छिपे अर्थ तक पाठक नहीं पहुँचता, व्यंग्य रचना का उद्देश्य पूरा नहीं हो सकता।

इस योजना में विद्यार्थी एक हास्य-व्यंग्य रचना को पढ़ेंगे और इसके लिए वे बस के यात्रियों का अभिनय करेंगे। इस प्रक्रिया में वे पाठ से अच्छी तरह परिचित हो जाएँगे और जब पाठ के वाचन का चरणआएगा, उसे अधिक बेहतर समझ के साथ पढ़ सकेंगे। इस योजना में वे मंचीय प्रदर्शन की तैयारी हेतु समूहों में कार्य करेंगे। इन कार्यों को करते हुए वे भाषा और पाठ की विषय-वस्तु के साथ सक्रिय रूप से लेन-देन करेंगे और इस प्रकार भाषा और विषय-वस्तु पर अपनी पकड़ मज़बूत करेंगे।

अधिगम प्रतिफल

सत्र के अंत तक, शिक्षार्थी —

- पढ़ी गई सामग्री पर चिंतन करते हुए समझ के लिए प्रश्न पूछते हैं।
- पढ़कर अपरिचित परिस्थितियों और घटनाओं की कल्पना करते हैं और उन पर अपने मन में बनने वाली छवियों और विचारों के बारे में मौखिक/सांकेतिक/लिखित/ब्रेल भाषा में अभिव्यक्त करते हैं।
- किसी रचना को पढ़कर उसके सामाजिक मूल्यों पर चर्चा करते हैं, उसके कारण जानने की कोशिश करते हैं।
- विभिन्न प्रकार की सामग्री, जैसे— कहानी, कविता, लेख, रिपोर्टज, संस्मरण, निबंध, व्यंग्य आदि को पढ़ते हुए अथवा पाठ्यवस्तु की बारीकी से जाँच करते हुए उसका अनुमान लगाते हैं, विश्लेषण करते हैं, विशेष बिंदु को खोजते हैं।
- पढ़ी गई सामग्री पर चिंतन करते हुए बेहतर समझ के लिए प्रश्न पूछते हैं।
- विभिन्न पठन सामग्रियों में प्रयुक्त शब्दों, मुहावरों, लोकोक्तियों को समझते हुए उनकी सराहना करते हैं।

इस योजना के अधिगम उद्देश्य

- ध्यानपूर्वक सुनकर समझना।
- निर्देशों को सुनकर/पढ़कर उनके अनुसार कार्य करना।
- आत्मविश्वासपूर्वक अभिव्यक्ति करना (मौखिक/ दैहिक)।
- दूसरों की अभिव्यक्ति में रुचि उत्पन्न करना।
- दूसरों की अभिव्यक्ति, समस्याओं, परिवेश आदि के प्रति संवेदनशीलता का विकास करना।
- सामान्य लगने वाली बातों में छिपे व्यंग्य को पहचानना और उस पर प्रतिक्रिया करना।
- व्यंग्यात्मक भाषा के सौंदर्य की सराहना करना।

शिक्षक को सलाह दी जाती है कि वे सुझावात्मक प्रदर्शिका को पढ़ें एवं कला समेकित सत्र के सुचारू संचालन के लिए पूर्व व्यवस्था करें।

सामग्री

कागज की कुछ पर्चियाँ एवं नियमित कक्षा-कक्ष।

(छात्रों को स्थानीय विशिष्ट सामग्रियों का सदुपयोग करने एवं सामग्री को व्यर्थ न करने के लिए प्रोत्साहित करें।)

ऑनलाइन कक्षा के लिए— इंटरनेट कनैक्शन, टैब, मोबाइल फोन, लेपटोप आदि।

तैयारी

पाठ को अच्छी तरह पढ़ लें। जिन पर्चियों का प्रयोग किया जाना है, उन्हें पहले से तैयार कर लें। यदि ऑनलाइन माध्यम का प्रयोग किया जा रहा है तो इंटरनेट कनैक्शन, उपकरण आदि की व्यवस्था और जाँच पहले से कर लें। विद्यार्थियों को भी निम्नलिखित पर पहले से सूचित कर दें—

- समय
- तिथि
- तैयारी में उनकी भूमिका
- किस माध्यम द्वारा कक्षा आयोजित की जाएगी

चरण 1 (आइस ब्रेकर – सच झूठ)

प्रसन्नचित्त भाव से कक्षा/ऑनलाइन माध्यम/प्लेटफॉर्म में प्रवेश करें। सम-विषम गिनती, कपड़ों के रंग आदि के अनुसार विद्यार्थियों के समूह या जोड़े बना दें या उन्हें स्वयं इसी प्रकार के किसी तरीके से जोड़े बना लेने के लिए कहें। विद्यार्थियों से कहें— आपको अपने समूह/साथी को अपने बारे में एक सच्ची और एक झूठी बात बतानी है और वे अंदाजा लगा कर बताएँगे कि कौन-सी बात सच्ची है और कौन-सी झूठी है।

इस गतिविधि का उद्देश्य विद्यार्थियों द्वारा कही गई बातों पर ध्यान देना और उन पर तर्कपूर्ण चिंतन करना है। इस पाठ में इन कौशलों का बड़े स्तर पर प्रयोग किया जाना है। गतिविधि करवाने से पहले विद्यार्थियों के प्रश्न अवश्य आमंत्रित करें।

बस की यात्रा

विद्यार्थियों से उनकी यात्राओं के बारे में पूछें— आपने किन-किन साधनों के द्वारा यात्रा की है? किस वाहन में बैठना सबसे अच्छा लगा और क्यों? किस वाहन में बैठना अच्छा नहीं लगा और क्यों? इसके बाद विद्यार्थियों से कहें— आज हम अपनी कक्षा/अपने-अपने घरों में बैठे-बैठे यात्रा एँ करेंगे। विद्यार्थियों की जिज्ञासाओं का स्वागत करते हुए बताएँ— मान लीजिए कि कक्षा की प्रत्येक पंक्ति किसी वाहन में बैठकर यात्रा कर रही है। आप सभी सहयात्री हैं। आपको स्वयं यह सोचना है कि आप कहाँ जा रहे हैं, कहाँ से यात्रा शुरू हुई है। यदि कक्षा में चार पंक्तियाँ हैं तो चार वाहन हुए। प्रत्येक वाहन का एक ड्राइवर और एक कंडक्टर/टी.टी. आदि होगा। ये कार्य कौन करेंगे, इसका निर्धारण भी समूह के विद्यार्थियों को स्वयं करना है। प्रत्येक समूह को लगभग दस मिनट मिलेंगे। वह टोली किस समूह में बैठी है, इसका पता पर्चियों से चलेगा। सामने मेज पर पर्चियों के दो पात्र रखे हैं। प्रत्येक समूह, प्रत्येक पात्र से एक-एक पर्ची उठाएगा। फिर उस पर लिखे वाहन की यात्रा का अभिनय करेगा।



चित्र. 1



चित्र. 2



चित्र. 3

इस गतिविधि के लिए पर्चियाँ पहले से तैयार कर लें। कक्षा में जितने समूह/पंक्तियाँ हैं, कम-से-कम उतनी पर्चियाँ दोनों पात्रों में होनी चाहिए। उदाहरण के लिए, यदि कक्षा में चार पंक्तियाँ हैं तो कम-से-कम चार-चार (कुल आठ) पर्चियाँ प्रत्येक पात्र में होनी चाहिए। कक्षा में मौजूद किसी भी वस्तु (जैसे— कोई थैला, टोकरी, डिब्बा, ज्योमेट्री बॉक्स आदि) का प्रयोग पात्र के रूप में किया जा सकता है। एक पात्र की पर्चियों पर वाहनों के नाम होंगे, जैसे— बस, ट्रक, रेल, हवाईजहाज़, बैलगाड़ी आदि। दूसरे पात्र की पर्चियों पर गाड़ी की स्थिति लिखी होगी, जैसे— टूटी-फूटी, खटारा, खस्ताहाल, जर्जर आदि। स्पष्ट कर दें कि प्रत्येक टोली को पर्ची पर लिखे शब्दों के अनुरूप अभिनय करना है। उदाहरण के लिए, यदि किसी टोली की पर्चियों पर लिखा होगा— ‘खस्ताहाल ट्रक’ तो वे उसी के अनुरूप अभिनय करेंगे। यात्रा के दौरान प्रत्येक यात्री कुछ-न-कुछ बोलेगा। ड्राइवर और कंडक्टर भी अपनी-अपनी भूमिका निभाएँगे। जिस समूह की बारी हो, उन यात्रियों को छोड़ने आए रिश्तेदारों और मित्रों का अभिनय कक्षा के बाकी विद्यार्थी कर सकते हैं। (चित्र 1, 2, 3 और 4)



चित्र. 4

इस गतिविधि द्वारा विद्यार्थी अपने पूर्व अनुभवों का प्रयोग करते हुए स्वयं संवादों की रचना करेंगे और स्वयं को उस स्थिति-विशेष में रखते हुए अवसरानुकूल अभिनय करेंगे। आनंद और सक्रियता से भरपूर इस वातावरण में वे भाषा का सृजनात्मक उपयोग करते हुए ‘बस की यात्रा’ पाठ से मानसिक रूप से जुड़ जाएँगे।

विकल्प

- समय बचाने के लिए विद्यार्थी जिन पंक्तियों में बैठे हैं, वहीं पर एक समूह मानकर इस गतिविधि को कर सकते हैं लेकिन समूह बनाने के अन्य तरीकों का प्रयोग भी किया जा सकता है।
- ऑनलाइन कक्षा के दौरान समूह बनाने के लिए नीचे दिए गए विकल्पों का प्रयोग किया जा सकता है।
- यात्रा के दौरान यात्री काल्पनिक वाहन में चढ़ और उतर भी सकते हैं।
- शिक्षक स्वयं भी वाहन में चढ़ने वाले यात्री की भूमिका निभा सकते हैं।
- इस गतिविधि को एक पर्ची (जिस पर केवल वाहन का नाम लिखा है) द्वारा भी करवाया जा सकता है।
- प्रत्येक समूह को अपनी पर्ची पर लिखे शब्दों के विपरीत स्थिति के वाहन का अभिनय करने के लिए भी कहा जा सकता है, जैसे—‘खस्ताहाल ट्रक’ के स्थान पर ‘चकाचक ट्रक’ की यात्रा।
- ऑनलाइन कक्षा के दौरान सबके लिए पर्चियाँ निकालने का कार्य किसी विद्यार्थी को दिया जा सकता है या आप स्वयं सबके लिए पर्चियाँ निकाल सकते हैं।
- ऑनलाइन कक्षा के दौरान पर्चियों पर शब्द लिखने के स्थान पर निम्नलिखित वेबसाइट का प्रयोग किया जा सकता है—

<https://wordcounter.net/random-word-generator>

<https://randomwordgenerator.com/list.php>

- ऑनलाइन समूह बनाने के लिए निम्नलिखित में से किसी वेबसाइट का निःशुल्क प्रयोग किया जा सकता है—
<https://www.aschool.us/random/random-pair.php>

<https://www.classdojo.com/en-gb/toolkit/groupmaker/?redirect=true>

<https://www.transum.org/software/RandomStudents/>

<https://www.randomlists.com/team-generator>

<http://chir.ag/projects/team-maker/>

<https://www.superteachertools.us/instantclassroom/#.WIO-A1Q-eL8>

चरण 2

अब विद्यार्थियों से बातचीत करें और गतिविधि के बारे में उनके अनुभव पूछें। विद्यार्थियों को बताएँ कि अब जिस पाठ को पढ़ा जाएगा, वह भी एक टूटी-फूटी बस के बारे में है। विद्यार्थियों को यह पाठ भावों और उचित विराम आदि के साथ पढ़कर सुनाएँ। यदि इस पाठ को इस पाठ की प्रकृति के अनुरूप पढ़कर सुनाया जाएगा, तो विद्यार्थी हँसे बिना न रह पाएँगे।

ऑनलाइन कक्षा के दौरान ऑनलाइन ऑडियो-वीडियो कार्यक्रमों का प्रदर्शन भी किया जा सकता है।

बारी-बारी से विद्यार्थियों को व्यंग्य पढ़कर सुनाने के लिए आमंत्रित करें। ध्यान रखें कि इस कार्य के लिए उन विद्यार्थियों को अवश्य आमंत्रित किया जाए, जिन्हें हिंदी पढ़ने में अभी दिक्कत है या आत्मविश्वास की

कमी है। चूँकि पाठ के वाचन की गतिविधि प्रत्येक पाठ के साथ अवश्य की जानी है, इसलिए ध्यान रखें कि ऐसा न हो कि कुछ विद्यार्थियों को पठन का बार-बार अवसर मिल जाए और कुछ को कभी अवसर न मिले।

पाठ पर चर्चा द्वारा इसके अर्थ को विद्यार्थियों से प्राप्त करने का प्रयास करें। इसके लिए कुछ प्रश्नों का प्रयोग भी किया जा सकता है, जैसे —

- आपको इस पाठ में क्या/कौन-सा वाक्य/कौन-सा पात्र सबसे अच्छा लगा और क्यों?
- किन वाक्यों को पढ़कर आपको बहुत हँसी आई?
- लेखक को पेड़ भी दुश्मन क्यों लग रहे थे?
- इस यात्रा के दौरान ‘बस’ क्या सोच रही होगी?
- ‘गजब हो गया! अपने आप चलती है!’ इस वाक्य से लेखक के मन का कौन-सा भाव प्रकट हो रहा है?
- लेखक ने जैसी बस का वर्णन किया है, क्या आपने कभी कोई ऐसी बस या वाहन देखा है? उसकी ऐसी दशा क्यों होती है?
- और कहाँ-कहाँ आपने टूटी-फूटी या बदहाल चीजें देखी हैं? वे इस हालत में क्यों होती हैं? आदि।

प्रयास करें कि आप स्वयं उत्तर न दें और कक्षा में विद्यार्थी ही आपस में बातचीत करें, आप केवल उसे दिशा देने तक सीमित रहें। अपेक्षा यह है कि विद्यार्थी एक-दूसरे से खुलकर प्रश्न करें, तर्क करें, अपने विचार रखें, अपने अनुभव साझा करें। आप चाहें तो विद्यार्थियों जैसे ही एक प्रतिभागी की तरह चर्चा में भाग ले सकते हैं।

इस चर्चा का उद्देश्य विद्यार्थियों को व्यंग्य के गहरे अर्थों की ओर ले जाना है। प्रत्येक विद्यार्थी की प्रतिक्रिया का सम्मान करें। ध्यान रखें कि आपके भाव या शब्द उन्हें किसी प्रतिक्रिया को सही या गलत की श्रेणी में डालने का संकेत न कर दें। इन प्रश्नों के एक से अधिक उत्तर सही हो सकते हैं और ये मुद्दे ऐसे हैं जिनका उत्तर खोजने की प्रक्रिया इनके उत्तरों से अधिक महत्वपूर्ण है क्योंकि प्रक्रिया ही विद्यार्थियों के भावों को सक्रिय करके उनके विचार गढ़ने में सहायक होगी, उनके मन में संवेदनशीलता का विकास करेगी। अतः यदि उन्हें कोई आदर्श उत्तर बता दिया जाएगा तो उस उत्तर का कोई लाभ नहीं होगा। जब विद्यार्थी प्रतिक्रिया दे रहे होंगे तो उन्हें आपस में चर्चा करने, सवाल पूछने और एक-दूसरे की बातों को तर्कों से काटने की पूरी आज्ञादी होनी चाहिए। इसी दौरान उनकी अभिव्यक्ति और भाषा का आकलन अवलोकन द्वारा किया जा सकता है।

चरण 3

विद्यार्थियों से कागज की पर्चियों पर पाठ के संदर्भों को जोड़ते हुए पाठ के वाक्य लिखवा लें, जैसे —

- समझदार आदमी इस शाम वाली बस में सफर नहीं करते।
- क्या यह बस चलती भी है? अपने आप चलती है?
- बस तो फ़स्ट क्लास है जी, यह तो बस इतेफाक की बात है!
- निकल जाओ बेटी, अपनी तो वह उम्र ही नहीं रही!
- आना-जाना तो लगा ही रहता है।
- डरो मत, चलो। बस अनुभवी है। नई-नवेली बसों से ज्यादा विश्वसनीय है। हमें बेटों की तरह प्यार से गोद में लेकर चलेगी। आदि।

पर्चियों को आपस में मिला लें। प्रत्येक विद्यार्थी एक-एक पर्ची उठाएगा। अब सभी विद्यार्थी पाठ वाली बस के यात्री बन जाएँगे। एक विद्यार्थी बस का, एक ड्राइवर का और एक विद्यार्थी बस-कंपनी के हिस्सेदार

का अभिनय करेगा। विद्यार्थी बैठे-बैठे ऐसा अभिनय करेंगे जैसे खटारा बस चल रही है और वे डर रहे हैं, हिचखोले खा रहे हैं आदि। इस अभिनय के दौरान विद्यार्थी विभिन्न संवाद बोल सकते हैं, लेकिन अपनी पर्ची पर लिखे संवाद को भी अवश्य बोलना है। बीच-बीच में बस बना विद्यार्थी भी रोचक संवाद बोलेगा। जब गतिविधि को समाप्त करवाना हो, तब गाड़ी का पेट्रोल समाप्त होने की घोषणा की जा सकती है।

ऑनलाइन कक्षा के दौरान दिए गए वाक्यों को <https://randomwordgenerator.com/list.php> वेबसाइट के उपयोग द्वारा भी विद्यार्थियों को व्यक्तिगत या सामूहिक रूप से दिया जा सकता है।

इस गतिविधि के दौरान एक-दूसरे को सुनने, एक-दूसरे से सीखने, धैर्य आदि कौशलों का विकास होगा। साथ ही ध्यानपूर्वक सुनने और समझने के कौशल का भी विकास होगा। इस प्रक्रिया में विद्यार्थी स्वयं संवाद गढ़ेंगे, पढ़ेंगे और उस पर प्रतिक्रिया करेंगे। साथ ही वे वाहनों और यात्राओं से जुड़े शब्दों का प्रयोग भी समझेंगे और करेंगे।

विकल्प

- यह कार्य भी समूह बनाकर करवाया जा सकता है। इससे विद्यार्थियों में सामूहिकता की भावना का विकास भी होगा।

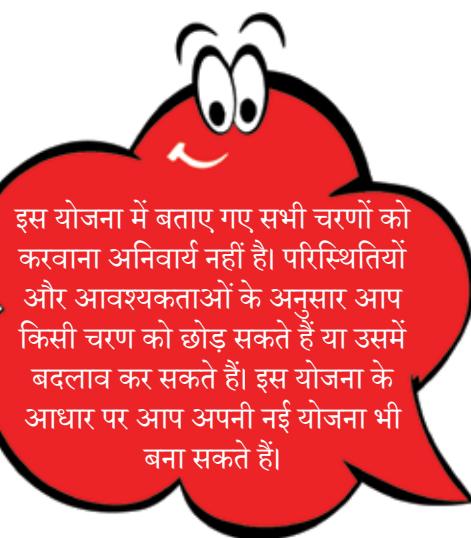
यदि विद्यार्थी पहली बार इस प्रकार की स्वतंत्रता का अनुभव कर रहे हैं तो शायद वे लीक से हटकर सोचने के आत्मविश्वास का प्रदर्शन नहीं कर सकेंगे, लेकिन यदि कक्षा में इस प्रकार का उन्मुक्त वातावरण बने हुए कुछ अरसा हो गया है तो विद्यार्थी इतनी कुशलता से अभिनय कर सकेंगे कि आप भी आश्चर्यचकित रह जाएँगे। अतः कक्षा में जितना जल्दी हो सके, स्वतंत्र रूप से सोचने और बोलने का परिवेश बनाना आवश्यक है। स्वतंत्रता के साथ उत्तरदायित्व की भावना का जन्म अपने-आप हो जाता है, अतः इस बात से चिंतित न हों कि ऐसी स्वतंत्रता से कक्षा का वातावरण सीखने-सिखाने लायक नहीं रहेगा।

चरण 4

विद्यार्थियों से जो बातचीत की गई है, उसके आधार पर चर्चा के बिंदुओं को प्रश्न-उत्तर के रूप में लिखवाया जा सकता है। चूंकि प्रत्येक विद्यार्थी को प्रत्येक प्रश्न का उत्तर पता है; उसने अपना उत्तर स्वयं खोजा है, इसलिए वे स्वयं उन्हें लिख सकेंगे। जिन विद्यार्थियों को लिखने में दिक्कत है। उनकी सहायता उनके साथी या आप भी कर सकते हैं। इस चरण के लिए निम्नलिखित क्रियाकलाप भी करवाये जा सकते हैं—

पाठ में से ऐसे वाक्य खोजिए, जिनके द्वारा लेखक —

- सविनय-अवज्ञा आंदोलन के उदाहरण द्वारा बता रहा है कि बस का हर हिस्सा दूसरे से असहयोग कर रहा था।
- बता रहा है कि बस में कोई भी चीज़ नई नहीं थी।
- ऐसे लोगों पर व्यंग्य कर रहा है जिनके लिए मुनाफ़ा उनकी जान से भी बढ़कर है।
- बस की कल्पना इंसान के रूप में कर रहा है।
- बस के बहुत पुराने होने के लिए उदाहरण दे रहा है।



आकलन

इस पूरी योजना में प्रत्येक चरण के साथ-साथ आकलन जारी रहेगा। आकलन को मुख्यतः अवलोकन और विद्यार्थियों के साथ बातचीत द्वारा किया जाएगा। आकलन में विद्यार्थियों की अभिव्यक्ति और श्रवण कौशलों के साथ-साथ उनके आत्मविश्वास, तर्क, चिंतन आदि पहलुओं को ध्यान में रखा जाएगा। चूँकि हिंदी भाषा का एक प्रमुख पक्ष लेखन भी है, अतः लिखित कार्य द्वारा विद्यार्थियों के लेखन कौशल का आकलन भी अपेक्षित है। लेखन और मौखिक कौशलों के आकलन का सबसे प्रमुख पक्ष अभिव्यक्ति की मौलिकता है। अतः यांत्रिक पक्षों के स्थान पर आकलन में मौलिकता, कल्पनाशीलता और भाषा के सौंदर्य पर अधिक बल दिया जाए।

पाठ के बारे में चित्र बनाने के कार्य द्वारा भी विद्यार्थियों के बोध का आकलन किया जा सकता है। सरल-साधारण रेखांकन द्वारा भी विद्यार्थी अपनी अभिव्यक्ति कर सकते हैं।

भाषा से संबंध

कला समेकित अधिगम की इस योजना द्वारा विद्यार्थी विविध तरीकों से आपस में संप्रेषण और भाषा का सार्थक संदर्भों में प्रयोग करेंगे। इसके द्वारा पाठ्यपुस्तक के पाठ और उसके पात्रों को समझने, दोहराने और उन पर प्रतिक्रिया करने में सहायता मिलेगी। किसी अन्य कहानी/नाटक को लेकर भी इस प्रकार की गतिविधि कक्षा में सकारात्मक ऊर्जा भर देगी। इनके द्वारा किसी अवधारणा से संबंधित शब्दावली का विकास भी संभव है, जैसे — ‘बस’ से संबंधित शब्द और वाक्य। चरित्र-चित्रण करने की शुरुआत की जा सकती है।

अन्य विषयों से संबंध

इस पाठ के दौरान जिन कौशलों का विकास होगा, वे प्रत्येक विषय के अध्ययन में अत्यधिक उपयोगी होंगे, जैसे— तर्क करना, अनुमान लगाना, निष्कर्ष निकालना, अनुभवों के बीच समानता और अंतर की पहचान करना, व्याख्या करना आदि।

इसके अतिरिक्त, सामाजिक अध्ययन का एक पाठ सीधे-सीधे इस व्यंग्य की विषय-वस्तु से जुड़ाव रखता है। यदि सामाजिक विज्ञान के अध्यापक से चर्चा करके योजना इस प्रकार बनाई जाए कि इन पाठों को किसी अवधि विशेष में समानांतर रूप से लिया जा सके तो यह समग्र अधिगम के दृष्टिकोण से अत्यंत उपयोगी होगा। विभिन्न विषयों को समेकित रूप से पढ़ाने का एक लाभ यह भी है कि इससे दोहराव से बचाव होता है और बचे हुए समय को अन्य उपयोगी कार्यों में लगाया जा सकता है।

1. सामाजिक विज्ञान— अधिगम प्रतिफल— 1870 के दशक से लेकर आजादी तक भारतीय राष्ट्रीय आंदोलन की रूपरेखा तैयार करना। (पाठ 9, हमारे अतीत, भाग 3)

2. कला शिक्षा— अभिनय की बारीकियाँ सीखने के लिए कला शिक्षा के कालांश का उपयोग किया जा सकता है।

विस्तार के लिए कुछ रुचिकर सुझाव

- विद्यार्थी अपनी रोचक यात्रा के अनुभवों को लिख सकते हैं।
- पर्चियों वाली प्रारंभिक गतिविधि का विस्तार करके उससे विशेषण और विशेष्य का अभ्यास करा सकते हैं। (टूटी-फूटी बस)
- संभव हो तो कला/कार्य-अनुभव/शारीरिक शिक्षा के शिक्षक साथियों से बातचीत/विचार-विमर्श करके उनके पीरियड और सहयोग का उपयोग भी किया जा सकता है।

4.2 ENGLISH

ACTIVITY 4.2.1



0753CH08

SUBJECT	ENGLISH
CLASS	VII
THEME	POETRY (MEADOW SURPRISES)
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Reads and recites poem with appropriate pause, intonation and pronunciation.
- Participates in different activities in English like role play, poetry recitation, etc.
- Responds to different kind of instructions, requests and directions in varied contexts.
- Identifies details, characters, main idea and sequence of ideas and events in textual/non textual material.
- Infers the meaning of unfamiliar words by reading them in context.
- Asks and responds to questions based on texts (from books or other resources) and out of curiosity.
- Explores and connects to the cultural heritage of their region.
- Appreciates and analyses the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Team work, appreciation for nature, imagination, creativity.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

STEP 1 (IMAGINARY WALK)

For this activity students are asked to stand anywhere in the activity area. Teacher plays music in the background and asks students to walk

according to the music. Learners are asked to listen to the instructions carefully and act accordingly. Students are expected to imagine the space and act accordingly. Teacher motivates them to experience the space around and walk.

INSTRUCTIONS FOR THE GUIDED EXPERIENCE (IN SOFT AND SLOW PACE OF VOICE)

TEACHER: It is a fine morning. You are going out for a walk alone. You walked for some time and reached a field. The cool breeze started to caress you. You could hear the song from a home far away. You are so happy. You are watching around. You see the green paddy in the field. You see the velvet grass. You could hear the sound of a brook and running water. You go near the brook, bend down and wash your face in it. You dip your feet in this water and feel its coldness. You see a butterfly on the flower. You try to catch the butterfly and it flies away. You hear a noise down the tree.. hey.! there's a white rabbit hopping away. You hop behind the rabbit and try to catch it, but it vanishes away. You pluck a flower which has hairy head. You blow it out to see the air fluttering by. You watch the burrows and nest where the bird lives. Oh! That's a lovely day you say to yourself and walk back home.

After the guided experience the teacher interacts with the learner/students.

- How did you feel?
- Did you enjoy the imaginary walk?
- Have you ever been to a place of such scenic beauty?

Teacher elicits responses from the students and gives opportunity to everyone, especially those who keep quiet otherwise.

STEP 2 (LET'S DRAW)

TEACHER: students you experienced an imaginary walk. Can you recollect visuals that you liked the most. Draw/paint a composition based on this experience.

STEP 3 (LET'S READ)

Teacher asks students to read the poem '*Meadow surprises*' and see what the poet says about the surprises in meadow. Students read the poem and understand it. They recite the poem musically with appropriate pause, intonation and pronunciation.

STEP 4 (LET'S WRITE)

Teacher asks the students to write their own poem/s based on the picture that they drew. All pictures/drawings and poems can be displayed for the joy of reading with their peers and can also be put together as compendium of students expression. Students can grade their peers on a 5 point scale.

ASSESSMENT TOOLS SUGGESTED

Teacher can assess each learner during the loud reading of the poem with reference to the following questions.

- Does the learner employ proper posture and gestures?
- Is the learner relaxed and confident while reciting the poem?
- Has the learner enjoyed reading out their poem?
- Does the learner use pause and pace effectively to communicate meaning of the text?
- Does the learner speak clearly, distinctly and with appropriate and varied pitch and tone?

Teacher further checks for comprehension of the poem by each learner, referring to the following indicators—

- Is the learner able to ask a question about the central idea of the poem, make a connection and make a prediction?
- Is the learner able to scan the text for author's word choice clues?
- Is the learner able to determine the author's purpose?
- Is the learner able to annotate while reading, connecting the repeated words, phrases and ideas?
- Can the learner summarise the text, add key details, evidence, and reasoning?

Teacher caters qualitative feedback to each learner on the basis of the above observation.

ACTIVITY 4.2.2

SUBJECT	ENGLISH
CLASS	VII
THEME	POETRY (DAD AND THE CAT AND THE TREE)
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS



0753CH07

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Reads and recites poem with appropriate pause, intonation and pronunciation.
- Participates in different activities in English like role play, poetry recitation, etc.
- Responds to different kind of instructions, requests and directions in varied contexts.
- Identifies details, characters, main idea and sequence of ideas and events in textual/non textual material.
- Infers the meaning of unfamiliar words by reading them in context.
- Uses appropriate grammatical forms in communication (e.g. noun, pronoun, verb, determiners, time and tense, adjective, adverb, etc.)
- Writes descriptions/narratives showing sensitivity to gender, environment and appreciation of cultural diversity.
- Explores and connects to the cultural heritage of their region.
- Appreciates and critically analyses the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Team work, sense of appreciation, imagination, creativity.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Chart paper and crayon or dry colours sufficient for each group.
(Encourage students to use local specific materials and avoid wastage of any kind.)

STEP 1 (COLLECTIVE PICTURE DRAWING)

Students are divided into groups and are provided with chart paper and colours. They are asked to draw a tree collectively. Teacher asks following relevant questions—

- How big will your tree be?
- What is the feature of its leaves?
- Is it a strong tree or a wobbly tree? (Teacher models the idea of wobbly tree through proper actions.) They can even use video clip to show wobbly tree.

Students/learners interact with the teacher and draws, paint the tree in groups. Teacher ensures that everybody gets chance to engage in the collective picture drawing.

TEACHER: What do you see on the tree?

STUDENTS: The shapes and columns, textures and their volume. Birds that rest on these trees etc.

TEACHER: Can you draw it?

Every student draws the things that come to their mind. And teacher has a look at all the drawings while appreciating their efforts in creating the tree.

QUESTIONS—

TEACHER: Have you seen things on trees, which are not part of those tree?

Answer from the students can be like kite, dry branch etc.

TEACHER: Someone who can climb the tree. Can you guess what it is?

Students make guesses. Teacher provides hints (an animal, with fur, it mews etc). Teacher finally introduces the character 'CAT' in the poem.

TEACHER: Can you draw the cat stuck on the tree?

Students draw the cat and each group displays its collective picture drawing on the notice board. Teacher gives 5 minutes to students to look at each others drawing/painting of the tree. Teacher and students appreciates by way of clapping for the work done by the teams.

STEP 2 (READING POEMS)

Students are asked to read the poem in groups, discuss and understand the theme of the poem.

STEP 3 (CORNER STILLS)

Teacher asks students to move in the activity area on 'Taal' created with the help of claps. Teacher calls out a number and students form into groups of that number. Once the students are in groups', teacher calls out a theme and the groups must perform the theme as a corner still. Teacher count from 1-15 and for the last count teacher says 'freeze'. To

the freeze instruction, students stand still without moving. (This activity is also known as Statue game.)

The themes can be—

Group of 7 - Flower

Group of 11 - Flower bed

Group of 9 - A wobbly tree

Group of 6 - Landed wallop

Group of 8 - Pleased as punch (Show of great delight)

Group of 5 - Child's play

STEP 4 (LISTEN AND ACT)

Teacher divides the class into groups of 5. (The last group in the former activity can be also maintained). Students are asked to recite the poem in groups. The five stanza of the poem can be divided among five students in each group. students plan the chain recitation.

Teacher writes the main characters of the poem on the board and asks the students of each group to choose one character for themselves. The characters are Cat, Tree, Mum, Dad, and Girl.

TEACHER: When group A recites the poem, Group B will simultaneously perform as characters according to the recitation. (Every student in the class get a chance to recite and act)

ASSIGNMENT

- Students are asked to draw visuals of their choice from the poem 'Dad and the Cat and the Tree'.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Presentation and Performance
- Observation

ACTIVITY 4.2.3

0849CH01

SUBJECT	ENGLISH
CLASS	VIII
THEME	PROSE (THE BEST CHRISTMAS PRESENT IN THE WORLD)
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Participates in activities and events like role play, group discussion, skit and drama etc. organised by schools.
- Responds to a variety of questions on familiar/unfamiliar texts verbally and in writing.
- Responds to different kind of instructions, requests, directions in varied contexts
- Thinks critically, compares and contrasts characters, events, ideas, themes and relates them to life.
- Writes short messages in the relevant context.
- Engages in conversations in English with people from different professions using appropriate vocabulary.
- Identifies details, characters, main idea and sequence of ideas and events while reading.
- Asks questions in different contexts and situations.
- Participates in kinaesthetic activities for language learning.
- Explores and connects to the cultural heritage of their region.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Interpersonal relationships, coping with emotions, respect for others, group dynamics, friendship.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

DAY 1 (ICEBREAKER)

STEP 1 (LET'S MOVE TO THE MUSIC)

Teacher distributes slips of paper (5cm×5cm size) to all the learners to write their names. Takes back and shuffles the slips in a bag or box. Learners are asked to pick up any one of the slips from the box.

They are encouraged to write one positive quality of the person whose name appears on the slip they got. Randomly selected student will read out the good quality of the ‘person’, without telling their name.

STEP 2 (LET'S MAKE A MESSAGE CARD)

Students are asked to take a small piece of paper and write their own names and drop it in the box or a bag kept in the centre of the room. The teacher now shuffles the slips and asks the students to again pick up one slips from the box. They are asked to open it and read the name but not to disclose to others. Teacher states that the person whose name is on your slip is a special friend and you are going to plan and present them a gift as a token of your appreciation towards them. Now think of a gift you would like to present them with. Remember that you have a reason for giving this particular gift. Close your eyes and think what you would give to your special friend.

Teacher provides students with A4 size paper and colours to draw and paint (Teacher can give it as home assignment).

Students are asked to use one fourth of the page to draw gift and leave rest of the space blank to write a message to the friend. They can beautify the sheet as per their liking.

Students are given 20 minutes to work individually. After the completion of the message card, they are asked to move in to the activity area and follow the music (Teachers can play any music piece). When the teacher blows the whistle they can go and meet their friend to give the present. Every student is involved in the activity of making the message card and the entire class receives a gift card.

Students can be asked to come forward and show the message received by each of them one by one. You can read out the message to the whole class. The person who received the card as gift and the one who presented the same must stand together during the presentation. After the presentation of a particular student, the one who gifted the card will tell about why they thought of that particular gift. After the presentation, all the cards are displayed in the classroom/display board.

Teacher then introduces the story ‘*The Best Christmas Present in the World*’ at this point. Students are asked to read and enjoy the story.

DAY 2 (GROUP WORK)

The students have read the story “*The Best Christmas Present in the World*”. The story ends where the author meets Mrs. Connie.

TEACHER: Dear students you have read the story “*The Best Christmas Present in the World*”. You are familiar with all characters of the story now. What do you think should have happened to Mrs. Connie and the author after the meeting?

Teacher gives students time to discuss in groups and afterwards they are asked to present their thoughts in the form of a role play. They are given time to plan before the performance. Teacher then concludes the AIL session by congratulating the groups for their creative contributions.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Presentations and Performances

ACTIVITY 4.2.4

SUBJECT	ENGLISH
CLASS	VIII
THEME	POETRY (GEOGRAPHY LESSON)
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS



0849CH02

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Enlists and identify new words and infer the meaning of unfamiliar words by reading them in context.
- Refers dictionary and encyclopedia as reference books for meaning and spelling while reading and writing.
- Narrates stories (real or imaginary) and real life experiences in English.
- Reads, compares, contrasts, thinks critically and relates ideas to life.
- Participates in different events such as singing, role play, poetry recitation, etc., organised by school and other such organisations.
- Infers the meaning of unfamiliar words by reading them in context.
- Writes short paragraphs coherently in English with a proper beginning, middle and end with appropriate punctuation marks.
- Writes messages, descriptions/narratives, personal diary, report.
- Explores and connects to the cultural heritage of their region.
- Appreciates and critically analyses the art work done by their peers.

TARGET LIFE SKILLS

Imagination, team work.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

NOTE FOR THE TEACHER

Purpose of the lesson is to enable the students to appreciate and comprehend the poem. It's a three stanza poem which emphasizes how nature is free from all kind of limitations and how people have created boundaries. The teacher will share the link of the song of film 'Refugee'— "Panchhi, nadiya pawan ke jhonke... <https://www.youtube.com/watch?v=-vChRau1tJQ> a day prior to the lesson and ask the students to listen to the song and initiate a discussion with their parents/grandparents/family for reflections on the content of this song. Also ask them to learn the song to sing together in class next day.

DAY 1**STEP 1**

The teacher along with all students sing the song, “*Panchhi, nadiya pawan ke jhonke...*” Understanding the lyrics and emotions connected to the song. Singing is followed with a reflective activity of 15 minutes on—

- What do you think about borders?
- Do we really need borders?

The activity ends without any comments on ‘right’ or ‘wrong’ tag to the reflections. Teacher appreciates students for their participation.

STEP 2

Teacher asks students to listen to another song. The teacher will play the songs ‘*Imagine by John Lennon*’ or ‘*We are the world by Michael Jackson & Others*’. They can also give handouts of the lyrics or write the lyrics on the board for students to read it while they are listening the song. Teacher facilitates simplification of the content of these lyrics and then encourages students to try singing this song together.

The listening and singing of songs is followed by another quick reflective activity to know.

GROUP WORK— DISCUSS AND DRAW

Q. What could be the impact of geographical boundaries on human life? The session ends with appreciation for sincere participation of all students in group discussion and drawing.

STEP 3 (ICE BREAKER)

The teacher gives students some coloured papers for making paper planes. Students make paper planes and are encouraged to think about the country they wish to visit/travel. They fly their planes and imagine the distance covered by their plane to reach to that country. (Fig. 1)



Fig. 1

HOME ASSIGNMENT

- “Try to imagine your self as a flying bird or an airplane, enjoying the ‘Bird Eye View’ of the city”. Write down what all you saw on earth from the sky in 500 words and draw the view you have seen in imagination on a A4 size paper sheet.

DAY 2**STEP 1**

The teacher introduces the poem *Geography Lesson* and encourages students to recite the poem with proper intonation, voice modulation, pronunciation, enunciation, rhythm etc. The recitation of the poetry should be followed by a small discussion on meaning making of the poem.

GEOGRAPHY LESSON

*When the jet sprang into the sky,
 It was clear why the city
 had developed the way it had,
 seeing it scaled six inches to the mile.
 There seemed an inevitability
 about what on ground had looked haphazard,
 unplanned and without style
 When the jet sprang into the sky.
 When the jet reached ten thousand feet,
 it was clear why the country,
 had cities where the rivers ran
 and why the valleys were populated.
 The logic of geography —
 that land and water attracted man —
 was clearly delineated
 When the jet reached ten thousand feet.
 When the jet rose six miles high,
 it was clear the earth was round
 and that it had more sea than land.
 But it was difficult to understand
 that the men on the earth found
 causes to hate each other, to build
 walls across cities and to kill.
 From that height, it was not clear why.*

(Zulfikar Ghose)

EXPLANATION OF THE POEM

The poet describes the scene of a city from a jet. He finds that cities do not seem to be neatly planned and are disorganized. He understands that water resources are the main reason for people to settle near the rivers. As the jet moves higher, he notices that people have created boundaries of hate among themselves. As the jet moves even higher, the boundaries seem to have lost their relevance. The poet reflects his inability to understand the reasons of hatred among people, the reasons to build wall across cities and to even kill.

SUGGESTED LITERARY EXTENSIONS

The students will be suggested to read literature (poetry/stories/views/films, etc) on the impact of boundaries on humanity. For example: '*The Mending Wall*' by Robert Frost.

SUGGESTED CREATIVE EXTENSIONS

Teacher can ask students to compose a song with a message on 'The World Without Boundary'.

INTEGRATION WITH OTHER SUBJECTS

GEOGRAPHY: Learning about the geographical features and boundaries based on these art experiences.

SOCIAL AND POLITICAL LIFE: Learning through the interaction about the political relations between different countries.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Observation
- Presentation

4.3 SCIENCE

ACTIVITY 4.3.1

SUBJECT	SCIENCE
CLASS	VI
THEME	PLANTS - FORMS AND FUNCTIONS
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Classifies materials, organisms and processes based on observable properties, e.g., plants as herbs, shrubs, trees, creepers & climbers.
- Identifies materials and organisms, such as, plant fibres, flowers, on the basis of observable features, i.e., appearance, texture, function, aroma, etc.
- Differentiates materials and organisms, such as tap and fibrous roots on the basis of their properties, structure and functions.
- Draws labelled diagrams of organisms and processes, e.g., parts of flowers.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.
- Explores and connects to the cultural heritage of their region.
- Appreciates and critically analyses the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Plants of different sizes, newspaper/used paper/pamphlets, straws, glue, leaves, sketch pens, objects for leaf imprint, paints/turmeric paste/beetroot juice, props like dupattas, dhoti etc.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1 (INTRODUCTION)

Teacher and students sing any regional/local folk song together on parts of a plant. Teacher then encourages students to draw and label the parts of a plant. Students draw a diagram of parts of a plant and label the parts. (Fig. 1)



Fig. 1

ASSESSMENT

- Name the parts of a plant and state their functions.

ASSIGNMENT

- Write an acrostic poem on plant. (Integration with English subject)

DAY 2 (CLASSIFICATION OF PLANTS)

Teacher and students visit the school garden which creates a joyful learning environment. (Group activity)

Students are happy to visit the school garden and appreciate the beauty of different varieties of plants. They observe different plants in the garden and tabulate the information. They also classify the plants based on their sizes.

ASSESSMENT

- Pupil enact one thing which they like the most in the garden visit. (Students use hand gestures to represent the thing they like the most and others will identify the gestures like flower/butterfly/leaf/creeper/herb.)

ASSIGNMENT

- Represent the number of plants of each category in a graph sheet. (Integration with Math subject)

DAY 3 (FUNCTIONS OF A STEM)

Students make a simple model using domestic items to show the functions of stem as a two-way traffic street. Teacher correlates the function of stem with traffic on road. The student blows air from top and next from bottom in both the straws to show the movement of water and minerals and food in stem. They appreciate the use of easily available material to show the function of stem. (Fig. 2)



Fig. 2

ASSESSMENT

- Stem is a two way traffic street. Justify the statement.

ASSIGNMENT

- Find the crops grown in your region which have edible stems.
- Locate native crops of your state on the political map of your state.
- State the functions of stem other than transportation (Integration with Social Science subject)

DAY 4 (STRUCTURE AND FUNCTIONS OF LEAF)

Teacher encourages students to observe a leaf and identify the parts. Further teacher guides students to make leaf imprint and appreciates the creative work of students using items like paper/septum spike/earthen pot/glass bottle/cloth.

Students do leaf imprint on available domestic materials and label the parts of a leaf after painting. Students draw the lines of symmetry on the leaf imprint. (Fig. 3)



Fig. 3

ASSESSMENT

- List the parts of a leaf with the help of designed painting.

ASSIGNMENT

- Create a leaf art using fallen leaves (native plants) and mention the venation of each. (Integration with Math subject)

DAY 5 (ROOT AND ITS FUNCTIONS)

Teacher guides students perform the role play on functions of root. Students enact as root, water, soil, nutrients to showcase the functions of root. (Group Activity)

ASSESSMENT

- Can you identify the root system without plucking a plant?
- Give examples of edible roots.

ASSIGNMENT

- Make a poster on “Save Soil” depicting the importance of nutrients in soil for the growth.

DAY 6 (FLOWER AND IT'S PARTS)

Teacher will co-relate flower, its parts and its use to the Mayuri tribal dance of south region and guides them in performing the dance. Students actively perform Mayuri tribal dance to depict the different parts and uses of flowers in Mayuri tribal culture. Teacher appreciates the involvement and performance of students.



Students performing Mayuri tribal dance to depict the different parts of a flower

ASSESSMENT

- How do you demonstrate the flower and its parts using other fine arts?

ASSIGNMENT

- Design a model of a flower using pamphlets, newspaper, glue, broom stick and any other household material.

DAY 7 (SUMMARISATION)

Teacher appreciates the varied concept mapping designed by the students in the note book. Students design a concept map of all the topics learnt in the lesson in the note book.

ASSESSMENT

- Summarisation by students.

ASSIGNMENT

- Adopt a plant/tree in your locality and nurture it.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Presentations and Performances
- Projects
- Observation Records

ACTIVITY 4.3.2

SUBJECT	SCIENCE
CLASS	VII
THEME	TRANSPORTATION IN ANIMALS AND PLANTS
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Differentiates materials and organisms such as, digestion in different organisms on the basis of their properties, structure and function.
- Classifies materials and organisms based on properties/characteristics, e.g., plant and animal fibres.
- Measures and calculates pulse rate.
- Draws labelled diagrams/flow charts e.g., organ systems in human and plants.
- Constructs models using materials from surroundings and explains their working, e.g., stethoscope, pulse meter.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Team work, creativity, imagination, group coordination and team spirit.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Paper, alpins, straw with paper tip, stop watch, small funnel of 6-7 cm in diameter, rubber tube (thin water pipe) 50 cm long, balloon, rubber band, 5 potatoes, knife, bowls, common salt, water, edible colours, chalk, beaker and orchid stalk with white flowers, seeds, vegetables.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1 (ICE BREAKER)

STEP 1 (OBSERVE BREATHING RATE, FEEL HEART BEAT AND PULSE RATE)

Students are asked to imagine that they are in the forest where some birds are chirping gently, some are flying, some are jumping here and there, some walking slowly, like elephant and some are running very fast like deer. Students are asked to mimic their behaviour at a fast-paced beat. After two minutes of the fast activity, they are asked to observe their breathing rates which has changed now. Their pulse rate as well as heartbeats have also increased. This can help them understand the change in their breathing pattern, in pulse rate and in heartbeats, during fast pace activities.

Q. Can we count pulse beats and heartbeats?

Possible Answer— Yes, we can.

LET'S TRY

INSTRUCTION: This activity can be done better in groups. Divide students in four groups, A, B, C and D. Tell them that they will make two different devices for measuring their pulse rate and heartbeat rate.

INSTRUCTION FOR MAKING PULSE METER— Take a straw with small paper attached to the tip and fix it on a drawing pin, then press your wrist of one hand towards the thumb side with two fingers of other hand . you will feel that there is some movement in your wrist, now locate this device on the wrist. make sure to keep it undisturbed and ask your friend to count the to and fro motion of the straw in one minute. And record your observations. Repeat this process with each other in the group and record the readings.

VIDEO LINK— https://www.youtube.com/watch?v=JJx1r_dum8M

INSTRUCTION FOR MAKING STETHOSCOPE— Take a small funnel (6-7 cm in diameter) and fix a rubber tube (50 cm long) tightly on the stem of the funnel and stretch a balloon on the mouth of funnel and fix it tightly with the help of a rubber band. Put the open end of the tube on one of your ears and place the mouth of the funnel on the chest, near the heart of your friend. You will hear the thumping sound of heart and count the beats for one minute. Record observations of 3-4 members. Repeat the process after dancing for two minutes and count both the beats again and record. Compare your observations in both situations.

VIDEO LINK— <https://www.youtube.com/watch?v=sSBNYkq8LoI>

Online Classroom: the facilitator can ask students to do the same activity with their family members and make a small video and share it in the group.

STEP 2

Each group is asked to share their results with others in the class. The teacher may ask following questions for a general discussion:-

- How did you like making these health related devices?
- Was there any difference in readings of before and after dancing activities? If yes, what could be the reason?

After the discussion, teacher explains methods of measuring pulse rate and heartbeat. "If the pulse count is about 70-80 beats per minute then the person is considered fit and healthy. If the heartbeats are between 60-100 per minute then the heart is working fine". Teacher can also explain the blood components and types of blood vessels. This activity can be used for recording observations on assessment as learning and assessment in learning.

DAY 2 (OBSERVE THE WATER MOVEMENT IN PLANT BODY)

TASK 1

Facilitator will keep an aquatic plant (with thin stem) on the table and fix paper alpin in its stem. Ask a small group of students to come near the table (one by one) and observe the movement of alpin. This will help them correlate with the movement of blood (pulse rate) in human body. Facilitator during discussion can also give some example like; if there is any cut in our body, blood comes out, similarly if you break a tiny branch of plant, a liquid comes out. (This is just for correlation)

TASK 2

Group A and B are asked to pick one potato, one knife, one small bowl, one spoon, common salt and different edible colours e.g. Red, green, blue and orange. Now peel off potato. Cut one end of each potato to make its base flat, make a deep and hollow cavity on the opposite side of these potatoes. Fill these cavities with common salt. Put the potatoes in bowls containing different colour of water. Leave the apparatus for half an hour and see the changes.

FOLLOW UP ACTIVITY

Group A and B can draw and paint the process on A4 sheet.

VIDEO LINK— <https://www.youtube.com/watch?v=p7L4Cb8wNQE>

Group C and D are asked to keep a stalk of orchid plant with white flower in a beaker containing red coloured water, leave the apparatus undisturbed for half an hour.

FOLLOW UP ACTIVITY

Group C and D can draw and paint Orchid plant with white flowers changing colours in the process.

VIDEO LINK— https://www.youtube.com/watch?v=3eROCi5P_mw

Observe the apparatus and give the answer to the following questions.

Q-1 Did the colour of water enter the cavity made in potatoes?

Q-2 What prevented the colour to enter the cavity?

Q-3 Did the colour of flower changed?

Q-4 Who is responsible for conduction of water and minerals in plant body?

During the class discussion teacher should explain all the functions related to the movement of water in plants. Teacher should also explain working of the xylem and phloem.

TASK 3 (GROUP ACTIVITY)

All groups are ready with chalk and *Rangoli* colours. They are named after parts of the plant. There can be 5-6 students in each group. Ask the groups to draw the diagram of a human heart and diagram of a plant on the stage with the help of *Rangoli* colours. On completion of *Rangoli*, all students will observe the work done by the other group and give remarks for peer assessment. During class discussion, teacher will explain the structure of human heart, flow of blood in different parts of the body and unidirectional flow of water and bidirectional flow of food in plants. Teacher will ask students to take pictures of their *Rangolis* and the work done by students will be appreciated.

TASK 4

All the students are asked to make excretory system with the help of vegetable or different seeds, also draw a picture of leaf showing transpiration. The work can be displayed in the classroom and preserved in portfolio for records.

SUGGESTIVE HOME ASSIGNMENT

- Students can measure the pulse rate and heartbeat of their family members.
- They can also think of any system resembling the working of human heart and excretory system and write a short poem or story on it.

INTEGRATION WITH OTHER SUBJECTS —SOCIAL STUDIES AND MATHEMATICS

The facilitator may ask the following questions—

Q-1 What comes out from mantle when the earth's crust erupts?

Q-2 Where does the river flows faster on the mountains or the plains? And why?

Q-3 By which mode of transportation you come to school?

Q-4 Arrange these vehicles according to increasing order of their speed.
(Car, bus, scooter, bicycle, Bullock cart.)

ASSESSMENT TOOLS SUGGESTED

- Observation Records
- Peer Assessment and Self Assessment
- Projects
- Portfolio
- Rubrics

ACTIVITY 4.3.3

SUBJECT	SCIENCE
CLASS	VII
THEME	ACIDS, BASES AND SALTS
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Differentiates materials and organisms such as, acidic, basic and neutral substances on the basis of their properties, structure and function.
- Classifies materials and organisms based on properties/characteristics, e.g., physical and chemical changes.
- Conducts simple investigations to seek answers to queries, e.g., Can extract of coloured flowers be used as acid-base indicator?
- Writes word equation for chemical reactions, e.g., acid-base reactions.
- Applies learning of scientific concepts in day-to-day life.
- Makes efforts to protect environment, e.g., planting trees to avoid soil erosion; sensitising others with the consequences of excessive consumption of natural resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.
- Explores and connects to the cultural heritage of their region.
- Appreciates and critically analyses the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Regional fruits and vegetables, baking soda, turmeric, detergent, soap solution, ear buds or paint brush, white papers, hibiscus flower, cardboard, lemon juice/tamarind juice/vinegar/beet root juice, blue and red litmus papers, mineral water bottle, balloon, teeth model, pen, paper, colour pencils, water colours, charts.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1**STEP 1 (ICE BREAKER)**

Teacher distributes few regional fruits and vegetables for tasting and derives the properties of acids from students. Students taste the given fruits and vegetables. Students try to give the properties of acids from their experience.

FOLLOW UP ACTIVITY

Draw a quick sketch of facial expression on tasting different fruits. Sketches can be the live sketches.

ASSESSMENT

- Why do few fruits and vegetables taste sour?
- How do you feel if you apply lemon juice on the palm for some time?

HOME ASSIGNMENT

- Make a fruit salad using regional fruits. (Take a picture to share in the class.)

STEP 2 (INTRODUCTION TO BASES)

Teacher asks the students to touch the given substances and mention its properties. Students touch the given soap/baking soda and give their nature. Students give other examples of substances containing acids and bases.

ASSESSMENT

- Why are the given substances soapy in nature?

WRITTEN ASSIGNMENT

- Differentiate between acids and bases.

DAY 2 [INTRODUCTION OF NATURAL INDICATORS (TURMERIC)]

Teacher encourages students to design a greeting card using the property of indicators and have joyful learning in designing a greeting card by applying the properties of acids and bases. Teacher co-relates traffic signals to introduce the topic of indicators where different colours are shown by indicators in acids and bases. Teacher guides the students in making a greeting card using the property of indicators.

Students make a greeting card using turmeric and detergent. They bring dry turmeric paper and dip ear bud or paint brush in prepared detergent solution and make regional designs of *Pochampally* (regional art form of south region) and write a message on it to greet their parents or siblings.

ASSESSMENT

- Why does the turmeric change its colour on applying detergent?

- Observe and give reasons for the change in the turmeric sheet by applying lemon, vinegar, curd, etc.

HOME ASSIGNMENT

- Identify the acidic and basic substances found in the kitchen? If a detergent is applied on a cloth containing food stains, the stain turns red. Give reason.

DAY 3 [INTRODUCTION OF NATURAL INDICATORS (HIBISCUS AND LITMUS)]

Teacher encourages students to work in groups and apply the property of indicators like hibiscus, litmus in doing craft work. Teacher appreciates the active involvement of students in their groups.

Students test the acidic and basic nature of the given substances (lemon, soap, etc.) using the petals of hibiscus, observe the colour change and use these petals to make a book mark with a card board.

ASSESSMENT

- Group the substances which give similar colour with hibiscus and find their nature.

HOME ASSIGNMENT

- Make beetroot juice and test with different substances available in kitchen and find their nature.

DAY 4 (NEUTRALISATION REACTION)

Teacher encourages the students to perform the activities of neutralisation in pairs using kitchen items like vinegar or lemon juice and baking soda or baking powder. Students form into pairs and take few ml. of vinegar or lemon juice in a small empty fruit juice bottle or mineral water bottle and add few grams of baking soda or baking powder. They quickly plug the mouth of bottle with a balloon and observe its inflation. (Fig. 1)



Fig. 1

ASSESSMENT

- What is vinegar made of? Why is it used in cooking?
- Name the gas evolved in adding vinegar to baking soda or baking powder and give one application.

WRITTEN ASSIGNMENT

- Define neutralisation.
- How is baking soda different from baking powder?

DAY 5 (NEUTRALISATION REACTION)

Teacher encourages students in their groups to perform the neutralisation activity using indicators. Students take few ml. of lemon juice or tamarind juice in a glass bowl and add few drops of phenolphthalein or beet root juice and note the colour change. To the same solution they add lime water or detergent solution and observe the colour change. This activity is repeated by adding acidic and basic substances alternately and observe the magic of colour changes in the solution.

ASSESSMENT

- Give reason for the repeated colour changes observed on adding different solutions.
- Students to touch the container and explain why is it warm.

ASSIGNMENT

- Why has the *Taj Mahal*, a great Indian monument, turned yellow from pure white? Also paint any one part of the *Taj Mahal* on A4 drawing sheet.

DAY 6 (NEUTRALISATION IN DAILY LIFE)

Teacher encourages students to do skit or a role play in groups to depict the advertisements shown on television to learn applications of neutralisation. Students perform a skit or a role play on neutralisation reaction to depict the advertisements of their choice in groups related to acidity, toothpastes, detergents, etc.

ASSESSMENT

- What causes acidity?
- Explain how antacids work?

ASSIGNMENT

- You feel pain when a bee or wasp bites. Give a home remedy to be relieved from the pain.

DAY 7 (APPLICATION OF NEUTRALISATION IN AGRICULTURE)

Teacher provides newspaper for students to read the articles about excess usage of fertilizers in soil/crops. Teachers motivates the students to make posters and write slogans. Teacher appreciates the active participation of students in save soil campaign. Porter can create image of Earth, Plants, Crops under the effect of chemicals.

Students co-relate the soil topic to geography (social) and discuss further. Students design colourful posters and write slogans on save soil. Students display save soil human chain as a part of campaign. (Fig. 2)

ASSESSMENT

- Why do plants not grow well in acidic or basic soil?

ASSIGNMENT

- Discuss with the local farmers, the steps taken for the healthy growth of the plants. (Integration with Social Science subject).



Fig. 2

DAY 8 (SUMMARISATION)

Teacher encourages students to summarise the concepts and make a mind map. Teacher appreciates and writes the points on the board. All students actively give the points of summarisation and make beautiful and colourful mind maps comprising all the concepts of the chapter.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Presentations and Performances
- Projects and Models
- Observation Record
- Portfolio

ACTIVITY 4.3.4

SUBJECT	SCIENCE
CLASS	VIII
THEME	LIGHT
FORM OF THE ART ACTIVITY	VISUAL ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Conducts simple investigations to seek answers to scientific queries.
- Measures angles of incidence and reflection.
- Draws labelled diagram of experimental set ups.
- Constructs models using materials from surroundings and explains their working, e.g., periscope, kaleidoscope.
- Applies learning of scientific concepts in day-to-day life.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Creative thinking, social skills.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

A4 size paper, pencil, water colours, source of sunlight, thread, torch, toy, looking glass/plane mirror, ball, protractor, carbon sheet.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1

Teacher to students: Have you ever done thread painting? Well we will do it today. Take plain sheet of paper and fold it from the centre to make two

equal parts. Now take three pieces of thread dipped in different colours. Place the threads on one fold of sheet creating irregular curves. Now fold the other part of paper above it and press it with a book or note book and pull out the thread slowly. Open the fold and tell (Fig. 1);

- What do you see on the page?
- Are the images on both sides of the paper same?
- Whether the distance of both images is same from the centre line (Mirror)?
- Can it be related with image formation in the mirror?

Teacher ask the students to show their arts to others and explain it.



Fig. 1

DAY 2

STEP 1 (IN GROUP OF 2)

Lets have fun drawing using carbon sheet. Place a carbon sheet on a paper sheet. Remember that carbon side of paper has to be facing the plain (A4) sheet of paper. To keep it fixed on paper sheet, you can use a pin or jump/U clip. Now fold the paper sheet from centre with carbon sheet on the inner side. The fold of the paper is the centre line and you can draw lines, zigzags, criss cross, round and round or any image. Now open the sheet and enjoy the magic.

STEP 2

Interpret your creation in 10 lines.

STEP 3

Exploration with actual mirror and answer the question:

- Can you explain how images reflect in mirror?

DAY 3 (EXPERIMENTING RAY DIAGRAM WITH THE HELP OF PAPER FOLDING)

STEP 1

Take a plain sheet of paper and fold it from the centre of the paper. Let us imagine this line is mirror line. Tell the students to take thread and colour it with wet water colour and mark a angular line with stretched thread touching the mirror line at an angle, and fold it perpendicularly at the point of incidence. We will get its print on the other side. And the point on other side will be perpendicular to the point of incidence.

STEP 2

Repeat the same exercise with another thread originating from the same point but touching the mirror line at another point. Now again fold perpendicularly to the mirror line. The impression of this on the other side will be perpendicular to the point of incidence on the papers. Now draw lines on the perpendicular folds.

STEP 3

Now fold paper from the centre over the threads so as to create an impression on the other fold. An image as shown below is created. Let the students measure the angles (incident and reflected) or students may use a plane mirror and torch light to study the incident and reflected ray. They mark the ray and measure the angle of incidence and reflection.

After the class discussion, the teacher explains both the laws of reflection of light. They ask the students to draw the ray diagram taking proper measures of angles using a protractor.

STEP 4 (ASSESSMENT)

The teacher asks questions:

- Is the image formed at the same distance behind the mirror as the object is in front of it?
- What happens to the image when the object comes closer to the mirror or moves away from it?
- Why is this kind of image not formed in front of the mirror line?
- What kind of image is this— real/virtual?

The teacher draws a free hand sketch of the ray diagram on the board and asks students to make it in their notebooks taking proper measures using a protractor to get the image.

EXTENDED LEARNING

Students are asked to think and answers following questions:

- What happens when you look at two mirrors kept at an angle to each other?
- Do the images increase in number when the angle between the mirrors increases/ decreases?
- How many images are formed when the mirrors are kept parallel to each other?

HOME ASSIGNMENT (MODEL MAKING)

- Making of kaleidoscope to get beautiful patterns by multiple reflections.
- Making of periscope.

ASSESSMENT TOOLS SUGGESTED

- Presentations
- Participation in making/doing arts and crafts
- Self and peer assessment on 5 point scale
- Portfolio

ACTIVITY 4.3.5

SUBJECT	SCIENCE
CLASS	VIII
THEME	FORCE AND PRESSURE
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Differentiates materials such as contact and non-contact forces on the basis of their properties, structure and functions.
- Conducts simple investigations to seek answers to queries, e.g., do liquids exert equal pressure at the same depth?
- Relates and explains processes and phenomenon with causes, e.g., effects of force, atmospheric pressure.
- Constructs models using materials from surroundings and explains their working.
- Applies learning of scientific concepts in day-to-day life.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Drum and sticks or big steel plate and spoon, table, chair, wooden block, paper, crayons, colour pencils, scale, newspaper/pamphlet, graph sheet, bamboo stick/any other stick, string/thread, hibiscus plant, turmeric, beetroot, Brushes, sketch pens/markers/pens/pencils, fluids like water, lemon juice, honey, balloon, container, steel glass, spoon, paints, straws, old dupattas/dhotis.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1 (INTRODUCTION OF THE TOPIC: FORCE)

Teacher guides the students to perform the *Dappu* dance (regional dance of South India) using drum and sticks/Big steel plate and spoon in different pitch and understand force. Students enjoy dancing according to the beat and state the reason for different sounds produced (Fig. 1). Teacher appreciates the active participation of students in identifying the magnitude of force.

Teacher creates an interest in the students by singing the wrap song along with the students. Students sing together learning the concept of force wrap song: Lyrics of the song:

"Forces a Push or Pull"
Force make things go up
Force make things go down
Force make things go back and forth
Force make things
go round and round contd..."



Fig. 1

VIDEO LINK— https://www.youtube.com/watch?app=desktop&v=E-SnC_WKsCg&ab_channel=JackHartmannKidsMusicChannel

ASSESSMENT (QUESTIONS AND SITUATIONS)

- Illustrate two applications of force observed in your daily life.
- When we push a wall, it does not move. What has happened to the force applied on it?
- When we apply equal amount of forces on both the sides of a table, it does not move. Why?

ASSIGNMENT

- Define force and mention its SI unit.
- Can you mention the forces involved in your favourite dance?
- Listen to the music produced by any two musical instruments like tabla, keyboard and list out the differences of sounds produced by them basing on the amount of force applied.

DAY 2 (EXPLORING FORCES: BALANCED AND UNBALANCED)

Teacher guides the students in designing the mind map. Students display a sense of interest in mapping the concepts

ASSESSMENT

- Give any two examples of balanced and unbalanced forces in real life situations.

ASSIGNMENT

- Select your favourite sport and mention how interaction results in force in various stages of the games.

DAY 3 (EFFECTS OF FORCE)

Teacher encourages students to design a paper rocket using domestic material and appreciates them. Students make their own paper rocket, release them to observe keenly and lists various effects of force involved in it.

Students estimate the distance travelled by their rockets and compare the distances travelled by different rockets in the form of a graph.

ASSESSMENT

- State the various effects of force displayed by cricket players in their game.
- Rockets are made in stream lined shape. Why?

ASSIGNMENT

- How are various effects of force responsible in moulding a piece of iron into a shape?

DAY 4 (TYPES OF FORCE)**TASK 1**

Teacher assigns simple tasks to differentiate between contact and non-contact force. Students perform tasks like: lifting a bag, clapping hands.

TASK 2

Teacher guides in designing a bow and arrow to understand different contact forces. Students use domestic material in the making of bow and arrow and states various types of forces involved in it as they play with it. (Fig. 2 and 3)



Fig. 2



Fig. 3

TASK 3

Teacher motivates students to make poster on different types of force. Students enjoy making a poster on different contact and non-contact

force. Students relate the types of contact and non-contact force to their day to day activities.

ASSESSMENT (QUESTIONS)

- It is difficult for us to walk on a block of ice. Why?
- Name the force exerted on a ball of dough to make chapatti.
- Differentiate between contact and non-contact force.

ASSIGNMENT

- Observe a boy riding a bicycle, driving a bike, drawing water from a well and moulding a clay pot. List types of force involved in each of the above tasks.
- List different types of contact and non-contact force involved in everyday activities.

DAY 5 (PRESSURE)

Teacher co-relates a few day to day life situations and encourages students to give examples to understand the concept of pressure. Teacher encourages students to derive the formula of Pressure from the concept learnt.

Teacher encourages students to compare the pressure exerted by changing the area of contact using art. Students display artistic skills in establishing relation between area and pressure.



Drawing using sketch pens—less pressure



Mandala Art using pen—more pressure

ASSESSMENT (QUESTIONS)

- Straps of school bags are made broad, why?
- Why materials like spikes and rubber are used in the making of sport shoes?

ASSIGNMENT

- Perform a simple dance using both flat shoes and high heels and then share your experiences with the class.

DAY 6 (LIQUID PRESSURE)

Teacher appreciates students as they list out examples of fluids like water, lemon juice, honey etc. and defines the term '*Liquid Pressure*'.

TASK 1

Teachers asks students to examine pressure applied by liquids at different depths practically. Teacher observes students performing simple activities like filling water into a balloon with holes, pouring water on the ground from different heights. Students performs these simple tasks and lists out various factors affecting the fluid pressure.

TASK 2

Teacher asks students to make a *Jal Tarang* with metal tumbler and spoon to learn and play musical notes produced by using water up to different heights using *Jal Tarang* (Fig. 4). Both teacher and students enjoy the music produced by *Jal Tarang*.

ASSESSMENT (QUESTIONS)

- Is air a fluid? Justify.
- Will you be able to ride your bicycle, if the tyre of your bicycle is flat. Why?
- Do all metal tumblers with different water level can produce the same sound? Why?



Fig. 4

ASSIGNMENT

- Name some fluids that you are surrounded with.
- Give few examples of daily life situations where we experience fluid pressure.
- Try playing *Jal Tarang* with different water levels and note the differences.

DAY 7 (ATMOSPHERIC PRESSURE)

Teacher narrates a story of a man climbing a hill, finds difficulty in breathing as he goes to higher altitudes on to a hill, also notices that the ink of the pen in his pocket started leaking. Students listen to the story keenly and try to reason out for the difficulty in breathing and also for the leaking of ink from the pen. Students will co-relate that the change in pressure causes natural disasters like Cyclones, Tsunami etc.

ASSESSMENT (QUESTIONS)

- Why did the person experience difficulty in breathing?
- What is the unit to measure atmospheric pressure?

ASSIGNMENT

Case study: Rheema while travelling to Manali suddenly noticed bleeding in her nose. Give reason (Integration with Social Science subject).

DAY 8 (SUMMARISATION)**TASK 1**

Teacher facilitates students the acquired knowledge to associate the effects of force and pressure with an activity of blowing air through the straws to create an art. Students perform a simple activity (using natural indicators like Turmeric, Hibiscus plant, Beetroot) of blowing air using a straw to summarise the concept of force and pressure. (Fig. 5)



Fig. 5

TASK 2

Teacher involves students in decorating their classroom with various unused cloth material like *dupatta*, *dhoti* etc. by applying different effects of force and pressure.

ASSESSMENT

- Observe and identify the effect of forces involved in preparing a *roti*.

ASSIGNMENT

- Using the knowledge gained on various effects of force, invent a new sport.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment on 5 point scale
- Presentations and Performances
- Projects and Models
- Observation Record
- Portfolio
- Rubrics

4.4 SOCIAL SCIENCE

ACTIVITY 4.4.1

SUBJECT	SOCIAL SCIENCE
CLASS	VI
THEME	MOTIONS OF THE EARTH
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS



0656CH03

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Distinguishes between stars, planets and satellites e.g., Sun, Earth and Moon.
- Demonstrates day and night; and seasons.
- Identifies latitudes and longitudes, e.g., poles, equator, tropics, States/UTs of India and other neighbouring countries on globe and the world map.
- Locates important historical sites, places on an outline map of India.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Model of the sundial, model of seasons-spinner, chart/globe, chairs, paper plate, straw or ice cream stick, sketch pens, scale, glue, pencil, alpins, clay, scissors, split pins, ball.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1**STEP 1**

The teacher displays the chart and shows the globe to motivate students. Through oral questioning the teacher elicits the topic.

- Name the planet we live on.
- Does the Earth move or is it stationary?

Students observe the chart displayed and answer accordingly.

STEP 2

The teacher encourages students to explore the concept further by doing an activity to showcase the movement of earth and explain the terms ‘rotation’ and ‘revolution’. Students in pairs demonstrate the two movements of the earth. They also play the game musical chairs on the rhyme— “Here we go round the Mulberry bush” and go round and round in a circle (revolution) and enjoy the game. The students imagine the revolution/rotation shapes/pattern and correlate it by giving example of the foods like *Murukulu/Sakkinalu/Jalebi* etc.

STEP 3

Teacher engages them in critical thinking by asking these question—

- When you are travelling in a train you feel as if the trees are moving along with you? Why is it so?

The teacher then connects the topic to History by igniting the curiosity of the students by showing pictures of the *Jantar Mantar* at Jaipur. Questions on these pictures or video clips or videos can be;

- Where is the *Jantar Mantar* located?
- Who built it?
- What is its importance?

GROUP ASSIGNMENTS

- Find out some information about the Indian astronomer Aryabhata.
- What if the earth stops rotating?

DAY 2

The teacher recapitulates the concept learnt in previous class through oral questions and involves the students in a hands-on activity of making a ‘Model of Sundial’ and familiarising them to the concept of ‘Circle of Illumination’, day and night.

Students make a model of the sun dial and analyse the difference in the length of day and night. The students are able to give reasons for the difference in the length of day and night with reference to the circle of illumination. They describe the position of the earth in relation to the sun during the rotation by giving the example of taking rounds around the temple.

With the help of the hands-on activity and examples in daily life the teacher analyses the different timings of the day. The teacher connects the concept with math and yoga through the activity—‘Sundial Model’. For example— understanding the different angles, time calculations, and concept of circle and divisions, etc. The students recognise the importance of sunrise and sunset (dawn/dusk) and can also discuss about why in Indian traditions lamps are lighted during dawn and dusk and why are these parts of the day preferred for practising Yog.

ASSIGNMENT

- Prepare a chart on different movements of the earth.

DAY 3

STEP 1

Teacher involves the students in a hands-on activity of making a ‘Model of Seasons-Spinner’ and introduced to the concept of seasons. The students are divided into groups of 4 and asked to make a ‘Model of Seasons-Spinner’ where students take interest in exploring the different seasons and find reasons behind season change. Students spin the top circle of the seasons-spinner around to reveal three months and their corresponding season. (Fig. 1)



Fig. 1

STEP 2

Students are shown the following video link or the poem is recited to them.

VIDEO LINK— https://www.youtube.com/watch?v=xnic3e_Kalo

Students are divided into two groups and are made to stand in an elliptical shape with one student standing at the centre thus take turns and play the game—“*catch the ball*” by reciting any poem or song on seasons. Students experience the logic behind the circular shape and elliptical shape in relation to the position of earth and sun and correlate with the student standing in the middle with axis, earth’s equinox, solstice and spell out the reasons for the change of seasons.

EXTENDED LEARNING

The teacher further integrates the concept with the activity —seasons spinner through following questions:

- What are the different fruits/crops grown in our region, in different seasons?

- Why do we wear cotton clothes in summer?
- List out the various festivals celebrated in various seasons etc.

Teacher also integrates state's culture by posing questions on different festivals. Students also give examples of different dishes/dances etc. made on different festivals in different seasons like— *Puran Poli/Bakshalu* and *Bathukamma* dance and exchange of *Jammi* leaves on *Dussehra*, *Ugadi Pacchhadhi/pickle* on *Ugadi* festival, use of sesame seeds as scrub for bathing on *Pongal* festival etc.

ASSESSMENT TOOLS SUGGESTED

- Observational Records
- Task sheet
- Self Assessment and Peer Assessment
- Projects

ACTIVITY 4.4.2

SUBJECT	SOCIAL SCIENCE
CLASS	VI
THEME	DIVERSITY AND DISCRIMINATION (STEREOTYPE)
FORM OF THE ART ACTIVITY	VISUAL ARTS



0658CH02

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Describes various forms of human diversity around her/him.
- Develops a healthy attitude towards various kinds of diversity around them.
- Differentiates between equality and inequality in various forms to treat them in a healthy way.
- Appreciates and involve themselves in different art forms as a medium of exploring their creative and artistic expression.
- Recognises various forms of discrimination and understands the nature and sources of discrimination.
- Exhibits values of cooperation, empathy and freedom from fear and prejudices.

TARGET LIFE SKILLS

Critical thinking, observation skills, collaborative working, adaptability, resilience, empathy.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

DAY 1

STEP 1 (ICEBREAKER)

Teacher enters the class with a pleasant smile on the face and tells the students that today they are going to have fun with drawing. So everyone gets ready with paper pen or pencil. Draw a scenery as quick as in 1 minute (Fig. 1). Your time starts now.



Fig. 1

QUICK GUIDELINES FOR THE ICEBREAKER

- One can draw with pen or pencil.
- Do not bother to colour it, line drawing will do.
- It is a quick drawing activity and every student should try to finish it in one minute.

After completing the quick drawing of a scenery, they are asked to keep their drawing with them.

STEP 2

Now all of you will get *20 minutes* to draw a scenery, but the difference this time is that you will think of the scene that you have experienced for example; the tree/the mountain/desert/sea/land/rivers/sky that you have seen. Houses, gardens, birds or animal, whatever you want to draw in it, should have been part of your experience at some point of time. Take another sheet and create another scenery.

Teacher will make sure that students get into their imagination and not involve in talking. This exercise is more effective if done quietly and peacefully. After they complete their scenery they are applauded for the active engagement in drawing activity.

STEP 3

Next part of the activity is to compare both the sceneries done. Students are given two minutes to look at both of their works to find out the difference. Teacher asks one by one or randomly about the differences they have found. Each student gets time to tell one difference only. Difference shared by one student will not be repeated by others. If what they have written has been shared by others already, then say ‘pass’ at your turn. After completing one round you may find opportunity to share your findings, if its not yet shared by anyone. (Fig. 2)



Fig. 2

(This activity makes students listen to all the details and differences shared)

Looking at the scenery drawings and listening to the difference found, teacher can pick up points to conclude the activity and link it with the concept of ‘Stereotype’. Points could be—

- Why most of the first scenery drawings are of similar kind?
- What is the basis of this expression?
- “Whenever we think about a scenery, we tend to draw the mountains, hut, river, sun and birds, a boat”. Why?
- “Even schools those are in deserts may draw the same scenery as their counterparts in Himachal”. Why?

Teacher will introduce and explain the term ‘Stereotype’ and explain that when we get in to fix ideas, fix people into one image, we create a ‘Stereotype’. We keep following set practices rigidly without looking at its logic.

Teacher can clarify that in first activity you got just one minute to draw the scenery, hence there was less time to think, feel and act. Therefore what you made has got partial stereotypes.

Now look at the second drawing done by you, it’s detailed and based on your personal/original experience/s. The shape of mountains, trees, rivers and other objects/subjects are near real. In the second work you did not follow the fixed idea of a common expression of a scenery, rather enjoyed the beauty of your own experience. Hence, you cracked the cover of ‘Stereotype’ from the term ‘Scenery’.

DAY 2

STEP 1

Teacher can now form small groups of 4 students each and encourage them to read the content given in this chapter/unit of the textbook. And make list of common stereotypes of our time. Every group is given one minute to read out their list of stereotypes and handover the list to teacher.

After listening to all the groups teacher can conclude the session. They can have their own list of stereotypical ‘roles’, ‘responsibilities’, ‘professions’, ‘traditions’ and ‘practices’, that need to be shared with students at this point to make their understanding of the concept even deeper. (Fig. 3, 4 and 5)



Fig. 3



Fig. 5



Fig. 4

Teacher will appreciate the active participation of all the students, their ability to understand stereotypes and for making learning a fun.

Next we will learn about ‘Prejudice’ and I am sure you all are going to enjoy that too.

ASSIGNMENT

- Prejudice has a deep connection with stereotype, so do explore and come prepared with your list of 'Prejudices I know' tomorrow.

ASSESSMENT TOOLS SUGGESTED

- Worksheets (Fig. 6)
- Anecdotes
- Group Projects and Presentations
- Observation
- Rubrics: Attentiveness, Participation, Spontaneity, Listening Skills, Spontaneity of Response, Accuracy, Conceptual Clarity
- Quiz

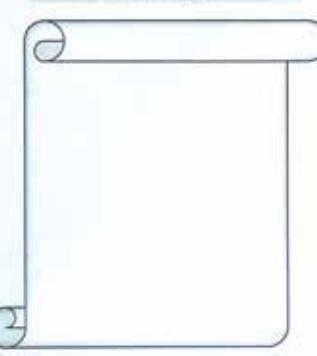
**Worksheet
Stereotypes and Prejudice**

♦ Put a tick in the appropriate column

Situations	Stereotype	Prejudice
Fair complexioned girls are more beautiful than dark ones		
Boys don't cry		
A mother is an epitome of love		
Life in the city is easy. People here are spoilt and lazy.		
Girls are well behaved, soft spoken and gentle		
People who speak English are superior to those speaking Hindi		
Town dwellers are well dressed whereas villagers are not		

♦ What do you think are the differences between Stereotypes and Prejudice

Stereotype



Prejudice

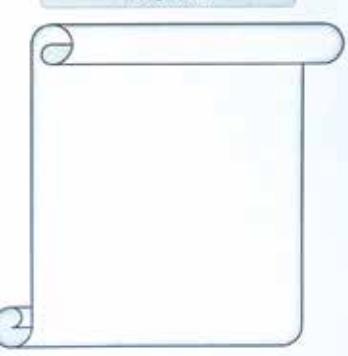


Fig. 6

ACTIVITY 4.4.3

SUBJECT	SOCIAL SCIENCE
CLASS	VII
THEME	ENVIRONMENT
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS



0762CH01

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Identifies major layers of the earth's interior, rock types, layers of the atmosphere in a diagram.
- Describes formation of landforms due to various factors.
- Explains composition and structure of the atmosphere.
- Describes different components of the environment and the interrelationship between them.
- Reasons and factors leading to diversity in flora and fauna, e.g., climate, landforms, etc.
- Shows sensitivity to the need for conservation of natural resources—air, water, energy, flora and fauna.
- Exhibits creativity in designing, planning, making use of available resources, etc.
- Exhibits values of honesty, objectivity, cooperation, freedom from fear and prejudices, compassion and appreciation for nature.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Collected fallen leaves, twigs, rice powder/fine sand/salt/brick powder, natural colours like turmeric, vermillion, indigo powder, ochre, neem twigs, jute twine (*rassi*)/thread, needle, glasses, bowls, steel spoons/stick, water, venn diagram model of an ecosystem.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1

The teacher takes the students on a nature walk and ask them to observe the surroundings and collect natural items —such as dry leaves, stones of different colours and shapes, twigs, seeds, and other items that interest them. Students observe their surroundings and are interested in the natural environment and are eager to explore what they can do with the items collected. Teacher motivates the students to make some art pieces with the items collected (Fig. 1). Suggested art pieces:

- Landscape with leaf art
- Stone craft
- Nature bracelet, crown



Fig. 1

After they do the activity, the students display the pieces of art and learn from their peers and interact with them. They also exchange ideas with other sections.

The students can also use stones of different shapes, sizes and colour to create beautiful show pieces which they can proudly display in their homes. The students with collected flowers can make natural ornaments which they can wear and feel happy.

DAY 2**STEP 1**

The teacher with the help of a mind map classifies the environment into natural, human and human made. The teacher then engages the students in preparation of *Rangoli/wall painting/Toran* making/floral *Rangoli* with flowers, leaves or natural pigments and colours —such as ochre, turmeric, vermillion, indigo flowers (Fig. 2). The teacher also encourages students to sing a folk song *Janapadam* (regional song of South India) learnt from their parents or grandparents while doing the art, to sensitise them to the concept of Lithosphere.

The students create beautiful pieces of art with natural dyes and colours showcasing their skill and competency. Thus, integrating all the three components of environment—natural, human made and human environment.



Fig. 2

STEP 2

The teacher connects to the concepts of geometry (math) through *Warli* art —triangles are used to make stick figures and the intersections of shapes form figures and drums, hands, etc. Also the *Toran* activity emphasises the use of mathematical concepts to measure the doorway and the number of flowers used and required.

ASSIGNMENT

- Make a scenery with all the landforms found on the lithosphere (mountains, plateaus, depressions, plains, etc.)

DAY 3

This activity done by the teacher and students integrates the art form of music and physics. It helps students experiment with the sounds created with different quantities of water. The teacher creates music notes with the help of a DIY *Jal Tarang* (bowls filled with different quantities of water) to make the students aware of the other elements of nature —hydrosphere and atmosphere. The students enjoy the music and also try to make their own *Jal Tarangs* and music.(Fig. 3 and 4)



Fig. 3



Fig. 4

The teacher connects the music created to the science of sound and vibrations, and also encourages them to draw their own inferences. Students draw conclusions; why the sound varies in the different bowls/glasses? The students create musical notes and understand that water (hydrosphere) and air (atmosphere) interact and create the beautiful music. They understand that the volume of water and the air column above the water in any container creates music, thus an interaction between the major domains of the environment —the hydrosphere and the atmosphere.

ASSIGNMENT

- Draw the water cycle in your note books.

DAY 4

Using a venn diagram the teacher relates to the interaction of the major domains of environment (Biosphere) and also displays a model of the ecosystem. Students observe the Venn diagram and understand the interaction and share their responses. They also collectively make a model of the ecosystem with the help of the teacher. (Fig. 5)



Fig. 5

ASSIGNMENT

- Build your own terrarium using recyclable materials such as— glass/ shoe boxes/clay pots or bowls, soil, plants, etc.

DAY 5

The teacher sings a folk song on environment conservation and encourages the students to get involved by singing along. All students of the class join the teacher in the singing of regional folk song. The teacher connects the conservation to science by giving an insight into the classification of the species which are endangered, extinct or protected. After the song the students give their suggestions for conservation.

ASSIGNMENT

- Find out about *Chipko* movement.
- Discuss with your elders about how your area/village has changed over a few decades.

ASSESSMENT TOOLS SUGGESTED

- Peer Assessment and Self Assessment
- Task sheet
- Presentations/Models

ACTIVITY 4.4.4

SUBJECT	SOCIAL SCIENCE
CLASS	VIII
THEME	UNDERSTANDING SECULARISM
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS



0860CH02

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Analyses the significant developments in the process of nation building.
- Interprets social and political issues in one's own region with reference to the constitution of India.
- Explains the significance of equality in democracy.
- Exhibits values of secularism, compassion, brotherhood, cooperation and freedom from fear and prejudices.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Images/flash cards, paper, pencil/pen, music audio or instruments, materials for making the band—chart paper/colour thread/wool/satin ribbon, scissors, decorative items, glue, story board.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1

The teacher introduces the topic by taking the students to a garden and asking them to observe the trees around them. The students observe and try to understand the diversity among trees there around (Fig. 1). Through nature walk teacher connects to the geographical features of the region, by asking questions based on vegetation, type of soil and weather conditions of the day. After getting responses, the teacher shares images



Fig. 1

of religious unity and diversity and elicits one liners from the students. The students then look at the pictures and share their thoughts and write one liners on paper. The one liners written by the students express their views on different religions of India. Students give one liners:

- United we stand
- Peace, harmony, love
- All religions are one etc. etc.

ASSIGNMENT

- Make a list of secular and non-secular countries.

DAY 2

STEP 1

The teacher involves the students to delve deeper into the meaning of Secularism with examples and compares between other secular countries and India. Teacher facilitate students relate secular ideas with the history of India through role play on the tolerant policies of Ashoka after the *Kalinga* war. (Fig. 2)



Fig. 2

STEP 2

The teacher can reinforce the unique features of Indian Secularism, through local/regional folk songs and dances on unity.

ASSIGNMENT (IN TEAMS OF TWO EACH)

- Read the Preamble from the Geography text book —The term “Secular” was added to the Preamble later —find out when it was added and by which amendment act?

DAY 3

STEP 1

Through story-telling and a brother hood band activity the teacher inspires the students on the importance of secularism in India. Teacher shares a true story with students where people from different religions came together to reconstruct the places of worship to enhance brotherhood in the community. Teacher encourages students to come up with similar kinds of stories/experiences/incidences, that they have heard of or seen in their region.

STEP 2

The teacher connects with Math subject to reinforce the story with an activity of making the brotherhood band. Students make the brotherhood band and tie it to each other. The students measure perimeter of the circular wrist band and make it to fit the wrist of their friends. They draw and cut different shapes and decorate it (Fig. 3). The feeling of fraternity is ignited among the students through this activity.



Fig. 3

DAY 4

Using the story board given in the NCERT textbook, the teacher (by integrating English subject) encourages the students to personify the characters in the story. Students are encouraged to participate in it voluntarily. The students bring these characters to life by using voice modulations, intonations and correct pronunciations of the dialogues.

ASSESSMENT TOOLS SUGGESTED

- Peer Assessment and Self Assessment
- Task sheet
- Presentations and Performances
- Observation Records

4.5 MATHEMATICS

ACTIVITY 4.5.1

SUBJECT	MATHEMATICS
CLASS	VI
THEME	TYPES OF ANGLES
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Describes geometrical ideas like line, line segment, open and closed figures, angle, triangle, quadrilateral, circle, etc., with the help of examples in surroundings.
- Demonstrates an understanding of angles by—
 - Identifying examples of angles in the surroundings.
 - Classifying angles according to their measure.
 - Estimating the measure of angles using 45° , 90° , and 180° as reference angles.
- Classifies triangles into different groups/types on the basis of their angles and sides. For example— scalene, isosceles or equilateral on the basis of sides, etc.
- Describes and provides examples of edges, vertices and faces of 3D objects.
- Engages/Participates in exploration of angles in day-to-day life. For example— Yoga, Dance, Architecture.
- Relates regional art forms with mathematical applications. For example— types of angle.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Notebook, colour, pencils A4 size paper or drawing sheet, rulers, graph paper, glue, colour pencils, card board, protractor, ground, equipment (slides, see-saw) coloured tape, chalk, desk, political maps, colour paper, glue, stick, chart paper.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1 (INTRODUCTION TO ANGLES)

TASK 1

Teacher asks students to identify use of angles in their surroundings. Students will give different examples of angles seen in daily life. The concept of angles through examples of regional heritage/monuments can be considered (Fig. 1). Students will be able to make angles using pencils, rulers, and notebooks.



Fig. 1

TASK 2

Then, students can connect *Warli/Madhuwani* or any folk art of wall painting with formation of angles. They can draw and depict the angles formed in it. Students can show case angles by using their body through native dance forms. They will demonstrate formation of angles by using their body as vertex and their arms will represent the rays. (Fig. 2)



Fig. 2

ASSIGNMENT

- Draw objects of day-to-day use at home and write about the angles formed/used in it.

DAY 2 (CONSTRUCTION AND MEASUREMENT OF ANGLES)

Teacher facilitates the students to construct and measure the angles using protractor.

TASK 1

Students will be engaged in the activity of measuring angles on graph paper. Students will write the name of their choice on a graph paper and

measure the angles formed in it. Students will practice the construction and measurement of angles by using protractor in the class work.

TASK 2

Students will be involved in the activity of making a clock. Students will make paper/clay clock and measure different angles formed with the help of protractor.

ASSIGNMENT

- Students will make paper/cardboard protractor at home and stick it in the note book.

DAY 3 (TYPES OF ANGLES)

TASK 1

Teacher will accompany students to the school ground and assist them to explore different types of angles around. Students observe, analyse different objects or equipment (slides, see-saw cricket, football, basket ball ground) and discuss in the groups about angles formed in different areas. Students will be involved in the angles activity with tape/chalk on ground/desk. Students will use the available desk/ground and paste coloured tape or draw lines with chalk on it. They will identify and measure different angles and write about them. (Fig. 3 and 4)



Fig. 3



Fig. 4

TASK 2

Students will be engaged in the activity of plotting angles on map. Students will draw and identify different types of angles by joining different cities in Indian political map. In another task, teacher encourages students to understand types of angles through hands on activity. Students will make paper fans using paper and use it to show different angles in a group. (Fig. 5 and 6)



Fig. 5



Fig. 6

ASSIGNMENT

- Create any figure using coloured paper and note down the angles formed in it.
- Students will create different designs of their choice using match sticks and note down different angles and their measurements.

DAY 4

Teacher will engage students in performing different *Yogasanas* and *Kuchipudi* dance (art form of South India). Teacher will encourage students to analyse and understand different types of angles formed through *Yogasanas* and through regional/local dance forms. (Fig. 7)



Fig. 7

ASSIGNMENT

- Make 3D model of different types of angles using material of your choice.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Task sheets
- Projects
- Observation Records
- Presentations and Performances

ACTIVITY 4.5.2

SUBJECT	MATHEMATICS
CLASS	VI
THEME	UNDERSTANDING ELEMENTARY SHAPES
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Describes geometrical ideas like line, line segment, open and closed figures, angle, triangle, quadrilateral, circle, etc., with the help of examples in surroundings.
- Demonstrates an understanding of angles by—
 - Identifying examples of angles in the surroundings.
 - Classifying angles according to their measure.
 - Estimating the measure of angles using 45° , 90° , and 180° as reference angles.
- Classifies triangles into different groups/types on the basis of their angles and sides. For example— scalene, isosceles or equilateral on the basis of sides, etc.
- Describes and provides examples of edges, vertices and faces of 3D objects.
- Engages/Participates in exploration of angles in day-to-day life. For example— Yoga, Dance, Architecture.
- Relates regional art forms with mathematical applications. For example— types of angle.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Team work, creativity and imagination, critical thinking, communication, problem solving.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Blackboard, chalk, newspaper, glue/local variants of glue, scissors, twigs, using items from surroundings like plate/spoon/table/old boxes, tree stems etc.

(Encourage students to use local specific materials and avoid wastage of any kind.)

STEP 1 (ICEBREAKER – GROOVE AROUND)

VIDEO LINK—<https://www.loom.com/share/6ecc460b1f284de0abb6429dcba32e9f>

Facilitator will play some music/sound (using items from surroundings like plate/spoon/table/old boxes and tree stems etc.) in the classroom. Students will be required to create dance steps on the music played.

INSTRUCTIONS

This activity will be done in groups. Each group will create some interesting dance steps on the music played in the class. These may include steps from local folk dance forms prevalent in the area. Each group will have to create at least 4 dance steps. The steps created may use different parts of the body like hands, legs, waist etc. The facilitator will guide the students as and when required. Once the students have created the steps and practiced them to attain synchronization they will present it in front of the class. During presentation, the students are asked to observe the performance of their peers and note down some interesting points which can connect dance steps and postures with Math concepts. This will help in building interest and focus amongst the students.

In case of an online classroom, the teacher will first show images portraying different dance steps. They may also show a video showcasing dance steps with the use of different body parts. Music will then be played using easily available things around or using the electronic gadget. Each student will be asked to create 4 dance steps listening to the music.

SUGGESTED DISCUSSION

After the presentation of all the groups, the facilitator can ask students to share their points group wise. Appreciate their efforts and clarify that dance and Yoga postures are connected to angles.

The facilitator will then explain students the concept of angles and how an angle is formed by the combination of two rays. They will also relate it to the different postures being created during the dance and Yoga performance.

STEP 2 (TYPES OF ANGLES)

Students will be creating different types of angles on the ground/classroom floor using material available like sticks from trees (should be straight), sticks created using old newspaper/magazine pages etc., potter's clay other local variants and create a pattern using it.

INSTRUCTIONS

This activity will be done in pairs. Students will be choosing tree sticks, making sticks out of old newspaper etc. and then using them to create angles. See that they join sticks together at a single point of contact. This will help them create an angle. Once the angle is created, the pair will work together to move the two arms of this angle in different directions to explore the variations they can create. Each time an angle is created, students may use *Rangoli* colours to trace its outline. This will help them create a beautiful pattern. They can even select different colours for different angles.

Blue – Right angle

Black – Obtuse Angle

Green – Acute Angle

Similarly, more angles and more patterns can be created.

In case of an online classroom, the above activity can be done individually. Each student can use the easily available material like twigs, tree sticks, sticks made of newspaper, used matchsticks etc. to create angles. Each time an angle is created the student may use *Rangoli* colours or chalk to trace an outline on the floor/paper. This will help them create a beautiful pattern.

STEP 3 (PROPERTIES OF TYPES OF ANGLES)

The facilitator will then explain the properties of the different types of angles like acute angle, reflex angle, obtuse angle, right angle, straight angle, complete angle etc. (Fig. 1). They would also give examples of various angles from the surroundings and students will explore the application in solving various problems using the textbook.



Fig. 1

STEP 4 (THE ANGLE FAMILY)

Students can present a role play depicting different types of angles as '*The Angle Family*'. The facilitator will provide the following instructions—

INSTRUCTIONS

Facilitator will divide the students into groups of 4-5. Each student in the group will take up the role of a particular angle and the groups together will present a role play (presentation) of 2-3 minutes on their angle family in front of the class. While preparing for the role play, the students can try to project the properties of different angles, their shapes, conditions of creation using their hand gestures and dialogues/conversations. This will help the teacher to know if the students can identify the various types of

angles, differentiate between them and assess whether the desired learning outcomes have been attained. This activity can be done as mentioned above even during the online classes.

ASSESSMENT SUGGESTED

- The facilitator can ask the students to identify different types of angles around them.
- Students will be asked to draw various angles using protractor and identify the angle and the type of angle.
- Self-assessment as well as peer assessment of the work can be done.
- Role play presented on 'The Angle Family'.

SUGGESTED EXTENSION

INTEGRATION WITH SCIENCE

The concept of angles can be extended to explain the concept of light and how light gets reflected through various angles. The discussion may be extended to angle of incidence and angle of reflection, the difference between the two and the situations that arise when angle of incidence and angle of reflection are same or different.

INTEGRATION WITH SOCIAL SCIENCE

Students may be asked to study the architecture of their home, school or any local historical monument in their city as application of angles.

In case of online classes, students can go through the virtual tours of different monuments in their cities. Such links are easily available on www.youtube.com and can be viewed by any student.

After observing the structure of their home/monument carefully, they may observe the different elements in the architecture like the domes, minarets, arches, doors, windows and measure the angles that they see at the different corners. They may also identify the types of angles that they have measured. Students can also choose any one angle and use it to create a unique architectural design for their home/school. While studying the architecture of any local historical monument a classroom discussion can also be initiated upon why a particular design was chosen in a given historical era. Students can ponder upon the pros and cons of choosing a particular design.

SDG INTEGRATION

With SDG 9 —Industry, Innovation and Infrastructure in focus students can be asked to brainstorm and come up with a design that suits today's climate and atmospheric conditions. They may also discuss the types of material that can be used in construction which are pocket friendly and help resolve local issues. For instance, in an area prone to floods or earthquakes what architectural changes are required in a building and what material is suggested for the construction.

ACTIVITY 4.5.3

SUBJECT	MATHEMATICS
CLASS	VI
THEME	FRACTIONS
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Uses fractions and decimals in different situations which involve money, length, temperature etc.
- Solves problems on daily life situations involving addition and subtraction of fractions.
- Relates regional art forms with mathematical applications.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentations with interest etc.)

TARGET LIFE SKILLS

Team work, creativity and imagination, critical thinking, communication, problem solving.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Blackboard, chalk, graph paper/grid paper, colours, newspaper, glue/fevicol/local variants of glue, scissors.

(Encourage students to use local specific materials and avoid wastage of any kind.)

STEP 1 (ICEBREAKER – THE FRACTIONAL BEATS)

Students will be required to dance on a piece of newspaper on the folk song played in the class (selected by students and the facilitator). For this, space needs to be created to place newspaper on the floor and dance. This activity can also be done in open.

Each student will need one piece of newspaper. Students will place the piece of newspaper out as a ‘whole piece’. The facilitator will then play folk music/local music so that the students can dance along on their piece of newspaper. When the music will stop, the student must pick up their piece of paper and fold it in half. They will then repeat the process and will start dancing on the folded newspaper. Again, the music will stop and they will fold the piece of newspaper and dance on $1/4$ th of it. The process will continue until the newspaper is folded into $1/16$ th. This will help build interest and momentum amongst the students. This activity can be conveniently done even during online classes.

In case of online classes, student may ask their parents/friends/cousins/ relatives to accompany in the activity. This will help in relationship building and add a special fun factor to the activity.

STEP 2 (FRACTION ART PRECAP)

The facilitator will ask the students to work in pairs and find answers to the suggested exploratory questions:

- Can we divide a whole object into parts? Think and discuss some real-life situations in which we do this.
- Do parts and whole have a relation? Can this relation be identified as any mathematical term?
- Try to make free hand drawings of different mathematical shapes and divide them into equal parts.
- Try deducing the relation between the parts and the whole. Can it be stated in terms of a fraction?

The facilitator will introduce the concept of fractions to the students in relation with the created mathematical shapes and their parts. They can also show images of objects like *Roti*, apple, orange (other vegetables and fruits) etc. to explain the correlation of the parts and the whole in terms of the mathematical term ‘fraction’.

STEP 3 (CREATING FRACTION ART)

The facilitator will divide the class into pairs. Ask them to cut a perfect circle from a circular paper plate/a piece of newspaper. Students will be asked to divide the circular cut into fractional parts. The facilitator will guide and provide clarification to the pairs if required. Students will then create art pieces based on fraction. (Fig. 1 and 2)



Fig. 1



Fig. 2

GUIDELINES ON FRACTIONS

Students can use paper plates/circular cuts outs of newspaper by dividing them into parts. They will first divide the complete circle into half, and then each half into a quarter. Each quarter piece will then be divided into half further creating one eighth of a division. Once these parts are created, students will be using them to create real life objects like flowers, animal or bird figures, baby cart etc. They will name the object created and will also mention the fraction on each part used to create the image.

STEP 4 (CREATING FRACTIONAL IMAGES ON GRID SHEET)

Students will be encouraged to use grid sheet and create innovative design of their own by colouring each square on the sheet with specific colours. The facilitator can either provide or ask students to bring a 10*10 grid sheet containing 100 squares.

In case of online classes the students can arrange for this sheet by themselves or even create it at their home using any plain paper. This can be done by drawing 10 horizontal and 10 vertical lines at a distance of 1cm each from each other.

Students will be using the grid sheet provided by the facilitator to create an artistic design. They will colour the squares of the grid sheet with different colours to create the design and also mention the fraction of each colour used in creating the design. Each student will come and present their design in the class and the fractions used for creating the same.

STEP 5

The designs created will be put up on the class board during the course of further discussion.

SUGGESTED QUESTIONS FOR THE FOLLOW UP ACTIVITY

- Have you seen such designs being used in real life?
- Observe all fractions in the fractional artwork created here. What can you deduce?
- Is it always necessary that the upper number (numerator) in a fraction is smaller than the lower number (denominator)?
- Can there be other types of fractions?

The facilitator will then explain the mathematical terms —Proper fractions, Improper Fractions, Mixed Fractions, Like Fractions, Unlike Fractions and Unit Fractions. They will discuss the meaning, method of conversion of one type of fraction into another and explore their application in solving various problems using the textbook.

VIDEO LINK— <https://www.youtube.com/watch?v=DtV1zWiMyM>

ASSESSMENT TOOLS SUGGESTED

- Project
- Self Assessment and Peer Assessment of the images created
- Presentations
- Observation Records (with anecdotes, narration unique situations etc. wherever possible)

ACTIVITY 4.5.4

SUBJECT	MATHEMATICS
CLASS	VI
THEME	PERIMETER
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Uses variable with different operations to generalise a given situation. For example, Perimeter of a rectangle with sides x units and 3 units is $2(x+3)$ units.
- Finds out the perimeter of rectangular objects in the surroundings.
- Relates regional art forms with mathematical applications.
- Explores and connects to the cultural heritage of their region
- Appreciates the art work done by their peers.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing arts, presentation with interest etc.).

TARGET LIFE SKILLS

Critical thinking, creative thinking, communication skills, interpersonal skills, empathy, observation skills, problem-solving skills.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Black board, paper, 20cm thread/wire, graph paper, colours, pair of scissors. (Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1**STEP 1**

The teacher/facilitator collaborates with theatre teacher and narrates a story to the students.

NARRATION

Paheli studies in a government school. She is a very dedicated student and a keen learner. One day, her teacher sensitised the class about ecological balance, which inspired her to the core. She took a vow to give something back to nature. There was a waste land near her house. She decided to change wasteland into productive land. Eventually, she started planting seeds in the wasteland. A few days later, she could see the result of her hard work in little saplings. She was very proud to see her seeds blooming into little plants.

One morning, to her dismay, she found her saplings destroyed and damaged by animals. She was very disheartened. She discussed this problem with friends and teachers.

After the narration, the teacher/facilitator along with students brainstorm and discuss on 'How could have *Paheli* protected her plants?' The teacher refrains from giving hints for the answers and encourages students to think.

DISCUSSION

STUDENT: She can appoint a guard for her garden.

TEACHER: But for this, she has to pay salary every month.

STUDENT: She can put a scarecrow in her garden, it wouldn't cost her much!

TEACHER: But scarecrows are to scare away birds and not land animals.

STUDENT: She can put a fence around the garden using either a rope, barbed wire, or a brick wall.

Post discussions, the teacher/facilitator explain to the students that *Paheli* decides to put a fence around her garden that fits her budget. (Fig. 1)

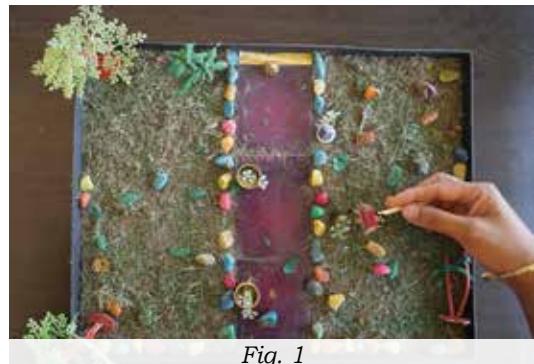


Fig. 1

STEP 2

The teacher/facilitator ask the students to draw *Paheli*'s imaginary garden in their notebooks; measure its dimensions and also find its perimeter. After the activity, teacher/facilitator initiates following discussion.

If you were at *Paheli*'s place;

- Where would you go to buy the fence for your garden?
- How will you decide which fence will be suitable?

Solution agreed upon after discussion;

- To survey the market for desired material and select the best possible keeping suitability and the cost of the material in view.

DAY 2**STEP 1**

The teacher/facilitator asks the students to convert the classroom into a marketplace and distribute chits, mentioning the different names of shops on those chits. Each row of benches will have students enacting as shopkeepers and some students as customers. (Fig. 2)

ABC Fencing shop: Rate- Rs.50 per metre

EFG Fencing shop: Rate- Rs.75 per metre

XYZ Framing shop: Rate- Rs. 2.50 per metre for the wooden frame and Rs.5 per square metre for glass.



Fig. 2

STEP 2 (FIND A SUITABLE FENCING SHOP)

The students are given a task to explore the lowest bidder and calculate the cost of fencing. After finalising the price, the task of the class is to calculate the money they will require to fence their garden. Teacher explains the concept to the students that the perimeter is calculated in metres, and metre is the unit of length, therefore we need to find out the length of wire required for fencing. The teacher then announces that the length and breadth of the *Paheli's* garden is 20m x 12m respectively and students have to calculate the cost of the fencing for her garden as well. ABC fencing shop quotes the cheapest cost which is Rs. 50/- metre.

Students calculate the cost of fencing *Paheli's* garden.

- Total length of the fence required = $20+20+12+12 = 64$ metres
- Cost = $64 \times 50 = \text{Rs.}3200$

SUGGESTED EXTENSION

Teacher can conduct more similar activities where students can calculate the perimeter of other plane objects like school balcony, switchboards, window panes etc.

ASSESSMENT TOOLS SUGGESTED

- Rubrics
- Self-Assessment and Peer Assessment
- Presentations and Performances
- Observation Records

ACTIVITY 4.5.5

SUBJECT	MATHEMATICS
CLASS	VII
THEME	ROTATIONAL SYMMETRY
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Applies the concept of rotational symmetry in real life situations.
- Identifies symmetrical figures from immediate environment which shows rotational symmetry.
- Visualises the symmetry through paper folding activities.
- Relates regional art forms with mathematical applications.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers and others.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing art presentations with interest etc.)

TARGET LIFE SKILLS

Team work, creativity and imagination, critical thinking, communication, problem solving.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Blackboard, chalk, cut out of objects, torch, newspaper, glue/fevicol/local variants of glue, scissors (careful handling of the scissors is mandated).

(Encourage students to use local specific materials and avoid wastage of any kind.)

STEP 1 (ICEBREAKER – SHADOWING IMAGES)

Students will be required to create shadows on a wall/plain surface/paper using a paper cut out of any geometrical object/shape (e.g. leaf, hand, flower, rectangle, triangle, circle etc.) against the light. Source of light can be a torch or sun.

INSTRUCTIONS

This activity will be done in pairs. Each pair will make a cut out of any object/shape they see around them. One student from each pair will place the cut out in their hand standing at some distance from the wall. The other student will have a torch facing the object from the back so that its shadow is casted on the wall in front. Students may also trace the shadow created using a pencil/chalk/colour. The facilitator will guide the students as and when required. Once the students are comfortable in creating the shadows the students will try to rotate the objects at different angles to create different kind of shadows. This will help build interest and momentum amongst the students.

In case of an online classroom the teacher can show images of shadows created by different objects in the class and demonstrate the same using a torch/sun shadow. They will place the cut out of an object as described above in one hand and will stand at some distance from a wall. Holding a torch in the other hand, they will throw light on the object so that its shadow is cast on the wall in the front. Students can then try out the same activity at home following the demonstration.

SUGGESTED EXTENSION (INTEGRATION WITH SCIENCE)

The facilitator will ask the student to explore more about Shadows. They will pose the following suggested questions—

- How are shadows formed?
- Have they ever seen their own shadows? If yes, then when?
- Can the shape and size of a shadow change as per our will?
- What does it depend upon?

The facilitator will then ask the students to explore and try changing the shape and size of the shadows they have created.

STEP 2 (ROTATIONAL TESSELLATIONS)

The facilitator will ask the students to create a small cut out of any regular/irregular mathematical shape. The students will then be forming colourful patterns by rotating the shape at different angles. (Fig. 1)



Fig. 1

INSTRUCTIONS

Each student will make a cut out of any regular/irregular mathematical shape. The student will then place the cut out on a plain sheet of paper and trace it using pencil colours. They will then rotate the shape by an angle of 90 degree and trace it again using a different colour. This process will be repeated 3 more times until one complete circle is done. The facilitator will guide the students as and when required. Students may repeat the same process again by rotating the shape through different angles (30, 45, 60 degrees). Beautiful and colourful pattern will be created in the process.

NOTE: As the mentioned activity is a concept based art experience, the facilitator should take special care that the fun factor should be retained and students should be provided with appropriate time to explore different variations during the activity.

The facilitator may ask the following questions—

- During the course of the activity did you observe anything significant?
- Did some objects looked identical even after they were rotated?
- Did this happen at every rotation or were there specific angles at which this could be achieved?
- Was this angle (at which the object looked identical even after rotation) same for different shapes?

The facilitator will then discuss in detail about the concept of rotational symmetry and will explain the various terms associated with it like angles of rotation, order of rotational symmetry etc. They would also give examples of various shapes (both regular, irregular) that possess rotational symmetry and students will explore the application in solving various problems using the textbook.

ASSESSMENT SUGGESTED

- The facilitator will ask the students to identify different shapes from around them which have rotational symmetry.
- Students will be asked to draw the various stages of symmetry and identify the angle and order of rotational symmetry.
- Self Assessment as well as Peer Assessment of the work will be done.

SUGGESTED EXTENSION

INTEGRATION WITH SOCIAL SCIENCE

The facilitator will ask the student to explore some historical monuments in the city they reside in. The students can study any one element of the design created in the monument and select a design to check if it has rotational symmetry. For example: If we try looking at the Taj Mahal and its minarets students may study the different mathematical shapes used in the creation of the monument. Like the cylindrical minarets can be

observed to see if they show rotational symmetry. They may further indulge in a discussion on which style of ancient architecture was most inclined towards creating symmetrical pattern while designing their monuments. While discussing about the symmetry in the monuments a classroom discussion can be conducted on the deteriorating condition of our ancient monuments and the impact of pollution on the same.

SDG INTEGRATION

With SDG-13 Climate Action as the focus, students can find out about the various atmospheric changes and harmful gases that lead to the deterioration of an ancient monument. Also, they may brainstorm about the steps that can be taken to improve the climatic conditions and reduce the level of pollution in their state/area/locality to help save the monuments. These solutions can be presented in form of a mind map and put up in the classroom for future reference. In an online classroom, it can also be created digitally on free platforms like Padlet where the entire class can collaborate and put up their suggestions in words, pictures, videos, links etc.

INTEGRATION WITH SCIENCE

The concept of eclipse can be explained through this activity. The activity can help explain how the alignment of heavenly bodies' casts shadows notably umbra and penumbra that is responsible for partial and total eclipse. The geometry of their alignment can be understood with paper cut-outs or balls of different shapes resembling the earth, moon and the sun. As used in this activity, torch can be used to cast a shadow of the round figures with variations in position of the source of the light.

ACTIVITY 4.5.6

SUBJECT	MATHEMATICS
CLASS	VII
THEME	MENSURATION
FORM OF THE ART ACTIVITY	VISUAL AND PERFORMING ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Finds out approximate area of closed shapes by using unit square grid/graph sheet.
- Calculates areas of the regions enclosed in a rectangle and a square.
- Relates regional art forms with mathematical applications.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers and others.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing art presentations with interest etc.).

TARGET LIFE SKILLS

Team work, creativity and imagination, critical thinking, communication, problem solving.

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

Chalk/charcoal, blackboard/floor, A-4 size sheet, pencil, eraser.

(Encourage students to use local specific materials and avoid wastage of any kind.)

STEP 1 (VIRTUAL IMAGINATION – NARRATION)

The facilitator can use a puppet to say that they had a dream about the classroom floor. The floor was complaining that it cannot be seen at all. So many things are covering it. Facilitator and students need to brainstorm to find solution to its problem. They will work in pairs to discuss and visualise the situation and think critically to answer the suggested questions—

- What were the complaints of the floor?
- What things do you think are covering the floor?
- What can you do to make the floor happy again?
- Which mathematical concept do you think can be applied in this situation?

The facilitator listens and asks guiding questions to bring the concept of Area.

STEP 2 (TRACING ACTIVITY)

The facilitator will ask students to work in groups of 4-5 to create a 1×1 square grid of 10×10 cm on the board/floor. One student will trace their hand on the grid and together the group will find out its area. They will explore the means of calculating the area.

In case of an online class however, the same activity can be done individually. Each student at their own home can create a 10×10 grid on the floor with chalk/colour/rangoli colour etc. Once the grid is created they can trace their own hand and then try to find its area on the grid.

GUIDELINES

Group will count the total number of complete squares, half squares, less than half squares and more than half squares covered by the traced hand.

- Area of one complete square should be taken as 1 sq. cm.
- Area of more than half square should be taken as 1 sq.cm.
- Area of half square should be taken as 0.5 sq. cm.
- Area of less than half square should be taken as 0 sq. cm

Cumulative Area of all types of squares will give the area of the hand.

SUGGESTED EXTENSION

The facilitator may ask the following questions:

- Can you think of other ways for calculating the area of irregular shapes?
- Can the area of regular shapes also be calculated in a similar manner?
(The facilitator may discuss the traditional ways of calculating area using thread, hand and foot for measurement.)
- Is there a mathematical formula to calculate the area of regular shapes like rectangle, triangle, circle, parallelogram etc.?

STEP 3 (BLUEPRINT FOR YOUR DREAM SCHOOL)

- The facilitator will initiate a discussion on importance of school in a student life. They will then ask students to visualise their 'Dream School'. Students will work in pairs and write down the important components (classroom, playground, nature, labs, toilets etc.) of their 'Dream School'.

- The facilitator will ask the students to use an A-4 size sheet and consider it as the space to design their school. Students will use their imagination and create a rough blue print of their school. (The facilitator will ask them to observe the interior of buildings/houses in their vicinity and guide the students to make use of regular shapes while creating the blueprint.)
- Students will give a name to their 'Dream School' and present the blueprint in the class. They may also recite/sing a self-composed poem as a part of the presentation. The facilitator will display all the 'Dream School' blue prints in the classroom during the course of the chapter.

In case of an online classroom, this activity can be done individually and can be changed into designing a 'Dream Home'. Students can observe their home and measure actual dimensions using inch tape/foot measurements. They can then create a design for their dream home. While doing the same students can be guided to think on how can they make their dream house environment friendly too and so what kind of material they would like to use for its construction (keeping in mind the climatic conditions of a particular area).

STEP 4

The facilitator will then discuss the formulas for the calculation of various regular shapes like square, rectangle, triangle, parallelogram etc. and will explore their application in solving various problems using the textbook

ASSESSMENT OF LEARNING

The facilitator will ask students to rework on the 'Dream School' blue prints created and use the knowledge of areas to calculate the area of each component drawn in the blueprint.

SUGGESTED EXTENSION

- The facilitator may ask the students to create any figures/shapes (like human, animal, plant figures) on the graph paper using mathematical shapes and a given area.
- The facilitator can ask the students to identify 2-3 mathematical objects in the classroom. Students will find their areas by first measuring their dimensions using a rope/thread/hand/foot and then using a suitable formula for further calculation.

ASSESSMENT TOOLS SUGGESTED

- Project
- Peer Assessment
- Observation Records (with anecdotes, narration unique situations, etc. wherever possible)

ACTIVITY 4.5.7

SUBJECT	MATHEMATICS
CLASS	VII
THEME	FRACTIONS
FORM OF THE ART ACTIVITY	VISUAL ARTS

TARGET LEARNING OUTCOMES

By the end of session, the learner:

- Interprets the division and multiplication of fractions.
- Uses algorithms to multiply and divide fractions/decimals.
- Represents daily life situations in the form of a simple equation and solves it.
- Solves problems related to conversion of percentage to fraction and decimal and vice versa.
- Relates regional art forms with mathematical applications.
- Explores and connects to the cultural heritage of their region.
- Appreciates the art work done by their peers and others.
- Demonstrates artistic abilities (keeping classroom and surroundings clean and beautiful, helping in classroom displays, participating in visual arts and performing art presentations with interest etc.)

The teacher is advised to read the suggestive exemplar and make prior arrangements for the smooth conduct of Art Integrated session.

MATERIAL REQUIRED

A4 size paper, colours, colour pencils, seasonal vegetables/fruits, different variety of items available at home, card board or used CDs, glue and sketch pens, beads, silver foil or silver coloured paper and glue.

(Encourage students to use local specific materials and avoid wastage of any kind.)

DAY 1 (ICE BREAKER)

Teacher guides the students in performing the colourful activity of fractions using available vegetables. Students make different types of fractions using vegetable painting and they share the known information with each other. Teacher appreciates the active involvement of students.

ASSESSMENT

- Design 2 improper fractions using materials available at home.

ASSIGNMENT

- Make a collage of different types of fractions.

DAY 2 (EQUIVALENT FRACTIONS)

Teacher opens a conversation on equivalent fractions. Students involve themselves in vegetable salad making using equivalent fractions. Different seasonal fruits can be used as well for the activity. (Fig. 1)



Fig. 1

ASSESSMENT

- Identify the composition of ingredients used in any regional dish.

ASSIGNMENT

- Make a recipe chart for your friend using equivalent fractions.

DAY 3 (LIKE AND UNLIKE FRACTIONS)

Teacher allows the student to create pictures using types of fractions in real life situations. Students discover different types of fractions using items provided at home. Students will be able to relate kite festival of Telangana (festival of south region) to make Fractions Pictionary.

ASSESSMENT

- Create a geometrical *Rangoli* using fractions.

DAY 4 (ADDITION AND SUBTRACTION OF FRACTIONS)

Teacher guides the students to detect addition and subtraction of fractions. Students design *Cheriyal* art (traditional art form of south region) using different fractions. Students carry their designed *Cheriyal* art to home for adding and subtracting the fractions. Teacher appreciates the involvement of students.

ASSESSMENT

- Explore a working model on addition and subtraction of fractions.

DAY 5 (MULTIPLICATION AND DIVISION OF FRACTIONS)

Teacher elicits multiplication and division of fractions from students. Students enjoy learning multiplication division of fractions through *Bidri* art (traditional art form of south region). They are able to multiply and divide the fractions using given parts from the picture. (Fig. 2)



Fig. 2

ASSESSMENT

- Draw a mind map on four operations on fractions.

ASSIGNMENT

- Design your own peacock model using different fractions.

DAY 6 (FOUR OPERATIONS ON FRACTIONS)

Teacher facilitates flower arrangement to elicit the application of all four operations. Students design *Bathukamma* flower arrangement (regional festival of south India) and solves operations with fractions. They are able to solve the given problems in a task sheet. The students sing the song of *Bathukamma* while doing flower arrangement. (Fig. 3)



Fig. 3

This activity was planned and executed by a teacher of a school in south region. Hence teachers of other region can use art forms common in their own region.

ASSESSMENT

- Design paper flowers of *Bathukamma*.
- Apply four operations of fractions by taking different coloured petals.

DAY 7 (WORD PROBLEMS ON FRACTIONS)

Teacher mentors students to brainstorm and have spontaneous group discussion to produce ideas. Students use different variety of cereals to design fraction garden at home.

ASSESSMENT

- Students appreciate Telangana *Haritha Haram* (Greening Project).

ASSIGNMENT

- Explore about Telangana ‘crop colonies’ make a table of requirement of horticulture produce (native crops of south region).

DAY 8 (SUMMARISATION)

Teacher allows students to summarise the concepts learnt by accepting views. Students conclude the topic by contributing their views on operations on fractions. Students will integrate storytelling and illustrate an inspiring short story about fractions.

ASSESSMENT

- Create a fraction wheel on operations with fractions.

ASSESSMENT TOOLS SUGGESTED

- Self Assessment and Peer Assessment
- Observation Records
- Presentations and Performances
- Portfolio Records

SUGGESTED LINKS FOR ACTIVITIES

<https://www.aschool.us/random/random-pair.php>
<https://www.classdojo.com/en-gb/toolkit/groupmaker/?redirect=true>
<https://www.transum.org/software/RandomStudents/>
<https://www.randomlists.com/team-generator>
<https://chir.ag/projects/team-maker/>
<https://www.superteachertools.us/instantclassroom/#.W1O-A1Q-eL8>
<https://wordcounter.net/random-word-generator>
<https://randomwordgenerator.com/list.php>
https://www.youtube.com/watch?v=-vChRau1tJQ&ab_channel=hindisongs
https://www.youtube.com/watch?v=JJx1r_dum8M
<https://www.youtube.com/watch?v=sSBNYkq8LoI>
<https://www.youtube.com/watch?v=p7L4Cb8wNQE>
https://www.youtube.com/watch?v=3eROCi5P_mw
https://www.youtube.com/watch?app=desktop&v=E-SnC_WKsCg&ab_channel=JackHartmannKidsMusicChannel
https://www.youtube.com/watch?v=xnic3e_Kalo
<https://www.loom.com/share/6ecc460b1f284de0abb6429dcba32e9f>
<https://www.youtube.com/watch?v=DtVI1zWiMyM>

ABBREVIATIONS USED

AIL	Art Integrated Learning
DIKSHA	Digital Infrastructure for Knowledge Sharing
MOOC	Massive Open Online Course
NCF	National Curriculum Framework
NEP	National Education Policy
NISHTHA	National Initiative for School Heads and Teachers Holistic Advancement
PRAGYATA	Plan, Review, Arrange, Guide, Yak(talk), Assign, Track, and Appreciate
SWAYAM	Study Webs of Active-Learning for Young Aspiring Minds
UNESCO	United Nations Educational, Scientific and Cultural Organization

REFERENCES

- ANDERSON, A. 2015, July. Dance/Movement Therapy's Influence on Adolescents' Mathematics, Social-Emotional, and Dance Skills. *The Educational Forum*. Vol. 79, No. 3. pp. 230–247.
- ANDERSON, R. C., M. HANEY, C. PITTS, L. PORTER AND T. BOUSSELOT. 2020. "Mistakes can be Beautiful": Creative Engagement in Arts Integration for Early Adolescent Learners. *The Journal of Creative Behavior*. Vol. 54, No. 3. pp. 662–675.
- AUROBINDO, S. AND T. MOTHER. 1998. *On Education*. Sri Aurobindo Ashram Press, Pondicherry.
- BAIRD, D. 2015. *Integrating the Arts in Mathematics Teaching*. Unpublished Master's Thesis. University of Toronto, Toronto.
- BAKER, D. 2013. Art Integration and Cognitive Development. *Journal for Learning through the Arts: A Research Journal on Arts Integration in Schools and Communities*. Vol. 9, No. 1. Retrieved from <https://doi.org/10.21977/d9912630>
- BENEGAL, V. 2010. *Art: A Brain Developer* [Film]. CIET, NCERT, New Delhi.
- BLUMENFELD-JONES, D. 2009. Bodily-Kinesthetic Intelligence and Dance Education: Critique, Revision, and Potentials for the Democratic Ideal. *The Journal of Aesthetic Education*. Vol. 43, No. 1. pp. 59–76.
- BOWEN, D. H., J. P. GREENE AND B. KISIDA. 2014. Learning to Think Critically: A Visual Art Experiment. *Educational Researcher*. Vol. 43, No. 1. pp. 37–44.
- BURTON, J., R. HOROWITZ AND H. ABELES. 1999. Learning In and Through The arts: Curriculum Implications. *Champions of Change: The Impact of the Arts on Learning*. pp. 35–46.
- DEMOSS, K. AND T. MORRIS. 2002. *How Arts Integration Supports Students Learning: Students Shed Light on the Connections*. Chicago Arts Partnerships in Education (CAPE), Chicago, IL.
- DEWEY, J. 1938. *Experience and Education*. Collier, New York.
- FAROKHI, M. AND M. HASHEMI. 2012. The Impact/s of Using Art in English Language Learning Classes. *Procedia-Social and Behavioral Sciences*. Vol. 31, pp. 923–926.
- HOME - INSEA. *InSEA*. Retrieved February 15, 2022, from <https://www.insea.org/>
- IVES, W. AND J. POND. 1980. The Arts and Cognitive Development. *The High School Journal*. Vol. 63, No. 8. pp. 335–340.

- KEINÄNEN, M., L. HETLAND AND E. WINNER. 2000. Teaching Cognitive Skill through Dance: Evidence for Near but Not Far Transfer. *Journal of Aesthetic Education*. Vol. 34, pp. 295–306.
- KOSKY, C. 2008. An Action Research Exploration Integrating Student Choice and Arts Activities in a Sixth Grade Social Studies Classroom. *Journal of Social Studies Research*. Vol. 31, No. 1. pp. 22–27.
- LOUIS, B., A. PICKENS AND L. WELKOWITZ. 1984. Cognitive Development through Art Instruction. *Educational Perspectives*. Vol. 22, No. 3. pp. 15–21.
- MASON, Y., K. M. STEEDLY AND M. THORMANN. 2008. Impact of Arts Integration on Voice, Choice and Access. *Teacher Education and Special Education*. Vol. 31, No. 1. pp. 36–46.
- MCDERMOTT, P., F. FALK-ROSS AND S. MEDOW. 2017. Using the Visual and Performing Arts to Complement Young Adolescents' "Close Reading" of Texts. *Middle School Journal*. Vol. 48, No. 1. pp. 27–33.
- MINISTRY OF HUMAN RESOURCE DEVELOPMENT. 2020. *National Education Policy 2020*. MHRD, Government of India, New Delhi. Retrieved from https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
- MYNARIKOVA, L. 2012. Art-Based Program for Social and Emotional Development of Children. *US-China Education Review A8*. pp. 720–726.
- NARANG, A. 2018. *Experiential Learning through Drama: A Study of Children's Reflection on Social Issues*. Unpublished Ph.D. Thesis (Education). University of Delhi, New Delhi.
- NCERT. 2005. *National Curriculum Framework 2005*. National Council of Educational Research and Training, New Delhi. Retrieved from <https://ncert.nic.in/pdf/nc-framework/nf2005-english.pdf>
- . 2006. *1.7 Position Paper: National Focus Group on Arts, Music, Dance and Theatre*. National Curriculum Framework, National Council of Educational Research and Training, New Delhi. Retrieved from https://ncert.nic.in/pdf/focus-group/art_education.pdf
- . 2015. *Training Package on Art Education for Primary Teachers, Volume I*. National Council of Educational Research and Training, New Delhi. Retrieved from <https://ncert.nic.in/deaa/pdf/tpaev101.pdf>
- . 2015. *Training Package on Art Education for Primary Teachers, Volume II*. National Council of Educational Research and Training, New Delhi. Retrieved from <https://ncert.nic.in/deaa/pdf/tpaev201.pdf>
- . 2019. *Art Integrated Learning—Guidelines*. National Council of Educational Research and Training, New Delhi. Retrieved from <https://ncert.nic.in/pdf/notice/AIL-Guidelines-English.pdf>

- NOBORI, M. 2012, August. *How the Arts Unlock the Door to Learning*. Retrieved from <https://www.edutopia.org/stw-arts-integration-reform-overview>
- PIAGET, J., 1970. Piaget's Theory. In P. H. Mussen (Ed.), *Carmichael's Manual of Child Psychology*, 3rd ed. Vol. 1, pp. 703–732. Wiley, New York.
- PRASAD, D. 1998. *Art: The Basis of Education*. National Trust, New Delhi.
- RAGHUVANSHI, A. AND D. SHAH. 2021. Art in the Time of Corona: Transforming Learning for 4.7 Million Children. *Childhood Education*. Vol. 97, No. 5. pp. 66–71. Retrieved from <https://doi.org/10.1080/00094056.2021.1982299>
- ROGERS, C. 1969. *Freedom to Learn*. Charles E. Merrill Publishing, Columbus, OH.
- SHOUMA, M. 2020. *The Impact of Arts Integration on the Learning and Social Abilities of Students with Disabilities: An Approach to an Inclusive Classroom*. Doctoral Dissertation. The British University in Dubai, UAE. Retrieved from <https://bspace.buid.ac.ae/handle/1234/1749>
- TATAROGLU, E. 2012. Evaluation of Visual Arts Lesson Gains According to the Learning Steps of Cognitive, Affective Psychomotor Areas. *European Journal of Educational Research*. Vol. 1, No. 2. pp. 65–83.
- TAYLOR, J. A., T. MONCK AND S. AYOUB. 2014. Arts Integration in the Social Studies: Research and Perspectives from the Field. *The Councilor: A Journal of the Social Studies*. Vol. 75, No. 1. pp. 5.
- UNESCO. 2010. *Seoul Agenda: Goals for the Development of Arts Education*. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000190692>
- YGOTSKY, L. S. 1971. *The Psychology of Art*. MIT Press, Cambridge, MA.
- WALKER, E., C. TABONE AND G. WELTSEK. 2011. When Achievement Data Meet Drama and Arts Integration. *Language Arts*. Vol. 88, No. 5. pp. 365.



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

ISBN 978-93-5292-397-7