

SCHOOL BASED ASSESSMENT

1. OVERVIEW

The module includes various aspects related to school based assessment (SBA) that are crucial to be considered by all stakeholders especially the teachers at the school level. Beginning with the objectives, the module unfolds the background of assessment in the form of examination to evaluation to continue and comprehensive evaluation (CCE) and school based assessment (SBA) in our country. It gives an idea of how the curricular and examination reforms looked at school-based assessment to reduce the element of fear related to external, centralized and rigid procedures of testing and examination among children. It also establishes linkages between CCE and SBA in terms of SBA as an add-on to CCE. Highlighting the criteria and the purpose of assessment the module details out the strategies that can be used for school based assessment. This module aims to help different stakeholders especially teachers to be aware of and use the child-centred approach to teaching learning and assessment in school based assessment.

2. OBJECTIVES OF THE MODULE

This module will help you to —

- understand the genesis and importance of School Based Assessment,
- familiarize with learner-centred approaches for assessment,
- facilitate integration of teaching learning process with assessment procedures,
- develop context-based exemplars in the relevant subject areas for the purpose of assessment.

3. BACKGROUND

At the time of independence, the system of education in India was predominantly examination-based and was categorising people based on their performance in written examinations. In the process of remodeling the system of education in India as per the needs and aspiration of the people, the National Policy on Education (1968) argued for comprehensive evaluation including performance in both scholastic and non-scholastic aspects in examinations.

The National Policy of Education (1986) visualised evaluation as an integral part as teaching-learning process that provides evidences of child's growths and development. While delineating the objectives it stated that continuous and

comprehensive evaluation of students' growth and development in both scholastic and non-scholastic areas spread over the total span of teaching learning time.

The concept of Continuous and comprehensive evaluation (CCE) has been in used for over 30 years in the literature of school education in India. It is used for the purposes of understanding and labeling the growth and development in child as a result of teaching learning processes in school. This extensive use of CCE and the freedom to every school, institution and individual in devising own scheme of CCE has brought in many maladies/confusions in the minds of masses leading to loss of credibility of scheme as well as the system. Some of them are:

- Testing dominated the teaching and learning process.
- Focusing only cognitive aspects and neglecting affective and psycho-motor aspects of behaviour.
- Increased load on teachers due to excessive paper work on recording and record keeping
- Emphasizing on rote memorisation.
- Mechanical use of multiple techniques of testing leading to malpractices.
- Loss of interest among teachers and students becoming careless effecting severely the quality of education.
- Loss of credibility of teaching profession and school system.
- Parents not satisfied with the CCE pattern.

The main reasons for distrust in the CCE were as follows:

- The term 'continuous' was misconstrued as 'periodic'. The evaluation should have adumbrated with 'teaching' and 'learning' where as it was dominated by class tests, unit tests, formative tests, summative tests. Excessive use of testing dominated the whole process of education.
- The term 'comprehensive' referred to evaluation of all aspects including affective and psycho motor aspects of child's growth and development where as it didn't happen because of appropriate tools to assess these aspects of child's growth and development were not available and handy to teachers. Therefore, assessment of comprehensive aspects remained a misnomer in CCE implementation.
- The term 'evaluation' was considered synonymous to the term 'measurement'. The way measurement in physical world is done with highest approximation and reliability, evaluation in CCE was also expected to measure child's

growth and development with similar precision and correctness. Whereas, assessment in physical world has different nature (being in ratio scale) than assessment of behavioral aspects (being in interval and ordinal scales).

- Another important issue was regarding use of multiple tools and techniques in assessment. Even in CCE, the assessment was also dominated use of paper-pencil tests only.

Despite all these serious issues, no one doubted on intends of the CCE scheme. It was therefore considered desirable to revisit the implementation aspects of the CCE scheme.

In order to overcome the maladies and shortcomings that had crept in during implementation of CCE causing serious malfunctioning, school based assessment has been proposed as next generation assessment. It may be fourth in the sequence of one-time external (board) examination to a combination of external and internal examination to CCE and now SBA.

4. SCHOOL BASED ASSESSMENT (SBA)

The term school based assessment may be defined as:

- Assessment that facilitates attainment of competencies specified in terms of learning outcomes in a holistic manner during teaching learning process.
- Assessment embedded in the teaching and learning process within the broader educational philosophy of ‘assessment for learning’.
- Assessment of school students by school teachers in the schools.

4.1 Salient features of SBA

- Integrate teaching-learning and assessment
- No load on teachers of documentation- recording, reporting
- Child-centered and activity based pedagogy
- Focus on (learning-outcome based) competency development rather than content memorisation
- Broadening the scope of assessment by way of including self-assessment, peer-assessment besides teacher assessment
- Non-threatening, stress free and enhanced participation/interaction
- Focus on assessment of/and/as learning rather than evaluation of achievement
- Reposing faith on teacher and the system
- Enhancing self confidence in children

Let us reflect

- What purpose does the examination serve?
- How is it different from the School based Assessment?
- Which out of the two is relevant and why?

In view of this, each child needs to get an opportunity to learn and progress and be supported during this process. CCE can be a potent tool in respecting the intent of the RTE Act by ensuring learning for all children, as school based assessment helps teachers observe child's learning progress, provide timely feedback and support to help the child overcome learning difficulties, if any. The school based assessment helps monitor the quality of education at the micro level however, it is equally important for the other stakeholders at different levels - the block, district, state or even the national level to assess the health of the system, and it needs to be done in a manner that does not burden the teachers and affect their teaching learning. Keeping in view the large scale of macro evaluations, a written test (with multiple choice questions) is the most common choice, which may not provide a comprehensive picture of a child's personality yet it does reflect the quality of education in a school, block, district, etc. More important is to look at both the central evaluation and the SBA separately and derive meaningful implications for different stakeholders at different levels.

Let us reflect

- What do you think are the advantages and disadvantages of central examinations and school based assessment?

5. ASSESSMENT: WHAT, WHY, AND HOW

The prime objective of assessment is to decipher the learning needs of children to allow them to build on their strengths, and support them to overcome the gaps in learning, if any. To understand the 'Why, What, and How' of Assessment, let us have a look at;

- What are the criteria of assessment?
- What purpose does it serve?

These sub-sections elaborate on the criteria i.e. the learning outcomes, key features of the assessment and its purpose with details on how we can observe children's learning and development using classroom and school based assessment strategies.

6. LEARNING OUTCOMES: THE CRITERIA OF ASSESSMENT

Assessment of learning, not just requires understanding of what kind of learning is desired but also the criteria against which it could be assessed. Most often, the stakeholders conducting the macro or school based assessment are not clear about it as teachers consider textbooks to be the complete curriculum and assess children using questions given in the unit-end exercises whereas the examination and achievement surveys use some MCQs without a clear rationale about the competencies being assessed and the learning behind each of them. The subject wise learning outcomes, for each class, not only apprise different stakeholders, at district/state/national level, of the criteria of assessment but also enable those at the school level i.e. teachers, students, parents/guardians, School Management Committee (SMC) members, commutate functionaries to be responsible and alert towards their role besides directing their efforts towards ensuring quality education. So, the learning outcomes defined explicitly can guide and ensure the responsibility and accountability of different stakeholders for the accomplishment of expectations in different curricular areas.

Examples of some of the Learning Outcomes (LO) are given below:

- Learner describes need of food for people of different age groups and animals and birds (class III)
- Learner explains the process of producing and procuring daily needs (e.g., food, water, clothes)(class IV)
- Learner establishes linkages among terrain climate, resources (food, water, shelter, livelihood) and cultural life (class V)

Purpose of Assessment

Assessment for Learning

Assessment is integral to teaching learning and occurs continuously during teaching learning. In order to be holistic and free from biases or distortion, it needs to be multiple-evidence based which requires tapping different sources to collect information using a range of activities that the child participates in both inside and outside the classroom on different aspects of learning, i.e. knowledge, performance, skills, interests, attitude and motivation. This helps teachers not only to understand the learning gaps of

each child but also to reflect, review and modify their teaching learning as per the need and learning styles of students. It involves students as partners in planning, transaction and assessment of the teaching learning process and, thus, involves both giving and receiving feedback by the students and teachers. Assessment as Learning

This requires providing opportunities and space to students to critically assess, reflect and analyse their own work during the teaching learning process and identify their strengths and gaps. They may be encouraged to assess themselves and reflect on peer and group work. Assessment as learning enhances child's confidence and helps develop abilities for lifelong learning. It also occurs during teaching learning.

Assessment of Learning

It is used to benchmark students' learning against criteria (Process Skills/Learning Indicators and Learning Outcomes) based on identified curricular aims and objectives. To provide comprehensive information regarding the extent of student learning vis-à-vis curricular objectives on all aspects of curriculum, including performance in different subject areas, skills, interests, attitudes and motivation in a holistic manner without segregating into compartments of scholastic and non-scholastic areas.

Teachers map the students' progress on processes of learning based on evidence collected using information from individual/group/self or peer assessment. A profile for each child may be maintained which can be used to compile the progress of child in comparison to her/his previous performance. The teacher may record these observations (in her/his diary/log book/comments written on child's notebooks/worksheets/projects, etc.) as and when required, for her/him to monitor the learning progress of each child. It needs to be used meaningfully to help children improve their learning and progress.

An attempt in this direction recently at the national level by the NCERT to spell out curricular expectations, learning outcomes, and pedagogical processes in all the curricular areas at the elementary stage has been made to enable different stakeholders especially teachers understand the linkage between them to keep the teaching learning in the desired direction. Please refer to the document available on the NCERT website.

Let us reflect

- Refer to the syllabus of any subject/class of your State/UT and also the Learning Outcomes in that subject/class in the NCERT document on Elementary Stage. How do you think the two are related?
- Select a theme/unit in a subject and class and try to enlist the learning outcomes.

7. ASSESSMENT STRATEGIES FOR SCHOOL BASED ASSESSMENT

Most commonly used assessment strategies are: observations, interview, self-assessment, peer assessment, group work assessment, portfolio assessment, feedback, authentic assessment, assignment, roll play, storytelling, simulation, project work, experimentation, anecdotal records, checklist, rating scales, focus group discussion (FGD), etc. Some of the major assessment strategies that are very supportive to school based assessment had been given below:

7.1 Assessment of individual learning

Many activities such as tests (written/oral), creative writing (essay, story, poem writing), picture reading, experimentation, individual projects, drawing and craftwork, etc., require individual assessment. Although the NCERT textbooks include many such opportunities, yet a conventional classroom/school/centrally administered written test (with question-answers) or examination remains the most common choice with teachers and other stakeholders. In spite of the limitations associated with this mode of assessment, we often find resistance for its excessive usage from different stakeholders especially teachers and it continues to be the most favourable option on account of the customary, convenient and conventional approach in evaluation and reporting since last many decades. It may be recognised that written tests are very useful assessment tools yet to use them to provide meaningful and authentic information of a child's learning, the teachers or any other stakeholders need to rationalise and use them judiciously for assessment of a particular set of skills and dispositions.

Let us reflect

- Can conventional written test or examination be used for comprehensive assessment on all learning outcomes?

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- How can we assess the manipulative, social, and emotional aspects (skills and dispositions) of child's personality?
- Choose some modes of assessment to carry out holistic assessment covering different dimensions of learning and development (cognitive, socio-emotional, and psychomotor) and elaborate using examples.

It will be easy to understand if we look at the exercises given in your EVS textbook.

- Using dry leaves make pictures of different animals in your notebook.
- Take rubbings of leaves and tree trunks. Are these same or different? Which ones gave good prints? Which ones were difficult to take rubbings for? And Why?
- Observe the things around you. Which ones have patterns of leaves and flowers?
- Name some plants that you have seen. Name some, which you heard but have never seen.
- Choose a tree near your school or house and make friends with it. Would you like to give your friend a special name? Find out more about your tree friend and share it with others.
- Ask some older people if there were plants which they have seen when they were children but which are not seen these days.
- Write down ten activities for which water is needed. Arrange them in the order starting from need less water to more.
- Write down the names of rivers that you have seen or heard of. Does anyone flow in your village, or city? Write its name.
- At home, where do you get drinking water from? Who fetches or stores it? How is it stored? Why is it stored?



- Look at the pictures given above. What kind of work are people doing in both the families?
- Is your family like any one of these families? If yes, like which one? How is your family like theirs?
- Who does this work in your house and in your friend's house?

Work	Who does this work	
	In your house	In your friend's house
Cooking Food		
Cleaning vessels		
Sweeping		
Buying things from market		
Filling water		

Do you play any games with your family members? Which games and with whom?

When you get sick, do you take any plant-based medicine? What do you take when you;

get hurt -----

have a stomachache -----

have cough or cold -----

have toothache -----

Let us reflect

- Which, out of these, can be used in written test based assessment?
- Which ones can be used for oral assessment?
- Which ones can be used for the school based assessment or central examination or both?
- Are there any exercises that cannot be assessed through written or oral tests? If yes, which other strategies of assessment can be employed and why?
- What do you think of the learning outcomes; ‘Create designs, motifs, models from local material’ and ‘show sensitivity towards of plants, animals, the elderly and differently abled people’?
- Design some questions for these learning outcomes for the quarterly or term end written examination or test paper.

Children understand better when the classroom learning relates to their real lives and they do not feel alienated from the knowledge given in the textbooks. Opportunities to reflect their

own experiences on concepts and issues included in curriculum make their learning deeper as it facilitates establishing linkages across concepts, themes, subjects and stages of learning. The NCERT textbooks include exercises having questions that require children to answer on their own experiences rather than reproducing the textbook information. Such kinds of questions allow multiple responses, as no single response is correct. So, these can be effectively used under SBA whereas may not serve the purpose of a uniformly administered centralised assessment system, on a large scale, with set answer keys. For example; in the following questions, the answers to first option in each case will be based on a child's own experience whereas the second option can even lead to memorised answers based on rote learning.

A-1: Name the vehicles in which you have travelled in.

A-2: Name at least three vehicles each having two, three, and four wheels.

B-1: Spend some time under a tree. Name the animals that can be seen—

on the branches	-----	-----	-----
on the leaves	-----	-----	-----
on the trunk	-----	-----	-----
on the ground	-----	-----	-----
around the tree	-----	-----	-----

B.2. Enlist the animals that live in a tree. Name them.

C. 1: Name any four activities each that you can do and cannot do without water.

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C:2 : Enlist some activities in which water is used.

Let us reflect

- What do you think of the following questions?
 - a. How do you feel when you are hungry? How would you describe it? What would happen if you do not eat anything for two days?
 - b. Have you ever lost your way? What did you do then? Write your experience in your own words.

- c. Imagine that you are on a mountain. How do you feel there? What can you see? What do you feel like doing there?
- Design some more questions like these for different themes and concepts in EVS, Maths, and Social Science.

The textbook is a very useful resource in the hands of teachers but keeping in view the regional, cultural, geographical diversity it requires contextualization as per the needs and contexts of students. So it is expected that a teacher develops her/his set of questions/activities as per the contexts of children in her / his class instead of using those given in the textbooks.

For example — The textbook has the following questions (1a and 1b) which different teachers adapted as 2a and 2b).

- Q-1a: What things are made in your house from ripe and unripe mangoes?
- Q-1b: What are the things made in your house from ripe or unripe bananas/coconut?
- Q- 2a: How are these things made in your house?
 - Papad - Badiyaan - Chikky
- Q-2b: How are these things made in your house?
 - Khakra - Thepla - Dhokla

Any question papers (bank) developed centrally at state, district, or block level and a centralised assessment may not serve the purpose as it might restrict children from relating with their context and also hinder reflections and expressions in terms of their own experiences.

7.2 Assessment of Group Learning

To use group-based assessment, the teachers must be clear about the aims behind using such modes. The activities involving field visits, surveys, art work (like model making, Rangoli making), experiments, projects etc. demand group work and can be used as excellent opportunities to assess the process skills as well as social skills. Let us take an example of one such group activity.

Survey: Audit of the natural light, ventilation, cleanliness and provisions for the differently-abled of your school.

In order to do this activity with children of class V, the teacher divided them into four groups.

- **Group I** — to find out about the availability of natural light in classrooms of your school

- **Group II** — To explore about the ventilation facility in different classrooms.
- **Group III** — To find out the cleanliness in the school
- **Group IV** — To assess the Provisions for the Differently abled

The teacher asked each group to divide the task amongst the group members for framing questions, take observations and record them. She also helped children in the process. Some of the questions developed by the groups were as under.

Observe and record

Natural Light Audit

- Is there sufficient number of windows?
- Is the light from the window falling on the work-zone of the children in your class?
- Are the windowpanes clean?
- Are the windows placed on the sides (preferably left) of students rather than back or front?
- Are some trees/ vines, etc. outside classroom blocking the light?
- Are the interiors of the room painted in dark colours?
- Is there a need to supplement natural light with artificial light?
- How many light points are there?
- Are they all working?

Ventilation Audit

- What are the sources of ventilation in your class?
- What are the number of doors/ windows/ventilators in the classroom
- Do they remain closed or are they kept open?
- Is there a provision for cross ventilation?
- What is the location of doors/windows/ ventilators?
- Are the doors on the same wall?
- Are the windows/ ventilators on the walls opposite to the doors?
- Are the ventilators at some higher place/ close to the ceiling?

Cleanliness Audit

- Who cleans the classroom?
- How often is the classroom cleaned?
- How often is the classroom cleaned?

- Are some parts of the room damp or stained?
- Are there any dustbins in the classroom?
- Are there a lot of litter in the room?

Audit of Provisions for the Differently Abled

- Are any of your school students or staff differently abled?
- If yes, what are their special needs for the infrastructural changes in school?
- Are there provisions for handrail at appropriate places?
- Are there ramps in the school?
- Is the ramp made up of anti-skid materials? Is its slope appropriate for person in wheelchair to move on it?
- Are there provisions for toilets for the differently-abled?
- Is the school floor and furniture appropriate to their needs?

She also provided opportunities to think and reflect. Some questions in this regard were;

Think, Reflect and Act

- Why the classrooms are not clean? What problems do the students and the staffs encounter to keep them clean? What do you suggest to address these problems?
- What are the problems that exist with regard to ventilation in the class?
- How our school can be differently-abled friendly?
- Think ways by which they can overcome the problems enlisted after the survey.
- Select the ideas on which the students with your help can take an immediate action.
- Are there any options for the authorities to take any action? Find out.
- How can you help the grievances reach the authorities?

The teacher may help children in the above. Each group presented the report before whole class, which followed discussions with other groups. Such activities can be assessed on three-point scale using **rubrics** that a teacher may design herself or involve children in doing so.

Criteria	Level I	Level II	Level III
Framing questions	Frames questions with the help of peers.	Frames new questions on her/ his own and finalises with the help of teacher and peers.	Frames questions independently.

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Data collection	Asks questions and uses few probes.	Asks questions with many probes.	Probes deeply and even modifies or frames new questions on the spot.
Data recording	Recording the responses is not organised.	Systematically records the collected information.	Systematically records and presents the information.
Drawing conclusion	Makes some sense of the information.	Draws appropriate meaning.	Makes meaning and explains logically.
Reporting	Prepares report but unsure while presenting.	Prepares report and presents with confidence.	Prepares comprehensively articulated report and explains logically with confidence.
Working together	Difficulty in working with others sometimes.	Works patiently in groups.	Works patiently in groups and also helps others.

- Level I- For a given activity or outcome(s) child needs a lot of support from teacher/adult.
- Level II- For a given activity or outcome(s) child is able to perform with proper feedback and support
- Level III- For a given activity or outcome(s) child works independently with occasional support

So the group work activities constitute an important mode of both learning and assessment. This may require children to work for longer duration that could be days or weeks together and these may not be restricted to classroom and require children to work beyond school as well. Some examples can be like;

- Estimate the wastage of water in your school/home/neighbourhood
- Conduct a survey of at least 15 families in your neighbourhood for the kind of common diseases that people suffered in your area during last three months. Find out the common causes.

Let us reflect

- What do you think about this activity? Will you consider it as teaching learning or an assessment strategy?
- What kind of learning has taken place? Which process skills and dispositions can be enhanced through this and similar such activities?

- Enlist the targeted learning outcomes?
- Design some more group activities in different subjects and also the criteria (rubrics) for their assessment. Also identify the learning outcomes that these aim at.

The assessment strategies should be such that provide authentic information on child's learning and development against the class wise learning outcomes defined under each curricular area.

We recognise that assessment is not just to measure what children can recall, what was taught, but it is also to see, whether it translated in holistic 'learning' and development acquiring the knowledge, skills and dispositions, which is not a onetime activity but a continuous process. The assessment integrated with teaching learning provides opportunities to enhance and understand what children learn by providing situations for new learning which are varied in terms of modes and experiences that are process oriented and engage children both 'hands on' and 'minds on'. This makes the assessment, process oriented and non-threatening to the learner and thus helps accomplish the learning outcomes.

7.3 What is a Rubric?

A rubric is a comprehensive set of criteria used to assess students on a specific task. The rubric outlines the criteria for the performance and assessment of the task. It is developed in participatory way by both teacher and the students. Rubrics have flexibility and adaptability that very few other assessment tools possess. When used correctly, rubrics have been shown to provide timely feedback, prepare students to use detailed feedback, encourage critical thinking, refine teaching methods, and facilitate communication with others.

A Rubric is an assessment tool that clearly indicates achievement criteria across all the components of any kind of students' work from written to oral to visual.

Rubric consists of four parameters:

1. Assignment Description (e.g., Cleanliness Audit given above)
2. Scale Level (level I, II, III as given below in the table)
3. Dimensions (e.g., Question framing, data collection, etc. as given below in the table)
4. Dimension Criteria (framing question with help, independently, etc. are dimension children assessed on criteria such as framing questions, data collection, etc.)

Suggestive questions for developing the Rubric

- How well did I/my friend plan for the activity or any task?
- How well did I/him/her follow the plan or the steps of activity/task?
- How can it be done differently next time?
- What did I/he/she find difficult?
- How can I/she/he improve the work?
- What grade should I give myself/himself/herself?

7.4 Peer Assessment

Learners need to be given adequate opportunities to assess their own work or that of their peers. Self-assessment is defined as ‘the involvement of learners in making judgements about their achievements and the outcomes of their learning’. Self-assessment supports student learning and is one of the most important skills that students require for future professional development and life-long learning, as it empowers learners to evaluate their own progress and skill development, identify gaps in their understanding and capabilities and discern how to improve their performances.

Peer Assessment

Peer assessment requires students to provide either feedback or grade (or both) to their peers on a product or a performance based on the criteria of excellence for that product or event which students may have been involved in determining.

Objective

- The students can learn to reflect and critically evaluate their own progress and skill development.
- The students can identify gaps in their understanding and capabilities.
- The students can discern how to improve their performances.

1. Peer Assessment Collaboration Rubric

	4	3	2	1
Participation	Group member participated fully and was always on task in class	Group member participated most of the time and was on task most of the time.	Group member participated but wasted time regularly and/ or was rarely on task.	Group member did not participate, wasted time, or worked on unrelated material.

Leadership	Group member assumed leadership in an appropriate way when necessary by helping the group stay on track, encouraging group participation, posing solutions to problems, and having a positive attitude.	Group member sometimes assumed leadership in an appropriate way.	Group member usually allowed others to assume leadership or often dominated the group.	Group member did not assume leadership or assumed it in a non-productive manner.
Listening	Group member listened carefully to others' ideas.	Group member usually listened to others' ideas.	Group member sometimes did not listen to others' ideas.	Group member did not listen to others and often interrupted them.
Feedback	Group member offered detailed, constructive feedback when appropriate.	Group member offered constructive feedback when appropriate.	Group member occasionally offered constructive feedback, but sometimes the comments were inappropriate or not useful.	Group member did not offer constructive or useful feedback.
Cooperation	Group member treated others respectfully and shared the work load fairly.	Group member usually treated others respectfully and shared the work load fairly.	Group member sometimes treated others disrespectfully and/or did not share the work load fairly.	Group member often treated others disrespectfully and/or did not share the work load fairly.

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Time Management	Group member completed assigned tasks on time.	Group member usually completed assigned tasks on time and did not hold up progress on the newspaper because of incomplete work.	Group member often did not complete assigned tasks on time, and often held up completion of the newspaper.	Group member did not complete most of the assigned tasks on time and often forced the group to make last-minute adjustments and changes to accommodate missing work.
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Let us Do

Write the number of the description that fits each group members' participation in the box under the collaboration skill. Include your own name in the list.

- Four students are functioning at a high level and does not need to improve;
- Three students are working well within the group but has a few areas which could be improved;
- Two students are making an attempt to work well but needs to improve in some areas;

One student does not seem to be trying to work well with the group and needs to improve a great deal.

Group Member	Participation	Leadership	Listening	Feedback	Cooperation	Time Management

Self-assessment

Self-assessment is defined as the involvement of learners in making judgements about their achievements and the outcome of their learning.

7.5 Self-assessment

Assessment as learning is about children's understanding about their own learning and is one of the important aspects out of all the purposes of assessment. It is important to emphasise on it right from the early grades. The meta-cognition (Learning about Learning) through reflection and critiquing one's work by self or peers greatly helps children to improve further in this area, and improve their overall performance. Children need to be given adequate opportunities to assess their own work or that of their peers. The following questions may help

- How well did I/my friend plan for the activity or the visit or any other task?
- How well did I/him/her follow the plan?
- How can it be done differently next time?
- What did I/he/she find difficult?
- How can I/she/he improve the work?
- What grade should I give myself?

An Exemplar Rubric: Rubric for Students (self-assessment)

Subject: Mathematics		Grade : 8	
Learning Outcome –Understanding of the square and square root of whole numbers			
Level – 1 I need help	Level – 2 I have a basic understanding	Level – 3 My work consistently meets expectations	Level – 4 I have a deeper understanding
<ul style="list-style-type: none"> • With assistance I can determine basic perfect squares. • With assistance I can determine the value of a basic number squared. • With assistance I can determine the value of basic principle square roots. 	<ul style="list-style-type: none"> • I can determine basic perfect squares. • I can determine the value of a basic number squared. • I can determine the value of basic principle square roots. 	<ul style="list-style-type: none"> • I can independently determine if specific numbers are perfect squares. • I can determine the value of a number squared. • I can determine the value of a principle square root. 	<ul style="list-style-type: none"> • I can explain why a perfect square is a perfect square. • I can explain my strategy for determining the square of a number. • I can explain my strategy for determining the value of a principle square root.

7.6 Portfolio

Portfolio is a collection of not just the best but all kinds of a child's work or activities done over a period of time. This may include worksheets, projects, creative writings drawings, assignments, tests, craft work, observations by teacher, peers and self, collection of materials such as seeds, leaves, album of stamps and news items, interests, abilities and problems of self, etc. A teacher analyses each child's portfolio and shares evidences of children's learning to offer useful and pertinent feedback after some intervals (quarterly, semi-annually or term end) to parents/guardians, children and other stakeholders. Parents come to know of the abilities and interests of their wards that they tend to overlook and with the feedback they can now support their children to progress.

Portfolio

It is a purposeful collection of student work that exhibits the students' efforts, progress and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit and evidence of students' self-reflection.

A portfolio is a systematic collection of work of the learners. The purpose of maintaining the portfolio is to assess the progression in the learning both for the teacher and the learner. At the end of the session the teacher may ask the learners to have their best assignments in the portfolio. The greatest value of portfolios is that students become active participants in the learning process and its assessment.

Examples of portfolios for different subjects

Science	Math	English/ Language Arts	Social Sciences
<ul style="list-style-type: none"> • Charts, graphs created • Projects, examples, posters • Lab reports • Research reports • Tests • Student reflections (either weekly, monthly, or bi-monthly) 	<ul style="list-style-type: none"> • Samples of problem solving Written explanations of how to solve problems • Charts, graphs • Computer analyses conducted • Student reflections (either weekly, monthly, or bi-monthly) 	<ul style="list-style-type: none"> • Reading log • Different types of writing Poems, Essays, Letters, Vocabulary achievements • Tests • Book summaries/ reports • Dramatisations, creative endings to stories • Student reflections (either weekly, monthly, or bi-monthly) 	<ul style="list-style-type: none"> • Work sheets • Essays • Projects • Models • Maps work • Self-assessment • Pictures • Observations • Experiences • Anecdotal records

Some important aspects for preparing portfolio

- Reflections are an important part of the portfolio
- Criteria for evaluating portfolio must be shared with student beforehand

7.7 Written Tests

Written tests popularly known paper pencil tests are one of the most used tools for reliable assessment of students in scholastic

areas. But the problem with these paper pencil test questions is that our teachers are prone to developing questions mainly rote learning based. In school based assessment the questions are to be developed based on learning outcome focusing on development of competencies. Hence, there is a need to acquaint our teachers in developing competencies based questions instead of content/subject based questions. Some exemplars of such questions relating to learning outcomes of mathematics, EVS and Languages have been given in Annexure -II for teachers. Questions based on the perspectives of the given exemplars will help improving problem solving, problem posing, critical thinking, meta cognitive skills in students thereby strengthening school based assessment.

8. RECORDING AND REPORTING

Assessment should help the teachers to know how well each child is able to perform, track her/his progress and give feedback to ensure further improvement. In no way, it is to compare or rank children. Child's reporting should be such that it motivates every child and gives her/him the confidence that she or he can do better. Comprehensive report of assessment captures a wide range of children's performance to reflect a better picture of their abilities and learning. Reporting of a child's progress should be such that it reflects what a child can do and share his/her strengths and suggest measures to improve and progress. Negative remarks, generic or vague statements need to be avoided as these do not help or encourage children to learn and progress.

The example elicited below on the chapters based on the theme 'Family and Friends' from Class III NCERT textbook might help you to appreciate the integral aspect of assessment and teaching learning. It will also enable you to comprehend the three purposes of assessment as mentioned above and use them in the EVS classrooms as per the need and contexts of children and adapt the process for children at the primary stage. The example depicts an EVS classroom from a rural area of Manipur (north east). Realising the fact that the context/milieu of children is crucial to effective transaction of EVS and the core principles of assessment don't vary with the context, this example will also help you address the issue of adopting/adapting the textual material in EVS, go beyond it and plan learning situations in EVS.

Let us reflect

- What do you think about the curricular expectations and learning outcomes in EVS?
- How are these helpful in assessment?
 - What kind of teaching learning strategies can be used to accomplish these expectations and Learning outcomes?

The curricular expectations of EVS at the primary stage are —

- acquiring awareness about immediate/wider surroundings through lived experiences on various themes related to daily life, e.g. Family, Plants, Animals, Food, Water, Travel, Shelter, etc.;
- nurturing natural curiosity and creativity for the immediate surroundings;
- developing various processes/skills, e.g. observation, discussion, explanation, experimentation, logical reasoning, through interaction with immediate surroundings;
- developing sensitivity for the natural, physical and human resources in the immediate environment; and
- pointing out/ raising issues related to equality, justice and respect for human dignity and rights.

These curricular expectations are broad. In order to have a comprehensive view of a child's development and map her/his learning progress in EVS, as per these curricular expectations, a set of learning outcomes in EVS for each class has been spelt out. These require using pedagogical processes to create age appropriate and contextual learning situations and considering learning needs and learning styles of the learners to facilitate teachers to explore their existing ideas and build further on them to enhance their knowledge, skills, values, interests and dispositions. The suggested pedagogical processes given class-wise, in the table below, provide different stakeholders, especially teachers, some clues for the learning situations. These can help them plan and design learning tasks/activities and also assess children for their learning progress in an inclusive classroom.

Liklai teaches EVS at the primary level in a government school (Thoubal, Manipur). Today she planned to introduce plants and some physical features of plants to her students. Liklai identifies that the chapter is woven around the following learning points:

- Plant diversity

- Size, colour and texture of the trunk
- Shapes and colours of the leaves
- Local festivals related to plants/harvest

She planned some learning situations that encouraged children to—

- observe the plant diversity in the surroundings;
- observe the physical features of plants (size, colour and texture of the trunk and shapes, colour, texture and aroma of their leaves, etc.);
- record the observations;
- compare and classify the observations;
- find out and discussion on the uses of plants in surroundings;
- work together in groups; and
- actively participate in games and fun activities.

Let us reflect

- Name some pedagogical strategies that can be employed to create these learning situations.
- Which processes of learning do these emphasise?
- The assessment activities in the NCERT textbooks (based on NCF-2005) are integrated with the text of the chapters instead of being pushed to the end. Why do you think it is so?
- How do these help children and teachers?
- Compare the assessment activities of the NCERT textbooks with those given in the textbooks of your own State/UT and see how these are different.

9. ASSIGNMENTS FOR THE KRPs

1. What, according to you is a fear free environment? Enlist the factors that can help teachers use assessment to enable children learn in a stress and fear free environment?
2. What kind of skills and abilities they need to acquire to use assessment as an integrated activity with teaching learning? Discuss in groups and present before all the participants.
3. How can we assess CWSN in an inclusive environment? What do the teachers need to do to for this? How can we

facilitate both teachers and CWSN? Discuss in groups and present before all the participants.

4. How can different stakeholders (at each level- cluster, block, district and state) help teachers discharge their role effectively to enable each child learn and develop holistically?
5. Select a lesson/ theme/ unit in maths and language of any class up to elementary stage and identify the concepts and chapters including them in the textbooks of your State/ UT. Develop a plan of teaching learning and assessment strategies.

Suggested Readings

Continuous and Comprehensive Evaluation Guidelines. 2019.
NCERT. New Delhi

Education Commission. 1964–66. MHRD, New Delhi

Exemplar Package on CCE at the primary Stage. 2010. MHRD
New Delhi

Learning Without Burden. 1993. MHRD, New Delhi

Looking Around. 2008. NCERT Class III–V, Textbooks, 2018.
NCERT, New Delhi

National Curriculum Framework. 1975. NCERT, New Delhi

National Curriculum Framework. 2000. NCERT, New Delhi

National Curriculum Framework. 2005. NCERT, New Delhi

National Policy on Education. 1968. MHRD, New Delhi

National Policy on Education. 1986. MHRD, New Delhi

Right to Children for Free and Compulsory Education-2009.
MHRD

Source Book on Assessment for Class I-V: Environmental Studies.
2008 NCERT Publication, New Delhi

Syllabus for Classes at the Elementary Level. 2006. NCERT
Publication, New Delhi

ANNEXURE-I

ENVIRONMENTAL SCIENCE

Selecting Teaching-learning Strategies

Visualising and Creating Learning Situation

While dealing with this lesson, Liklai discussed her colleague Memcha, who gave an idea of bringing pictures of different plants, leaves and flowers to the classroom and show those to children. However, Liklai was not convinced, as she believed that the best way to learn about plants was to let children have a first-hand experience of the natural world surrounding them. She interacted with children to get their ideas about plants.

Liklai (the teacher): Where do you see plants?

Mila: Ma'am, in the park, garden, jungle.

Thaja: Ma'am, I have a lot of them in my house as well.

Guna: I saw a lot of plants on the sides of the road when we went to my mamu's place last month.

Liklai: Can you name a few plants?

Tomba: Waa (Bamboo), Laphu (Banana), Heinou (Mango tree), Sanarei (Marigold), Awathabi (Papaya), Khamen (Brinjal), Mayeplei (China rose), Nobap (Citrous plant), etc.

Liklai: Do all plants look same?

Manja: No, Ma'am. They are different. Some are tall and some are short.

Liklai: Good, what different things do you see in a plant?

Pinky: Ma'am, we see leaves, fruits.

Guna: Ma'am, I also see birds and butterflies.

Kaiku: Some plants bear flowers also.

Liklai: What will happen if there are no plants?

Chaobi: Ma'am, we will not get banana, apple or other fruits.

Bala: We cannot get vegetables also.

Sam: Ma'am, there will be no bees.

Liklai: Why do you think so?

Sam: My father does bee farming and he said that bees suck flower juice and make their bee-hive on the plants.

Pinky: I think, my parents will not be able to sow crops.

Kaiku: But Ma'am, I saw a desert in T.V. It had no plants but only sand in it. They were telling it was very hot there.

Informal discussion with children revealed that some of them could name some plants, identify a few parts and uses of some plants as well. They are able to relate these with their surroundings. Some could even relate plants with the daily life. Their prior knowledge or experiences about plants helped Liklai think of a course of action to build further on the desired concepts that she intended to take up. To make their understanding deeper, she thought of providing children a hands-on experience, as the topic was about plants, which were available in plenty in their surroundings. She decided to take up this lesson by a nature walk to a nearby area rich in natural plant diversity.

Let us reflect

- Why is it important to understand children's previous knowledge?
- Does it help the teacher plan the teaching learning activities? How?

Planning for the Visit

She asked children to share their experiences of their visit to any nature camp such as garden, park etc. Some of the points of discussion were:

- Some features and names of plants in the park/garden visited.
- Shapes of leaves.
- Flowers and their colours, etc.
- Uses of plants.
- Season in which plants are grown.

She allowed children to freely express themselves so that she gets to know about their experiences related to such places. Then they all decided to go for a nature walk. Liklai planned what to do next and she decided to divide the class into five groups. Each group comprised of six children and she shared with children about their scheduled visit.

(Liklai decided for a one-day visit within the school hours. However, depending on the availability of time, weather conditions or other constraints, you may plan the activities distributed over a period of 2-3 days.)

Note: The selection of a teaching learning strategy is an important task and depends on the concept, context and availability of resources. One of the objectives of EVS is to contextualise the learning process. In this case, the example is from a north eastern region. However, in an urban situation where the possibility

of taking children to such an area may not be feasible, then the activity may be planned in a nearby park, garden, school campus, etc.

She asked all children to carry a notebook, a pencil, crayons, thread, water bottle and some food to eat.

Going for the Visit

She took children by walking and, on the way; she drew their attention towards plants and animals in the surroundings.

Liklai: Do all plants have same size?

Children: No, Ma'am. Some are tall. Some are short.

Liklai: Which colours do you see in plants?

Memcha: Ma'am, the leaves are green but the stick is brown (pointing towards the trunk).

Liklai: This is not stick. It is called the trunk of this plant. But is it thick or thin?

Sam: Ma'am, it is thick.

Liklai: Why do you think so?

Sam: Ma'am, I will be unable to hold it even with both of my arms.

Liklai: Do you all agree with Sam?

Children: Yes, Ma'am.

Chaobi: Ma'am, I can see red, yellow and purple colours in the leaves as well.

Liklai: Yes. Do all leaves have same shape?

Sanjoba: Ma'am, some are same and some are different.

Children discussed about the sizes of different plants, their names and different parts, etc. After reaching the desired place, she assigned the tasks to all working in groups.

- Each child in the group was to observe different plants around them and collect the information for which she distributed worksheets containing the tables for observation and recording the information.
- She asked each child from every group to observe at least two plants and if they wished, they could observe even more.
- She asked them to be careful and not to pluck the flowers or leaves of any plant but use the fallen ones for the activities.
- For recording the observations, she asked children to tick mark where the option they thought was 'Yes' in the table.

Module 4

Activity 1

Name of the plant*	Thick		Trunk Colour of the trunk
	Thin	Thick	
1. Waa (Bamboo)		✓	Light Green
2.			

*Children were naming the plants in their local language. They may be allowed to do so.

Assessment during teaching-learning —Teacher's observations for timely feedback*

Liklai was moving around and observing each one of them.

- She found that some children were not able to identify the plants. She asked the group members to help others.
- She also helped children to name different plants. She observed that Memcha, Manvi and many other children were mentioning the plants as thick and thin just by observing them. She found Bala and Chaobi were using their hands and arms whereas, only Manvi was using the thread for it.
- She asked Bala, Thaja and Manvi to show their methods to others and asked the group which seemed to be using a better way to them and why?

*The observations (assessment) by the teacher are used to improve children's learning and are not meant for reporting.

Let us reflect

- How are teacher's observations crucial for understanding children's progress?
- Do you also write any reflections for each child of your class?
- How do you use it for giving feedback to children?
- Do you use it for gearing the teaching learning as per children's needs? How?

Activity 2

Name of the plant	Surface of the trunk	
	Rough	Smooth
1. Heikru (Amla)		✓
2. Koubila	✓	

Assessment during teaching learning and timely feedback (scaffolding and peer learning)*

Liklai observed that in three groups, some children could not comprehend the word surface and other children were helping them, whereas in the other two groups, she interacted and explained that we can feel smooth or rough surface when we run our fingers or hand on something and asked them to feel surface of their pencils and their school bag. Later, she found some children gave examples of smooth and rough objects used in their daily lives.

**Supporting children to improve their learning.*

Care needs to be taken that the answers given by children need not be labelled as right or wrong, as reflection on a wrong answer allows you to understand the process behind arriving at it. Therefore, asking children questions such as, ‘why’ and ‘how’ they arrived at so called ‘wrong answer’ will help children critically analyse their work and thus enabling them to improve their learning.

Activity 3

She told the children that they would now explore, “which trunks feel soft on touching and which feel hard.” She explained that hard or soft is a quality we feel when we press lightly on something. If we are able to press it a little, we call it soft, like the skin of our palms. But, if it is not pressed at all, we call it hard, like our teeth, nails.

Name of the plant	Surface of the trunk	
	Soft	Hard
1. <i>Heikru</i> (Amla)		
2. <i>Koubila</i>		

Teacher's observation and timely feedback

*Sanjaoba could not distinguish between smooth and soft. Then Liklai helped him by letting him touch a trunk of *Uningthou* (timber), which was smooth but not soft, and a trunk of *Khamen* (Brinjal) which was soft but rough.*

Activity 4

She asked children how to print the design of the trunk on a paper. Binita replied, “I take the design of coin on the paper by rubbing with crayon.” Mukta said, “Tree design could also be

printed on a paper in the same way.” Liklai said, “Ok, let’s try it out” and provided a paper to take impressions of the trunk.

Assessment during teaching learning teaching learning for timely feedback

- Liklai, while observing the children, was encouraging them and helping them whenever required.
- She observed that some children were unable to take the impressions as they were not holding the paper properly against the tree, and some were not rubbing the crayon effectively.
- She observed that both Chaobi and Kaiku rubbed the crayon but could not get the impressions of bamboo trunk and grass. Teacher asked them to take the impression of Neem trunk. They succeeded in getting the impressions. Why bamboo trunk and grass did not give clear impressions while Neem trunk gave the impression? ‘Because bamboo trunk and grass are smooth surfaces while Neem trunk is rough,’ replied students.

Let us reflect

- Do you think the assessment can be fear-free?
- Are there children in your class who hesitate to ask/ answer questions or participate in discussions?
- How can you facilitate their participation? What do you think about the child friendly environment?

Activity 5

After this, Liklai asked children to observe different kinds of leaves. She explained that leaves could differ according to colour, shape, smell, surface, and even according to many other features like colour, thickness, shapes, edges, texture, smell, etc., and encouraged children to note a few of them in the given worksheet.

Leaves of the plants*

Name of the plant	Colour of the leaves	Shape of the leaves (round/oval/long, Any other)	Do they have any smell? Yes/No	Surface of the leaf	
				Rough	Smooth
1. Yendem	Green	Oval	Drawing of the shape of leaf	No	Yes

*The impressions of leaves that are fallen may also be taken by children.

Assessment during teaching learning for timely feedback

Tomba mentioned the shape of Yendem leaf as 'round'. Liklai accepted his response as that was the way he perceived the shape of this leaf. Later, she showed round and oval leaves to the group and asked students to note the difference between round and oval. Other leaves such as star-shaped, triangular-shaped were also observed and drawn by students. Students observed that some leaves are big while others are small. Comparing banana leaf and rose leaf was interesting for them.

She found that some children were observing and discussing other parts of the plants, i.e., fruit, flower, etc. Teacher facilitated the discussion by providing additional inputs.

Later, when everyone finished taking observations and recording those in the tables, Liklai collected their worksheets group-wise.

She played a local game (*Ama Ani Katika*) with children. Children of one group drew a big circle and Thaja started counting as *Ama Ani Katika Thambal Mana Kakita Chahum Nahum Pet*. The person placed with the last word 'Pet' qualified for the game. All children selected by this process stood inside the circle; only Mila was left and she stood outside the circle. She announced 'a green trunk' and all children in circle ran to touch the green trunk and tried coming back into the circle after touching it. Sam was caught by Mila before he could reach inside the circle. Now, he had to stand in Mila's place, and he then asked everyone to touch a flower and the game continued. She observed the other groups and, at times, she played with them for some time. After having lunch, all of them started their journey back to their school. They sang local songs of *Chuang Kut* (a harvest festival of Manipur). Some children even recited local songs in Meiteilon, Kukilon (local language). Everyone had fun while back to school.

Liklai observed each one of them and ensured their participation in these activities. She recorded her observations in her diary the same day (strengths of children and some areas where most of the children had difficulty/gaps in learning).

Follow-up Classroom Activities

Next day, all of them reached the classroom and Liklai had a discussion with the groups on the visit of the previous day. All children were given an opportunity to participate, and some points of discussion were:

Discussion with each group

- Which plants were observed?
- Which plants had a thick trunk?
- Which plants had a thin trunk?
- Name plants with rough bark and plants with smooth bark.
- What were the shapes and surface of their leaves?
- How did you do rubbings of trunk?
- What did you observe besides trunk and leaves?

Liklai encouraged each child of the group to participate in the discussion.

Let us reflect

- How can children be involved in assessing their learning and that of their peers?
- How will it help them?
- What all can you do in order to create a culture of group work in your class?
- How does it facilitate you and children in learning?

Sharing of Group Report (Orally): Sample Report of Group I

- Manvi told that she observed *Kaphadi* (Pomegranate) and *Heinou* (Mango) plants. *Kaphadi* had red flowers. Some flowers were lying on the ground. Its plant was not very big and the leaves had smell like Kaphadi. Heinou plant also had fruits. I like Heinou and found a fallen unripe one and I ate it with my group.
- Chaobi's group observed *Heikru* (Amla) and Timber plants. He shared that Amla plant had green leaves and they were thin and narrow and the plant was not tall like timber tree. She showed rubbings of timber tree and it was as plain as timber tree and had smooth trunk.
- Other members of the group also shared their observations. Liklai appreciated various shapes drawn by children.
- She noted observations made by some children from Group I. For example, in response to the other things seen around:
 - Manvi's observations included some butterflies, sparrows and ants around plants besides some broken pieces of bangles, some stones and half-eaten pieces of bread in addition to sparrows and ants.
 - Sam mentioned some discarded polythene and stones.

- Liklai appreciated these children for their minute observations. There were some who did not mention anything against this column. She encouraged them as well.

Note: The idea is not to assess the accuracy of observations vis-a-vis the planning of the teacher which happens most of the time in real classroom situations. Suppressing such responses not only lowers the self-esteem of children but causes impediments to her/his future learning as well.

The other three groups also presented their reports. During the sharing of report, all children got the opportunity to listen to the observations, reflect on them and came to know about a number of plants through sharing of the experiences. This process extended their learning by knowing more about different plants.

Recordings made in the teacher's diary (during teaching-learning)*

- The observations of children during the field visit showed that two Groups (I and III) had chosen only tall plants whereas, in Group II, children even selected some small plants. It was interesting to see that Manvi included the observations about grass as a plant. She mentioned the leaves as green and said there was no trunk.
- Almost all children had an idea about thick and thin trunks. Many could do that only through observation. In Group II, some children were putting their arms around the plants, whereas, I saw Chaobi and Manvi were very systematic in taking the observations in the Group IV. They used a thread to check whether the trunk was thick/thin. On being asked, they said that they could observe the thickness but by using a thread they would also compare two plants (Liklai attached the two pieces of thread of the two plants with their worksheets).
- Only Mila and Guna could distinguish between hard/soft and rough/ smooth.
- Manja could not run because of the problem in his knee and I found that in his group Manvi took the initiative to change the rules of the game and, instead of running all children of the group, were now pointing towards the object that they identified.

(Note: You will appreciate that skills, values and attitude might be visible in some children in a short/intermediate span, whereas for others, it might take a longer time to develop. However, consistent and sustained efforts are required in this direction).

- From the children's responses to other observations, I found some students had left the column blank. Some had tried to observe and record one or two things. Manvi, Chaobi and Memmi seemed to be a very keen observers, and Sam and other children needed to be given more opportunities for such experiences.
- She recorded specific information related to some children in her diary under their names and class related information for her own record.

*No formal reporting required

She observed that majority of the children could not distinguish between smooth/rough and hard/soft. So she reflected that they must have some mental image of rough and smooth to be able to compare. She said if you find a surface more like this metal pencil box, then you can call it smooth; and if you find it more like the surface of a pineapple or a groundnut peel, they are rough. She showed many objects and asked them to feel hard-soft, smooth-rough but from outside. Similarly, for soft, she asked them to compare with the skin of their hands for soft, and with teeth, for hard.

Addressing gaps in learning of children*

Material	Touch and tell where should given materials be placed			
	Soft	Hard	Smooth	Rough
Chalk		✓		✓
Desk				
Sponge	✓			✓
Tiffin				

*You can add more materials to this list.

Liklai asked children to do this activity in pairs and assess their work as well. Later, she provided answers to the activity on board and asked children to compare their results with those written on board with the ones, which were self-assessed.

Similarly, keeping the appropriateness and the need, opportunities of peer assessment may also be provided to children.

She still found some children were unable to distinguish. She then listed some material on the blackboard and asked children to classify into hard/soft and rough/smooth after trying those at home. She asked children, in their free time,

to observe and feel the trunk and leaves of the plants in their surroundings to experience their texture. She asked them to take the help of their peers in class and elders at home. Liklai asked children to observe objects in their surroundings that had plants, leaves, and flowers in their designs. She also asked them to interact with their elders on how plants are useful to us.

Creating opportunities for self and peer-learning (Assessment as learning)

Liklai observed that all children took lot of interest in self-assessment. During discussion in the class, Liklai observed that some children (Thaja, Manvi, Chaobi) gave many more examples of soft/hard and rough/smooth that were not discussed in the class but were related to their daily life (Self learning).

She found that 2-3 children were motivated and collected information on many more plants in their surroundings and shared with the class. When discussed, many of them talked about the medicinal uses of different plants besides talking about other uses such as furniture, baskets, paper, etc. (self-learning).

Note: Taking children towards self-learning is an important objective of assessment, yet in no way the teachers needs to be impatient about this. It is a slow process to develop the ability of self-assessment and self-learning (assessment as learning). However, sustained efforts are required and opportunities for it need to be provided from time to time.

The above activities were completed in about a week. Similarly, she took up other activities of the chapter for identifying patterns of flowers and leaves on different objects in the surroundings. She organised plantation of saplings by each group and asked children to name and take care of those. She encouraged children to think of/write some poems/riddles on their favourite plant/flower/fruit and next day children presented those in the class. All these activities of lesson took around 10-12 days. (*However, the time varies depending on the activities, children's pace of learning and other administrative constraints.*)

Assessment after completion of chapter

After completion of a chapter and continuous practice and exercises in the class, Liklai planned to carry out assessment of children for what they have learnt (Assessment of Learning) through some activities/ exercise in the class, and situations

(observation, oral expression, make and do, etc.) using the objectives of learning of the lesson as enlisted above. (You may choose other strategies such as paper-pencil test, project, survey, visit, etc. The selection of any method will depend on the purpose of assessment and other constraints mentioned earlier). Liklai offered children to work in groups as well as individually. It took her two days (two periods each day) to assess all children. For example:

- a. Liklai provided leaves of plants such as coriander, mint, carrot, and of some other plants that had aroma in a group and asked children to guess one-by-one the name of the plant by smelling it with their eyes closed. After that, she asked them to compare and classify these into rough and smooth.
- b. She asked each child to observe one plant (her/his choice) around her/his home. Later, the child was asked to speak five sentences on the plant or its parts such as leaves, flowers, fruits, trunk, etc.
- c. She provided some dry leaves to children and asked them to draw/print five different leaves from that and observe the pattern emerged.

Later, she collected the worksheets that children had used to draw the leaves/ took prints and classified those into rough and smooth.

Recording child's progress of learning on completion of a chapter

Teacher noted her observations against the name of each child in a logbook, which included a separate page for each child. For example, she recorded her observations of two children as given below:

- *Manvi: She is able to identify all leaves from its odour. She expressed her observations covering minute details related to plants. She could classify all leaves into rough/smooth. She needs more practice for taking prints.*
- *Chaobi: He is able to identify leaves of different plants with some hints. His observations on the features of plants are clear. He has good drawing skills but needs to build more confidence for oral expression.*

However, the frequency/periodicity of Assessment of Learning may be decided by you or the school instead of being prescriptive. It may be done after completion of a chapter(s), unit(s), theme(s) or any other criteria decided as per the need.

Note: You have seen that the teacher has used assessment as a process by using various ways such as discussion, interaction, asking questions, sharing experiences to improve children's learning.

This data need not be recorded for reporting purpose, however, some specific observations could be recorded, (strengths) which helps for reporting.

Assessment of learning after one quarter

After the teaching learning process of about three months and completing some chapters/ sections of the theme 'Family and Friends' that covered sub-themes namely; 'Plants', 'Animals', 'Relationships', the teacher planned to evaluate children for some concepts and issues under this theme through individual and group activities using different ways mentioned in the table given below:

Theme		
Family and Friends		
Subthemes		
Plants/Animals, Relationship, Work and Play		
Concepts and Issues	Assessment Strategies	Learning Outcomes
<ul style="list-style-type: none"> • Plant diversity and leaf diversity with respect to the physical features. • Plants that are eaten, patterns in leaves. • Animals, their habitat, food eaten by animals. • Relationships and diversity in family types. • Work that people do in neighbourhood and the Gender aspects. 	<ul style="list-style-type: none"> • Paper-pencil task • Make and do tasks like; Creating designs, motifs or models. • Sharing of experiences and discussion in classroom. • Survey 	<ul style="list-style-type: none"> • Identifies simple features of leaves, trunk and bark of plants, animals, relationships and family types. • Groups objects, birds, animals, features, activities according to differences/similarities using different senses. • Records observations, experiences and information on objects/activities/places visited in different ways and predicts patterns. • Creates drawings, designs, motifs, models, top, front, side views of objects, and slogans, poems, etc. • Observes rules in games and other collective tasks. • Voices/opinions on stereotypes for play/food/tasks. • Shows sensitivity for plants, animals, the elderly and differently-abled and diverse family set ups in the surroundings.

She added children's work such as drawings, 'make and do' tasks, paper-pencil tasks, and project reports to the portfolio of each child. She developed rubrics to assess their work. She assessed the project work on the following aspects.

Framing questions, data collection, details in observation, recording and report making and its presentation, involvement in activity, working together in the group.

She collected these evidences and also used other sources like children's portfolios, her own diary and logbook, to assess the change in learning progress of each child against the learning outcomes of Class III. After analysing the assessment data (assessment of learning) of one quarter, she reported their performance. For comprehensive progress report, she prepared a profile for each child and reported its progress on a three-point scale along with some qualitative description. A sample has been given as below.

Name : Manvi

Class : III

Physical health : Height-----cm

Weight : -----Kg

Eyes and Dental health :

Attendance : Number of days attended the school / Number of Working days

Subject-wise Details

Subject Environmental Studies	Levels of Performance*									
	Quarter I			Quarter II			Quarter III			
	I	II	III	I	II	III	I	II	III	
Learning Outcomes										
Identifies simple features of plants, animals, objects, and places around.										
Places around.										

Groups, objects, birds, animals and their features, activities according to differences or similarities using different senses.									
Records observations, experiences, information on objects, activities, places visited in different ways, and predicts patterns.									
Creates drawings, designs, motifs, models, slogans, poems, etc.									
Observes rules in collective tasks Shows sensitivity towards plants and animals, the elderly and the differently abled in day-to-day life.	In group situations Manvi mostly focuses on her task and does efforts to help others. She planted a curry sapling on her birthday and takes care of it. Her sensitivity to the elderly and animals gets reflected in her drawings and oral expressions.								

**Levels of Performance*

Level I: Needs lot of support

Level II: Able to do with support

Level III: Age appropriate

(Note: These levels may also be given credits such as 1 for level I, 2 for level II and 3 for level III for aggregating learning outcomes and giving consolidated report of student's performance at the class level)

Based on the above information the teacher wrote a quarterly profile for each child. For Manvi and Chaobi she wrote the following report

Profile of Manvi — server as she identifies and segregates objects based on their features. Her skills of sorting are amazing, as she does not oversee even minutest details. She is quite systematic in recording but needs help to analyse or derive pattern in the observations. She is able to relate learning beyond the textbook and school, which is evident from the kind of examples she cites and experiences that she shares in the class. However, she needs to be little patient while working in groups, and should help others when required.

Profile of Chaobi — Quarter I

Chaobi is able to manage his work and the task allotted with the help of teacher or his peers. He has good experimental hand and draws well. He is able to take observations but needs help to analyse and conclude. He needs to take up extra efforts to go beyond the textbooks and classroom learning. His creative abilities reflect better in hands on activities. It is appreciable to notice his love for the animals as he does not miss the chance to feed birds and animals. He patiently waits for his turn in various group tasks and other activities like taking MDM and helps others whenever he can.

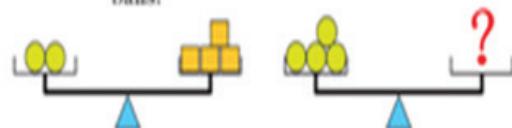
ANNEXURE-II

SAMPLE QUESTIONS WITH LEARNING OUTCOMES

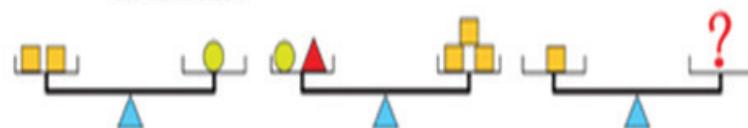
IN MATHEMATICS, EVS, ENGLISH AND HINDI

LO: II (4): Compares objects as heavier/lighter rather than using simple balance

- (a) If 2 balls balance 4 boxes, how many boxes would be needed to balance 4 balls?



- (b) Look at the balances below and find out what could be used to balance the thridscales.



LO V (7) : Identifies the pattern in triangular and square



Now ask the child:
How many triangles do you need to form the next figure? Make the next triangle.

LO III (4.1): Identifies and makes 2D-shapes by paper quality , paper cutting on the dot grid, using straight lines, etc.

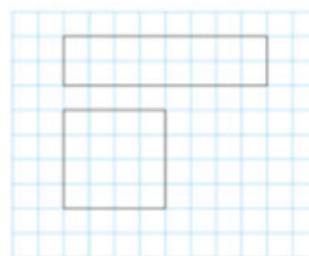
ACTIVITY 107

Conceptual area:

Computing area and perimeter.

Material: Drawing sheet or worksheet, pencil.

Instructions: Draw two objects with same area but different perimeters (such as a rectangle of 8×2 and a square of 4 cm) on a square grid and ask: 'Which has the greater perimeter?'



LO III (5): Estimates and measures length and distance using standard unit like centimetre and meter and identifies relationship

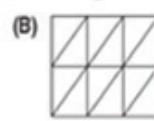
A metre is about as long as

- (a) the length of my leg
- (b) the length of my book
- (c) the length of my foot

LO IV (2.1): Identifies half, one-fourth, three-fourth in a given picture by paper folding and also in a collection of object



If a child finds figures like this (A) easy, slightly more challenging ones (like B) can be given.



Using the idea of equivalence is implicit in the problem without stating it. If the child is successful in such tasks, it means she is able to use the idea of equivalence well!



LO II (5.2.2): Identifies and forms equivalent fractions of a given fraction

Instructions: Ask the child to write each of the following fractions in the boxes given below.

5/6 6/11 17/17 111/112 4/3 34/37 31/2 100/100

Less than 1	Equal to 1	Greater than 1

LO V (5): Establishes linkage among terrain, climate, resources, and cultural life

- Make your own report which mentions the cause of the disaster, date and time.
- What kind of damage did it cause – to lives, belongings, livelihoods?
- Which people came forward to help? Which government offices or other groups?
- You may need some help from these in case of an emergency. Find out and write the addresses and phone numbers. Add to this list.

	Address	Phone Number
Fire Station	_____	_____
Nearby Hospital	_____	_____
Ambulance	_____	_____
Police Station	_____	_____

LO IV (12): Uses the information on sign board, posters, currency (notes/coins), railway tickets / timetable

People face a lot of difficulties if they lose their family, or their houses and belongings. In the last one month look at newspapers for news related to such disasters – earthquakes, floods, fire, cyclones etc. in different parts of the world. Collect these news reports and paste them in your notebook.

Discuss and look at this bill and tell

LO V(9): Record observations and experiences, information in organised manner to establish relation between cause and effect

Example 2 Reading a Map – A Trip to Agra

Children are introduced to a map of Agra using symbols they can relate to. The map is supported by a small narrative, about the time it takes for a family to go from one place to another, to draw their attention to these symbols and help them get an idea of relative distance.



Marie and Baichung are going with their family to Agra. They get off the train at Agra Cantt. Railway Station and take a rickshaw to the Taj Mahal. After 3 hours, they start for Agra Fort, again in a rickshaw. In the afternoon they take a bus to go to Fatehpur Sikri.

Now look at the distances between these places (for kilometers we write km).

- Agra Cantt. Railway Station to Taj Mahal is 5 km
 - Taj Mahal to Agra Fort is 2 km

- Agra Fort to Fatehpur

- Now find from the map

season - Taj Mahal or Fatehpur Sikri

- Which of these is nearer to the railway?

- Babarpur forest or Taj forest?

- ## • Agra Fort or Taj Mahal?

Which is closer to the river Yamuna:

- Taj Mahal or the Railway Station?

(Math-Magic Class III, NCERT 2006 p. 56-57)

LO IV(9): Guesses estimates spatial quantities only local units and verifies using simple tools setup between cause and effect

Q1. Shanti's grandfather told her that as a small child he used to see many more birds like the sparrow and the myna than are seen today. Can you make two possible guesses as to why their number is less today?

1.
2.

LO IV(2): Identifies different features of birds, animals matters

Q2. Fatima and Irfan wanted small, round and smooth pebbles to play 'gitte' (a game played with pebbles) with. Fatima said "We can collect some from near the river. I have seen many smooth pebbles there." When they reached there Irfan observed, "When we go a little far from the river we do not find such pebbles." Can you think of why such round smooth pebbles get formed near the river side?

LO V (3): Describes the interdependence among animals, plants and humans

Q3. Mamta feels that the grass and small plants growing near her school wall are growing on their own. They have not been planted by anyone. A small berry plant was also amongst them.

- Suggest a place around your school where plants are growing without being planted.
- Why do you feel that they have not been planted by anyone?
- How do you think the seeds of the berry plant could have reached that place? Think of two possibilities.

1.
2.

LO II(3): Identifies connectors and sequence of event in the story (poem)

Hypothetical Responses:

- (i) No response.
- (ii) "Tree." Or responds in mother tongue/L1.
- (iii) Correct response in English.
 For response no. (i) (Needs help, 1)
 For response no. (ii) (Adequate, 2)
 For response no. (iii) (Good, 3)

(C) Reading with Understanding

This could begin with a simple picture and word association.

Poem

After a bath
After my bath
I try, try, try
to wipe myself
till I'm dry, dry, dry.
Hands to wipe
and fingers and toes
and two wet legs
and a shiny nose.
Just think how much
less time I'd take
if I were dog
and could shake, shake, shake.



The teacher asks children to read the names of all the body parts listed in the poem.

Hypothetical Responses:

- (i) Names 1-2.
- (ii) Names less than 5 but more than 2.
- (iii) Names all the body parts.
 For response no. (i), 'needs help'
 For response no. (ii), 'adequate'.
 For response no. (iii), 'good'.

LO I (2): Names familiar object seen in the picture

(D) Understands and Writes

Look at the following pictures and write the names of the objects you see.



LO V(1): Answer coherently in written and oral forms to questions in english based on day to day life experiences unfamiliar story and poems heard and unheard<

- Given in the box below are names of different means of transport.
- You can ask students to group these different means of transport into the correct boxes: Land, Water and Air.

Bus	Car	Aeroplane	Ship
Boat	Bicycle	Helicopter	Truck
Steamer	Scooter	Balloon	Submarine
Glider			



LAND



AIR



WATER

- | | | |
|----------|----------|----------|
| 1. _____ | 1. _____ | 1. _____ |
| 2. _____ | 2. _____ | 2. _____ |
| 3. _____ | 3. _____ | 3. _____ |
| 4. _____ | 4. _____ | 4. _____ |

LO III(4): Read small text in English with comprehension that is identifies main idea details and sequence and draw conclusion in English.

- Ask children to read the following paragraph and answer the questions.
- You can then ask children to imagine that they are little fish in the river and ask them to write down a description of what they might see around them.

Once upon a time, in the small town of Kovalam in Kerala, Mr. Chandrantha a farmer, caught a fish. He took it home for dinner. His children fell in love with the fish and stopped him from killing and cooking it. Since then it has lived in the bathtub and shared it with children when they were small. The family has trained the fish to swim in the bathtub. When someone needs to take bath it swims into a bucket. Mrs. Radha says, "He is part of our family".



- What is this paragraph about?
- Who caught the fish?
- What did the family train the fish to do?
- When did the fish share the bathtub?

LO III(4): Read small text in English with comprehension that is identifies main idea details and sequence and draw conclusion in English

कच्चा आम - पका आम

- कच्चे और पके आम से बनी कौन-कौन सी चीजें तुम खाते हों?

कच्चे आम से बनी चीजें

पके आम से बनी चीजें

LO II (3): Identifies characters and sequence of events in the story

- इनमें से कौन-से फल गुड़ली वाले हैं और कौन-से शीज वाले? सही उत्तर पर (✓) का निशान लगाओ।

फल	गुड़ली वाले	शीज वाले
परोता		
आम		
बेर		
अमरकृद		
जामुन		
अंगूर		

LO II(5): draws or write a few words for short sentences in respect to poems and stories

कविता में से ऐसे शब्दों को चुनो जिनमें “म” आया है।

जैसे—

मुझे मीठे-मीठे नम मूँह मत आम काम

इन शब्दों को देखो अब “म” से बने कोई तीन शब्द तुम लिखो।

ANNEXURE-III

ENGLISH LANGUAGE (UPPER PRIMARY STAGE)

This exemplar is suggested in continuation of our understanding of pedagogy of language as suggested in the module on pedagogy of language.

Let us Recapitulate

Language is learned and enriched through the perspective of whole language learning. The learning of skills of language together and not in isolation (integrated approach of learning language skills) up to the elementary stage, enhances the basic communication skills.

Mother tongue/home language of the child is the recommended medium of learning. Hence the mixing of codes/languages in spoken and written forms is acceptable in the initial stages and recommended in the process of assessment as well.

Reading of Literature (oral, text reading) enhances skills of reflection and thinking independently. It opens for the reader the world in its varied forms of culture, thought, language etc. Literature familiarises and gradually strengthens the skills of language i.e. reading, listening, speaking, and writing. Therefore besides textbook, learners shall have access to children's literature and other meaningful materials selected by the teachers keeping in mind the profile of the learners.

In the initial stages of language learning the emphasis is on how children can learn to use language in different contexts for example their response to story, poem, surroundings, familiar, and unfamiliar situations. Hence the assessment of language will take account of their understanding leading to their skills of articulating it in best possible way in English or by being bilingual particularly in the initial stages of language learning.

Assessment (CCE) is important and crucial to learning. It is subsumed in teaching learning process. The goal of assessment is to strengthen the developmental process of learning language. School based assessment plays an important role in learner's transition from first language to English and subsequently to other languages in terms of accepting the role of L1 in learning English and other languages in performing

tasks, activities and subsequently assessment. The individual feedback is important so is working in pairs and groups in school based assessment.

Let us Ponder

In the absence of assessment as learning with key feature of flexibility of modifications in tasks and strategies, (integration of assessment with teaching learning process) the results of examination, unit tests will be on how well the child has rote memorised and reproduced.

The following is an exemplar based on the text A Short Monsoon Diary from Honeydew class viii textbook (NCERT). The pedagogy and assessment strategies are integrated to ensure that learners are enabled to comprehend in terms of meaning, genre, grammar and have a pleasant experience of reading and connecting with the text. Some of the possible activities and assessment strategies are suggested keeping in mind the stage and interest of the learners. Teacher can make modifications based on their classroom situation and the profile of the learner so that they can engage with them and give their responses based on reflection.

The teacher focuses on following Learning Outcomes.

The learner—

- reads textual/ non textual materials in English, Braille with comprehension.
- identifies details, characters, main idea and sequence of idea while reading.
- reads, compares, contrasts, thinks critically and relates ideas to life.
- reads variety of texts with pleasure
- writes paragraph coherently.

Level 1

A. Before Reading activities were like pedagogic inputs to find out how well the learners would receive the text in terms of ideas, vocabulary, creative initiatives, etc. Probably this is the beginning of the process of assessment.

Teacher and learners can make use of related audio / videos, and explore about the author Ruskin Bond and his books. Teacher can—

- involve children in guessing the content of the text by reading the title of the text.
- ask them to write in words/sentences their guesses.
- ask them if they write a diary. if yes then why and what inspires them to write.
- do they write in English/ mother tongue or any other way?
- do mother/father maintain a diary for writing their thoughts, poems, household expense, etc.
- will the learners like to share their diary with friends?

Before reading activities are strategies for teaching learning the skill of comprehension. The school based assessment (CCE) is to help learners learn better and help the teacher to fine tune teaching. Teacher can modify the strategies according to the needs ,for example if children have no exposure to diary writing that the teacher comes to know when they engage them in conversation then the samples of diary writing can be shared with the learners

Now let us look at the opportunities of assessment

The teacher can assess—

- preparedness of the learners about the text, their understanding about what is diary writing etc.
- abilities of expression fluency in speech and clarity in ideas.
- challenges in terms of unfamiliarity with diary writing, failure to decode the meaning of the title, etc.
- strengths of writing skills like, ideas, vocabulary, punctuation, and grammar.
- understanding of the questions asked and responses of the peers.
- ability to work collaboratively by listening to each other patiently, not making fun of others and showing aggression.
- courteous in behaviour, use polite words like may i, sorry, your turn etc.

The above are suggestive you can add more as per your observation/assessment.

Thinking about the Strategies

How will the responses help me as a teacher in modifying my strategies—

- all learners are not participating in the discussions

- shall I ask simpler questions?
- be bilingual in discussions
- do they need more time to respond?
- talk to them individually, etc.
- how can I draw their attention to their strengths and weaknesses — spellings and grammar, certainly not by scolding, pinpointing, circling, etc.

You can add more as per your observations and assessment

In-text, questions are important to assess the interest and comprehension of the learners.

Please note the text from NCERT Textbook, *Honeydew* provides comprehension questions and glossary as well. Engage children in finding answers. They may be asked to write the answers, locate the references and work on writing the answer in their own words. Teacher can create comprehension questions and glossary if not given in the textbook after brief sections.

Peer assessment and Self Learning

Peer assessment is about following participatory approach (teacher and learners) in assessment. Learners while given opportunity of evaluating each others' task learn to reflect as well as improve their work.

Strategy

- Learners may be asked to read each others' answers.
- Ask them to work in groups and decide what could be the important points in the answers.
- What would make an answer more than average and less than average?
- Once this is decided give them answers that are not their own and ask them to assess them.
- Then ask them to assess their own answer to find out the scope of improvement.

This exercise will lead them to be objective in their understanding of the task. In this way they will be enabled to develop criteria/rubric for writing tasks. Give them opportunities for peer assessment by engaging them in presentations, dramatization, role play too.

Post Reading

Let us Reflect and Write

As we read The Monsoon Diary we find that it is a beautiful piece of writing. Ruskin Bond in his creative style of writing introduces us to insects, animals, and life in jungle during monsoons. The sounds and images create an ambiance of monsoon season. And author's entries in his diary make it an authentic experience. Teacher can engage learners in creative writing for the enrichment of language, reflection, exploration of personal thoughts, experiences and pleasure of expression through writing.

Writing Task 1

Creative Writing

Teacher can ensure by recapitulating learners' experiences of reading poems in English as well as in other languages. Poems and stories on seasons, monsoon, etc., can be revised and some more can be added. Here analysis or appreciation is not required. They read and enjoy, making their own meaning. This is suggested to avoid repetition of ideas, unnecessary use of words, expressions in their own writings.

Example— After reading the text ask learners to develop a paragraph on the following;

All night the rain has been drumming on the corrugated tin roof and.....

(This is a modified sentence from the text. More can be created from the text.)

- Ask them to make diary entries of the season they like the most.

Creative writing — Assessment

Writing/creative writing is important for developing sense of self-expression and communicative purposes. It evokes variety of emotional and intellectual moments and experiences for the learners. Above all it is their authentic piece of writing. Therefore a suggestive criteria for assessment is—

- authenticity of experience
- use of suitable vocabulary, words and expressions.

- command over language in terms of good, adequate average etc
- use of significant and even minor details.
- focus on characters
- flow in the narrative
- have they revised their writing by following process method i.e making draft and revising.
- use of collocation, rhyme scheme, metaphor etc.
- uses imagination and creativity for writing diary entries on the season of personal choice

More points can be added as per the performance of the learners. Gradually rubric can also be developed with the participation of the learners.

Portfolio Method

Learners can be advised to make portfolio of their creative writings. With the help of the teacher they can maintain progress portfolio. This kind of portfolio is maintained to keep record of the progress than just collection of writings/tasks/assignments. Hence it is important to peer assess the writing tasks and learners are encouraged to pay attention to the suggested ideas. The collection of their writing will show how have they progressed and how they are following some of the steps of process writing at this stage.

Writing Task 2

The monsoons are a blessing after long spells of summer and heat. It is fun to get wet in rain and feel cool and refreshed. However the untimely and prolonged rains have caused disaster in cities like Chennai, Kashmir.

- Ask learners to collect information from word of mouth, internet, newspapers, etc.
- Arrange information in order of dates, causes, and measures taken by the government and people.
- Rewrite stories of heroes who have shown extraordinary courage to save the lives of people, animals, etc.

Note to the Teacher

The above two assignments will need time for collecting the resources and in writing. Teacher can ensure by asking them their progress and if they need some help in between.

Assessment can be done when the learners are ready. Based on the following.

- Their ability to collect materials from different sources.
- Ensuring that information is authentic.
- Transparency in their methods and willingness to share the resources with peers.
- Skill to skim and scan the materials.
- Writing the events in sequence, coherence and cohesion.

You can add more points based on your observations and assessment.

Note to the Teacher — Teacher can add local specific activities for developing language skills and communicative competence of the learners.

HISTORY (UPPER PRIMARY)

Students of history need to know and understand historical events and concepts. They are also expected to apply different critical thinking skills that are commonly used in the study of history. However, knowledge and skill component in this context is often carried forward posing the two as different. History, as a subject, is therefore taught as a collection of facts woven into a narrative. But the way history is taught—as series of lectures, textbook reading, rote memorising, and test taking—is not only boring to students, but also ineffective in garnering real historical learning. Truth be told, if students are not taught to acquire and make use of critical thinking skills to interrogate historical information, they cannot have historical knowledge. To link critical thinking skills to content, the instructional focus should be on the process of learning. It is the application of the content that stimulates thinking. So it is important for teachers to move away from teaching history as ‘given’ and allow students to construct their own knowledge by following vivid and creative methods of learning. Use of primary sources is one such engaging way to support students’ higher order thinking skills.

What follows is an exemplar created to help students to have an understanding of primary sources and achieve the below mentioned learning outcome through various activities along with assessment. This exemplar will ultimately lead towards developing a foundation for critical thinking skill which will not only help in accomplishing this particular learning outcome but also other learning outcomes in history.

Learning Outcome

- Identifies different types of sources (archaeological, literary etc.) and describes their use in reconstruction of history of this period.

Initial Discussion or Question-answer

It is very important to ask right questions to stimulate students' critical thinking skills. Initial discussion with students and their response give the teacher an idea about the existing knowledge of students.

The teacher can write words 'primary source' on blackboard, give some time to students to reflect on this and then ask to explain the term in their own words or by drawing pictures.

After a few minutes the teacher asks students to think about "What primary sources are"?

Students give a wide array of answers, like 'sources we use,' 'sources used long ago,' and 'sources that historians need.'

(Students' responses help teacher to assess how much or how little they know about sources).

Students are then asked to think of all of the activities in which they were involved during the previous 24 hours. The students are asked to provide any evidence that proves they existed during the last 24 hours. Several answers are offered by students, such as:

"My father saw me doing my homework yesterday at my house." This student suggests that his father could vouch for his existence.

Another student responds, "I went to my friend's house yesterday." In this case, the friend would tell about my visit to his house. So this would be the proof of the student's existence.

(This helps the teacher assess that their concept of primary source is based on their daily experiences but is hazy and not yet a clearly defined concept. So she probes further to help students understand various aspects of primary source. In between she also familiarises students with what a 'good discussion' is and shares with them criteria's which has to be used by students while doing 'self assessment').

To get past just human interactions, the students are asked, "Are there any answers that do not involve or depend on people as proof of your existence?" The children start thinking.

One student responds—

“I went to a doctor yesterday and he prescribed some medicines for me” as proof of existence.

Another student answers, “my attendance has been marked in the attendance register in the school.”

All students try to say something based on their experience. They enjoy the exercise and the teacher encourages each of them to participate.

(Their enjoyment gives an idea of interest and involvement in the topic, so the teacher motivates each student to say something and simultaneously help them to understand that there are multiple sources to know about a thing).

To reinforce what has been learnt so far students are encouraged to go and talk to their family members about their grandparents or great grandparents and each one is asked to write about 2-3 such things in brief which help them to know about these people.

(The teacher provides hint that this thing could be a photograph or a letter or anything about them or anything used by them).

Next day the teacher finds that the class is very noisy where all students have something to share. So the discussion starts and each student shares what he/she has prepared. One student says that, “My father told me that my great grandfather was fond of watches and he had one Swiss watch also that is still with us though it doesn't work now”. One student comments that, “How can we know that you are not telling a lie?” To this he replies that, “I have got a photograph of my great grandparent where you can see that he is wearing the same watch”. Like this all students attempt to tell something about their grandparents/great grandparents.

(This discussion helps the teacher assess students' effort in identifying, collecting and presenting things. This also helps the teacher to connect the content with students' present life and dispel the idea that history is merely the study of long-past events and long-dead people. So through this exchange of ideas students are encouraged to understand how their write ups/ responses tell a story about a past event or place or people and are primary sources).

Self-assessment

Discussion on topics or questions is commonly expected of students in their history classrooms. However, it may not always be clear to students exactly what constitutes “good” discussion. Sometimes teachers are also tempted to think of ‘having a good discussion’ as a goal to aim for, rather than a method of achieving other goals. First thing that discussion does effectively is to help students feel at home with a topic or issue that is being discussed and adopt it into their active vocabulary, especially by means of applying it to new situations.

Checklists are very useful in helping students assess themselves or determine whether they are on track. Following example shows a checklist developed for helping students self-assess their participation in the discussion.

Strengths

- I was courteous to others.
- I paused and thought before speaking.
- I listened to others tell their ideas.
- I looked at the person speaking.
- I didn't hesitate to ask questions if I didn't understand a thing or to clear my doubt.
- I kept an open mind concerning what was said.
- I used information from my daily life to support my statements/questions.
- I felt comfortable speaking during discussion.
- I gave my opinions clearly.
- I could write about 2-3 things related to my grandparents or great grandparents.
- I could explain well when my classmates asked questions on the things I wrote about.
- I could provide variety of examples i.e. objects, photographs, letters, certificates.
- I knew the purpose of discussion very well.
- I was prepared for the discussion.

Weaknesses

- I interrupted others.
- I did not look at the person speaking.
- I did not speak at all.
- I talked too much.

I talked about subjects other than the topic of discussion.
 I did not listen to others.
 I was discourteous to others.
 I could not write much about things related to my grandparents or great grandparents.
 I could just collect letters of my grandparents.
 I could not explain when my classmates asked questions on the things I wrote about.
 I didn't know clearly the purpose of discussion.
 I was not prepared for the discussion.

Based on the results above, students can set a specific goal to improve their participation in further discussions. Remember, there is ALWAYS room for improvement!

The discussion about primary sources continue and students are shown several different primary sources e.g., replicas/pictures of mother goddess, seals, pots, artifacts, excerpts from inscriptions, visuals of sites, buildings and monuments, etc., and discussion takes place as to why and how each source is relevant to the ancient Indian history.

(Here we need to remember that familiarising students with sources and helping them in making sense of these sources require continuous guidance. For this we need to cultivate in students a habit to ask as many questions as they can to a source. Besides, if teachers facilitate students in interpreting/observing some of the textual and visual sources in detail, gradually students will start reading and looking at things critically and will realise an important point intrinsic to history as a subject, that any account of an event, no matter how impartially presented, is essentially subjective. Once students become familiar with such guided exercises/questions we can move forward to complex interpretation and analysis exercises gradually).

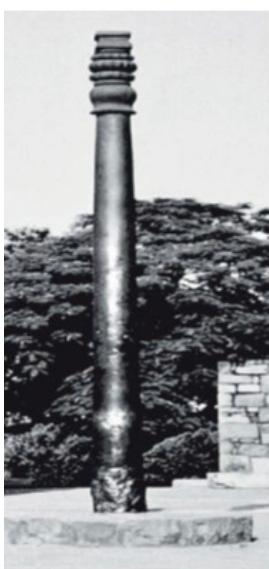


Fig. 1 The iron pillar at Mehrauli, Delhi



Fig. 2 A stone statue found from Mohenjodaro



Fig. 3 A punchmarked coin;



Fig. 4 A Jain monastery, Orissa

(The presentation of different types of primary sources not only helps in generating an excellent and interactive discussion about primary sources but also in creating a foundation for more mature levels of historical thinking. While reviewing these sources the students begin to discover, through instruction and open discourse, how primary sources are the tools that historians use to tell a story).

With a better idea of primary sources, the teacher moves to the next activity and provides an excerpt to students to read and find out what students have learned so far.

This is what Ashoka declared in one of his inscriptions:
 "Eight years after becoming king I conquered Kalinga.
 About a lakh and a half people were captured. And more than a lakh of people were killed.
 This filled me with sorrow. Why?
 Whenever an independent land is conquered, lakhs of people die, and many are taken prisoner. Brahmins and monks also die.
 People who are kind to their relatives and friends, to their slaves and servants die, or lose their loved ones.
 That is why I am sad, and have decided to observe *dhamma*, and to teach others about it as well.
 I believe that winning people over through *dhamma* is much better than conquering them through force.
 I am inscribing this message for the future, so that my son and grandson after me should not think about war.
 Instead, they should try to think about how to spread *dhamma*."

An excerpt from an Ashokan inscription appearing in class VI History textbook, *Our Pasts I*

The teacher explains beforehand what the activity is about and what is expected of them (criteria on which peer assessment will be done). She/he provides a set of questions to them. She also provides them an assessment rubric prepared in consultation with students'. She explains that a historian who wants to know more about this or any other excerpt would ask questions about it. The teacher discusses with them that the questions around the source help to understand and use the information in the source. For this she gives the example of a coin and says that,

"All of us know that coin is an important source of history. But questions like what is it made of, where was it found, what was its denomination, when was it issued, who issued it, and what symbols does it carry impart an altogether different meaning and context to the coin and thereby make it an important historical source. And carrying the research forward, as newer and newer questions are asked of the same source, there is every possibility that new answers will lead to different conclusions about the period when the coin had been issued."

So she makes it very clear that like a practicing historian who examines sources in this way, teachers and students studying history in schools can also question all kinds of sources and nurture critical engagement with the subject.

After this the teacher facilitates students' in the formation of groups where students form heterogeneous groups having 4-5 students in one group. All are asked to read the excerpt carefully and then discuss with their group members- which words or ideas occur important to them when reading the excerpt and finally write down answers to the questions provided to them. One student in each group has to write down the answers and another student has to read out the answers. The students have to make a list of all the words or ideas they collect by reading the excerpt.

Following questions were posed

1. Identify the type of source?
Is it a letter, an inscription, a newspaper article, or a photograph ?

2. Who wrote it/got it written?
Is it an eyewitness, someone involved in events described or someone writing about what they've heard or researched?
3. When was it written?
Was it at the time of events described or later?
4. To whom was it written? Why was it written?
5. What does it say? What does it tell about the past?
6. What are the key words and what do they mean? What is it about?
7. Can we trust what it says? Was the person there?
Is it reliable? Is the information accurate? Is it biased? In other words whose point of view?
8. Would it be useful if I were writing a history of the time?
How useful is this inscription for a historian researching the time of Ashoka?

The teacher finds that most students respond that it is a primary source an excerpt from an inscription of Ashoka. The students believe the description in the excerpt is from Ashoka himself.

(The teacher assesses here that students are able to apply what they have been learning.)

With regard to question number 4, most of the students say that the massacre perpetrated during the Kalinga war left deep impressions on Ashoka, he was full of remorse. As a result he decided to get his ideas inscribed in an inscription for his future generations as well as for people in general to keep them away from war.

The students' responses for question 5 vary but it still revolves around the same theme. One student says that, "It tells us that Kings fought wars and annexed other areas and that wars affect everyone in the land". Another student points out that, "It also tells about the repentance of King Ashoka who after seeing a lot of bloodshed decided not to wage war anymore".

(The teacher is very happy with students' thoughtful observations).

The two questions that seem to be quite challenging to the students the most are question numbers 3 (When was it written? At the time of events described or later?) and 7 (Can we trust what it says? Was the person there?). At first, the students do not seem to know where to begin their investigation for the question no.3, so the teacher probes by asking, “Do you get to know something from the excerpt as to when Kalinga was conquered?” To this some students respond that, “Yes it is mentioned here that Ashoka conquered Kalinga 8 years after becoming king”. The teacher says that if she provides them the date when Ashoka became king would they be able to find out the date of the Kalinga war? Though some students say ‘yes’ but from their facial expressions the teacher is able to make out that they are not very sure. She provides a clue that Asoka’s formal coronation took place in 269 BCE. Then students are asked: “Based on the information, can you figure out when it was written?” The students are not able to find out the date so she explains that since the date is in BCE so if Ashoka became king in 269 BCE and 8 years after becoming king he conquered Kalinga they will have to deduct 8 years from this date and if they do this 261 BCE comes as the date around which time this inscription was written.

With regard to question number 6, one student appears confused and says that “The inscription mentions word ‘dharma’ wrongly as ‘dhamma’. The teacher then explains that ‘dhamma’ is the same as Sanskrit ‘dharma’ but is written here in Prakrit. She also shares that most of Ashoka’s inscriptions are in Prakrit.

(The teacher is happy to see the student’s observation. This signals to other students that asking questions or expressing doubts is an important aspect of class learning and not only ‘knowing the correct answer’).

With regard to question number 7, one student says that, “The inscription is about the conquest of Kalinga by Ashoka and his repentance thereafter”. Another student says that, “Ashoka is addressing people in this inscription in the first person and expressing his remorse for unleashing terrible violence against Kalinga” but they are not sure about its reliability, biases and point of view.

To this the teacher facilitates them by saying that since this is Ashoka’s own edict where he is saying what he himself experienced it is trustworthy. She explains that mention of Mauryan rule and rulers is found in later literary accounts like Puranas, Buddhist, and Jaina accounts, etc. But Ashoka’s

inscriptions have a greater advantage in relation to other type of sources because these are contemporary and provenance and dating of these records are firmly specific and reliable. She directs students attention to the word ‘conquered’ and explains that Ashoka seems to be unbiased because here he is deplored war not in defeat but after a victory. He genuinely felt the horrors of war and now he is trying to persuade people to keep them away from such wars. In the course he talks about dhamma which is nothing but the moral and ethical principles common to all religions. So it can be considered a balanced and unbiased account.

Most of the students respond that this will be the most important source to consult to write about the history of the time. Students understand that physical or archaeological materials are more securely datable than the literary ones and therefore, often used with greater reliance by historians.

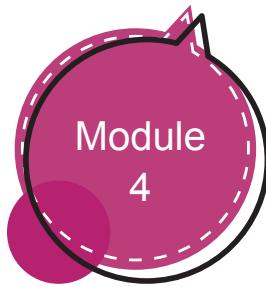
(The teacher however, cautions them that the meaningful understanding of any period cannot be attempted by the use of a single type of source to the exclusion of others).

As the activity concludes, the teacher explains to the students that what they had just done—reading and interpreting an excerpt—is very similar to what historians do with primary sources.

(This exchange helps the teacher assess how some children are showing interest, curiosity and are critically analyzing information by asking questions, to convince themselves. She also keeps judging how questions from a few students are helping the whole class learn better. If appropriate questions/comments do not arise, she gives them herself).

Peer assessment rubric

Criteria	Excellent	Good	Average	Below average
Identification of sources	Identifies different types of sources and provides example available in textbooks, local environment e.g. manuscripts, inscriptions, religious texts, archaeological finds etc.	Identifies different types of sources but does not provide examples.	Demonstrates only a minimal understanding of different types of sources.	Shows no understanding of different types of sources.



Module 4

4

Identification of Key Issues/Main Points/General context of the source	Identifies the key issues and main points included in the source.	Identifies most but not all of the key issues and main points in the source	Describes in general terms one issue or concept included in the source	Deals only briefly and vaguely with the key issues and main points in the document
Knowledge of Historical Context	Shows evidence of thorough knowledge of period in which source was written or created; relates source to specific historical context in which it was written or created.	Shows general historical knowledge but not able to relate source with its specific context.	Limited knowledge of historical context.	Barely indicates any knowledge of historical context.
Interpretation and analysis of source	Offers analysis and interpretation of the source; distinguishes fact from opinion; explores reliability of author; able to put in her/his own words meaning of various terms; author's attitude towards the event; reason for writing this inscription	Offers general interpretation of the source.	Demonstrates only a minimal understanding of the source.	Reiterates one or two facts from the source but does not offer any analysis or interpretation.

As the topic comes to a close, the teacher asks, "How would we change the definition of primary sources, knowing what we know now?" The students co-construct new definitions for primary sources as "things used to prove that something exists and that give us details or provide evidence about the past" and "the sources are basically the traces left behind by past events and human activities. The events of the past are no longer present, but at some point in time these were. Traces left by them make these events real. A historian works through these 'traces' (i.e. Sources) to reconstruct the events".

A final effort is made to authentically relate the topic to the students' lives by asking them to tell about the use and analysis of primary sources in certain television shows. The students enthusiastically share that in shows like CID and Dastak, characters analyse evidence and conduct investigations similar to the way historians do.