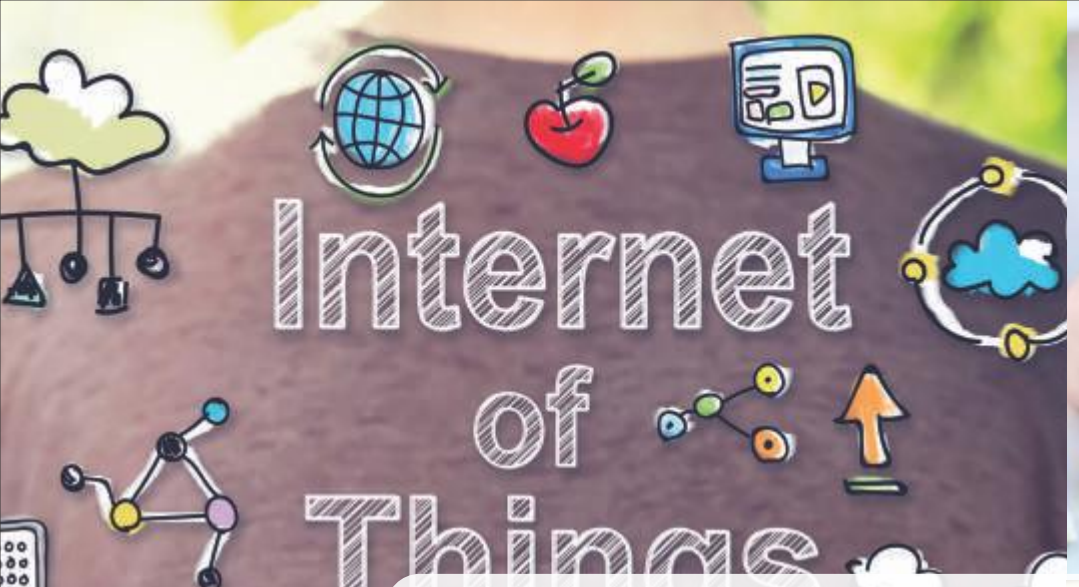
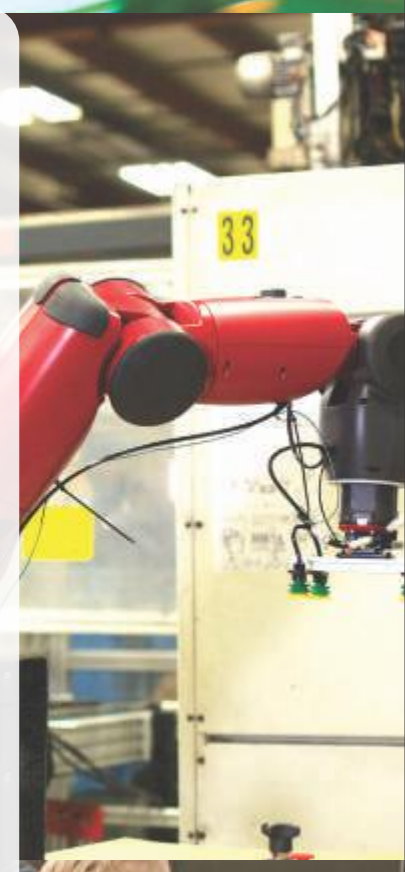
THE NEW DOT
CREATIVE EDUCATION NEWSLETTER
VOLUME - I
thenewdot@mindbox.in
A MindBox Initiative



CULTIVATING MAKER MINDSET

The current system, put forth by our predecessors demands a disruptive change in its core i.e. to engage students in STEAM (Science, Technology, Engineering, Art, and Mathematics) in early stages of learning; and To benefit student's active learning by sharing, collaborating, and tinkering

The prime verticals of Maker Movement are Design Thinking, Project Based Learning and DIY (Do It Yourself).



DESIGN THINKING

It inspires learners to openly understand, observe and define context of problems to ideate new solutions without any limitation.

A student-centric approach where tinkerers put themselves in a situation to figure out complex issues inside out, brainstorm to ideate designs and concepts, test their prototypes for possible outcomes and modify it according to the requirement.

PROJECT BASED LEARNING

Applied learning creates fun, growth-oriented surrounding for students.

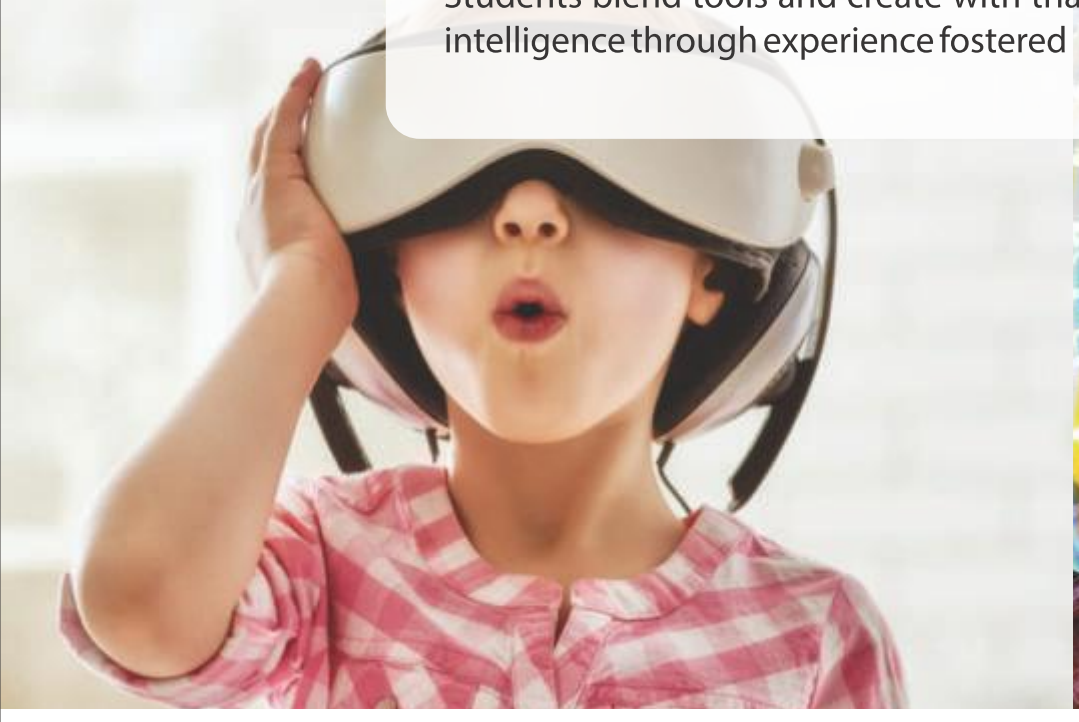
Students join forces to create & share their concepts, informations and designs.

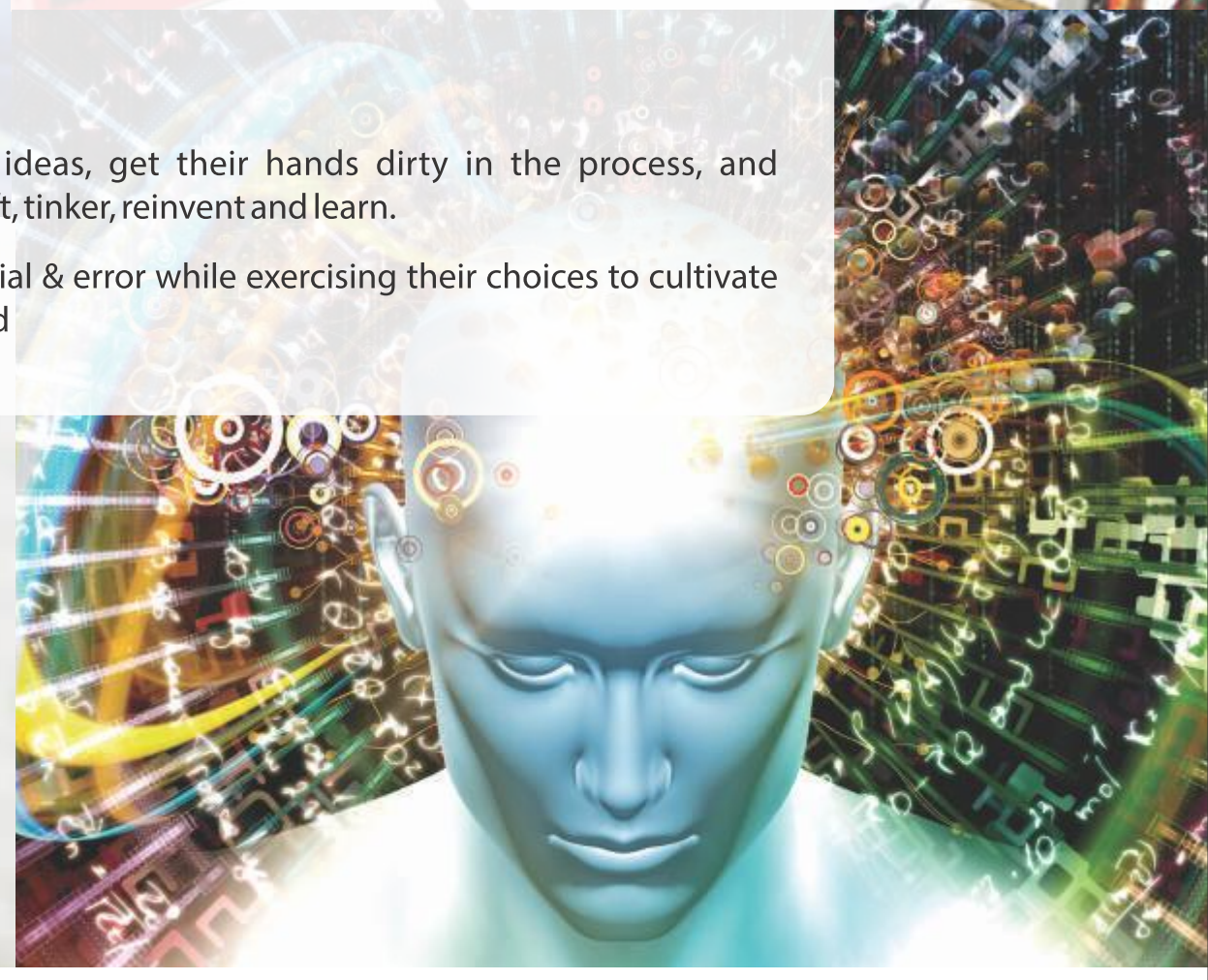
4 C's of 21st Century Skills i.e. Communication, Critical Thinking, Collaboration & Creativity blooms interactive sessions, working in groups & provide solutions to real world.

DIY (Do It Yourself)

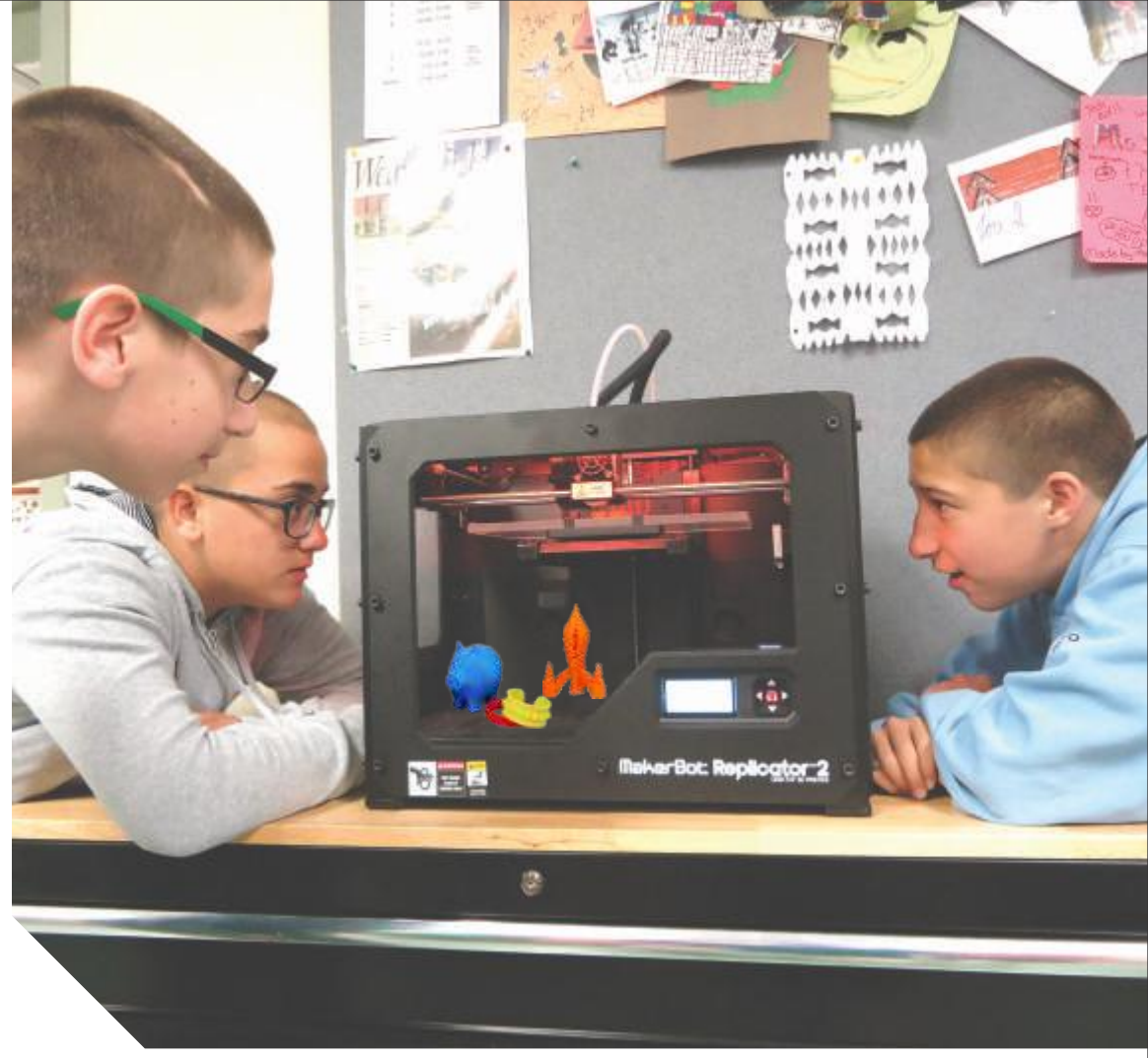
It aids the students to explore new ideas, get their hands dirty in the process, and develop maker mindset, where they craft, tinker, reinvent and learn.

Students blend tools and create with trial & error while exercising their choices to cultivate intelligence through experience fostered





THE FUTURE IS HERE

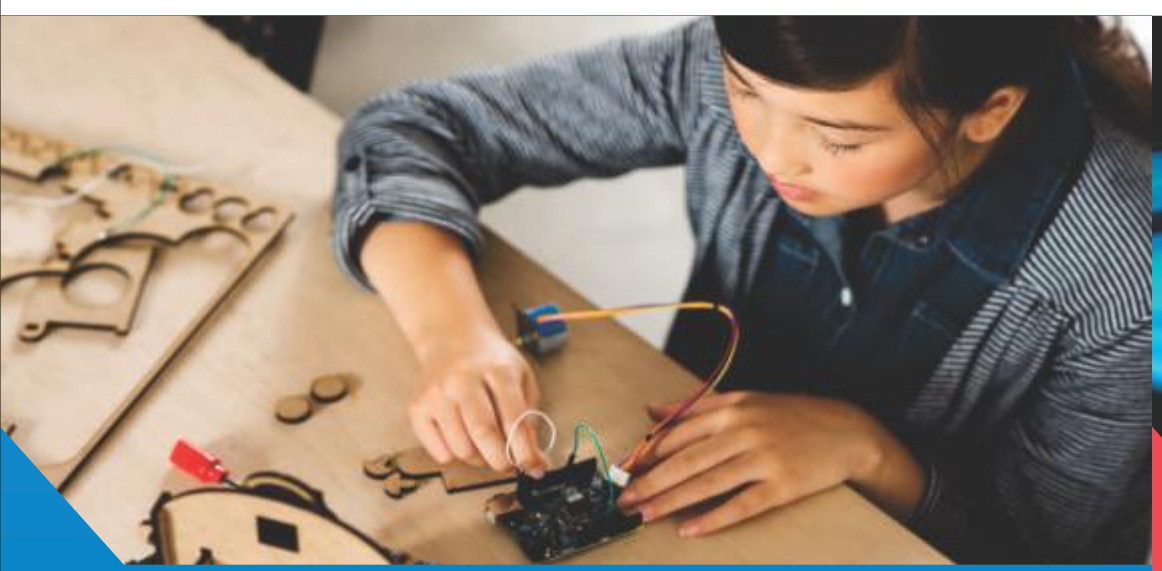


3D PRINTER

The key element of Maker Movement, 3D Printers, have revolutionized the way we use printers in our daily lives. 3D Printing, also known as Additive Manufacturing, are sequential layers of materials that shape to create 3D objects by reading electronic data from CAD (Computer Aided Design) files.

Introduction of 3D Printers in classroom learning will bring student's work to life. The process of picking up an idea, design, prototyping and testing will keep students engaged.

It is indeed an exciting concept for students to create something of their own and a sense of ownership. It will enable students to build low-cost high-quality lab equipment. One of the main learning outcome is Design Thinking, conceptualization of project and development of mathematical concepts. It ignites the entrepreneurial spirit of the learners. It aids in improved contraption development skills of students. Cognitive processes like computational thinking, rational thinking, strategic planning and spatial visualization develops evidently among pupils when exposed to this futuristic technology. It enhances the creative capability of a child to express his imagination & transform ideas into Three Dimensional Reality. Students learn structural analysis with improved reasoning and logical thinking for an efficient structural design. These hands-on learning experiences will make students ready for an evolving future.



ARDUINO

Welcome to the era of Arduino where you open-source imagination. Arduino boards with IDE (Integrated Development Environment) is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software.

It offers user-friendly IDE that runs on regular personal computers and allows simplified version of C or C++ coding for its users.

Its benefits outweigh the learning curve and authorize students from diverse backgrounds to work with single board micro-controllers, programming & electronics. Teachers and students together can build low cost lab equipment & tinker with new ideas to prove fun physics experiments. Arduino can be employed to create interfaces between smart phones, tabs with real world objects. Students learn the importance of sharing and collaborating and team work, advantages of open-source information and they get exposure to a worldwide online community of explorers & tinkerers.

INTERNET OF THINGS

IOT is future of modern day computing employing connectivity in creative ways. We are surrounded by sensors that transmit valuable data. This integration will not only result in collecting BIG DATA but also enable us to get valuable information through filtering & analyzing it. Cloud based applications & services can be employed to initiate auto analysis of such data.

IOT has reformed the educational landscape in terms of connectivity, making it smart and interactive. With IOT, students connected with iPads will receive personalized curricula delivered to desk. Now, students have all the necessary information at their fingertips, they can learn at their own pace with nearly same experience as that of classroom. Teachers can utilize this technology to create "smart lesson plans" for their students.

It also allows schools to improve the campus safety, to track key resources, and enhance access to information.

ROBOTICS

Robotics is the heart of automation and a governing technology of future. Robot is a machine that can be programmed to follow instructions. Technology is critical for innovation and empower students to explore future possibilities. As technologies trickle into classrooms, they are expected to become affordable and potentially larger components of everyday education.

Robots lend students in DIY activities. Introduction to robotics is an effective way to up-skill programming to students where they learn intertwines among science, engineering and math. Early exposure to programming will benefit students to build logic and reasoning in real world conditions. It deciphers a seemingly complex technology to pupils which they can explore to work in future. Students develop the skills of constructivism, logical building, re-engineering and understanding physical concepts for design. Pupils also develop programming skills which strengthens logical reasoning of students.

ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) is the epicenter of future technologies. AI is exhibited by machines capable of understanding human speech and interpreting complex data. Next generation AI will be adaptive, self-learning and intuitive. One place AI is poised to make big changes is Education.

AI will be the key factor in defining educational experience of future. AI will automate activities like grading and save significant amount of time. It donates more time for teachers to focus on in-class activities and student interaction than grading. AI in education will deliver custom-tailored education according to individual student's adaptive capacity.

AI can find loopholes and point out areas of improvements in curriculum. It can also provide additional support from AI tutors. AI driven programs can deliver helpful feedback to teachers as well as students.

AR & VR

Imagine a future where people not devices are the center of everything. Augmented and Virtual Reality are the conduit to a world where technology embraces humans as they are. VR (Virtual Reality) is the term used to describe a three-dimensional, computer generated environment which delivers experience closer to reality. AR (Augmented Reality) is the blend of VR and real life.

Introduction of AR/VR in education will bring outside world in classrooms. Students will perform physics, chemistry experiments and explore human anatomy in virtual labs. There are educational apps to study astronomy using AR/VR. It improves student's spatial thinking where they can rotate, move and combine virtual elements on a simulated playground of creativity.

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A MindBox Initiative

MindBox is an initiative in the Creative Education Field with an aim to develop and expand the Creative and Life Skills of students by conducting diverse STEAM based programs in Schools.

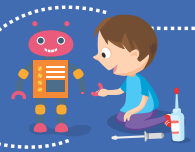
PRIMARY PROGRAMS

- DIGITAL ART

- VISUAL STORYTELLING

- INTERACTIVE MEDIA DESIGN

- MECHATRONICS DESIGN



- MEDIA DESIGN

SECONDARY PROGRAMS

- DIGITAL DESIGN

- COMMUNICATION DESIGN

- MECHATRONICS DESIGN

- INTERACTIVE MEDIA DESIGN

- DIGITAL DESIGN CAD

"WE ARE EVOLVING EDUCATION IN INDIA"

- Visual Communication as Language
- Creative Thinking as Subject
- Technology as Tool

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