

# PlayFul learning experience that enable every student to succeed.

For Grade I to IX



#### **About BCTLABS**

We live in a world that is changing more rapidly than ever before. Children will face a continual stream of new issues and challenges in the future. Things that they learn today will be obsolete tomorrow. To thrive, they must learn to design innovative solutions. Their success and satisfaction will be based on their ability to think and act creatively. Knowledge alone is not enough, they must learn to use their knowledge.

BCTLABS is an environment to experiment with new technologies and concepts in fun & hands on learning.

Our curriculum is meticulously designed for each grade and various education boards (MATRIC, CBSE, ICSE & IB). At BCTLABS, each child is seen as future's innovator and is nurtured accordingly.

BCTLABS provides a project based, hands-on learning solution, providing teachers with the necessary tools to implement hands-on project-based learning of key STEM concepts. The project's challenges are based on the "Learning by Doing" methodology, encouraging students to develop problem solving, decision making and scientific inquiry skills and comprehend abstract concepts in a play way method. It allows them to investigate, plan, test and implement their ideas thus focusing on application of the STEM concepts and themes.



#### **Machines & Mechanisms**





#### What Is STEM Education :

'STEM Education' known for its focus on Science, Technology, Engineering and Maths, is relatively a new term in the Indian education sector.

A robust STEM education creates critical thinkers, problem-solvers, and next generation innovators. Taking into consideration that India is one of the countries that produces the highest number of scientists and engineers.



In India, though nascent, there is a lot of innovation which is taking place with regard to stem:

• The education sector is looking beyond smart classrooms towards hands-on learning and STEM enhancement on their current information and communications technology and smart class platforms.

• Many STEM companies are working with schools to help them set up STEM centers, tinkering labs with upcoming technologies like Virtual Reality and Augmented Reality.

• New 'entry level' coding devices are coming to market that provide schools with the ability to teach simple coding and bring STEM to life in the classroom.









## For Preschool – LEGO Education (Ages 3-5)

### Supporting teachers to stimulate children's curiosity to explore

Lego education enables every child to succeed in the preschool through sage and durable solutions, developing preschoolers from where they are and promoting the use of social skills to help children collaborate and communicate with the world around them

Our playful learning solution encourages children to discover their own capabilities and support the acquisition of the fundamental skills to be ready for school and life with LEGO education preschool, there are so many way to learn together.

#### An immersive world of learning through play.

We provide opportunities for creative exploration to build confidence as children bring their ideas to life alongside social and emotional development, early math and science and literacy skills. Children explore emotional and social relationship, problem solving skills and language development through a fun cycle of constructing, contemplating, using and reconstructing their creations.





# For Elementary – LEGO Education (Ages 5-10)

#### (Simple and Powered Machines)

Simple and Powered Machines gives students indepth understanding of how simple machines and mechanisms work, while helping them in learning concepts such as Forces, Motion, Measuring and energy.

# LEGO Education

#### WeDo 2.0

#### Make science come to life

With real world science projects, including engineering technology and coding, students experience how science comes to life. WeDo 2.0 builds student's confidence to ask questions, define problems and design their own solutions, by putting discovery in their hands and their minds.







### For Middle School - Core STEM Courses (Ages 11-15) **LEGO Education - Mindstorms EV3**

We provide two main platforms to teach STEM at middle school level with LEGO education resources: machines & mechanisms and lego Mindstorms education EV3, these solutions offer choices to match where the students are in the learning process and the desired level of computing in lessons

#### LEGO Mindstorms education EV3 instant STEM learning with best in class robotics solution

LEGO Mindstorms education EV3 grows students critical thinking and creativity in computer science, science, technology, engineering and math. The greatest challenge teachers will face is getting students to leave the classroom!

#### **LEGO Education Machines & Mechanisms Discover how real world works**

Machines & mechanisms from LEGO education is a range of challenging hands on tools that link booklearning in science, technology, engineering and math to real-world phenomena.

Machines & mechanisms provides a compelling means of investigating mechanical principles, while encouraging students to engage in scientific inquiry and engineering design. Machines & mechanisms is easy to incorporate into everyday classwork, where it adds variations and motivates middle school students to acquire curriculum-revelent stem knowledge and skills.

#### Build

#### Get hands-on with the power of coding

With our flexible LEGO brick system, we combine with the easy-to-use coding software and engaging stem challenges, LEGO Mindstorms education enables you and your students to explore coding through real-life problem solving and hands-on learning experience.

#### Code

#### **Teach Future skills today**

Our comprehensive solutions contains everything you need to start teaching stem through coding, fully integrated, classroom-ready and designed to meet curriculum standards- so you are empowered to help every student to succeed with coding.

#### Learn

#### Put their Future in their hands with coding

Students are encouraged to expand their knowledge and make their physical creations come to life through code, developing 21st century skills as they program solutions in an accessible real-world environment.



# Core STEM Courses (Age 10+ Years)- Open Source For Grade (VI to X)

We also teach the latest technologies such as

- Arduino
- IoT
- Avionics

 Aeromodelling, etc. to the students and make them to involve in the Research & Development

### **3D Printing**

#### A major catalyst for STEM learning and innovation

3D printing promotes 21st century learning and is growing as a fundamental technology to master in stem fields, combined with other virtual resources, students of today are preparing for the jobs of tomorrow in order to reach new levels of thinking and problem solving.

### **3D Modelling**

Students and teachers can create their models using a computer and 3D modelling programs such as Tinkercad and 123D design, there are many options available that make the designing, 3D objects easy, instructional and fun. Once a model is ten sent to that 3D printer, the printer forms the digital model into real, tangible objects students can hold study and analyze.

Science Technology Engineering Maths

**Computer Science** 

### **BENEFITS FOR STUDENTS :**

- Participation in the Global Competitions.
  - 1. World Robot Olympiad (WRO) Supported by National Council of Science Museums.
  - 2. First LEGO League (FLL)
  - 3. Junior First LEGO League (Jr.FLL)
- A Positive Mind-set for Learning
- More Skillful Learners and Knowledgeable Students

We also initiate the following club activities in the school campus for the students.

#### **ClubActivities:**

- Racing drone club
- RC racing car club
- Aero modelling club
- Robotics
- R&D labs

START STEM EDUCATION NOW TO INSPIRE STUDENTS TO BE ACTIVE, MOTIVATED AND COLLABORATIVE LEARNERS.

Contact Us :HEAD OFFICE :No.7, Thalagattapura Post,<br/>Kanakapura Main Road,<br/>Bangalore - 560 062.BRANCH OFFICE :No.5/3, Nehruji Nagar,<br/>8th Street, Arakkonam - 631 001.

Keep track of Social Shares & Likes!