



THE JOY OF LEARNING

Science

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**EKYA
SCHOOLS**

JP NAGAR ITPL BTM LAYOUT BYRATHI NICE ROAD HRBR LAYOUT

We, at Ekya, believe in a world beyond boundaries where education should continuously evolve and adapt as the world changes.

Ekya is a community of children, educators and parents where everyone learns together. At Ekya, our students find their purpose, passion and community to make a positive difference in the world.

FIND New Ways to Learn

Our innovative learning model goes beyond conventional norms as we apply interdisciplinary skills to think differently and solve real - world problems. Science learning at Ekya Schools focuses on developing an in-depth understanding of content and building essential 21st century skills like communication, collaboration, inquiry, and problem-solving that will serve students throughout their lives.



The Ekya Science program equips learners to:

- Cultivate a mindset of curiosity, creativity and scientific inquiry to foster deeper and a more meaningful understanding of science.
- Engage in scientific practices to understand the dynamic nature of science.
- Develop interdisciplinary thinking and collaborative skills for problem-solving.

We follow the three-dimensional learning approach that integrates Science and Engineering practices, crosscutting concepts and core ideas of the disciplines.

The Science program

Practices

- Analysing data
- Arguing with evidence
- Conducting investigations
- Developing and using models
- Designing solutions and constructing explanations
- Communication information
- Asking questions and defining problems
- Using mathematics and computational thinking

Cross Cutting Concepts

- Flow, cycle and conservation
- Stability and change
- Cause and effect
- Scale, proportion and quantity
- System and system model
- Structure and function
- Patterns

Core Ideas

- Physical Science
- Earth and Space Science
- Life Science
- Engineering and Technology

Science and Engineering Practices (SEP)

Science and Engineering Practices (SEP) are practices that engineers use as they design and build models and systems. The key focuses of this program are Engineering Design Challenges and the process of scientific inquiry.

For example, in the Grade 6 curriculum students design and build a water filtration device using commonly available materials, following the design process used to develop the International Space Station Water Recovery System for NASA. Students use engineering design principles at various grade levels to build, test, measure, and analyse data to create improved yet functional prototypes.



Working models of Filtering Devices

Cross Cutting Concepts



Making Patterns



Conducting investigations

Disciplinary Core Ideas



Physical Science: Sound Activity



Biology: Building Models



Chemical Science



Earth Science



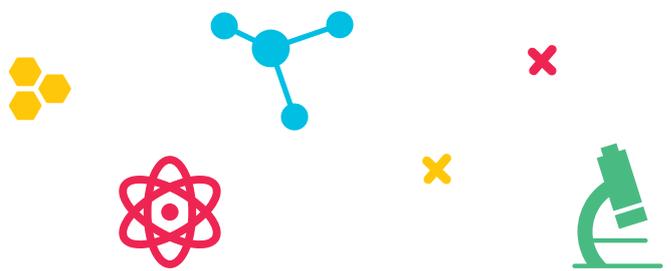
Problem Solvers at work



Communicating with Evidence



Learn by Doing



Students use "**Science Kits**" that are curated to align with the three - dimensional approach to science learning. These are designed to promote active engagement and experiential learning through hands-on experimentation and observation.

For example, our Grade 4 kit includes materials to construct an electromagnet that will help students understand the concept of electricity and magnetism.



Electromagnet construction



Students using Science kits in class

The Science curriculum is student-directed and enables them to actively engage in their learning process.

I used to think seeds are of no use, now I know that seeds makes baby plants.

I used to think that we can't see sun and moon together now I know that we can see in early morning or in the evening time.

Key takeaways from our Grade 1 students



Student Speak

The one thing that I enjoyed the most was the neutralisation reaction and other experiments we did in the unit. Can we please have more of these?

Pradyoth Kashyap
Grade 7

Science classes are the best and amazing. We do different experiments, activities, and worksheets to learn. We have a lot of fun doing them. The science kit experiments are very unique and enjoyable. My favourite experiment was making a catapult model. We all make it together in the class which makes it more fun. The experiments, activities and worksheets we do, makes us feel as a scientist. Science is my favourite subject.

Suhani Bindal
Grade 6

I really liked the experiment we conducted to test the pH of a substance through turmeric. It was very interesting and I had never expected to find the pH of a substance through turmeric. I also like the MCQ's because it is very fun and makes me want to finish it and know the results. Thank you for making our Science classes very interesting.

Manya Bhaskar
Grade 7

The Science curriculum equips students with the knowledge, skills, and confidence to take an active role in shaping the future of science and technology, and to make meaningful contributions to society.