

Home-based
Science
Activity and
learning program
with material support



Hands on Science Activity programs for school children
www.sundayscienceschool.com

Sunday Science School Junior Level

For Std 3 to 5

Course
starting from
09th July 2023



Over 50+ Experiments

All kits are given permanently

20+ Activity Kits

21 Sunday program

Activities + Exploration

**“ The Only
Source of
Knowledge is
Experience.”**

Sir Albert Einstein

**Course Fee
Rs. 5800/-**

Avail discount of Rs. 300/-
if registered on or before
02nd July 2023

Last date of
Registration
06th July 2023

**This is the most
comprehensive
Program to
learn Science by
“Experiential” way !!!**

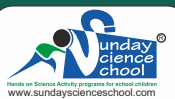


Every
Sunday
1.5 Hours

For enquiry and registration

www.courses.sundayscienceschool.com

9373035369 / 9850047933 / 8779678709



Know more about it..

Duration 21 sessions in 7 months span

Eligibility Std 3 to 5

Starting from July 09, 2023

Total Fee Rs. 5800.00
(Can be paid in 2 installments)

Avail discount of Rs. 300/- if registered on or before 02nd July 2023

Methodology

- SSS annual program starts in July and ends in January. On each Sunday, students understand a new topic and perform activities based on that topic.
- All material needed for activities is given to every child permanently. Study notes on all topics are also given for future reference.
- The program schedule, giving week by week topics and activities, will be shared at the beginning of the program. There will be a few Holidays on occasion of Diwali and other festivals, which will be clearly mentioned.
- Two MCQ type tests will be conducted during the course. Each student will be given certificate of 'Course completion' after final test.

How will the course progress?

- On each Sunday, there will be a session of 1.5 hours at specified location. Facilitator will discuss the topic and then activities will be done by students independently. Facilitator will help students in case of difficulty.
- Ready model or material of experiments will be given to each student on 'take-home' basis.

Experiential Science Learning is the correct learning method at young age.

Endless benefits...

- 🔊 Develops scientific outlook
- 🔊 Enhances brain function & episodic memory.
- 🔊 Heightens appreciation of how science works.
- 🔊 Enhances understanding of scientific concepts.
- 🔊 Builds fine motor skills.

Sunday Science School Junior Level Program

This is the most comprehensive activity based Science learning program for students from 3rd to 5th std. The activities are selected from general science that children should know at this age. The activities cover many important concepts suitable for this age group.

The program is of span of 21 sessions. The wide span of the program helps children to interact with us more frequently and expand their knowledge sphere.

Hands-on activity based program of Sunday Science School is highly useful and engaging option for students in this "post-Covid time". This is the program that stands out with its uniqueness of material based exciting activities for students, that no other program in India gives !!!

Salient features of SSS Junior Level

- ➔ SSS Junior level for Academic Year 2023-24 is designed differently with new topics and experiments.
- ➔ The topics chosen are carefully selected covering maximum basic concepts from different subjects of Science and also keeping in view, topics of different exams at this age.
- ➔ Activities are selected from all three subjects of Science, viz. Physics, Chemistry and Biology. Children will find these activities very interesting and exciting.
- ➔ Objective type "QUIZ" based on the topics of the course will be conducted Two times during 21 week program. Students will solve these tests to assess their understanding of the topics discussed during SSS sessions. This will be useful for SSS team (and parents) to assess students for their understanding of science.
- ➔ To summarize the program, it will have multiple benefits to the students -
 - ➔ Child will exploring different science concepts through experiments.
 - ➔ Child will understand and explain science of the topics.
 - ➔ Habit of Experimentation is developed at young age

What is Sunday Science School?

Sunday Science School has developed different Academic year-based programs for students to explore Science by doing it and thereby enrich their knowledge sphere. The concept is promoted and nurtured by people, who are active for over 28 years, in development of products and content for "Hands-On Science" for children.

The programs are based on experiential learning, which fosters an environment of accelerated learning through self-discovery and participation.

Our attempt is to give children Science Activities to engage them intellectually and physically. The goal is not necessarily to create Scientist but to create civilized citizens with scientific outlook, who apply their Brain to the problems and use scientific approach to find solution.

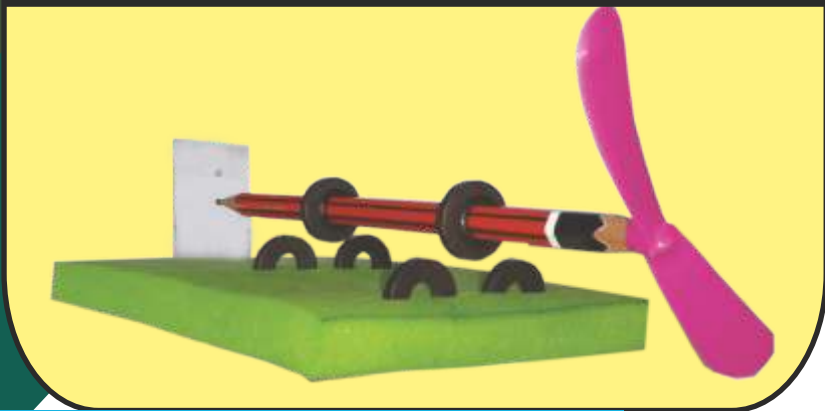
Day 1

Magnetism

- ▶ Properties of magnets
- ▶ Study of Poles of magnet
- ▶ Attraction between N and S poles
- ▶ Repulsion between similar poles
- ▶ Directive property
- ▶ Magnetic field
- ▶ Lines of force
- ▶ Make a Levitating pencil
- ▶ Make a freely spinning propeller

Children often handle magnets at home or they have a few toys and kits, which have magnets.

This session explains working of magnets, their properties and uses. Children will do multiple experiments and make a wonderful project in this session.



Day 2

Balancing

- ▶ Making a Balancing doll
- ▶ Balancing Question mark
- ▶ Balancing pencil
- ▶ Balancing challenge
- ▶ Activities on human body balancing.
- ▶ CG and its role in balancing
- ▶ Human postures and balancing
- ▶ Our body's Balancing system

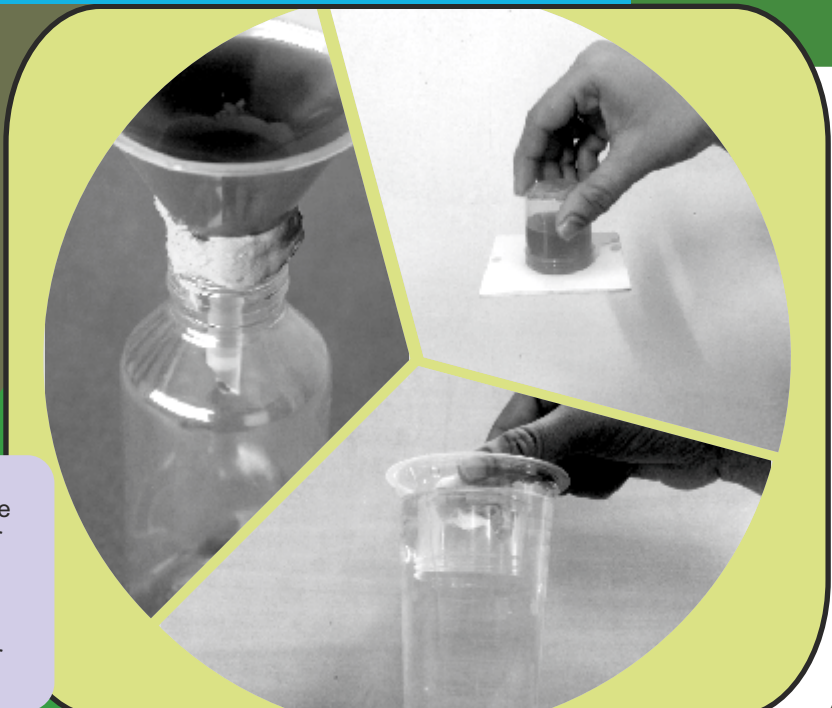
Day 3

Properties of Air

- ▶ Study of Air properties
- ▶ Water does not fall
- ▶ Fill the bottle challenge
- ▶ Invisible shield
- ▶ Funnel and ball experiment
- ▶ Air exerts pressure
- ▶ Wind has force and higher speed

We know that Air is around us at every place. There cannot be any place on the Earth, where air does not exist. The atmosphere around our planet exerts pressure due to mass of air.

In two sessions on Air, students will study different properties of air and explore these properties. They will understand concept of Air pressure by performing experiments.



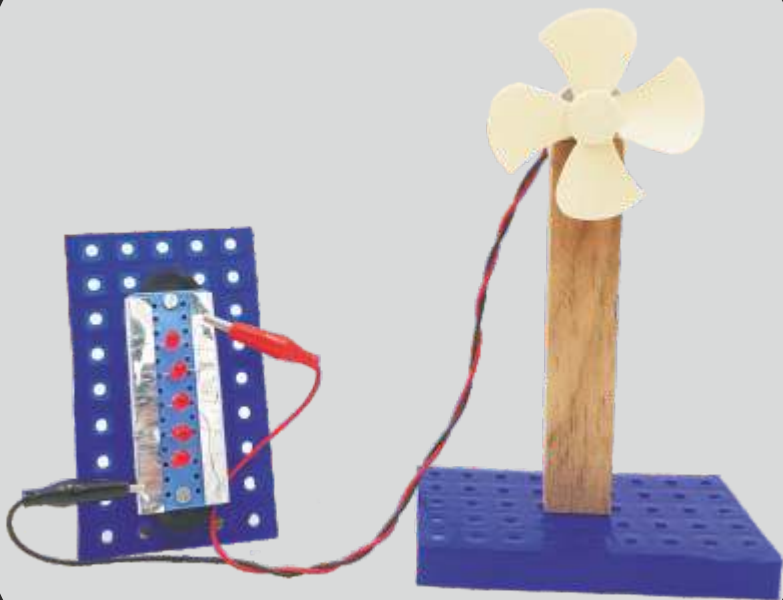
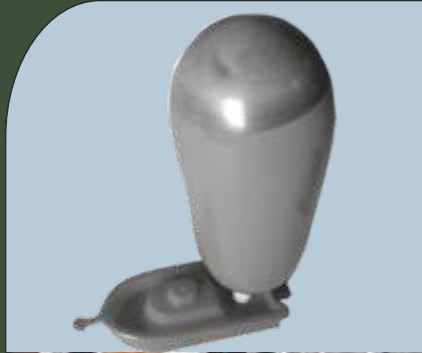
Day 4

● Applications of Air

- ▶ Air has weight
- ▶ How does Flyer fly?
- ▶ Balloon Rocket
- ▶ Hovercraft
- ▶ Magdeburg's hemisphere
- ▶ Working of Submarine

On second day of discussion about Air, children will know how pressure and force of air can be used for different applications.

Students will experience air pressure using Magdeburg's hemispheres. They will also realize that air has mass. Air pressure and its force are used in different transport vehicles. Students will make models of a few in the session



● Windmill

- ▶ What is air and wind ?
- ▶ How moving air is a force?
- ▶ Working of a windmill
- ▶ Size and details of real windmill
- ▶ Making of a windmill
- ▶ Connecting multiple LEDs in parallel
- ▶ Glowing LEDs by rotating windmill
- ▶ Holding the windmill before fan and generating Electricity

Moving air is called as Wind. When wind has higher velocity, it can rotate the blades of Windmill and we can generate electricity.

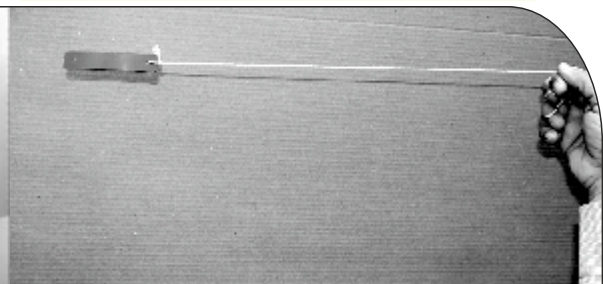
Students will like making a working model of a windmill. It can be operated by hand or can be held before a fan to see generation of electricity.

Day 5

Day 6

● Study of Sound

- ▶ What is sound?
- ▶ How does sound travel?
- ▶ Creating vibrations using strip
- ▶ String phone
- ▶ Balloon amplifier
- ▶ Observe sound vibration
- ▶ How do we produce sound?
- ▶ Working of vocal cords
- ▶ How do we listen?



Two session on SOUND will make students aware of many interesting facts about Sound. They will be familiar with concepts, like, waves, waveforms, frequency, amplitude and more.

Day 7

● Sound Waves

- ▶ What are waves?
- ▶ Transverse waves
- ▶ Longitudinal waves
- ▶ Frequency and Amplitude
- ▶ What is Pitch of sound?
- ▶ Spoon bell
- ▶ Spinners to produce sound
- ▶ Transverse waves model
- ▶ Longitudinal waves using slinky
- ▶ How is music produced?



Measure angle between mirrors.



Day 8

● Reflection - Periscope

- ▶ What is reflection?
- ▶ Regular and diffused reflection
- ▶ Images and how are they formed?
- ▶ Laws of reflection
- ▶ Lateral inversion in the image
- ▶ Images using 2 mirrors
- ▶ Relation between angle of mirrors and number of images
- ▶ Making of a Periscope

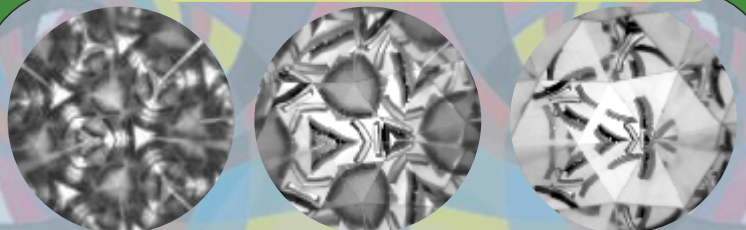
Observing images in the mirror is quite a known thing to every child. Knowing science of images is the purpose of this session.

Children will enjoy learning more about images and how are they formed. They will try multiple images using two mirrors and then make a Periscope.

Day 9

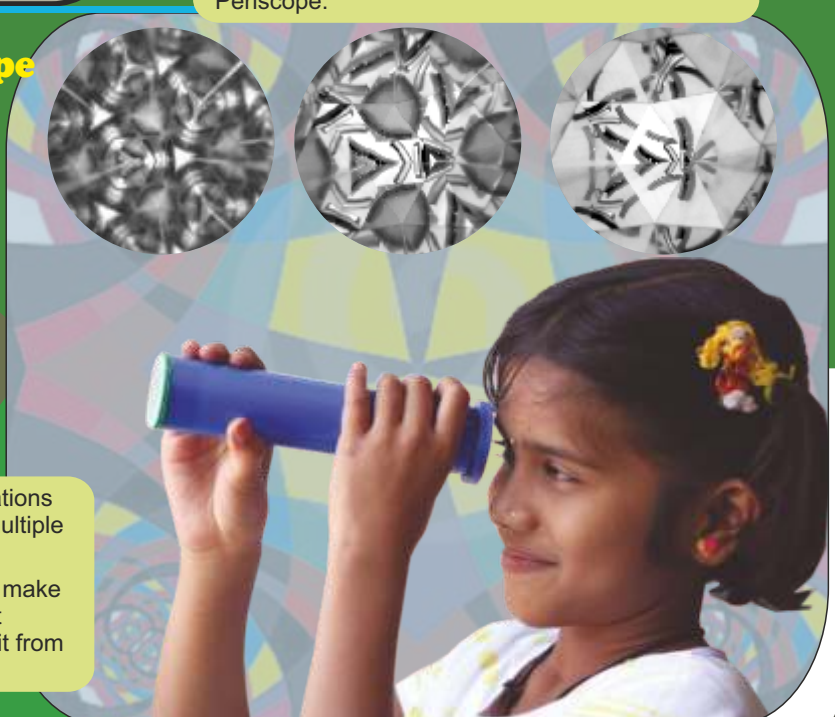
● Reflection - Kaleidoscope

- ▶ Images using 2 mirrors at 60°
- ▶ Kaleidoscopic view of objects using 2 mirrors and plane glass assembly
- ▶ Making of a Kaleidoscope
- ▶ Observation through kaleidoscope



A toy, Kaleidoscope has fascinated generations for centuries. It works on the principle of multiple reflections using 2 or 3 mirrors.

Children will study multiple reflections and make a beautiful toy, Kaleidoscope. They will get innumerable designs when they look in to it from one end.



Day 10

● Test No 1

First Objective type Test based on all topics discussed till this session in this Level of SSS



Day 11

● Centrifugal Force

- ▶ What is force?
- ▶ Force in rotating objects
- ▶ Make a fountain using centrifugal force of water
- ▶ Tornado formation
- ▶ Why Earth is bulged at equator?
- ▶ Make a model to show bulging of the Earth at equator

Day 12

● Shapes using Tubes

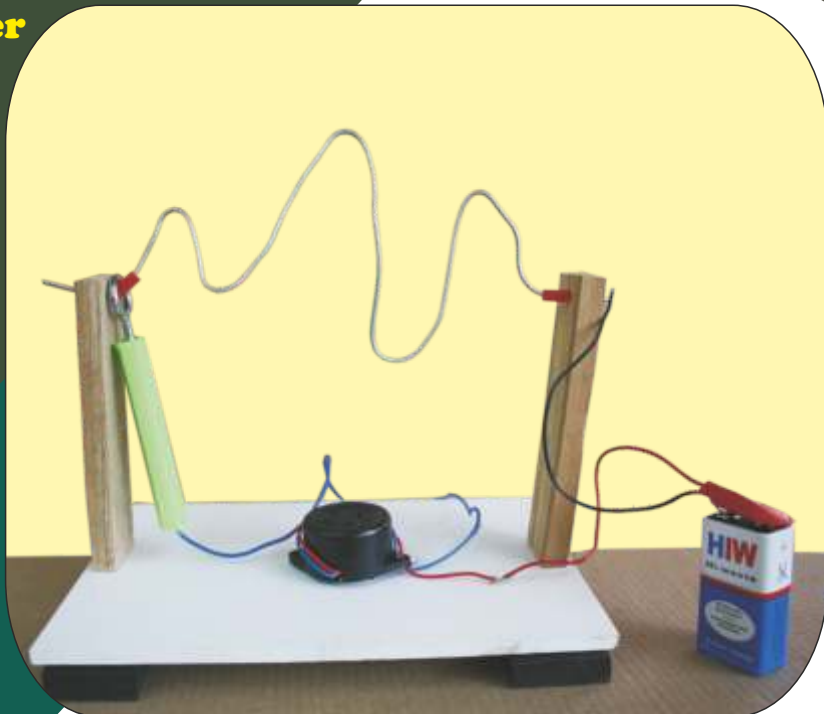
- ▶ Understand Geometrical shapes
- ▶ Make 2 D geometrical shapes
- ▶ Measure angle between 2 tubes
- ▶ Make 3D shapes
- ▶ Relationship between 2D & 3D shapes
- ▶ Creative shapes
- ▶ Platonic solids and their features
- ▶ Making Icosahedron
- ▶ Making Sky lamp using Icosahedron



Day 13

Hand-steadiness tester

- ▶ What is concentration and distraction
- ▶ How does concentration help in achieving more precise and effective results.
- ▶ The kit has material to make a concentration game..
- ▶ Make Hand Steadiness Tester using battery, buzzer and other material
- ▶ Play the game with family members and friends.



A fascinating Home activity to germinate seeds placed in different conditions



Seed Germination

Day 14

- ▶ What is a seed?
- ▶ How does plant grow from a seed?
- ▶ Types of seeds
- ▶ Identifying Monocot and Dicot seeds
- ▶ Conditions necessary for seed germination
- ▶ Giving different conditions to seeds and observing their germination
- ▶ Home activity to plant all seeds in different containers and observe their germination and growth
- ▶ Growing few plants in pots and observing their growth

Day 15

Herbarium Press

- ▶ What is Herbarium sheet?
- ▶ Why do we preserve leaves and flowers?
- ▶ Use of blotting paper in preservation
- ▶ Preserving green leaves
- ▶ Preserving twigs and small branches
- ▶ Flower preservation
- ▶ Study of venation of leaves
- ▶ Preparing Herbarium Sheets



Day 16

Kitchen Science Acids and Bases

- ▶ Acids and bases in kitchen
- ▶ What are acids and bases?
- ▶ What are indicators?
- ▶ Litmus test
- ▶ Indicator preparation
- ▶ Natural Indicators
- ▶ Making Turmeric paper
- ▶ Miscible and Immiscible liquids
- ▶ Preservation using lemon
- ▶ Make Carbon Dioxide



Perform
chemical test to see
Presence of Starch,
Carbohydrates,
Proteins and Fats.



Kitchen Science Nutrient tests

- ▶ What are nutrient?
- ▶ Macro-nutrient
- ▶ Micro-nutrients
- ▶ Test food samples for presence of Starch
- ▶ Testing 2 different flours for presence of Protein
- ▶ Understanding negative result of the test
- ▶ Fat ring test

This is very fascinating for children to test food items for presence of macro-nutrients.

The session emphasizes importance of balanced diet and role of nutrients in our health. By testing food items, students realize why diet should have different food items.

Day 17

Day 18

Newton's Disk

- ▶ What are colours?
- ▶ How do we see colours?
- ▶ Mixing of colours and secondary colours
- ▶ Sun Light is made up of 7 colours
- ▶ How 7 colours give white colour?
- ▶ What is Persistence of Vision?
- ▶ Making of a motorized Newton's disk
- ▶ Colours get mixed due to Persistence of Vision

Motorized Newton's disk is a fascinating project for children. They can actually see how 7 colours mix up to give white colour.

Demonstration of how Sunlight is made up of 7 colours is also done to give children clarity of the concept.



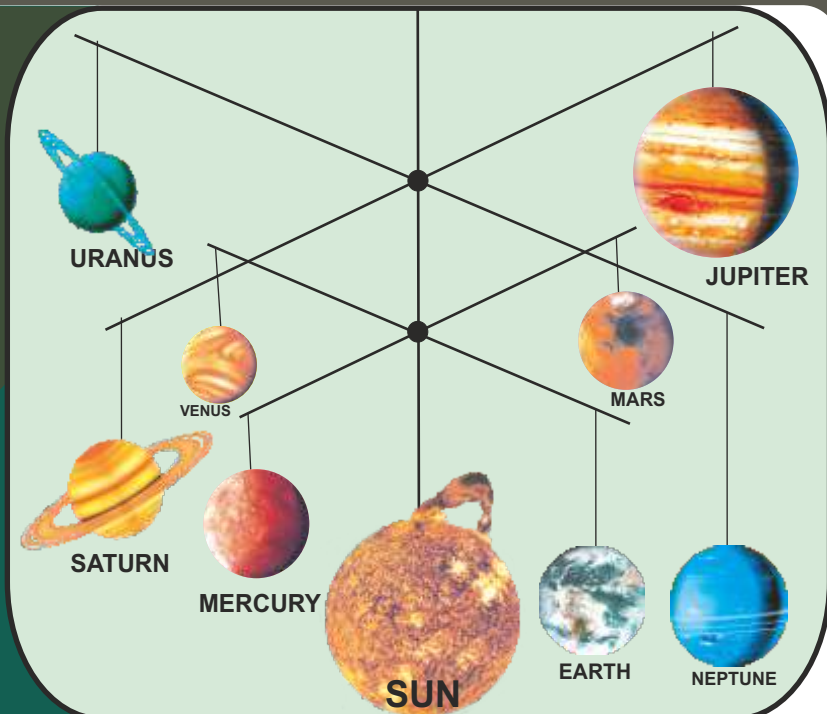
Day 19

Our Solar System

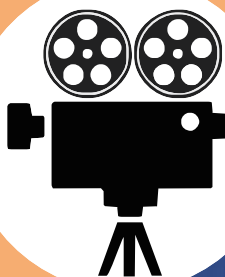
- ▶ Study of Sun
- ▶ Sun's flares
- ▶ Identifying all planets
- ▶ Understanding their places in Solar system
- ▶ Inner planets and Outer planets
- ▶ Assembling solar system

Children have lot of questions about stars and planets. Our nearby star, the Sun is the source of our life. In this session, children will understand many fascinating facts about the Sun.

Sun's family has 8 planets, many dwarf planets, asteroids, comets and natural satellites of planets. Children will know important information of our solar system in this session.



Day 20



Film projector

- ▶ What is film projector
- ▶ Use of lens in projecting films
- ▶ Image formation
- ▶ Finding out Focal length of lens
- ▶ Forming real image of distant objects on wall
- ▶ How do we see motion on the screen?
- ▶ Why the projected image is inverted.
- ▶ Making and testing a film projector

Test No 2

Second and Final Objective type Test based on all topics discussed till this session in this Level of SSS



Our Vision

Our vision is to inculcate habit of experimentation in young minds at formative age and to imbibe scientific thinking in them. This is possible through 'hands-on' science activities from young age. They develop scientific attitude and enhance qualities like Curiosity, Observation skills, Analytical approach, Problem solving techniques, Creativity and Patience.

Science is mostly taught in didactic way in our country, which results in children either fearing the subject or adapting to rote learning to secure marks. Our vision is to make children aware that science should be understood through active learning, experimentation and observation. Students should know and understand that science is a way of life and not just a subject.

KUTUHAL Group

"KUTUHAL" group is working actively for promotion of science and math activities through indigenously designed DIY kits since 1994. It has always strived to add to the joy of learning.

The group, through its pioneering company, "KUTUHAL Science Activities Pvt Ltd" designs and manufactures science activity kits for students since 1994.

Sunday Science School...

Sunday Science School, a company to facilitate "hands-on" science activities for students and teachers was formed in 2010.

Sunday Science School has designed "hands-on" science programs ranging from 1 hour science activities to academic year-long programs.

SSS has also launched syllabus mapped activities for standard 3 to 10. All such "hands-on" programs are designed with activity kits and experimentation material given to students on take-away basis.

Sunday Science School

- ☞ Sunday Science School - Junior Level is a 'hands-on' Activity program of about 21 sessions of 1.5 hours each.
- ☞ Students studying in 3rd to 5th std can enroll for this program.
- ☞ Different topics in science are discussed and students perform activities based on these topics.
- ☞ All models and experimentation material are given on 'take-home' basis. This Creates a small Lab at home.



Head office

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