### SCIENCE

# Teaching Learning Material

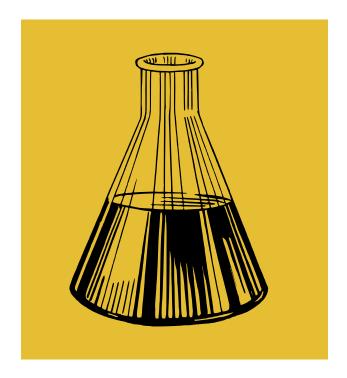
Vikram A Sarabhai Community Science Centre Science Shop

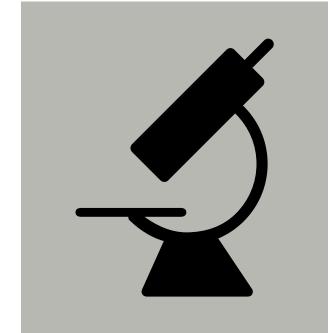


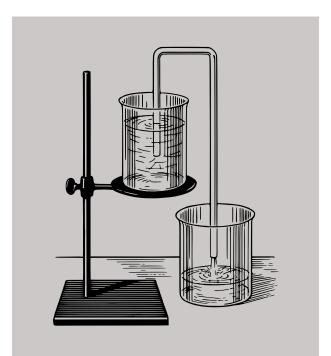


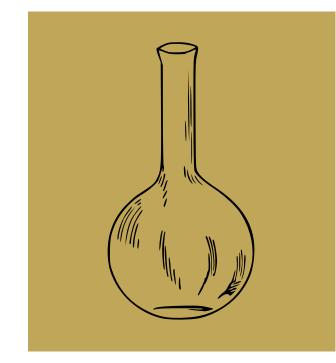
## WHO WE ARE

Vikram A Sarabhai Community Science Centre (VASCSC), Ahmedabad, is a pioneering community science centre which aims to nurture young minds and direct them towards scientific thinking with methods and techniques which make the process of enquiry and learning a fun filled, enjoyable and lasting experience. It was way back in 1966 that India's renowned scientist – Dr. Vikram Sarabhai founded the Centre to encourage scientific thinking and innovative teaching. (Website: www.vascsc.org)





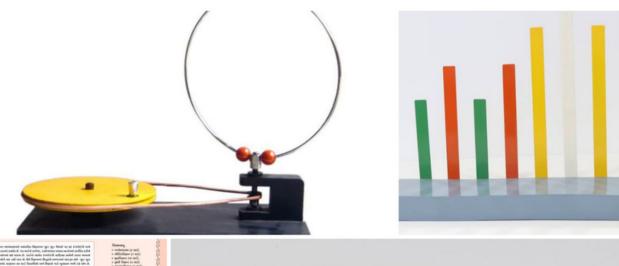




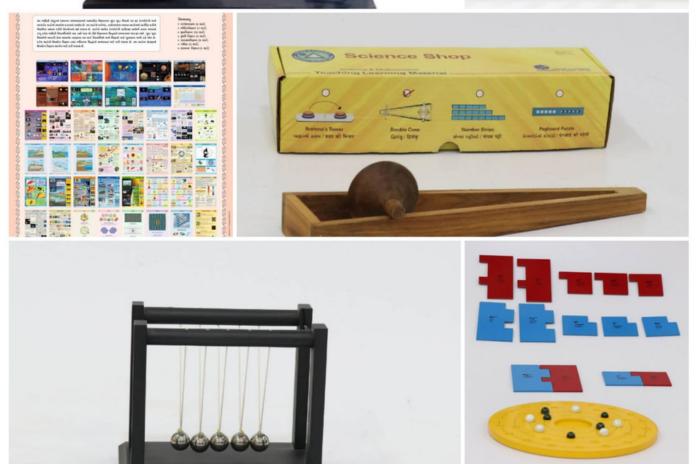
# THE VISION

VASCSC is dedicated for promoting among students, teachers and lay public:

- An understanding of the fundamental concepts involved in the Physical, Chemical & Biological Sciences and Mathematics
- The acquisition of scientific knowledge and insights as far as possible by the process of inquiry through experiment, audio-visual media and other means
- To stimulate interest, encourage and expose the principles of science and the scientific method to students, teachers and the general public
- To be concerned with the role of education and ways of improving education in relation to the individual and the community as a whole
- To make clear the social implication of science and technology



# TEACHING AND LEARNING MATERIAL



VASCSC has developed a wide range of innovative TLM and publications for teachers and students. The TLM aims to help teachers in effective teaching of science and mathematics, using hands-on and activity-based methodology. At the same time, it aids to provide better and lasting understanding of difficult concepts to the students by developing their interest towards science and mathematics and satisfying their curiosity through hands-on process. The TLM consists of interactive models, kits, publications, model making templates and charts.



### MY SCIENCE LAB

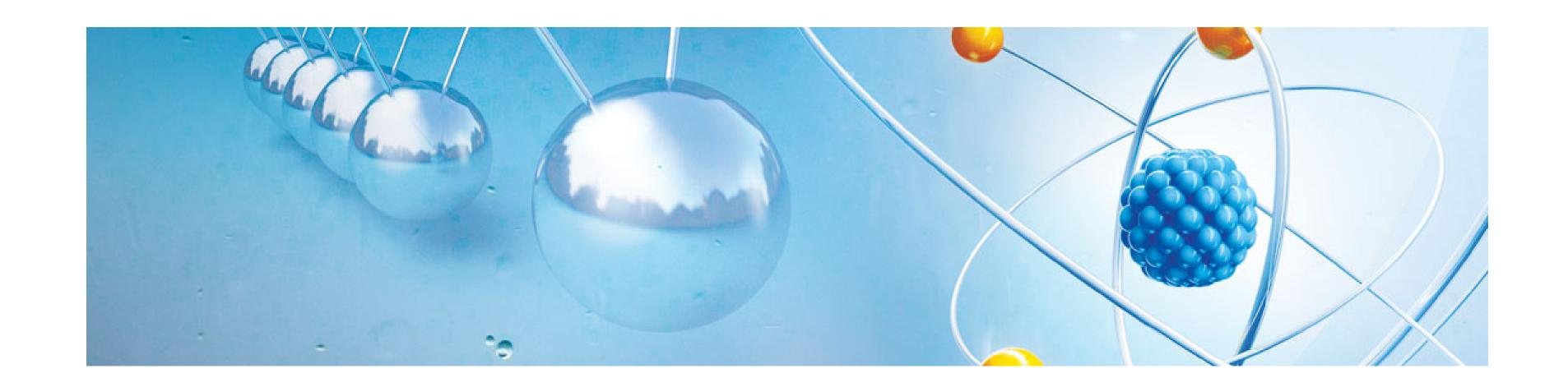
My Science Lab' is your personal lab. Perform science mini experiments and activities on your understand science and own concepts. . It includes high quality 40+ Lab items and User Guide. A must have package for students using which one can perform curriculum-based fun and experiments. It gives opportunity for Hands-on experience. Ideal for personal use, gifting and even donating.

Std. 6+

Language: E

L x W x H in cm: 44 x 33 x 22





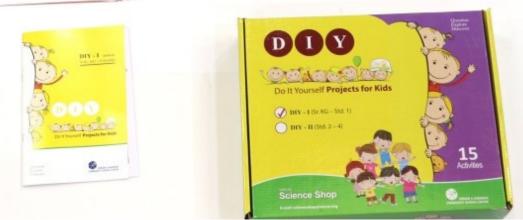
# PHYSICS

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE

# DIY SCIENCE ACTIVITY BOX - 1 (15 ACTIVITIES)



This set contains all the essential elements to build the 15 different models and understand interesting facts and basic scientific concepts. It includes richly illustrated, easy-to-understand, step-by-step instruction booklet. Make interesting models rattle drum, musical pipes, paper whistler, straw rocket, clock and many more. Understand primary colors, butterfly life cycle, learn interesting facts about fish, elephants, gliders and many more through fun activities.



Std. Sr. KG – 1 Language: English

L x W x H in cm : 33 x 27 x 8

This set contains all the essential elements to build the 15 different models and understand interesting facts and basic scientific concepts. It includes richly illustrated, easy-to-understand, step-by-step instruction booklet. Make interesting models wind wheel, yo-yo, wind mill, hoop glider, illusion top and many more. Understand center of gravity, conversion of energy, air pressure, static electricity and many more concepts through fun activities.

Std. 2-4

Language: English

L x W x H in cm : 33 x 27 x 8

### DIY SCIENCE ACTIVITY BOX - 2 (15 ACTIVTIES)



Vikram A Sarabhai Community Science Centre | Science Shop



### LEARN WITH MAGNETS

Hands-on learning generates conceptual clarity and interest in academics. Pack includes different type of magnets, magnetic compass, needle, iron powder, acrylic tray and detailed manual. Using this one can understand different types of magnets, magnetism and also perform small fun experiment related to magnetism.

Std. 5-7

Language: E/G/H

L x W x H in cm : 33 x 27.5 x 7



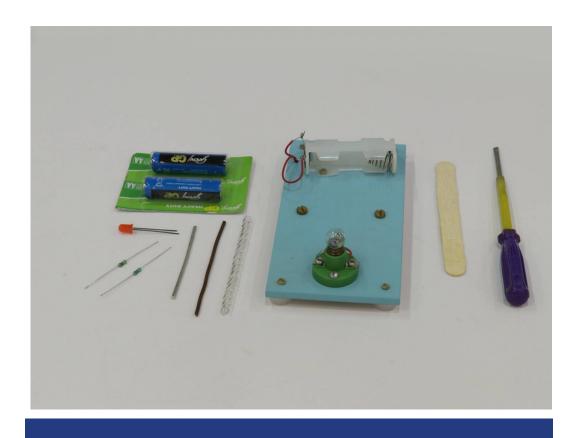
### REFLECTION OF LIGHT

A very useful teaching aid to demonstrate regular and irregular reflection, angle of incidence and angle of reflection. It is a small handy acrylic box containing rough and plain surfaces, laser light and detailed manual to explore different concepts of reflection of light.

Std. 5-8

Language: E/G/H

L x W x H in cm : 18 x 15 x 8



### LEARN ABOUT ELECTRICITY

A small battery operated handy tool to understand good conductors, insulators and perform 17 different activities of electricity. An ideal classroom tool for demonstrating basic concept of electricity.

Std. 6-8

Language: E/G

L x W x H in cm : 18 x 12 x 5



### PRAKASH SATHE RAMO

Do exciting experiments at home or school and improve knowledge through practical learning. This pack allows one to explore and learn the basics of light and its properties using the material and manual provided. Total of 20 different activities can be performed using this pack.

Std. 6 +

Language: E/G

L x W x H in cm : 33 x 27.5 x 7



### BAL, GATI ANE YANTRO

Do exciting experiments at home or school and improve knowledge through practical learning. This pack allows one to explore and learn the basics of force, motion and machines using the material and manual provided. Total of 20 different activities can be performed using this pack.

Std. 7 +

Language: Gujarati

L x W x H in cm : 33 x 27.5 x 7



### NEWTON'S CRADLE

Newton's cradle named after Sir Isaac Newton is a model that demonstrates conservation of momentum, Newton's laws of motion and energy via a series of swinging spheres. It is not only a classic model to demonstrate concepts of physics but also a fantastically relaxing object – classic fun gadget for all age group.

Std. 8 +

Language: E/G/H

L x W x H in cm : 22 x 16 x 20



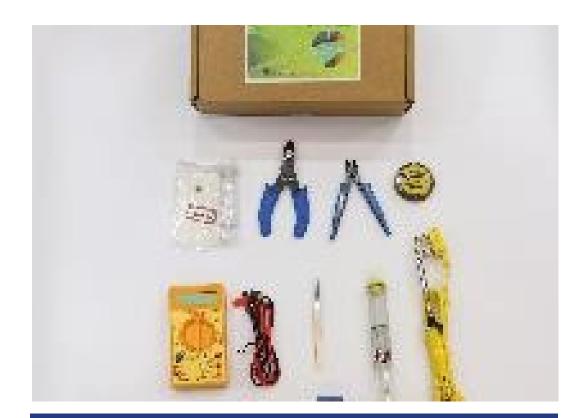
### DOUBLE CONE

A very creative, simple and most importantly, counter-intuitive device that helps learning through surprise and imagination. It's an amazing model which demonstrates center of gravity of different shaped object.

Std. 8+

Language: E/G/H

L x W x H in cm : 40 x 12.5 x 9.5



### LEARN SOLDERING

Soldering is a sheer fun. Isn't It??? Fun only when done properly with set of proper technical equipment's. Pack contains all necessary tools required for soldering and guide with tips, tricks and safety measures. A very useful kit for doing electronics projects.

Std. 11 +

Language: E/G

L x W x H in cm : 28 x 16 x 10.5



# MAKE A PINHOLE CAMERA (50 SETS)

Ever wondered how an image of a scene can be projected on a surface without lens? Make your own pinhole camera and find it out. Pack includes template and material required to make 50 Pinhole Cameras. Ideal for do-it yourself group activity and demonstrate 'light travels in a straight line' through a working model.

Std. 5-8

Language: E/G/H

L x W x H in cm: 46 x 33 x 5



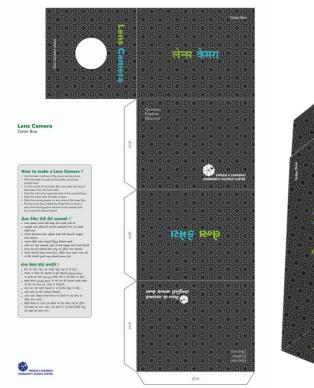


Build, learn and understand application of reflection of light through this paper model. Pack includes template and material required to make 50 Periscopes. Ideal for do-it yourself group activity and demonstrate reflection of light through a working model.

Std. 5-8

Language: E/G/H

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 5$ 





### MAKE A LENS CAMERA (25 SETS)

Create your own lens camera and understand basic working of lens and image formation. Pack includes template and material required to make 25 Lens camera. Ideal for do-it yourself group activity and demonstrate concepts of lens through a working model.

Std. 5-8

Language: E/G/H

L x W x H in cm : 46 x 33 x 5



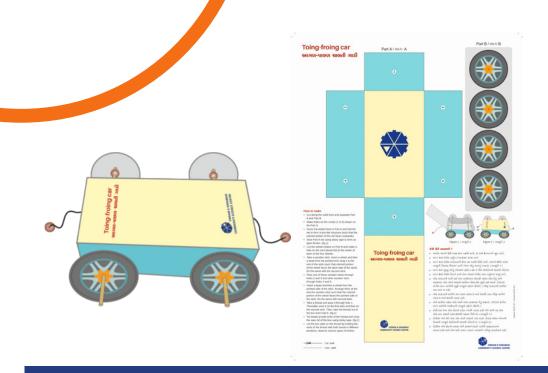
# MAKE A KALEIDOSCOPE (25 SETS)

Kaleidoscope is very popular among every age group for many decades. One can peep in and get mesmerised by burst of colorful patterns and interesting science concept of multiple reflections. Pack is ideal for group activity as it includes template and required material to make 25 Kaleidoscopes.

Std. 5-8

Language: E/G/H

L x W x H in cm :  $35 \times 33 \times 5$ 



# MAKE A TOING-FROING CAR (10 SETS)

The model explains various types of motion. When the string held straight, the car moves in rectilinear motion. When held in a curve position, the car performs curvilinear motion on the thread. The wheels exhibit the circular motion. Includes net and necessary accessories to make 10 to make toing – froing car Fun DIY activity with learning objective.

Std. 6-7 Language: E/G

L x W x H in cm : 46 x 33 x 3



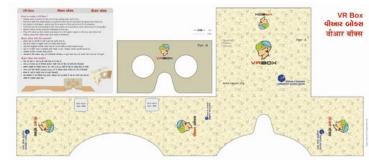
# MAKE A MAGIC COIN BOX (25 SETS)

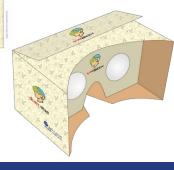
This works on the principle of reflection of light where the coin becomes invisible and creates an illusion. An interesting way to learn reflection of light. Includes net and necessary accessories to make 25 coin box Make the magic coin box and try it!

Std. 5+

Language: E/G

L x W x H in cm : 46 x 33 x 5





# MAKE A VR BOX (10 SETS)

IThe VR box is a box used to create an experience of virtual reality. The light coming from the video hits the lenses at different angles and when this light passes through the lens and reaches the eyes, it creates the illusion of distant images giving one the experience of virtual reality. Makes 10 VR Box. Enjoy the fun making your own VR box and understand the science behind it and enjoy watching 3D Videos!

Std. 7+

Language: E/H/G

L x W x H in cm : 23 x 33 x 3



# DIY OPTICS MODELS (5 MODELS)

Periscope, Pinhole Camera, Kaleidoscope, Lens Camera and 3D Glass – All 5 Templates in one pack. Make your own model and explore the science behind it. An interesting learning by doing activity with hours of fun. Even ideal for gifting someone.

Std. 5-8

Language: E/G/H

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 



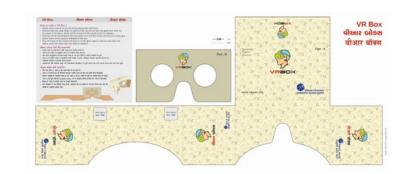
# DIY MAGIC SCIENCE MODELS (3 MODELS)

Includes material to make a bus on wheels which moves by magnet - a magic! A coin box where when you drop a coin in the box it becomes invisible and a Kaleidoscope which makes mesmerizing designs. What a magical way to learn magnets, reflection of light and multiple images.

Std. 5-8

Language: E/G

L x W x H in cm : 46 x 33 x 3



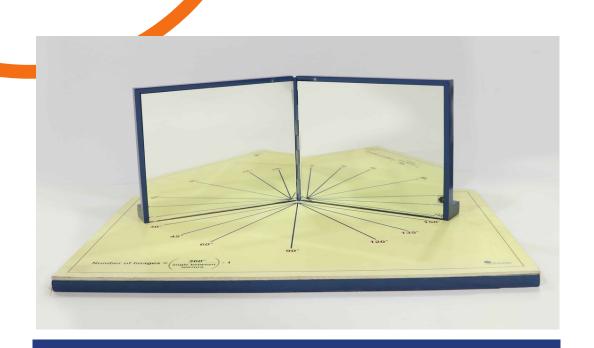
### DIY VR BOX

Includes Templates and lens to make VR box. Makes 1 VR Box. Enjoy the fun making your own VR box and understand the science behind it and enjoy watching 3D Videos! Ideal for gifting also.

Std. 7+

Language: E/H/G

L x W x H in cm : 23 x 33 x 1

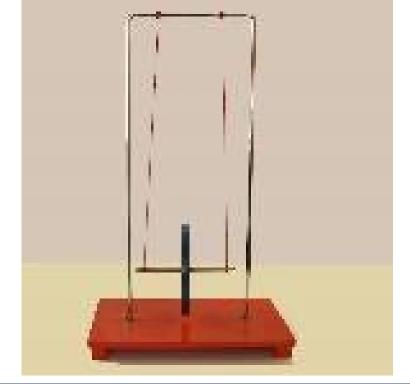


### ANGLE BETWEEN MIRRORS

A very simple and effective interactive exhibit to demonstrate relation between angles of mirror and number of images formed. Arrange two mirrors at different angle and find out number of images formed. Ideal for lab / activity center.

Std. 5-7 Language: E/G/H

L x W x H in cm : 46 x 30.5 x 18



### GIANT YO-YO

It is always fun, playing and watching yoyo movement. Giant yo-yo is the large sized exhibit model that is useful to demonstrate different forms of energy -Potential and Kinetic and how energy converts from one form to another. A must have exhibit for lab / activity center.

Std. 5-7

Language: E/G/H

L x W x H in cm : 31 x 21 x 59



### PHENAKISTOSCOPE

Phenakistoscope is a very traditional animation device that created a fluent illusion of motion and paved the way for future motion picture. Rotate the disc and observe how different images of still man turns into a dancing a man. A model that works on persistence of vision principle to create an illusion. An interesting concept best explained through this model.

Std. 5-7

Language: E/G/H

L x W x H in cm : 46 x 31 x 64



### LEVER MODEL

A large metal frame model, very useful to demonstrate the first class lever. By changing the load distance and effort distance, one can demonstrate the different aspect of first class lever. Ideal for schools and educational institute for demonstration.

Std. 6-8

Language: E/G/H

L x W x H in cm : 123 x 33 x 15



### LENS CAMERA

A large wooden exhibit, to demonstrate image formation through lens and explain important parameters of lens focal length and aperture. By sliding the lens forward and backward, one can show the projected image on the translucent glass screen. A very useful exhibit to explain lenc, and image formation.

Std. 6-8

Language: E/G/H

L x W x H in cm : 34 x 39.5 x 35



### GIANT PERISCOPE

A giant wooden periscope model to demonstrate observing over, through an obstacle or object which is prevented by direct line of sight. This is a very traditional model to explain how reflection of light works when mirrors are arranged at a certain angle. This model generates lots of curiosity and ideas to explore thus making learning more interesting.

Std. 6-8

Language: E/G/H

 $L \times W \times H$  in cm :  $0 \times 0 \times 0$ 



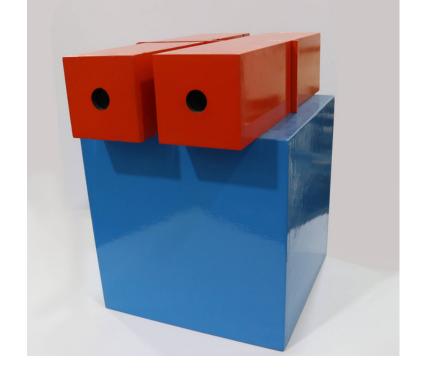
# GIANT PERISCOPE (WITH STAND)

A giant wooden periscope model to demonstrate observing over, through an obstacle or object which is prevented by direct line of sight. This is a very traditional model to explain how reflection of light works when mirrors are arranged at a certain angle. This model comes with stand. This model generates lots of curiosity and ideas to explore thus making learning more interesting.

Std. 6 - 8

Language: E/G/H

 $L \times W \times H \text{ in cm} : 0 \times 0 \times 0$ 



### DOUBLE PERISCOPE

It's a big size wooden model to observe a distant image even after it is blocked by an obstacle. The magic is you can see through only one eyepiece but not with other! Explore reflection of light through this interesting model that generates curiosity among all age group.

Std. 6 - 8

Language: E/G/H

L x W x H in cm : 31 x 40 x 42.5



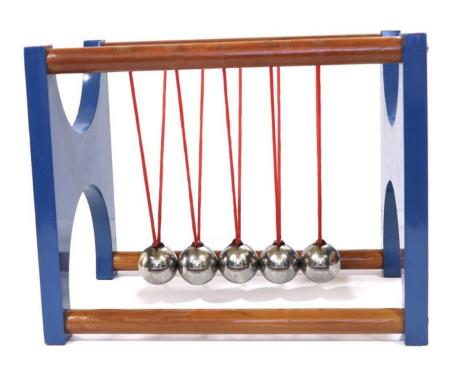
### COUPLED PENDULUM

A large wooden exhibit, to demonstrate image formation through lens and explain important parameters of lens – focal length and aperture. By sliding the lens forward and backward, one can show the projected image on the translucent glass screen. A very useful exhibit to explain lenc, and image formation.

Std. 6 - 8

Language: E/G/H

L x W x H in cm : 20 x 10 x 20



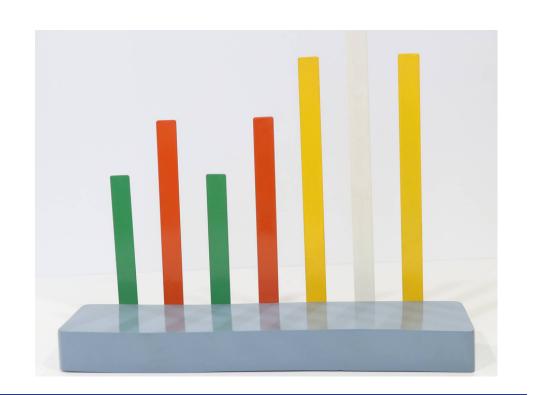
### NEWTON'S CRADLE

Newton's cradle named after Sir Isaac Newton is a model that demonstrates conservation of momentum, Newton's laws of motion and energy via a series of swinging spheres. It is a large size classic model to demonstrate concepts of physics, ideal for an activity center.



### CENTRIPETAL FORCE

Apply your maximum strength and force to rotate the disc and bring the two beads at the top of the circular ring. Can you do it? Learn about centripetal and centrifugal force by trying out this model.



### RESONANCE STRIPS

The colourful design of the model is with the purpose to generate curiosity, resulting into enhance learning. A simple yet effective model to demonstrate resonant modes as a function of length. Vibrate one strip and observe the result.

Std. 6-10

Language: E/G/H

 $L \times W \times H \text{ in cm} : 31.5 \times 21.5 \times 25$ 

Std. 7-9

Language: E/G/H

L x W x H in cm : 46 x 23 x 47

Std. 8 +

Language: E/G/H

L x W x H in cm :  $36 \times 9.5 \times 31.5$ 



### **GRAVITY TOWER**

A very sturdy metal tower designed with the purpose to effectively demonstrate center of mass and stable equilibrium. This is another version of commonly known "Tower of Pisa" model. Lean the tower and observe the point at which the tower will collapse.

Std. 8-10

Language: E/G/H

L x W x H in cm : 16 x 16 x 31



### DOUBLE CONE (LARGE)

A very creative, simple and most importantly, counter-intuitive device that helps learning through surprise and imagination. It's an amazing model which demonstrates center of gravity of different shaped object. Its a large sized metal model ideal for activity center and educational institute

Std. 8-10

Language: E/G/H

L x W x H in cm : 118 x 33 x 30



### FOCAULT'S PENDULUM

This is a very effective model to demonstrate that earth indeed rotated. The suspended pendulum from top swings back and forth and the angle of these lines changes when the circular base of earth is rotated, suggesting that the direction of the pendulum's travel is shifting over time under the influence of an unperceived rotational motion — that of Earth.

Std. 8-10

Language: E/G/H

L x W x H in cm : 31 x 31 x 36



# SPACE SCIENCE & AERONAUTICS

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE

### **Model Rocketry TLM**

Water Booster Launcher & Inclinometer



# WATER BOOSTER MODEL ROCKETRY LAUNCHER

This pack contains air pump, launching pad, inclinometer and all the material (except plastic bottle) required to build a water booster model rocket. It also includes detailed and easy guide to build and understand the science of water booster model rocket. Building such rocket and launching it is absolute fun!

Std. 8-12 Language: E

L x W x H in cm : 77 x 30 x 132

# SINGLE STAGE MODEL ROCKETRY LAUNCHER

This pack contains all the material (except propellants) required to build a single stage model rocket. It also includes detailed and easy guide to build and understand the science of single stage model rocket. Building such rocket and launching it is absolute fun!

Std. 8–12 Language: E

L x W x H in cm : 46 x 33 x 5



# MAKE A SATELLITE MODEL (50 SETS)

Communication satellites allow radio, television and telephone transmission to be sent live anywhere in world.

Communication satellites are generally located in geostationary orbit. Using this net one can make a communication satellite mode and understand its major components and its function.

Std. 7+

Language: E/G

 $L \times W \times H$  in cm :  $46 \times 33 \times 3$ 



# DIY WB ROCKET AND SATELLITE MODEL

This pack contains all the material required to build a water booster model rocket and a communication satellite model. It also includes detailed and easy guide to build and understand the science of water booster model rocket. and communication satellite model. Building such rocket and launching it is absolute fun!

Std. 6-8

Language: E/G

L x W x H in cm : 33 x 11 x 11



### MAKE A CHUCK GLIDER

This pack contains all the material required to build a chuck glider. It also includes detailed and easy guide to make and understand the science of chuck glider. Building such glider and playing it is absolute fun! Makes 1 Balsa wood chuck glider.

Std. 6+ Language: E

L x W x H in cm : 39 x 8 x 3



# MAKE A STRAIGHT WING GLIDER (50 NOS.)

This pack contains 50 templates required to make a paper glider. It also includes detailed and easy guide to make and understand the science of straight wing glider. Building such glider and playing it is absolute fun! Makes 50 Paper Straight wing glider.

Std. 5-8

Language: E/G

L x W x H in cm : 32 x 26 x 5



# **ASTRONOMY**

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE



# MAKE A BOX TELESCOPE (20 SETS)

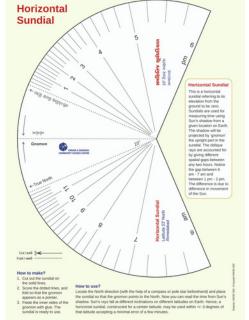
This box telescope will give a basic understanding of how a telescope is arranged and its workings. Students can use it to view different terrestrial and celestial objects in a magnified and resolved view. Building your own telescope and viewing through is a great way of learning and an absolute fun! Makes 20 box telescope.

Std. 6-8

Language: E/G

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 



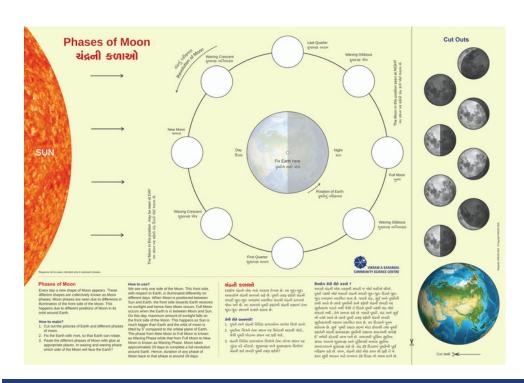


# MAKE A SUN DIAL MODEL (50 NOS.)

Sundials are used for measuring time using Sun's shadow from a given location on Earth. This is a horizontal sundial net referring to its elevation from the ground to be zero. One can make a sundial and understand its working using this model. Make your own sundial and know the time. Makes 50 sundials.

Std. 6-8 Language: E

L x W x H in cm : 32 x 26 x 5



# MAKE A MOON PHASES MODEL (50 NOS.)

Every day a new shape of Moon appears. These different shapes are collectively know as Moon Phases. Using this template once can make a moon phase model and understand how moon phases are seen due to difference in the illumination of the front side of the Moon. This is happens due to different positions of Moon in its orbit around Earth. Makes 50 moon phases model.

Std. 6-8

Language: E/G

 $L \times W \times H$  in cm :  $46 \times 33 \times 3$ 

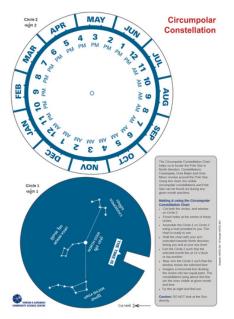


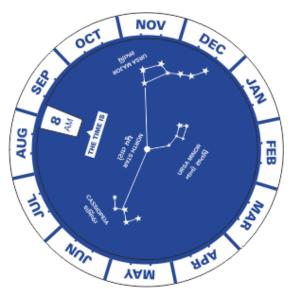
# ASTRONOMY BASICS DIY PACK (7 ITEMS)

This pack contains air pump, launching pad, inclinometer and all the material (except plastic bottle) required to build a water booster model rocket. It also includes detailed and easy guide to build and understand the science of water booster model rocket. Building such rocket and launching it is absolute fun!

Std. 6-8 Language: E

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 





# MAKE A CIRCUMPOLAR CONSTELLATION DIAL (50 NOS.)

The Circumpolar Constellation dial helps to location the Pole Star in North direction, to find constellations Cassiopeia, Ursa Major and Ursa Minor. Template to make 50 dials is provide, making it ideal for group activity based learning. By rotating top disc once can observe the constellation formation during different time of the day in different month. A very interactive learning aid for astronomy.

Std. 6-8

Language: E/G

L x W x H in cm : 32 x 26 x 5

### **COMING SOON**

Std.
Language:
L x W x H in cm:



# ELECTRONICS, ENGINEERING, ROBOTICS

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE

# LEARNING ARDUINO - FOR BEGINNERS

Arduino is the basic component for learning basic programming in the field of robotics and automation system. This beginner kit consists of Arduino Nano controller board for learning the basic programming and coding for it. It will also help in learning designing the circuit for particular application with Arduino. Includes 23+ electronics components including Ardion Nano to try different circuits!

Std. 6+

Language: E

L x W x H in cm : 18 x 12 x 5

# SMART HOME OF INTERNET OF THINGS

Built own DIY home and apply automation using PIR sensor, Gas sensor, controlling lights and fan using relays with your mobile using blynk app. Includes material to build a home model and all the essential electronic components for making smart home automation using IOT.

Std. 8+

Language: E

L x W x H in cm : 33 x 27 x 8

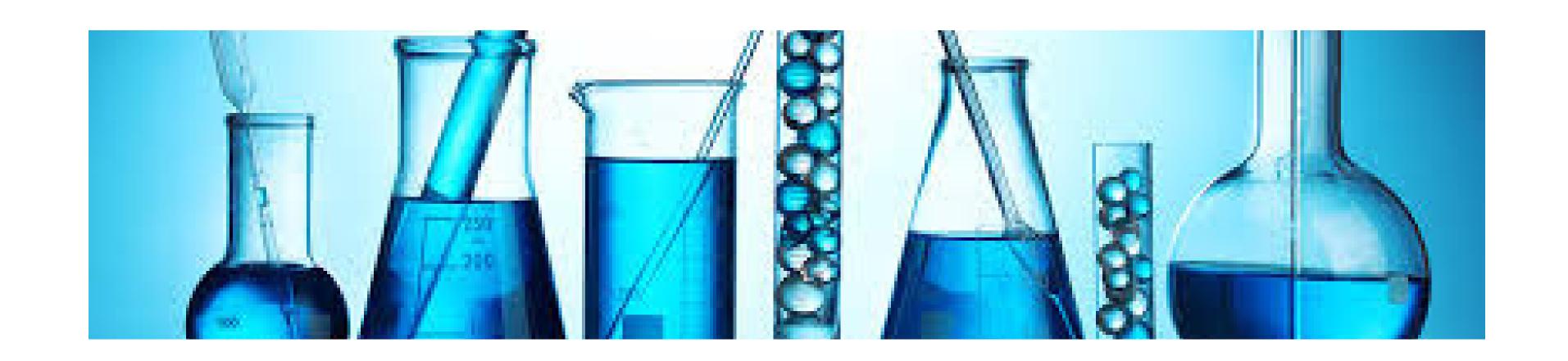
### GENNEXT TINKERING LAB

This kit consists of materials that will help to have a basic understanding of coding and programming using controllers, sensors and actuators, displays, switches and other electronic accessories. The user will also be able to use different communication modes like Bluetooth and Wi-Fi module & experiments them using IOT. Some of the basic projects examples are Distance Measurement System, Fire Alert System, Temperature Monitoring System using smarting Phones, Driver Boat, Bluetooth based Home Automation System. Includes 33+ electronics components.

Std. 8+

Language: E

L x W x H in cm : 33 x 27 x 8



# CHEMISTRY

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE



### SEPERATION OF SUBSTANCES

Substances need to be separated from a mixture for a variety of reasons. Depending on type of substance in the mixture, different techniques are required for separation. Using this TLM one can carry out hands-on experiment of filtration, evaporation, decantation and many other separation techniques. All the required material and detailed manual is provided

Std. 6-8

Language: E/G/H

L x W x H in cm : 22 x 27 x 17



### **ELECTROLYSIS OF WATER**

This TLM includes a small acrylic container with two electrodes that can be connected to DC electrical power source. Using this one can demonstrate the entire process of separation of hydrogen and oxygen at cathode and anode respectively.

Std. 6-8

Language: E/G/H

L x W x H in cm : 22 x 16 x 20



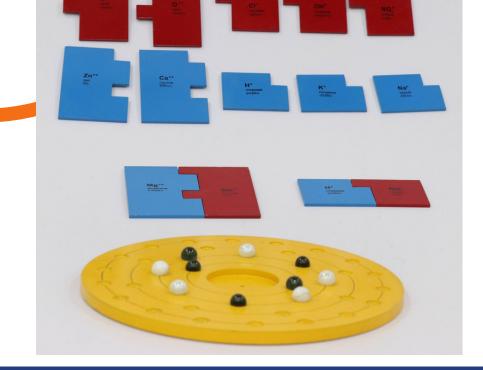
### ACID BASE EXPERIMENTS

This pack provides convenient method to observe study, test, and characteristic properties of acids and bases. It includes required chemical, apparatus and a detail guide to carry out 12 experiments about acid base reactions. Learning through this approach generates curiosity and interest which helps to clear concepts.

Std. 6-8

Language: E/G

L x W x H in cm : 18 x 16.5 x 10



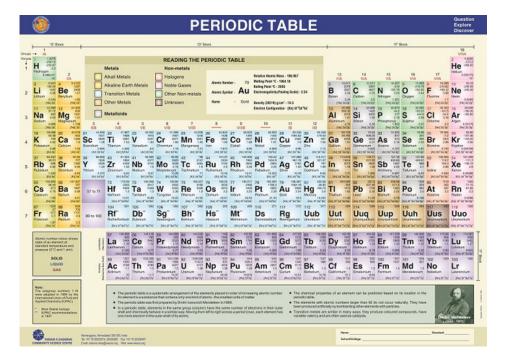
# ELEMENTS AND ATOMIC STRUCTURES

A very unique and useful teaching aid to demonstrate the structure of an atom. It contains wooden model of atomic shell, marbles representing protons, electrons and neutrons and various valency cards. It makes understanding of atom structure, chemical formula and chemical equation easy and very interesting.

Std. 7-9

Language: E/G/H

L x W x H in cm : 46 x 33 x 3



### PERIODIC TABLE CHART

18" X 25" chart that include details of 118 elements showing name, atomic number, symbol, oxidation state, electronic configuration and many more. Multicolor laminated high quality chart useful for use in classroom, labs and also for self-study.

Std. 9+

Language: English

L x W in cm: 63.5 x 45.5



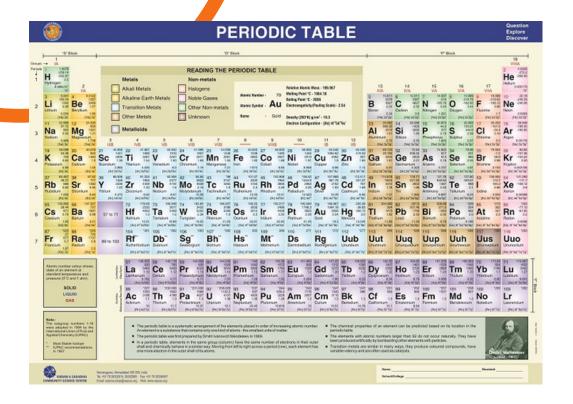
# CHEMICAL ELEMENTS ON THE CARDS

This is a handy deck of 118 cards, each featuring one element and when laid out together, forms a complete periodic table! Each card includes image of an element & various information such as; atomic number, symbol, atomic mass, melting & boiling point, its major characteristics and uses. This uniquely laid out information about chemical elements, make it a very useful and must have learning aid for both teacher and learners.

Std. 9+

Language: English

 $L \times W \times H$  in cm : 15 x 10 x 4



### PERIODIC TABLE PANEL

6' X 4' big size periodic table that include details of 118 elements showing name, atomic number, symbol, oxidation state, electronic configuration and much more. Multicolor printed on vinyl foam sheet and mounted on high quality mdf makes it durable and ideal for schools and institutes.

Std. 9+

Language: E/G

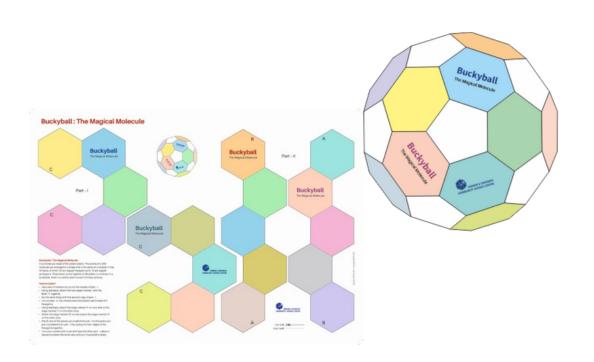
L x W x H in cm : 183 x 122 x 5



### ELECTRON ENERGY LEVEL

Energy levels inside an atom are the specific energies that electrons can have when occupying specific orbitals. This is a interactive model useful to show that atomic orbitals (s,p,d,f) have different energy levels & how electrons are filled in different orbitals depending upon their energy levels.

Std. 9+ Language: E/H L x W x H in cm:



# BUCKYBALL: THE MAGICAL MOLECULE (50 NOS.)

It is a molecule made of 60 carbon atoms. The atoms of a C60 molecule are arranged in a shape that is same as a football. Its has 32 faces of which 20 are regular hexagoans and 12 are regular pentagoans. Using this net one can understand the molecule and its structure visually. Makes 60 buckyball molecule model!

Std. 6+

Language: E

L x W x H in cm: 46 x 33 x 3



# BIOLOGY

MODELS, D-I-Y, EXHIBITS, CHARTS AND MANY MORE



# ANNUAL RINGS OF TREE (SMALL)

We can learn a lot about a tree's life just by looking at the rings of tree. This TLM includes a section of tree trunk (small size), magnifying glass and a detailed manual. One can perform interesting activities related to study about the age of tree and climate changes during tree's life.





# ANNUAL RINGS OF TREE (LARGE)

We can learn a lot about a tree's life just by looking at the rings of tree. This TLM includes a large size section of tree trunk, magnifying glass and a detailed manual making it ideal for activity center. One can do interesting study about the age of tree and climate changes during tree's life.

Std. 6+ Language: E/G/H L x W x H in cm:



# MAKE A ECOLOGICAL PYRAMID (50 NOS.)

Learn about terrestrial eco system and different between the relation Using the template organisms. provided, make a pyramid representing different trophic levels within the food chain and stick given different organisms on the pyramid based on their interdependency with each other. This pyramid also depicts the flow of energy amongst the terrestrial food chain. Set of 50 templates are provided making it ideal for activity-based learning.

Std. 6-8

Language: E/G

L x W x H in cm : 46 x 33 x 3



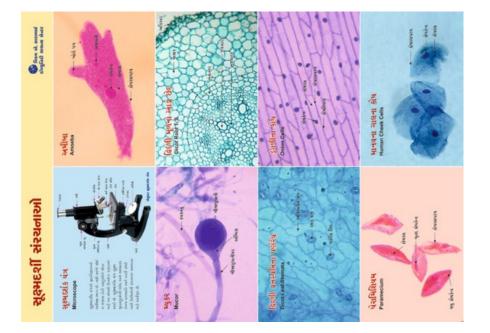
# LEARN PHOTOTROPISM (50 NOS.)

A small pot with seeds and soil an be grown and then can be placed inside a box that can be made using this net. Regularly monitor and water the potted plant and observe in which direction the plant grows and undestand why it happens!



Language: E/G/H

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 



### SUKSHMA DARSHI SARANCHANO SHIKHO (50 NOS.)

Understand microorganism or cell or tissue using photographs. Easy to refer and useful when one do not have microscope. Makes 50 charts of 7 different microorganism

Std. 6+

Language: G

L x W x H in cm: 46 x 33 x 3



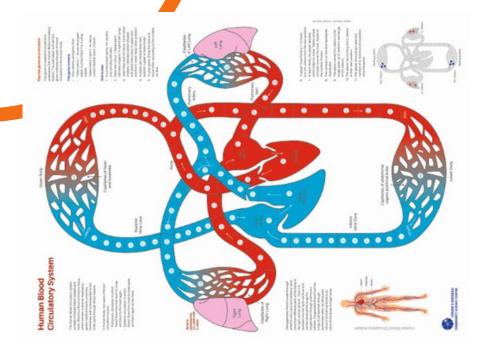
# MAKE TYPES OF ADAPTATIONS CHART (50 NOS.)

Learn about terrestrial eco system and between different the relation Using the template organisms. provided, make a pyramid representing different trophic levels within the food chain and stick given different organisms on the pyramid based on their interdependency with each other. This pyramid also depicts the flow of energy amongst the terrestrial food chain. Set of 50 templates are provided making it ideal for activity-based learning.

Std. 7+

Language: E/G

L x W x H in cm : 46 x 33 x 3

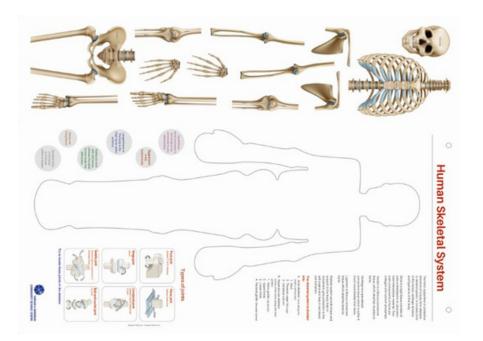


# HUMAN BLOOD CIRCULATORY SYSTEM (25 SETS)

We can learn a lot about a tree's life just by looking at the rings of tree. This TLM includes a section of tree trunk (small size), magnifying glass and a detailed manual. One can perform interesting activities related to study about the age of tree and climate changes during tree's life.

Std. 6+ Language: E/G/H

L x W x H in cm : 46 x 33 x 3



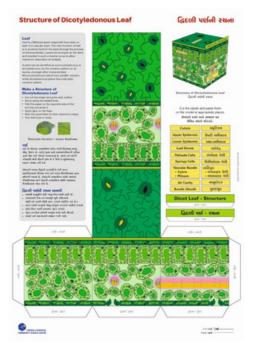
### MAKE A HUMAN SKELETON MODEL (50 NOS.)

The central framework of the body is difficult to understand. Through this template name, shape, size, location, arrangement of bones, movable and immovable joints in the human body can be understood easily by making a human skeleton using given pictures. Set of 50 templates are provided making it ideal for activity-based learning.

Std. 6+

Language: E/G/H

L x W x H in cm : 46 x 33 x 3





# MAKE A LEAF CUBE MODEL (50 NOS.)

Learn about terrestrial eco system and different the between relation Using the template organisms. provided, make a pyramid representing different trophic levels within the food chain and stick given different organisms on the pyramid based on their interdependency with each other. This pyramid also depicts the flow of energy amongst the terrestrial food chain. Set of 50 templates are provided making it ideal for activity-based learning.

Std. 7+

Language: E/G

L x W x H in cm: 46 x 33 x 3

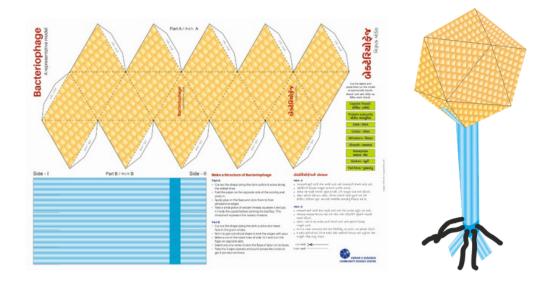


# MAKE A SOIL BIODIVERSITY PYRAMID (50 NOS.)

Periscope, Pinhole Camera, Kaleidoscope, Lens Camera and 3D Glass - All 5 Templates in one pack. Make your own model and explore the science behind it. An interesting learning by doing activity with hours of fun. Even ideal for gifting someone.

Std. 5-8 Language: E/G/H

L x W x H in cm : 46 x 33 x 3



# MAKE A BACTORIOPHAGE MODEL (50 NOS.)

Bacteriophage means virus eating bacteria. They are a type of friendly virus. The icosahedron head with collar, sheath, spikes and tail fibres form the basic structure of a bacteriophage. This template will also help to understand the process of insertion of viral genome into any host cell for replication. Pack contains set of 50 Templates that will make 50 bacteriophage model.

Std. 7+

Language: E/G

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 

### **COMING SOON**

Std.
Language:

L x W x H in cm : 46 x 33 x 3



### MICROSCOPIC STRUCTURES

It includes a set of 52 charts on anatomy of cells and tissues. Each chart consists of high quality labelled and coloured photographs of a microorganism or cell or tissue along with brief description. The images have total magnification of 100 X and are taken in-house from a compound microscope. This whole set will give you a small tour to fascinating world of Biology.

Std. 8+

Language: English

L x W x H in cm : 46 x 33 x 3



### SUKSHMA SANRANCHANO

This is Gujarati version of Microscopic Structures. It includes a set of 52 charts on anatomy of cells and tissues. Each chart consists of high quality labelled and coloured photographs of a microorganism or cell or tissue along with brief description. The images have total magnification of 100 X and are taken in-house from a compound microscope.

Std. 8+

Language: Gujarati

 $L \times W \times H \text{ in cm} : 46 \times 33 \times 3$ 

### **COMING SOON**

Coming Soon

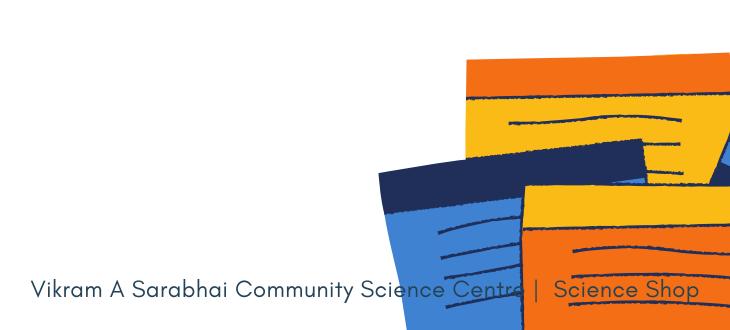
Std.

Language:

L x W x H in cm: 46 x 33 x 3



# **PUBLICATIONS AND CHARTS**





# SCIENCE GALLERY (SET OF 30 CHARTS)

Science Gallery, a set of 30 colourful Charts (Size-18"X25") with interesting & informative facts on Astronomy, Biology, Planet Earth, Chemistry, Physics, Life Sciences, Mathematics and Beliefs & Science. These charts can be displayed in Classroom, Laboratories & Exhibition spaces.

Entire set or selected chart also available as vinyl printed on U-foam based panel of 2'X3' size each.

Std. 5-12

Language: English
30 Laminated Chart 170 gsm - 45 x 63 in cm

Or Vinyl Printed on U-foam Panel - 61 x 92 x 0.5 in cm

# VIGNAN PRADARSHAN (SET OF 42 CHARTS)

Vignan Pradarshan, a set of 42 colourful Charts (Size-18"X25") with interesting & informative facts on Astronomy, Biology, Planet Earth, Chemistry, Physics, Life Sciences, Mathematics and Beliefs & Science. These charts can be displayed in Classroom, Laboratories & Exhibition spaces.

Entire set or selected chart also available as vinyl printed on U-foam based panel of 2'X3' size each.

Std. 5–12
42 Laminated Charts 170 gsm – 45 x 63 in cm
Or Vinyl Printed on U-foam Panel – 61 x 92 x 0.5 in cm





# SPACE SCIENCE GALLERY (SET OF 8 CHARTS)

Space Science Gallery, a set of 8 colourful Charts (Size-18"X25") with interesting & informative facts about space, Biology. These charts can be displayed in Classroom, Laboratories & Exhibition spaces.

Std. 7 +

Language: English

8 Laminated Chart 170 gsm - 45 x 63 in cm

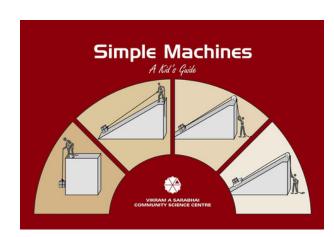
# VIGNAN DRASHTI (BIMONTHLY MAGAZINE)

This is a bimonthly Gujarati 8 page wall magazine. It consists of articles supplementing curriculum and information on the latest updates in science and technology. It also includes puzzle, crossword and do it yourself activities. Get subscribed and it will be delivered to your doorstep via post. Options available for 1 year, 2 year and 3 year subscription plan.

Set of 6 issues of past year also available.

Std. 5-7





#### SIMPLE MACHINE

A useful guide for beginners about 'Simple machines'. It introduces basic concept of machines through tools that are available in our surrounding which helps to relate easily and explore.

Std. 5-7

Language: English

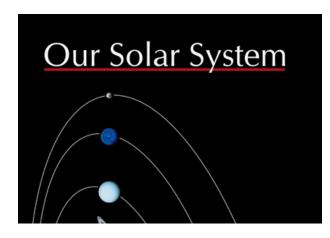


#### SAADA YANTRO

This is Gujarati version of Simple Machine. A simple handy guide for introduction of simple machines to beginners. It introduces basic concept of machines through tools that are available in our surrounding which helps one to relate easily and explore.

Std. 5-7

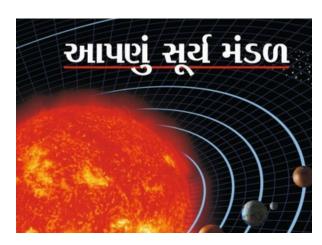
Language: Gujarati



#### **OUR SOLAR SYSTEM**

A richly illustrated book about solar system. It provides basic information about the solar system, how the sun and its planetary system evolved, what its future would be and what makes every planet so unique.

Std. 5-10



#### **AAPNU SURYAMANDAL**

This is Gujarati version of "Our Solar System". A richly illustrated book about solar system. It provides basic information about the solar system, how the sun and its planetary system evolved, what its future would be and what makes every planet so unique

Std. 5-10

Language: Gujarati



#### WHY THE SKY IS BLUE

This booklet includes Prof. C.V. Raman's talk on "Why the Sky is Blue" delivered on December 22, 1968 at the Foundation stone-laying ceremony of VASCSC, Ahmedabad. It is a power packed inspirational talk for children.

Std. 7+

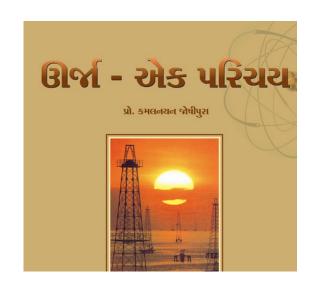
Language: English



#### **AAKASH BHURU SA MATE**

This is Gujarati version of "Why the Sky is Blue". This booklet includes Prof. C.V. Raman's talk on "Why the Sky is Blue" delivered on December 22, 1968 at the Foundation stone-laying ceremony of VASCSC, Ahmedabad. It is a power packed inspirational talk for children.

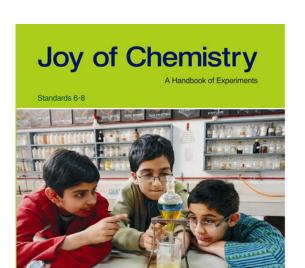
Std. 7+



#### **URJA - EK PARICHAY**

A simple guide for all age group who has interest to know about energy. It is authored by Prof. Kamalnayan Joshipura and provides basic information about energy and types of energy like wind energy, solar energy, nuclear energy, etc.

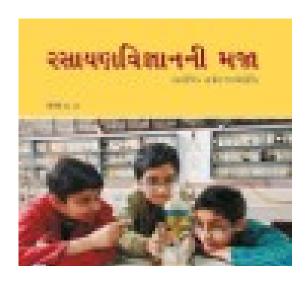
Std. 5+



## JOY OF CHEMISTRY

'Joy of Chemistry – a handbook of experiments' contains more than 42 chemistry experiments and activities useful for both teachers and students. A very useful resource and reference guide for science teachers to teach concepts using 'learning by doing' method. It provides useful tip on how to perform experiments in science laboratories and to arrive at definite conclusion after observation of an experiment.

Std. 6-8



### RASAYANVIGNAN NI MAJA

'Gujarati version of Joy of Chemistry – a handbook of experiments' contains more than 42 chemistry experiments and activities useful for both teachers and students. A very useful resource and reference guide for science teachers to teach concepts using 'learning by doing' method. It provides useful tip on how to perform experiments in science laboratories and to arrive at definite conclusion after observation of an experiment.

Std. 6-8

Language: Gujarati

Language: English

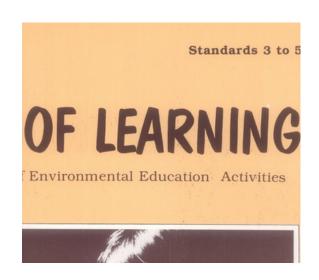


#### PARYAVARAN ANE MAARU JEEVAN

An informative book about the role of environment in our life and why it is important to protect environment. A very good reference guide for beginners.

Std. 3+

Language: Gujarati



## **JOY OF LEARNING TEACHERS MANUAL - 1**

This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 3-5

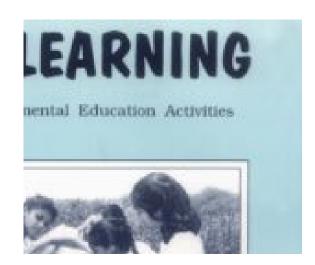




## SHIKHVANO ANAND TEACHERS MANUAL - 1

This is Gujarati version of 'Joy of Learning -1'. This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 3-5



#### JOY OF LEARNING TEACHERS MANUAL - 2

This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 6-8

Language: English

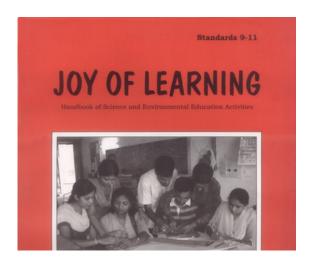


## SHIKHVANO ANAND TEACHERS MANUAL - 2

This is Gujarati version of 'Joy of Learning –2 '. This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 6-8

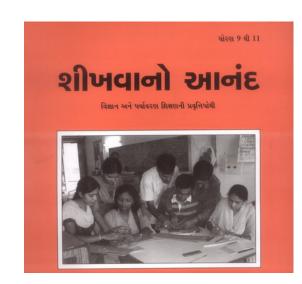
Language: Gujarati



## JOY OF LEARNING TEACHERS MANUAL - 3

This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 9-11



#### SHIKHVANO ANAND TEACHERS MANUAL - 3

Language: Gujarati

This is Gujarati version of 'Joy of Learning –3 '. This handbook contains activities based on study of science and environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

Std. 9-11



## SEEING IS NOT BELIEVING

This booklet is an exciting collection of optical illusions put together with the aim to stimulate minds and enable people to appreciate the wonders of science.

Std. 5+





## DRASHTIBHRAM - EK ANOKHO SANGRAH

This is Gujarati language version of the publication 'Seeing is not believing'. This booklet is an exciting collection of optical illusions put together with the aim to stimulate minds and enable people to appreciate the wonders of science.

Std. 5+

### WATER BOOSTER MODEL ROCKETRY HANDBOOK

This handbook explains the principles, laws, history, science, and maths behind a model rocket. It also, explains the assembly and launch procedure the water booster model rocket

Std. 11+ Language: English

### SINGLE STAGE MODEL ROCKERTRY HANDBOOK

This handbook can be used for understanding the principles, laws, history, science, and maths behind a model rocket.

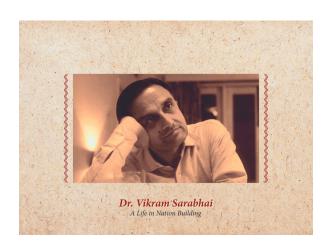
Std. 11+ Language: English



#### **GAMMAT SATHE VIGNAN**

This book contains fun-filled science activities, puzzles and experiments. These can be performed using simple, inexpensive and readily available material like matchsticks, empty bottles and tumblers. Solutions to the puzzles are also provided.

Std. 3+ Language: Gujarati



#### DR. VIKRAM SARABHAI - A LIFE IN NATION BUILDING

Language: English

This is a short biography of Dr. Vikram Sarabhai (1919–71), the renaissance man of Indian science. Dr. Vikram Sarabhai established Community Science Centre to popularize science and mathematics education among students, teachers and the lay public.

Std. All



## VAIGNANIK DR. VIKRAM SARABHAI

This is a short biography of Dr. Vikram Sarabhai (1919–71), the renaissance man of Indian science. Dr. Vikram Sarabhai established Community Science Centre to popularize science and mathematics education among students, teachers and the lay public.

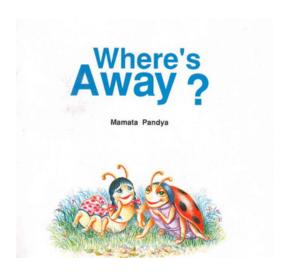
Std. All Language: Gujarati



## KAANSA NO RANKAR

This book gives us the answers as to how natural disaster like volcanoes, tsunami, thunderstroms & earthquakes happen it narates the scientific activities and outcome of these disaster especially the earthquake has been highlighted. The book is authored by Dr. Joseph D'Souza.

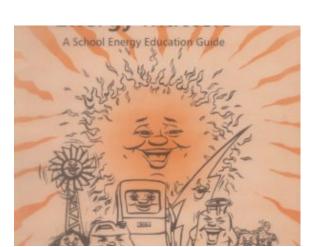
Std. 5+ Language: Gujarati



#### WHERE'S AWAY

This book is made for children on environmental related themes. It is based on waste trail with worryworm and litterbug in search of a place called Away

Std. 5+



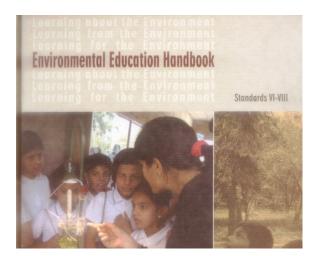
#### **ENERGY MATTERS**

This energy education manual focuses on energy and environmental concerns. Activities in this guide are organized to help you discuss data and information through a series of activities, which portray energy challenges and dilemmas facing India and world.

Std. 6-10



Language: English



## **ENVIRONMENT EDUCATION HANDBOOK**

This handbook contains 60+ activities/lesson plan based on environment, which can be carried out at school level. It provide details about type of activity, group size, step by step instruction and material required, which is very useful for teacher to organise plan an activity based session.

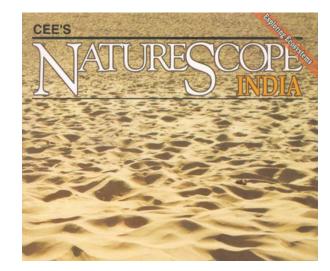
Std. 6-8 Language: English

#### **OBSERVING NATURE IN AN URBAN FOREST**

This is a creative education series dedicated to inspiring children on understanding and appreciation of the natural world while developing the skills they will need to make responsible decisions about environment. The book contains lesson plans about insects.

Std. 4-8

Language: English

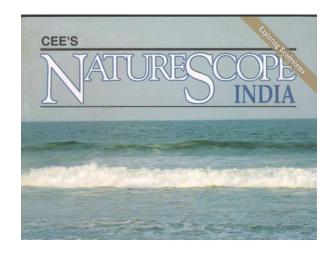


#### NATURESCOPE INDIA - INCREDIBLE DESSERTS

This is a creative education series dedicated to inspiring children on understanding and appreciation of the natural world while developing the skills they will need to make responsible decisions about environment. The book contains lesson plans about desserts.

Std. 6-10

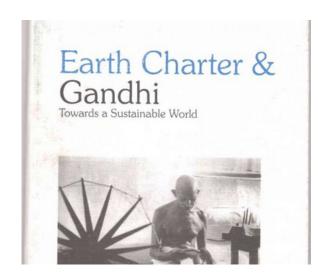
Language: English



## NATURESCOPE INDIA - INCREDIBLE OCEANS

This is a creative education series dedicated to inspiring children on understanding and appreciation of the natural world while developing the skills they will need to make responsible decisions about environment. The book contains lesson plans about oceans.

Std. 6-10



## **EARTH CHARTER AND GANDHI**

This book links quotations from Gandhi's writing with sections from the Earth Charter, provides Earth Charter activities and proponents of sustainable development with an opportunity to reflect on how Gandhi's wisdom and nonviolent approach to social change can illuminate the way forward in the face of today's formidable environmental economic and social challenges

Std. All Language: English

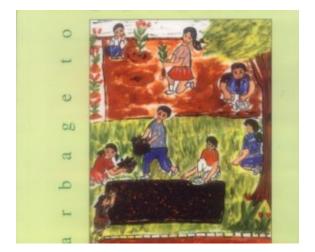


## **GREEN GAMES MANUAL**

Environment Education games provide an innovative, educational, entertaining and participatory approach to making people sensitive to the environment, and ultimately encouraging them to take action. Games can help in creating awareness, knowledge, values and skills. This Manual has 24 games which have proved to be effective and popular among all age group.

Language: English

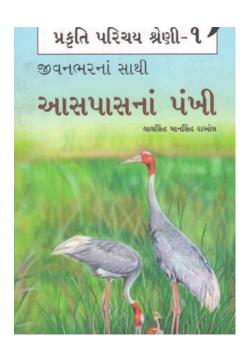
Std. Educators



## **GARBAGE TO GARDENS**

This book suggests various methods that may be employed to communicate concepts about waste management to children. The activities will help the educator to lead the children from knowledge about garbage to understanding and then action.

Std. Educators



## **AASPASNA PANKHI - SHRENI 1**

Can you identify the birds that fly across the horizon every day? If you can't, here's a series of books for you. 'Aas pas na Pankhi' (Birds: Introductory field guide) illustrates plates and brief accounts of 94 birds commonly seen in your souroundings. The guide also carries colourful illustrations of these birds

Std. 5+

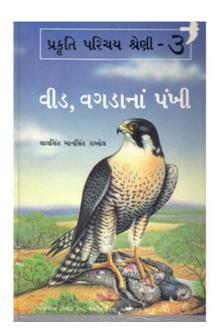
Language: Gujarati

## **PANINA SANGATHI- SHRENI 2**

Can you identify the birds that fly across the horizon every day? If you can't, here's a series of books for you. 'Aas pas na Pankhi' (Birds: Introductory field guide) illustrates plates and brief accounts of 94 birds commonly seen in your souroundings. The guide also carries colourful illustrations of these birds

Std. 5+

Language: Gujarati



## VID, VAGDANA PANKHI - SHRENI 3

Can you identify the birds that fly across the horizon every day? If you can't, here's a series of books for you. 'Aas pas na Pankhi' (Birds: Introductory field guide) illustrates plates and brief accounts of 94 birds commonly seen in your souroundings. The guide also carries colourful illustrations of these birds

Std. 5+



## VAN, UPVAN NA PANKHI - SHRENI 4

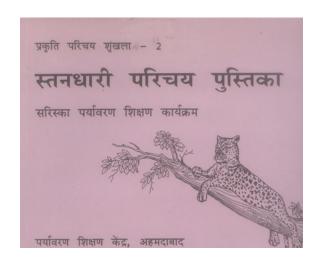
Can you identify the birds that fly across the horizon every day? If you can't, here's a series of books for you. 'Van Upavanna Pankhi' (Birds: Introductory field guide) illustrates details of 94 birds commonly seen birds in the plains, some hilly and coastal regions of Gujarat with colourful illustrations.

Std. 5+ Language: Gujarati

#### BIRDWATHERS FIELD GUIDES IN GUJARATI - SHRENI 1 TO 4

Set of 4 books Aaspasna Pankhi, Panina Sangathi, Vid Vagdana Pankhi and Van Upavana Pankhi

Std. 5+ Language: Gujarati

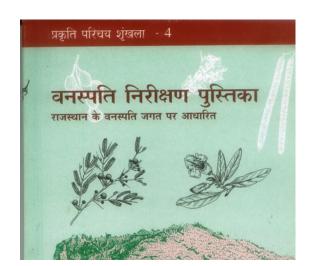


## STANDHARI PARICKAY PUSTIKA

This field guide series in an introductory guide book on birds, mammals and vegetation in an around Sariska National Park. It has detailed description with classification and plates for species identification and their importance. This book is dedicated to inspire the youth to initiate environmental awareness programmes in their locality.

Std. 6+

Language: Hindi



## VANASPATI NIRIKSHAN PUSTIKA

This field guide series in an introductory guide book on birds, mammals and vegetation in an around Sariska National Park. It has detailed description with classification and plates for species identification and their importance. This book is dedicated to inspire the youth to initiate environmental awareness programmes in their locality.

Std. 6+

Language: Hindi



### **BIRD CHART**

This is your field guide to the birds of India! The product has intricate illustration work, this unabridged aviary features over commonly found 36 birds from sparrows, hoopoes and mynas to wetland birds such as egrets, moorhens and storks. Perfect for amateur birdwatchers.

Std. All

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