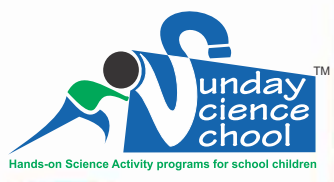


# Standard 4

In 4th std, students learn lot more science. They know about forms of energy, force, solar system, seasons, weather, rain and water cycle, our food, digestion of food, flowers and more. We have tried to cover many topics for 'hands-on' activities.

Students get simple microscope to observe flowers and insects. They make rain gauge, know about filtration and purification of water, make "hydro-electricity" model, design air-push car to know applications of force, prepare Seasons' model and so on. We have also introduced Air-mass concept and Tornado formation this year. A card game to cover topics on plants and animal will also be a handy tool for teachers. Experiment on Photosynthesis is useful in many ways.



## Hands-On Science Activities

### 401. Flowers



- |   |                        |  |
|---|------------------------|--|
| 1 | Parts of flower        | Why flowers are colourful and fragrant? Parts of flower and their functions. |
| 2 | Dissection of Hibiscus |  |

### 402. Microscope



- |   |                                  |   |
|---|----------------------------------|---|
| 1 | Working of microscope            | Understanding the image formation and magnification using microscope. Observation of tiny objects under microscope. <b>Take home microscope for every student</b> |
| 2 | Observation of non-living things |   |
| 3 | Observation of living things     |   |



## Standard 4



### 403. Human body



- 1 Cut out organs  
\_\_\_\_\_
- 2 Place the organ systems  
\_\_\_\_\_
- 3 Make a 3D Human body  
\_\_\_\_\_

Understanding working of organ, organ systems. Important functions of various organs.

### 404. Water Purification & Rain Gauge



- 1 Make a rain gauge  
\_\_\_\_\_
- 2 Observation and recording of rainfall  
\_\_\_\_\_
- 3 Make a rain gauge  
\_\_\_\_\_
- 4 Observation and recording of rainfall  
\_\_\_\_\_

Understanding weather parameters, how they are recorded? Keeping record if selected parameters. Types of cloud, and weather prediction.

### 405. Weather



- 1 Make a Tornado in bottle  
\_\_\_\_\_
- 2 Clouds and their types  
\_\_\_\_\_
- 3 Make a nephoscope  
\_\_\_\_\_
- 4 Make a cloud dial  
\_\_\_\_\_

Understanding weather parameters, how they are recorded? Keeping record if selected parameters. Types of cloud, and weather prediction.

### 406. Air has weight



- 1 Suck water with 2 straws  
\_\_\_\_\_
- 2 Make a fountain in bottle  
\_\_\_\_\_
- 3 Air has weight  
\_\_\_\_\_

Air occupies space  
Air exerts pressure  
Air has weight

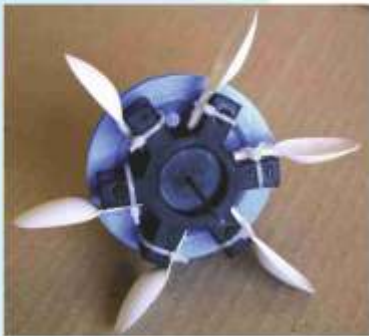




## Standard 4



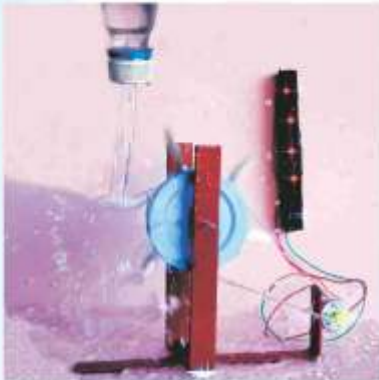
### 407. Turbine working



- 1 Make a turbine
- 2 Testing turbine under tap water
- 3 Function of turbine

What is energy? What are various forms of energy, conservation of energy, energy transformation. renewable and non-renewable forms and their sources etc.

### 408. Hydro Electricity model



- 1 Working of LED & Dynamo
- 2 Make a Hydroelectric project

How electricity is generated? Dams, storage of water, Uses of electricity.

### 409. Classroom card game



- 1 Question cards on animal adaptations
- 2 Questions on habitats of animals, plant & animal food
- 3 Questions on eatable parts of plants, adaptation in plants

Plants and animals, their adaptations, food, reproduction. foods we eat etc.

### 410. Saturn Rings



- 1 Cutting of Saturn ring
- 2 Model of Planet Saturn
- 3 Rotating Saturn to see how rings make different angles

Our solar system, Planets & their details, Saturn, its majestic rings, how do we Saturn with rings.



## Standard 4



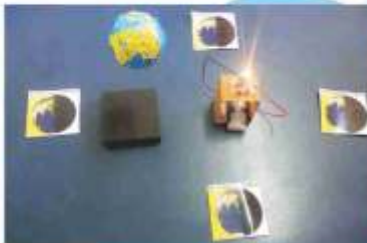
### 411. Food - Photosynthesis



- 1 Photosynthesis in plants
- 2 Iodine starch test

How plants make their food? Important parts of plants. Chlorophyll in green leaves, Nutrition and food we eat.

### 412. Seasons



- 1 Rotation and Revolution of Earth
- 2 Make a model to show Seasons
- 3 Equinoxes and Solstices.

Understanding the rotation and revolution of Earth, why season occurs? Earth's tilt and seasons, equinoxes and solstices.

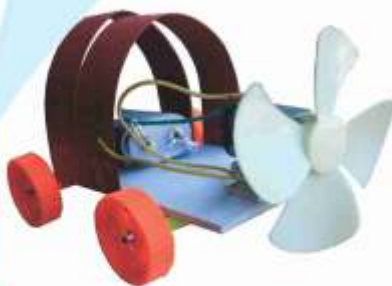
### 413. Science in Life



- 1 Concentration game
- 2 Simple electric circuit
- 3 Hand steadiness tester model making.

What is concentration, how do we achieve this? What is electric circuit? Working of battery, buzzer, switch etc.

### 414. Air Push Car



- 1 Making a car
- 2 Joining circuit to make fan to work.
- 3 Moving the car using push created by moving air

How do moving objects work? what is force? what is Newton's 3rd law of motion?, how is air pushed?, how do motor and fan work? what is the action and what is reaction? Making of circuit, use of electrical energy etc.