

# SAVING OUR PLANET: BABY STEPS GRADES 1-2





We know that Mother Earth is the most beautiful planet in our Solar System and today it is in deep crisis.

Together, we need to save the ecosystem and bring back the balance. We need to save and conserve the myriad species of plants and animals, restore forests, reclaim oceans and other habitats to ensure a clean and green planet.

The ravages of urbanization, industrialization, pollution and deforestation have resulted in global warming and climate change and this needs to be reversed and the time is now.

So, what can we do? How do we begin? We can create awareness about caring for the environment and practice small steps from an early age. Young learners can be sensitized to conserve and save water, save electricity, help to plant trees, eat vegetables and greens and practice health and fitness activities. Simple things like reusing paper, walking to school, re-using waste water for plants and turning off the taps while brushing one's teeth or washing dishes can go a long way in conserving the environment and saving the planet.

These series of activities on 'Saving Our Planets: Baby Steps' is a milestone in an attempt to make a difference. Each one of us can help save our planet and create a better world.

I hope that the teachers handling Classes I & 2 will find this document useful and would be able to use the activities provided in a meaningful way. Any suggestions for further improvement are always welcome.



### Grade 1

Activity number & Name	Page No.
Activity 1: How Green are you?	5
Activity 2: Sunlight has Heat Energy	6
Activity 3: Soil has Air	8
Activity 4: Nature: A Water Filter	10
Activity 5: My Body	12
Activity 6: Myself and My Family	13
Activity 7: Animals, Plants and objects	19
Activity 8: Local Fauna	23
Activity 9: A child's School and Friends	26
Activity 10: Symbol Identification- Traffic Symbols	30

### Grade 2

Activity number & Name	Page No.
Activity 1: Nature: A Water Filter	32
Activity 2: Who lives in the Soil?	34
Activity 3: Carbon in Nature	36
Activity 4: Unwanted Foreign Particles in Air	39
Activity 5: Hygiene for Healthy Living	42
Activity 6: Writing Slogans for Environment Conservation	45
Activity 7: Plants give us Food	50
Activity 8: Familiarity with Objects: Natural and Human made	52
Activity 9: Sources of our Food	55
Activity 10: Importance of Cleanliness	58



## Activity 1 How Green are you?

#### What to do

Use this chart to track your daily efforts to conserve energy. Give yourself one point in the daily box for each activity that you complete. Record additional points for repeated activities. For example, if you turn the lights off three times in one day, give yourself three points in the daily box.

What are the activities you did	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
to make life greener?							
Turned off the lights when							
leaving a room							
Turned off the tap while							
brushing my teeth							
Turned off television as soon as							
I finished watching a							
cartoon/show							
Walked, biked or took the bus							
to school							
Decided what I wanted before							
opening the refrigerator door							
Played outside with friends							
instead of on the computer							
Used a bucket for a bath,							
instead of the shower, using							
less water							
Utilised used water for							
watering the plants or washing							
the car							
Reused paper for school and							
home projects							
My total							

# Activity 2 Sunlight has Heat Energy

#### Background:

Light energy received from the Sun can be converged to a spot, on a piece/sheet of paper with the help of a magnifying glass. The light rays produce heat. As the heat increases, the spot becomes too hot, burning occurs and the paper burns.

#### Time: 35 minutes

Learning Outcome: Students deduce that solar light has heat energy.

#### Materials:

- ✓ A magnifying glass: This could be a regular magnifying lens/biconvex lens, glass bottle bottoms. Even a drop of water on the glass can be used as a lens.
- A sheet of white paper
- ✓ Pencil

#### Methodology:

- On a sunny day, hold the lens at such an angle so as to focus the Sun's rays on as small an area as possible on the ground or a table top.
- Place the piece/sheet of paper under this spot.
- Ensure the lens is still.
- Draw a small circle and fill it with ordinary pencil and focus the concentrated sun light on it. The spot will soon burn.

#### **Observation**:

✓ On keeping the lens still, as the Sun's rays converge onto the spot, the piece of paper, soon burns or catches fire.

#### **Result:**

✓ The heat energy present in the sunlight causes the paper to burn.



• Ensure that the sunlight is bright.

paper

Magnifying

alass

- The lens is held very still.
- The glass bottle bottom, if used, has no sharp edges.

Conclusion: Sunlight has heat energy.

#### **Discuss/Answer the following questions:**

Q1. In the experiment you have just performed, which energy made the sheet/piece of paper burn?

Q3. Where did this energy come from?

Q4. Why does only the small area, where the Sun's rays fall on the piece of paper, start burning?

Q5. Why does the area of the same paper, which directly received the Sun's rays does not burn?

## Activity 3 Soil has Air

Theme: Soil, Air

#### **Background:**

The air is an essential "ingredient" for life on Earth. Plants, animals and humans all need it to survive. Many animals and plants live/grow in the soil. Air present or trapped in the soil is used by these organisms growing in it. This experiment demonstrates that air is trapped or present in soil of different types.

#### Time: 35 minutes

Learning Outcome: Students deduce that soil has air.

#### Materials:

- ✓ 3 small disposable glasses (with some tap water)
- ✓ 3 soil samples (garden, sand and clay. The teacher may go exploring with the students to find sample in different places)
- ✓ Labels
- ✓ Pen/pencil
- A notebook

#### Methodology:

- Take three disposable glasses and fill each beaker halfway full with different soil samples, separately.
- Label each glass with the name of the type of soil it holds.
- Fill the glass one after the other, with tap water until they are almost full.



#### **Observation:**

As the water is added in the beakers, air bubbles from the soil in the beakers start rising to the top of the water. There are more bubbles in some of the beakers than in the others. You may take their photographs. Draw what you see in all the three beakers and write your observations in the table given.

Soil type	Amount of bubbles (Put tick)	What you see
Garden Soil	Maximum/Minimum/Average	
Sand	Maximum/Minimum/Average	
Clay	Maximum/Minimum/Average	

Result: Release of air bubbles in the three beakers demonstrates the presence of air in the soil. Conclusion: Different types of soils have different amounts of air trapped in them.

#### **Discuss/Answer the following questions:**

Q1. Name the type of soil which traps the maximum amount of air.

Q2. Name the type of soil which traps the minimum amount of air.

Q3. Do all types of soil have air trapped in it?

Q5. What happens to the air trapped in a garden soil if the garden gets water logged for a few months?

Q6. What will happen to the organisms living in the soil if there is no air in the soil?

### Nature: A Water Filter Theme: Water

#### Background:

Flowing water has the ability to get filtered by natural processes like the water cycle. The sun's heat causes water on earth to evaporate from streams, lakes, rivers, and oceans. Water in these water bodies contain many impurities. The water vapour rises up in the air from the water bodies, leaving behind the impurities. When water vapour reaches higher, cooler air, it condenses to form clouds. When the clouds are saturated, they release some of the water as rain which goes back to streams, lakes, rivers and oceans as fresh water.

Time: Setting up of apparatus - 25 minutes Process – 2 hours Learning Outcome: Students identify that nature purifies water.

#### Materials:

- ✓ 1 large glass bowl
- ✓ 1 mug/glass
- ✓ A sheet of clear plastic wrap/cling film
- ✓ Some water
- ✓ A piece of string or large rubber band
- ✓ Some ice cubes
- ✓ Some mud

#### Methodology:

- Put the bigger bowl in a sunny place outside.
- Put some mud and water into the mug into the mug, and then add some water to the mixture. Take special care to not drop water in the larger bowl.
- Cover the top of the bigger bowl tightly with the plastic wrap/cling film and tie a string or place a large rubber band around the bowl to hold the plastic wrap in place.
- Place the set up in sunlight.



#### **Observation:**

- The plastic wrap will appear to become hazy.
- The "mist" like appearance that is formed on the inside of the plastic wrap will change into drops of water after some time.
- When the water drops become larger, they will begin to drip. (You can speed up the dripping by carefully moving the bowl don't splash! into the shade or by putting small pieces of ice on the outside of the plastic wrap).
- Water thus will start getting collected in the larger bowl and it does not have salt or mud particles in it.
- Soil and salt particles are left behind in the small bowl.

#### **Result:**

Water from streams, lakes, rivers and ocean, i.e., in the small bowl, evaporates. It condenses to form misty "clouds" on the plastic wrap (inside). As the clouds become saturated, it "rains" into the bigger bowl, returning the water to earth which is pure, leaving behind soil and salt particles in the water bodies as in the small bowl.

#### **Conclusion:**

Nature purifies water.

### My Body

Find the names of various body parts which have been hidden in the crossword below:

R	Н	Е	Α	R	Т	Μ	K	Р	0
S	Т	0	Μ	Α	F	N	0	S	E
Т	E	E	V	L	E	G	F	Р	Y
0	Q	Y	F	С	Α	E	Ι	R	Т
Μ	N	E	0	В	Н	Α	N	D	G
Α	Н	G	0	L	U	М	G	K	M
С	K	D	Т	Α	Е	L	Е	Н	0
H	N	E	C	K	В	U	R	U	0
С	Е	Т	U	Р	N	N	L	W	Т
L	E	Α	R	F	Ι	G	E	R	Н

#### Hidden Words:

Knee Heart Neck Nose

Foot

Eye

Hand Lung

Ear Stomach Finger

Leg

### **Myself and My Family**

Theme: Child's Immediate Environment: Family and Home

#### **Background**:

A child takes for granted his/ her presence within the family but has to be conscious of the people he/she shares life and home with and their needs. Learning Outcome: Develop the ability to:

- Build a healthy relationship with members of immediate family.
- Get interested in knowing their fields of interest and needs.
- Realize that the materials needed at home are obtained from the environment.
   (3.2.1) (3.2.3)

#### Materials:

Photographs of the members of the student's family.

OR

Drawing materials: Some sheets of paper, crayons, pencil, eraser, scale, sharpener, fevicol or glue, needle and thread.

#### Methodology:

Time:

40 minutes

- 1) Students to bring the required material and teacher supervises when they draw or stick pictures of family members, in creative ways.
- 2) Help students to tie up the pages in the form of an album.
- 3) Collate the student's ideas about the favourite activity of his/her family members and explain to them that the sources of materials utilized in the activities by them or by members of their family are derived from the environment.

Students' ideas about the favourite activity of their family	Sources of materials utilized
members	(explained by teacher)
E.g. My mother likes to:	
1) Read a lot (the newspaper and books)	Paper is made from pulp obtained
	from plants
2) Gardening	Fruits and vegetables are obtained from home gardening.
My father likes to:	
1) Paint	Canvas, wood for brush are obtained from plants or have plants origin.
2) Cook	Items used in cooking food are obtained from plants.
My grandmother loves:	
1) Knitting	Wool is obtained from sheep hair.
2) Feeding the dogs and cats around	Eg: Bread and milk are obtained from crops and animals.
	14



#### Observation:

The student becomes aware of the family members and enjoys recalling their favourite interests. The child realizes that materials required for living and survival are obtained from the environment.

<b>Result:</b>	Necessities	of life	are	obtained
from th	e environmo	ent.		

Result: Human beings need to conserve the environment for their own welfare.

Paste a photograph / draw in the space given below as per the instruction.

Myself

#### Name\_\_\_

My favourite activity is \_\_\_\_\_

(Draw/stick a picture showing the activity)



Paste a photograph / draw in the space given below as per the instruction.

Your family member (anyone)



I call him/her

His/her favourite activity is \_\_\_\_\_

(Draw/stick a picture showing his/her favourite activity)



Handout 6B

Any person younger than you Any person older than you I call him/her \_\_\_\_\_ I call him/her \_\_\_\_\_ Favourite activity (Draw/stick a picture showing their favourite activity)

Paste a photograph / draw in the space given below as per the instruction.

### Animals, Plants and Objects

Theme: Child's Environment: Diversity among living and non-living components

#### **Background**:

It is important for a student to

- (i) Imbibe the idea that we share our environment with plants and animals
- (ii) Develop an attitude of friendliness towards animals
- (iii) Desist from plucking flowers and pulling out plants unnecessarily
- (iv) Develop an attitude where he/she values non-living objects.

Learning Outcome: Develop the ability to:

- Recognise that plants and animals live as partners for survival on earth.
- Observe the behaviour of plants and animals.
- Realise the importance of (non-living) objects such as metals, rock, soil etc.
   (3.1.1) (3.1.2) (3.4.1) (4.1.3) (5.2.2)

#### Materials:

- ✓ A garden bed/pots in school
- ✓ Glass bowl and water
- ✓ Discarded household items or collected rocks, shells tec.
- ✓ Used coconut shells/old bowl/clay pot
- ✓ Bird food (wheat/rice grains/millets)

### Activities:

Time:

One Month

- A. To grow a plant in a pot/garden bed
- B. To make a bird feeder from a used coconut shell/old bowl/clay pot
- C. To make a tray/chart/cardboard box of objects (rocks/household objects like caps, empty match boxes and shells)

#### Methodology:

- 1) Arrange to get a few pots/a flowerbed in the school.
- 2) Supervise maintenance of the bed of plants.
- 3) Arrange the used half coconut shells/old bowl/clay pots.
- 4) Arrange for the bird food. (rice grains/wheat/millets)
- 5) Collect for (non-living) objects from the immediate surrounding

#### Activity 7A

#### Group Activity for Growing Plants

The teacher divides the class into four groups to plant four plants:

- Two students make a hole with a stick after watering the soil to make it soft.
- Two students place the plant.
- Two students push down the soil and press the plants in position.
- Two students water the plants.



Students water the plant regularly and observe their growth. The teacher roughly measures them and students count the number of leaves and make general observations.

#### Activity 7B

The teacher arranges some used half coconut shells/old bowl/clay pot to make bird feeders. The bird feeds are put in these bird feeders.

#### The students observe-

- 1. The variety of birds coming to eat
- 2. How the birds eat
- 3. Structure of the different types of beaks





#### Activity 7C

Children bring five objects each, such as rocks, shells, household objects etc. and a chart or a piece of cloth. Students stick and collate them. The teacher may then relate the objects to the environment.

#### **Observations:**

The student:

- **4** Imbibes the habit of observing nature.
- Develops the right attitude towards plants and animals.
- Imbibes the habit of valuing objects and not readily discarding or destroying them.

#### **Result:**

Students develop good observation skills and realize the importance of plants and animals.

#### **Conclusions:**

#### The student:

- Learns to raise plants and experiences the joy of observing their growth through gardening.
- ↓ Learns to patiently observe animal behaviour.
- **4** Recognizes the importance of environmental resources in day to day life.

#### **Discuss/Answer the questions given below:**

Q1. Which animal did you see today/yesterday/the day before and what was it doing?

Animal	What was he/she doing?

Q2. Draw a leaf and colour it.

Q3. Name any plant that is blooming now. (It may be in Hindi/English/Regional language). Draw it if you do not remember the name.

### Local Fauna

**Theme: Biodiversity** 

#### **Background**:

An attempt is made here to help the student develop respect for the environment and learn to appreciate the beauty of nature.

#### Learning Outcome:

After completing this activity the child develops respect for all the animals around him and treat them with compassion.

(3.9.1) (4.9.2)

#### Materials:

- ✓ Cut-outs of animals
- ✓ A sheet of chart paper

#### Time:

80 minutes

#### **Methodology:**

- 1) Field visits to the zoo, a garden, a street, a pond, a forest and see whatever animals possible and talk about them in the class.
- 2) Let them see and learn the names of at least three common animals such as crow, parakeet, cow, sparrow, kingfisher, hen etc.
- 3) Let students narrate a sentence about squirrel, dog, cat, rabbit, horse, mice, elephant, cow, hen etc.
- 4) Let students help to make a list of animals that share their homes the lizard, cockroach, mosquitoes, houseflies, beetle bugs or name a pet if they have one. The
- 5) Teacher can make a chart or poster.
- 6) Teacher extends learning to the national flower, tree and animal.

#### **Observations:**

- **4** The students learn how animals resemble human beings and they need to be treated gently.
- **4** Students learn that we share the earth with animals.

Result: The student understands the importance of animals.

Conclusion: Students learn that we share the earth with animals and are interdependent.

#### **Discuss/Answer** the questions given below:

Q1. Let each student talk about any animal that he/she recognizes.

Q2. Use "join the dots" cards for common animals and students join the dots and recognize the animal.



Q 3. Form two teams. One team makes animal sounds and the other team recognizes the animals by associating it with the sound.

## Let's Craft! A simple-to-make paper whale!

- Start by making a square piece of paper with a newspaper and color it blue and white. To start making the square, fold one corner of a piece of paper over to the adjacent side. To finish making the square, cut off the small rectangle, forming a square (which is already folded into a triangle).
- 2. Color the square blue and white.
- 3. Fold two opposite sides over so that they meet at the fold.
- 4. Fold the tip over to just meet the other folds.
- 5. Fold the piece in half along the central axis.
- 6. Fold the tail up.
- 7. Make a short cut through the end of the fold in the tail. Fold the edges of the tail outwards.
- 8. Draw eyes, fins, and any other patterns you like, and enjoy your whale.



### A Child's School and Friends

Theme: Factors of the environment: air, water, sea, plant, insects

#### Background:

An atmosphere needs to be created to make school a place where a child feels free to express him/herself.

While the child is going through such enriching experiences, the child develops a positive attitude towards his/her friends and well-wishers.

Time: 2 periods i.e. 80 minutes **Learning Outcome:** Children develop love for learning in the school and become concerned about their friends/well wishers.

#### (3.9.1)

#### Materials:

- Recycled/old newspapers (1 cut into a square and 1 rectangle)
- ✓ 2 thin sticks
- ✓ Glue
- ✓ Thread
- ✓ Simple magnifying glass
- ✓ Pieces of string
- $\checkmark$  A piece of paper for making a card

#### Activity 9A

#### Methodology:

To go around the school in a group and then:

- 1) Locate the patch of green and understand that sunlight helps grass and plants to grow.
- 2) Locate the windows in the school and understand the need for circulation of air. They also observe what the name of the school is and count how many story's there are in the building.
- 3) Students make and fly a kite or paper planes under the teacher's guidance/ supervision.



#### Making a Paper Plane



The children understand that air abounds all around, though not seen. It is the air that helps their kites and planes to fly. Teacher tells them that all life on land depends on air.

Result: Students develop love and respect for all factors related to the environment.

Conclusion:Gradually,studentsunderstandthesignificanceofenvironmentalfactorsintheirliveslearn to care for them.

#### Activity 9B Students learn the meaning of 'friend'

Methodology:

- 1) Spell his/her friend's name, know his/her birthday and make a card for the friend.
- 2) Tie pieces of string and hang cards with students' friends' names in the class.

The teacher then explains that in the environment, we have many friends. The children are asked to draw one such friend (they may even draw Sun, the water, a plant, an insect).

The teacher gives the message that the "environment" being our friend, we have to abide by certain dos and don'ts such as (1) do not waste water; (2) love animals, (3) throw garbage in the bin (4) keep the air and water clean.



#### Observations:

Learning becomes fun, students while doing the activity, receive many messages which they learn and build a positive attitude.

Result: Students learn about practices that benefit or harm the environment.

Conclusion: Students develop a positive attitude towards the environment.

#### Discuss/Answer the questions given below:

Q1. What comes into the class rooms from outside through open windows? Is it of any use to us?

Q2. Pronounce the name of the school? (It should be correct.)

Q3. Write the name of your friend. Why do you like her/him?

Q4. Who is your friend outside your house and school?

## Activity 10 Symbol Identification- Traffic Symbols

Theme: Students immediate surroundings













Learning Outcomes achieved:

(3.2.2) (4.6.1) (5.6.1)



# Activity 1 Nature – A Water Filter

#### **Background:**

Flowing water gets filtered by natural processes, like the water cycle, which you have already studied and also by physical filtration by the natural 'bed' present in the earth crust. Filtration is used to purify/clean polluted water.

Learning Outcome: Students deduce that nature purifies water.

#### Materials:

- ✓ A recycled one litre plastic bottle
- $\checkmark$  A pair of scissors
- $\checkmark$  A marker pen
- ✓ Washed small pebbles and a small stone
- ✓ Some washed gravel and sand
- ✓ A jug with some muddy water

#### Time: 35 minutes

#### Methodology:

- Mark the recycled water bottle three out of four parts down as shown in the diagram and cut it with scissors.
- Remove the cap and reverse the upper part of bottle to fit into the lower part (which was cut), as given in the figure.
- Put the small washed pebbles at the bottom of reversed upper part of the bottle, so that the hole of the reverse bottle is covered but not blocked.
- Add some gravel on top of the pebbles and sand on top of gravel. Put a small stone on top.
- Pour muddy water on the stone at the top, so that water trickles down slowly and is ultimately collected in the bottom container.

#### Observation:

 ✓ Water collected in the bottom container is cleaner than the muddy water which was poured from the top on the filter bed in the inverted bottle.

#### **Result:**

✓ The Earth crust has a similar bed naturally present in it, which helps to filter impurities in water.

#### Conclusion: Nature purifies water.

#### **Discuss/Answer the following questions:**

Q1. Discuss, why, in the olden days did, people find the water taken out from deep wells safe for drinking?

Q2. Why is it not safe now to drink water taken out from wells without purifying it?

Q3. Is the tap water in your house purified before you drink it?

#### Did you know?



3/4<sup>th</sup> of the Earth's surface is covered in water!

### Activity 2 Who lives in the Soil?

#### Theme: Soil

#### **Background:**

Soil is often rich in small living organisms which are not visible to the naked eyes. These organisms are important for the soil to maintain its fertility and recycling of matter in the soil.

#### Time: 40 minutes

# Learning Outcome: Students infer that the soil has a variety of life forms in it. (3.9.1)

#### Materials:

- ✓ A recycled one litre plastic bottle
- $\checkmark \quad \text{A pair of scissors}$
- ✓ A marker pen
- Some garden soil
- ✓ A table lamp
- $\checkmark \quad \text{A piece of wire}$
- ✓ A piece of transparent plastic sheet
- ✓ A large rubber band
- ✓ Some moist paper or cloth

#### Methodology:

- Mark the water bottle three out of four parts down and cut it with scissors as shown.
- Remove the cap and reverse the upper part of bottle to fit into the smaller lower part as shown in the figure.
- Cut the wire mesh of a size slightly bigger than the diameter of the bottle and push it down (upper part) the bottle as far as possible.
- Fill the bottle with garden soil and cover the inverted bottle's open end with a piece of transparent plastic/cling film tied with a rubber band.
- Place the lamp in such a manner that light falls on the soil in the bottle; this is to provide heat to the soil sample kept in the reversed bottle
- Put a piece of moist paper/cloth in lower part of the bottle which is to be used as the container to collect small organisms.



Observation: Very small organisms will start moving away from the upper part of the bottle to avoid heat from the lamp and cross the mesh to reach the cooler area, i.e. container (the lower part of the bottle). Result: Different organisms which were invisible in the soil at the beginning of the experiment, are now visible.



- The lamp should not be placed very close to the soil for, the organisms may die before they escape to the bottom of the bottle/ collector/container.
- Setting up of the experiment/handling of the electric appliances is to be only done by the teacher.

Conclusion: Soil has a variety of life forms in it.



### Carbon in Nature

Theme: Importance of Carbon

#### **Background:**

Carbon is an essential element found in all the living forms. Carbon cycles in nature go from living to non-living forms. It is a very essential element, forming the backbone of molecules, supporting structure and providing energy for life. Carbon is present on earth in many forms such as graphite, coal and diamond. It is generally black in colour and leaves behind a black mark on paper. Learning Outcome: Students deduce that carbon is found in nature.

#### Materials:

- Dry leaves
- ✓ A piece of paper
- ✓ A match box
- ✓ A pencil

#### At home:

Ask your parents to heat a spoon full of sugar in a bowl and observe if any changes occur.

#### Time: 35 minutes

#### **Methodology:**

- Put a few dry leaves and a piece of paper in separate ceramic bowls.
- Light match sticks and drop them into the bowls containing leaves and paper.
- Wait for the leaves and paper to completely burn.
- Use the pencil to colour a dark black circle on the paper and rub your fingers on the paper with the pencil circle drawn on it several times and observe.
- At home: Heat a spoon full of sugar in the china dish over a burner and observe.

<b>Observations:</b> Students fill up the last column of the observation in table given below:			
Materials Used	Treatment given	Colour obtained when rubbed on a white paper	
Dry leaves	Burnt		
Paper	Burnt		
Pencil Lead	Rubbed		
Sugar (at home)	Heated		

**Result:** The black ash/material left behind is carbon.

Safety First	• Students should not be allowed to light the match stick. This is to be done by the teacher
Precautions	stick. This is to be done by the tedeler.

#### **Conclusion:**

Carbon is found in nature in:

- Living forms like leaves, products formed from living forms like paper, sugar.
- Non-living forms, like lead of a pencil.

#### **Discuss/Answer the following questions:**

Q1. Very often, we see, some black soot on the bottom of the vessel in which we cook food on gas/stove. What is it? Where did it come from?

Q3. Would we observe black spot on a vessel, if we cook food using a solar cooker?

### Activity 4 Unwanted Foreign Particles in Air Theme: Air

#### **Background:**

The Earth is surrounded by a blanket of air, made up of various gases called the atmosphere. The atmosphere helps protect the Earth and allows life to exist. Without it, we would be burnt by the intense heat of the sun during the day or frozen by the very low temperatures at night.

Anything additional, such as gas, particles or odours that are introduced into the air either by nature or human activity that destroys this natural balance of air can be called air pollutants and such pollutants are harmful to life on Earth. Learning Outcome: Students deduce that air has unwanted particles called 'pollutants'.

#### Materials:

- ✓ A white chart paper
- $\checkmark$  A pair of scissors
- ✓ Some thread
- ✓ Some petroleum jelly
- ✓ A marker pen
- ✓ A punching machine

#### Time: 35 minutes

#### Methodology:

- Cut four equal squares (10cms x 10cms) from the chart paper.
- Use a marker pen to write the location where you plan to put each of the four squares on the top of the square. Write "Class Room," on one poster board square and "Play Ground", "Bus Stop", "Computer Room" on the others (as shown in figure below)
- Punch a hole at the top center of each of the poster board pieces, and pass a thread through it. Have enough long thread to make a loop to hang the chart paper, and now tie a knot.
- Draw a medium-sized circle in the middle of each of the poster board square, of equal size.
- Cover the inside of these circles with petroleum jelly.
- Hang your card boards up in the location that is written on them. Wait for five to seven days, and then collect them.



**Observations:** Examine the petroleum jelly circles using a magnifying lens and look for any dust particles. Next, identify the place/places which has the most dust particles and the area which has the least dust particles. Write your observations in the following table:

Area	Dust Particles	Observations
Classroom	most/quite a lot/a lot/least	
Bus stop	most/quite a lot/a lot/least	
Play Ground	most/quite a lot/a lot/least	
Computer room	most/quite a lot/a lot/least	

Result:

- The maximum amount of dust particles were found in the.....
- The least amount of dust particles were found in the.....

#### Conclusion: Air has unwanted particles called pollutants in it.



**Discuss/Answer the following questions:** 

Q.1 People cover their face when they are caught in a dust storm. Why?

Q.2 What is the difference between the air inside and outside our homes, when there is a dust storm?

Q.3 The smoke particles present in air are bad for health. Why?

Q.4 Which system of our body is affected the most by these unwanted particles and pollutants in the air?

### **Hygiene for Healthy Living**

Theme: Personal Hygiene (Students' immediate environment)

<b>Background:</b> The student learns habits of good personal hygiene in order to remain healthy.	Learning Outcome: Students develop habits of good hygiene such as brushing teeth, taking a bath, washing hands before eating etc. every day without fail. (5.8.2)
Time: One period initially, and then to	<b>Materials:</b>
sing frequently in the class after they	The teacher composes or collects poems and
have learnt it by heart.	songs related to personal cleanliness.

#### Methodology:

- The teacher recites, sings and teaches the students to sing in a chorus with actions, along with him/her.
- Teacher explains what happens to people who do not carry out the daily schedule for personal cleanliness.
- Some samples of poems are recited.

#### **Observation**:

The students start comparing the activities (situation) in the poem with personal habits.

Result: Students understand the importance of activities related to personal hygiene and makes it a habit to carry them out daily.

Conclusion: Students understand that habits of personal hygiene make a person healthy and disease-free.

#### Sample Poems:

#### (Students make a circle and sing along with actions to this age old song.)

(1)

Here we go round the mulberry bush,

On a cold and frosty morning.

This is the way we brush our teeth

On a cold.....

This is the way we wash our face

On a cold.....

This is the way we have a bath

On a cold.....

and so on, the teacher can compose and children go on

#### (2)

Tara Tara, where are you? Suraj, Suraj, find me do. Tell me Tara what did you do? after you got up and went to the loo. Washed myself and brushed my teeth. Had my bath and washed my feet. Wore my dress and set my tresses Carried my bottle and my glass To reach you Suraj, here in the class.

- Q1. Recite a poem or song.
- Q2. Why (any one) of these daily activities of personal hygiene should be a habit?Write (A) in front of things used for keeping the teeth clean.Write (B) in front of things used for bathing.Write (C) in front of things used for keeping hair neat.



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### Writing Slogans for Environmental Conservation

Theme: Conservation of Environment

#### **Background**:

Students learn about the importance of the environment and become environment friendly. Learning Outcome:

Develop a positive attitude towards the environment to help students keep the environment clean.

Students develop a love for plants and animals.

**Materials:** Stories of animals, humans and (3.8.2) (4.9.2) (5.8.2)

plants dealing with the conservation of environment (are composed or collected by the teacher).

Time: 35 minutes.

Methodology: A sample story is given below:

In a thick jungle lived many plants and animals. Which kind of plants and animals do you think live in a jungle? Balu and little Sita used to play in the forest and the animals and trees were their friends. One day, the lion called Balu and said, "Little Balu what should we do? The bear, the sal tree, the hare, the deer are complaining that some people are cutting trees and killing animals."

Balu exclaimed, "Do not worry. I know how to draw and paint and write. I will make posters and post them at the entry of the forest to make those people realise that they are doing something wrong." So Balu made posters which dissuaded the people from cutting trees.

The teacher then suggests some slogans for posters and involve children to make some such



#### Observation:

Students create slogans and learnt the value of conservation.

#### **Result:**

Students think creatively about environmental conservation.

Conclusion:

Students develop a positive attitude towards the conservation of their environment.



Save the Environment and you will Save the Life and Future.



- Ask students to tell a story about:
  - 1. A pond or river or sea.
  - 2. A Mountain
  - 3. A Forest
  - 4. Plains
- The teacher evaluates how well students relate their story to environmental conservation.

						Let	's R	levi	ise!				Ś.		
E	c	0	s	Y	S	т	E	м	х	I	н	М	T	D	L
N	w	т	0	L	P	Q	w	A	c	т	Y	N	х	B	A
E	D	U	C	A	т	E	м	s	R	E	D	U	C	E	M
R	F	٧	н	P	L	G	Т	A	Y	D	N	0	R	н	A
G	м	T	A	W	A	R	E	N	Е	s	s	х	E	A	G
Y	B	R	N	F	U	E	F	A	ŧ	U	D	U	U	P	F
s	F	0	G	N	т	Е	В	С	0	м	P	0	s	т	A
0	P	R	E	v	E	N	т	D	Ε	H	A	с	E	P	н
1	м	N	0	R	с	N	R	E	С	Y	С	L	E	0	c
L	Z	E	B	с	N	A	0	٧	0	U	N	E	н	L	I
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x	1	Т	N	A	R	x	A	c	т	I.	0	N	A	U	Y
A	L	P	н	D	A	T	N	w	5	L	G	Q	v	т	0
Z	٧	N	E	G	c	W	A	N	0	N	т	0	x	1	c
С	0	N	s	E	R	v	A	Т	T	0	N	s	в	0	D
N	E	0	M	т	x	G	1	0	P	Q	U	P	0	N	x

Circle all the words listed below in the puzzle. Look carefully as some words can overlap and run in any direction.

Action	Conservation	Green	Prevent
Awareness	Earth	Nonhazardous	Recycle
Change	Ecosystem	Nontoxic	Reduce
Clean	Educate	Pollution	Reuse
Compost	Energy		

Answer to crossword puzzle on environmental words:



49

### **Plants give us Food**

Theme: Importance of plants as a resource of food

Background:	Learning Outcome:		
Students need to understand human dependence on plants for food, which	Students understand that people depend on plants for food.		
includes basic items as rice, wheat and	(3.3.1) (5.2.2)		
nulses fruits and enices			
puises, nuns and spices.	Materials: Rice, wheat, jwar, bajra, different		
Time: 35 minutes.	pulses, <i>rajma</i> , chickpea etc. and whole spices such as <i>jeera</i> (cumin), <i>saunf</i> (aniseed), <i>kalonji</i> ,		

#### Methodology:

The teacher asks different students to bring one kind of grain/spice each and a piece of cardboard or back of a used greeting card. The teacher helps each student to stick the grains on the card. The cards are then labelled and placed on a table. Students are divided into two groups. Each group identifies the grains/spice on the unlabeled card. The group that identifies greater number of spices and grains, wins.

The teacher informs students that spices and grains come from plants. Teacher shows pictures or specimens to the students or take them out to paddy/pulses / wheat field/a spice garden.

**Note:** There are many food items such as eggs, fish or meat which are obtained from animals which in turn obtain their food from plants.

#### **Observations**:

Children become acquainted with different types of spices and grains; and learn that they come from plants.

Result: Students understand that food comes from plants. Food builds body and gives energy. Human beings depend on plants. So, they must take care of plants and not unnecessarily pluck leaves or uproot plants.

**Conclusion: Plants are important for all living beings** 

- Q1. Give non-labelled cards of grains/spices and let students identify them.
- Q2. Students name other food items obtained from plants.

### Familiarity with objects: Natural and Human made

#### **Theme: Student's Immediate Environment**

#### Background:

Students get familiar with various common articles of use, their nature i.e. whether bio-degradable or not and also natural or human made to build up a healthy attitude towards nature. Learning Outcome: Students:

- Build a positive attitude towards environmental conservation.
- Become familiar with biodegradable and nonbiodegradable materials. (4.9.2) (5.8.2)
- Become familiar with natural and human-made material.

**Materials:** A plastic bottle, a polythene bag, cards or paper, wooden items, flower, chalk, coins, rubber ball, seeds, woolen, cotton clothes, leaves, two pots, soil, water and any other item.

Time: 35 minutes.

#### **Methodology:**

#### Activity 8A

The teacher divides the class into four groups and calls one student from each group one by one to come and pick up any one object. Others of the group answer the questions that the teacher asks.

- What is this?
- What is it used for?
- What is it made of?
- Where does the material of the object come from?
- When it is discarded after use?
- Does it remain the same way or does it change?

The teacher draws two columns and compiles the biodegradable and non-biodegradable objects and tells them in simple words, the purpose.

#### Activity 8B

- Take two similar pots with soil in them.
- In one, put some dry leaves and cover with soil.
- In the other, take the poly bag and cover it with soil.
- Pour some water in both the pots.
- After two weeks, collect the leaves and poly bag from the pots and observe them.

**Observations:** Examine the petroleum jelly circles using a magnifying lens and look for any dust particles. Next, identify the place/places which has the most dust particles and the area which has the least dust particles. Write your observations in the following table:

Items	Source of Materials	What happens if discarded	Human made/ Natural	Biodegradable Non- biodegradable
Leaves				
Poly bag				
Wood				
Coin				
Sheet				
Wool				
Chalk				
Seeds				

#### **Result:**

Students learn what comes from the environment and what is synthetically made i.e. human made.

#### **Conclusion:**

Objects from nature are generally biodegradable and many human made items are non-biodegradable.

**Discuss/Answer** the following questions:

Q1. Why have many governments banned the use of poly bags?

Q2. Write two duties you can perform to help environment.



### Sources of our Food

Theme: Students' immediate environment

Background:	Learning Outcome:		
Students to learn that our food comes from plants and animals which are part	Students learn the value of the living components of our environment.		
of our environment.	(4.3.1)		
	Materials:		
Mode: Group work	Sheets of paper and pencils for making the		
Time: 35 minutes.	list of food items consumed.		

#### Methodology:

Teacher directs students to make a list of food items they consume.

Also note down the sources of food items i.e. plants/animals.

Teacher explains that:

- Food is the only source to provide energy for survival and growth.
- Most of our food is obtained from plants and we are dependent on them for survival.
- One need to wash his/her hands before eating.
- One should enjoy food while eating.
- One should eat all kinds of food not to be choosy

#### **Observations**:

Students observe the importance of plants for our survival.

Result: Students learn:	Conclusion: Students learn:		
i) The importance of food for survival; ii) Human dependence on plants and animals.	<ul> <li>i) Understand the need for the care of plants <ul> <li>– the source of food.</li> <li>ii) They also develop habits of good personal hygiene.</li> </ul> </li> </ul>		

Each student is asked to answer the following:

Q1. What did you eat today?

Q2. Where do these items come from/ where do they grow?

Q3. Did you wash your hands before eating? Why?

Depending on the response of the students, the teacher asks the questions. If the students are unable to respond correctly, the teacher clarifies and explains with suitable illustrative examples.





The words listed below are hidden in the word search puzzle. Some are written across and some are written down. Can you find them all?

ANIMAL	BACTERIA	EAT
FAT	FOOD	FRUIT
MEAT	NUTRIENT	PLAN
WASH	VITAMIN	

ENERGY GERMS Т

FARM GRAIN PROTEIN VEGETABLE

Use the remaining letters to complete the sentence below:

I must eat a \_\_\_\_\_\_ to be healthy.

**Importance of Cleanliness** Theme: Keep the surrounding clean

#### **Background:**

Students learn not to litter their surroundings and to throw waste in the dustbin. Crafting objects help in developing psychomotor ability.

#### Learning Outcome:

Students develop the habit of keeping their surroundings clean.

(5.8.2)

#### Materials:

Pieces of glazed paper of different colours, a pair of scissors, old cans, some gum.

Time: 35 minutes.

#### Methodology:

The teacher rounds off the edges of metal cans if needed. She/he cuts the glazed paper to the size of the can/container and makes the students take the coloured paper of their choice and sticks them on the container. The teacher helps them decorate the can with small pieces of colour paper. This is the waste paper bin. Each student throws the extra bits of paper in the waste paper bin they have just created. Then she teaches them the age old song given below:

Bits of paper Bits of paper Lying on the ground Lying on the ground Make the place untidy. Make the place untidy Pick them up.

#### **Observations**:

Students pick up the paper and litter, and discard them in dustbins.

#### **Result:**

Students do not litter in their surroundings.

#### **Conclusion:**

Students develop the habit of keeping their surrounding clean.

**Discuss/Answer the following questions:** 

Q1. Did you throw waste in dustbin?

Q2. Would you like to pick up waste thrown by your friend on the floor and put it in the dust bin? Give reason.

Q3. Read Gandhiji's story on cleanliness and narrate it to your class.