

A reference book of Science & Technology (Health & Physical Education)

Nirantar

Science & Technology

(Health & Physical Education)

Step-1



Authors

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Nirantar Prakashan

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Preface

Nirantar Science & Technology (Health & Physical Education) book aims at providing both theoretical and practical cognitivity to the students of far and wide having some flair to science, scientific facts and processes with ample activities considering their needs, level, aptitude, intelligence and age factor by creating interest through proper selection and gradation of the subject matter to be taught and learnt. The entire desk of authors and editors claims that the book has come to adopt a thematic and activity centred approach, abundant illustrations and so on in order to make an understanding of science more effective and comprehensive.

This book has been developed as reference material to develop the concept of science and technology from the youngest class and to support the learners of the upper classes. This book describes in detail the lessons related to the science, technology, health and physical studies.

The new version in your hand is solemnly dedicated to those scholars far and wide with a provision of richly sophisticated but only relevant pictures, diagrams, tables, charts, fact files, reasons and logics, etc. as the soul of science. Apart from these, several other efforts have been put forward collectively in order to make the book more concise and student friendly so as to address the requirement of a perfect book to many students and teachers who like to culminate real practice in science in the days to come. Besides this, our another attempt through this presentation is to eradicate some misconceptions to science appeared in the growing mind of students especially in the classroom context by illuminating them in terms of these salient features incorporated within each book of the series.

Home Assignments/Worksheets: The revision exercises at the end of every chapter can be given as home assignments after teaching particular concepts.

Varieties of Questions: Objective type questions like, true or false, fill in the blanks, choose the correct answer, etc. are given in the exercises at the end of every chapter in this book in order to fulfill the objectives of each lesson.

Activities: Numerous activities in the classroom can provide platform for active involvement of students in application of their theoretical knowledge and learning. Thus, interesting activities are given so as to arouse interest of the students in science.

Projects: Lots of activities in the book are dedicated to investigate research projects with information gathering and deducing. Some of these can be individual research projects and others assigned to group of students with an aim to make them more participatory.

Note to the Teacher: This helps the teachers to get some tips in teaching methodology of each lesson as this section attempts to provide teachers with some exposure to science.

Points to Remember: This section helps the students to understand the main points of each lesson.

Quick Reply: It helps the students to answer the quick understanding of the lesson.

Last, but not the least, our sincere thanks goes to **Nirantar Prakashan** for their keen interest in publishing this series of books. We are also thankful to Mr. Shambhu Pd. Pokhrel (School Chairperson), Mrs. Sujita Adhikari Pokhrel (Principal), Mr. Rudra Prashad Khanal (Vice Principal), Mr. Ram Shrestha (Science Teacher), Mr. Badri Neupane (Science Teacher), Mr. Bishnu Bhattarai (English Teacher) at different institutions for their constructive suggestions and support.

Any constructive suggestions and recommendations for the betterment of this series will be highly acknowledged.

- Authors

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Section-A: Living Things

Living and Non Living Things

Key Words

living
movement

non-living
respiration

organism
sense

growth
alive

reproduction

Many things are around us. Some of them are living and others are non-living. A rat, dog, car, tree, flower, pencil and a book are some of the things .



rat



tree



stone



chair



car



pencil



dog



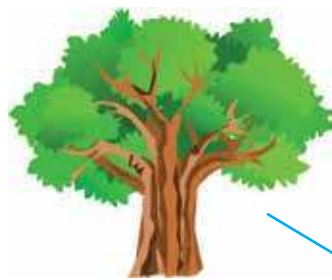
book

There are two different kinds of things in the world, one kind is called living things. Living things eat, breathe, grow, move, reproduce and have sense. The other kind is called nonliving things. Non-living things do not eat, breathe, grow, move and reproduce. They do not have sense.

Living things

Living things are the organism, which are alive. Anything that is alive is called a living thing. There are some traits which are common in all living things, which are:

- Living things move.
- Living things need food.
- Living things reproduce.
- Living things grow.
- Living things die.



tree



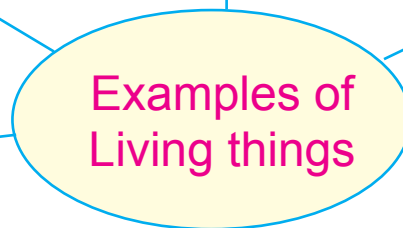
bird



girl



insect



tiger

Living things move.

All living things can move from one place to another but plants cannot move.



boy



tiger



flying bird



swimming fish

Non-living things cannot move. Glass, belt and brick are some non-living things.



Living things need food.

All living things need food to grow and live.



girl



tree



cow



watering plants

Living things reproduce.

All living things reproduce their own kind.



man



plant



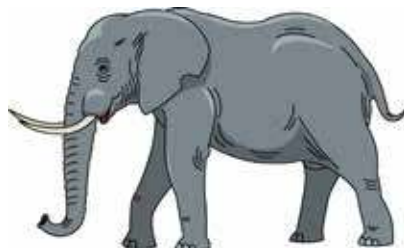
dog with puppy



cow with calf

Living things grow.

All living things grow from the beginning of their birth.



Living things respire.

All living things respire in order to release energy to fuel their living processes.



Do you know?

Living things have a definite lifecycle but non-living things do not.

Non-living things

Non-living things refer to those things which are not alive. The characteristic of life is absent in them. They do not show any trait of life, such as reproduction, growth, respiration, movement, etc.



car

Examples of Non-living things



book



radio



wood



pencil



Points to Remember

- There are many living and non-living things around us.
- Living things can move, need food, reproduce, grow and respire.
- Non-living things cannot move, eat food, reproduce, grow and do not respire.
- Both living things and non-living things are useful for us.

Glossary

traits : a distinguishing characteristic or quality

grow : to increase in size

respire : to breathe



Exercise



A. Choose a word to fill in the blanks below.

non-living

food

living

banana

plant

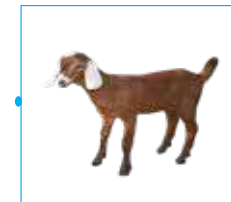
1. The monkey eats _____ .
2. A seedling grows into a big _____ .
3. Living things need _____ to grow.
4. A car is a _____ thing.
6. A snake is a _____ thing.

B. Write **T** for true and **F** for false statements.

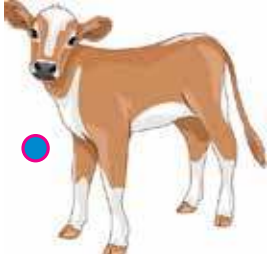
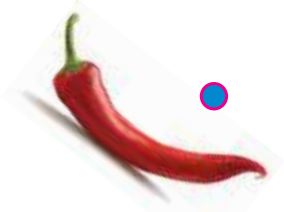
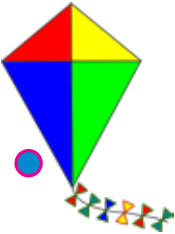
1. The dog has puppy.
2. Snakes move with legs.
3. Plants need soil and water to grow.
4. Tables and pencils cannot grow.
5. Some non-living things can move.

☐☐☐☐☐

C. Match the followings:



D. Match the pictures correctly. One has been done for you.



Non-Living Things

Living Things

A pink line connects the ice cream cone to the 'Non-Living Things' category.

E. Write **L** for living and **NL** for non-living things.

















F. List out the living and non living things from the pictures given below.



Living Things	Non-Living Things
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

G. Name any three non-living things.

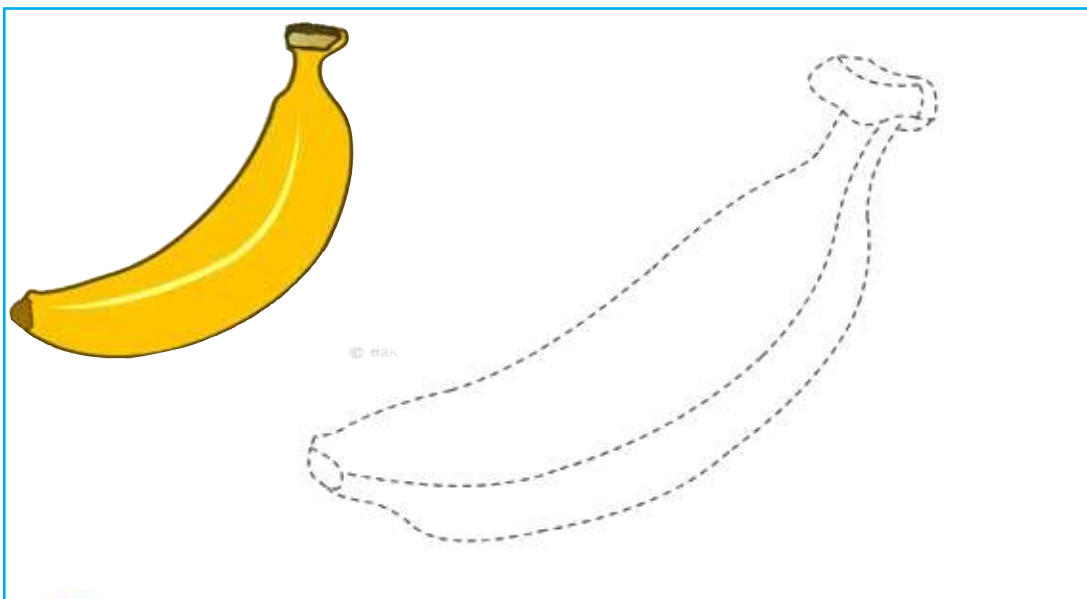
H. Name any three living things.

I. How do you know living things?

J. Write any three differences between living and non-living things.

	Living Things	Non-Living Things
1		
2.		
3.		

K. Join the dots and colour the following picture.



L. Tick (✓) the living things.


☐

☐

☐

☐

☐

M. Match the following:

Cow



Dog



Eagle



Book



Fish



N. Circle the living things from the given alternatives.

mosquito	bottle	giraffe	hen	goat
fan	pencil	flower	grass	hill
book	mobile	crocodile	cloud	

O. Name the following figures.



P. Make meaningful words from the jumbled letters.

EEAGL

ETABL

EPN

EHN

UBS



Q. Write any three characteristics of living things.

R. What things do plants need to make their food?

S. Which animals babies have you seen ? Do they look like their parents?

T. Are you a living thing or non-living thing ? Why?





Project Idea (With the help of teacher)

- I. Collect some pictures of living and non-living things and paste on a chart paper.
- II. Collect pictures of animals and their babies. Paste them on the sheet of paper so that the parent animals come next to its babies. Display them in your classroom.



Note to the Teacher

Make your students to differentiate between living and non-living things. Ask students about the different food of animals. Help your students to know about the growth of plants and animals through pictures and videos.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really seen these living things? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write their names?

a	b	c	d

Unit 2

Plants

Key Words

weak

soft

hard

bushy

strong

straight

branch

thorn

climb

support

Plants grow all around us. They make our surrounding colourful and attractive. Plants are of many kinds. They grow in many shapes and sizes. Most plants grow on soil; some grow in water.

Herbs

Some plants are very small. They have weak and soft stems.

Plants which are very small in size having weak and soft stems are called as herbs.



grass



mustard



cabbage



tomato

Shrubs

Some plants are medium in size. Their stems are hard. They look bushy. They are bigger than herbs. Bushy plants with hard stems are called as shrubs.



hibiscus



tea



rose



lemon

Trees

Trees are big plants. They are tall and strong. They grow straight. Some trees have branches but some do not have branches. **Tall, big and strong plants are called as trees.**



mango



coconut



banyan



pine

Do you know?

- A tree usually has one stem.

Thorny plants

Some plants have thorns.

Plants having thorns are called as thorny plants.



lemon



cactus



rose



bougainvillea

Climbers

Some plants are weak. They cannot stand straight. They need support to stand up.

Plants with weak stems and need support to stand straight are called climbers.



pea plant



grapevine plant



money plant

Creepers

Plants which grow and spread on the ground are called creepers.

They have very weak stems.

Do you know?

- Bushes do not grow as tall as trees.



strawberry



pumpkin



water-melon

Do you know?

- Around 2000 different types of plants are used by humans to make food.



Quick Reply

- Do you think plants grow everyday ?
- Which plants have branches ?
- Do plants grow in water ?
- Which plants have thorns ?
- Name some plants which are found in your surrounding.





Note to the Teacher

Demonstrate different type of plants. Make your students familiar about the local names of different plants of surrounding. Help to identify herbs, shrubs and trees.



Points to Remember

- Some plants are big; some plants are small.
- Very small plants with weak and soft stems are called herbs.
- Small and bushy plants with hard stems are called shrubs.
- Big and strong plants with hard stems are called trees.
- Plants with thorns on them are called thorny plants.
- Plants with weak stems and need support to stand straight are called climbers.

Glossary

attractive	:	having a pleasing look
climbers	:	plants that grow up along the support
bougainvillea	:	a plant that grows on warm climate having red or purple flowers
surroundings	:	everything that is around or nearby, environment



Exercise



A. Choose a word to fill in the blanks below.

soft	thorns	soil	climber	weak	tree
------	--------	------	---------	------	------

1. The banyan is a _____ plant.
2. Most plants grow on _____ .

3. _____ plants need support to stand straight.
4. Herbs have _____ and _____ stems.
5. A lemon plant has _____.

B. Write T for true and F for false.

1. A mustard plant has thorns.
2. Money plant is a tree.
3. Plants need soil and water to live.
4. A mango plant has branches.
5. Grass is a herb.

☐☐☐☐☐

C. Match the followings:



Herb



Climber



Shrub

D. Write H for herbs, S for shrubs, T for tree, C for climber and TH for thorny plants.



E. Answer these questions.

a. What do plants need to live?

b. Why is a money plant called a climber?

c. Write the name of three herbs.

d. Write the name of three shrubs.

e. Write the name of three trees.

f. Write the name of three thorny plants.

g. Write the name of three climbers.

h. Define the followings:

1. herbs _____

2. shrubs _____

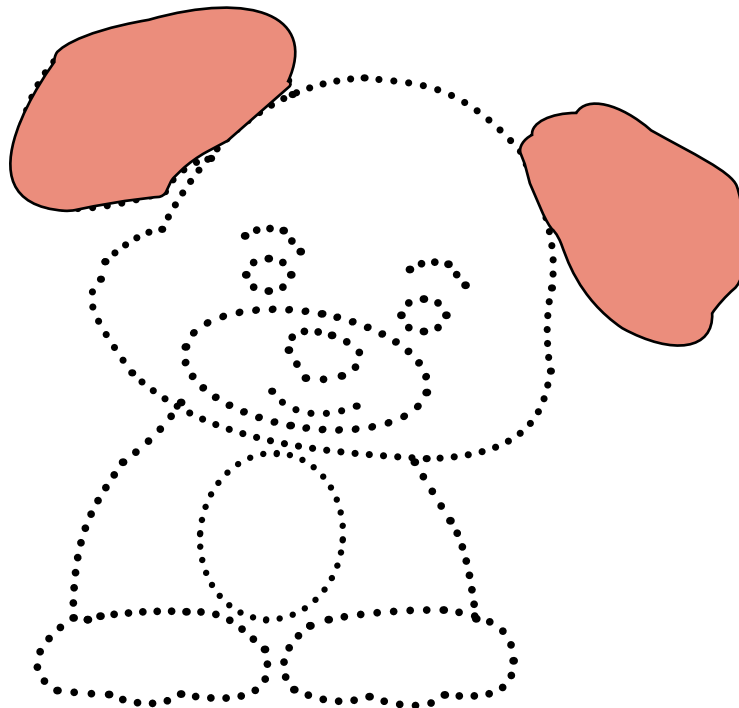
3. tree _____

4. climber _____

5. thorny _____

6. creeper _____

F. Join the dots and colour the following picture.



G. Choose the right words and fill in the blanks.

- a. The Ashok is a plant. (big/small)
- b. The is a climber. (bean/banyan)
- c. The plant grows straight up. (cucumber/papaya)
- d. The plant has thorns. (cactus/banana)

H. Find the names of the given plants hidden in this word search. One has been done for you.



T	P	O	N	E	E	M	G
U	X	B	S	G	Y	D	R
L	E	A	S	H	O	K	A
S	R	N	I	M	N	R	P
I	A	A	M	A	N	O	E
M	I	N	T	N	O	S	V
I	M	A	X	G	Z	E	L
P	I	N	E	O	N	S	N
B	A	N	Y	A	N	D	E

I. Tick (✓) the trees among the given plants.


☐

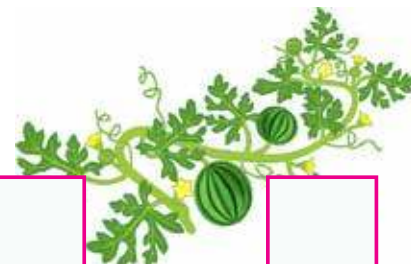
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J. Match the following:

Tree

Climber

Shrub

Creeper

Thorny plants



K. Name the following figures.



L. Make meaningful words from the jumble letters.

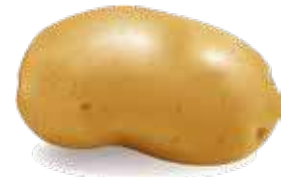
GRE AP

EMOLN

RSOE

TPOATO

EENM



M. Name any two:

- i. Shrubs _____
- ii. Herbs _____
- iii. Trees _____
- iv. Climbers _____
- v. Thorny plants _____

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given plants? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really seen these plants? Response with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write their names?

a	b	c	d

Unit 3

Parts of a Plant

Key Words

nature
seedling

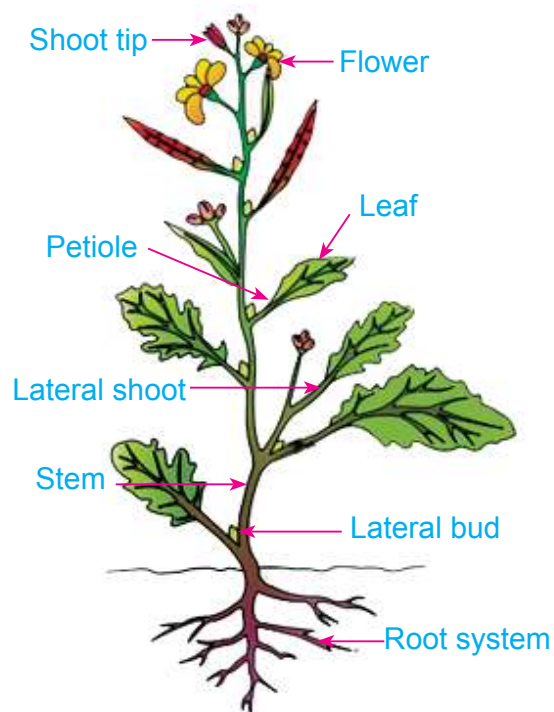
survive
cereal

absorb
bud

attractive
juicy

store

Plants are important part of nature. They can live on land and in water. Plants are very useful to us and we get many things from plant such as food, wood, paper etc. We eat roots, leaves, stems, flowers and fruits of plants. All plants have different parts. Each part serves different functions that help the plant survive.



Roots

The part of a plant that grows under the soil is called root. Roots hold plants in the soil. Roots absorb water from the soil.



radish



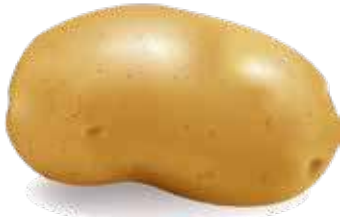
beet root



carrot

Stems

The stem is the part of a plant above the ground. The stem helps the plant to stand straight. It also gives a support to the plants. Some stems have branches.



potato



ginger



asparagus

Leaves

Most plants have leaves. Some plants have big leaves. Some plants have thorns instead of leaves. Some plants have small leaves. They are flat and green in colour. Leaves are also called the kitchen of the plants.



cactus



peepal



lotus



neem



banana



rose



mango



coconut

Leaves help plants to make food with the help of sun-light and water. The part of the plants which are green and help to make food are known as leaves.

Flowers

Most plants bear flowers. Some plants do not bear flowers. Flowers are beautiful and attractive. They are of different shapes and sizes. Flowers change in to fruits. **Beautiful and attractive parts of plant which change into seed is known as flowers.**



marigold



rose



rhododendron



sunflower



lotus



orchid



lily

Fruits

Flowers develop into fruits. Some plants do not bear fruits. Most fruits are fleshy and juicy. They are of different shapes and colours. Fruits contain seeds.



mango



banana



apple



orange



strawberry



pomegranate



grapes



pineapple



jack fruit



gauva



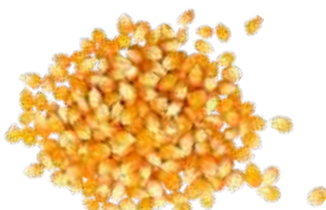
papaya

Seeds

Mostly fruits contain seeds. Some fruits have one seed and others have many seeds. Seeds are of many kinds. They grow into new plants.



gram seeds



maize seeds



pea seeds



papaya seeds



mango seed



orange seeds

Seeds need soil, air, water and sunlight to grow up into a baby plant. The parts of the plant which are found inside fruit and grow up into baby plant are known as seeds.

Do you know?

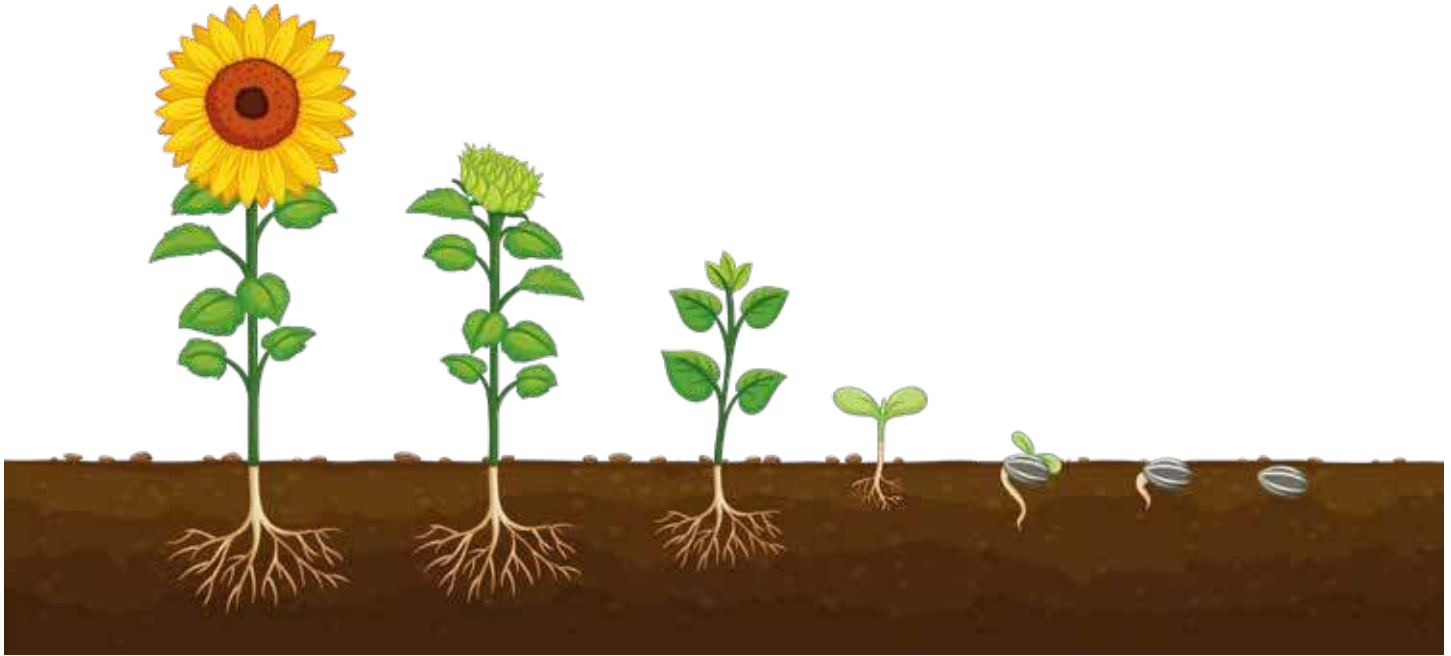
- Bamboo can be a fast growing plant.

Do you know?

- New plant germinate from seed.

Seedlings (Baby plants)

All flowering plants have seeds. Seeds have baby plants inside them. They store food for the baby plants. The three good friends of a baby plant are water, sunlight and air. They help the baby plants to come out from seeds. Then, the little plants grow into big plants.



Do you know?

- Fruits are fleshy and juicy too.



Quick Reply

- What do you find inside a fruit ?
- Name three fruits you like the most .
- Name your favourite flowers.
- What are two plants whose leaves can be eaten?
- What is the colour of leaves ?
- What are two plants whose roots can be eaten ?
- What do you find inside the fruit ?



Points to remember

- Root, stem, leaf, flower, fruit and seed are the different parts of a plant.
- Roots grow under the soil and absorb water from the soil.
- The stem grows above the soil and gives support to a plant.
- Leaves are green in colour and prepare food with the help of water and sun-light.
- Most plants bear flowers.
- Flowers change into fruits.
- Most fruits have seeds inside them.
- Seeds grow into new plants.
- Air, water and sunlight help the baby plant in the seed to come out.

Glossary

absorb : to take in (something, such as water, minerals etc) a natural way

juicy : having a lot of juice

bud : a small part that grows on a plant and develops into a flower

cereal : flower relating to grain



Exercise



A. Choose a word to fill in the blanks below.

baby	plant	food	fruits	water	seeds
------	-------	------	--------	-------	-------

1. Flowers change in _____.
2. Most fruits have _____ inside them.
3. A seed has a _____ inside it.



4. Leaves help plants to make _____ .
5. Roots absorb _____ from the soil.

B. Write T for true and F for false.

1. A stem has many branches.
2. Seeds are found inside the root.
3. Leaves are of different shapes and sizes.
4. Some fruits are fleshy and juicy.
5. Flowers absorb water from the soil.

☐

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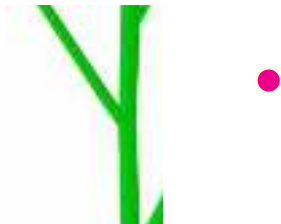
☐

☐

C. Match the followings:



leaf



fruits



root



stem



flower

D. Match the leaf with its flower of the plant.



banana leaf



papaya leaf



lotus leaf



rose leaf



pumpkin leaf



E. Fill in the boxes to get the names of these seeds.

P		
---	--	--



M				
---	--	--	--	--



P				
---	--	--	--	--



G			
---	--	--	--



F. Answer these questions.

1. Name any three fruits that contain many seeds.

2. Name any three fruits that contain single seed.

3. Which part of a plant is fleshy to eat?

G. Define the followings:

root : _____.

stem : _____.

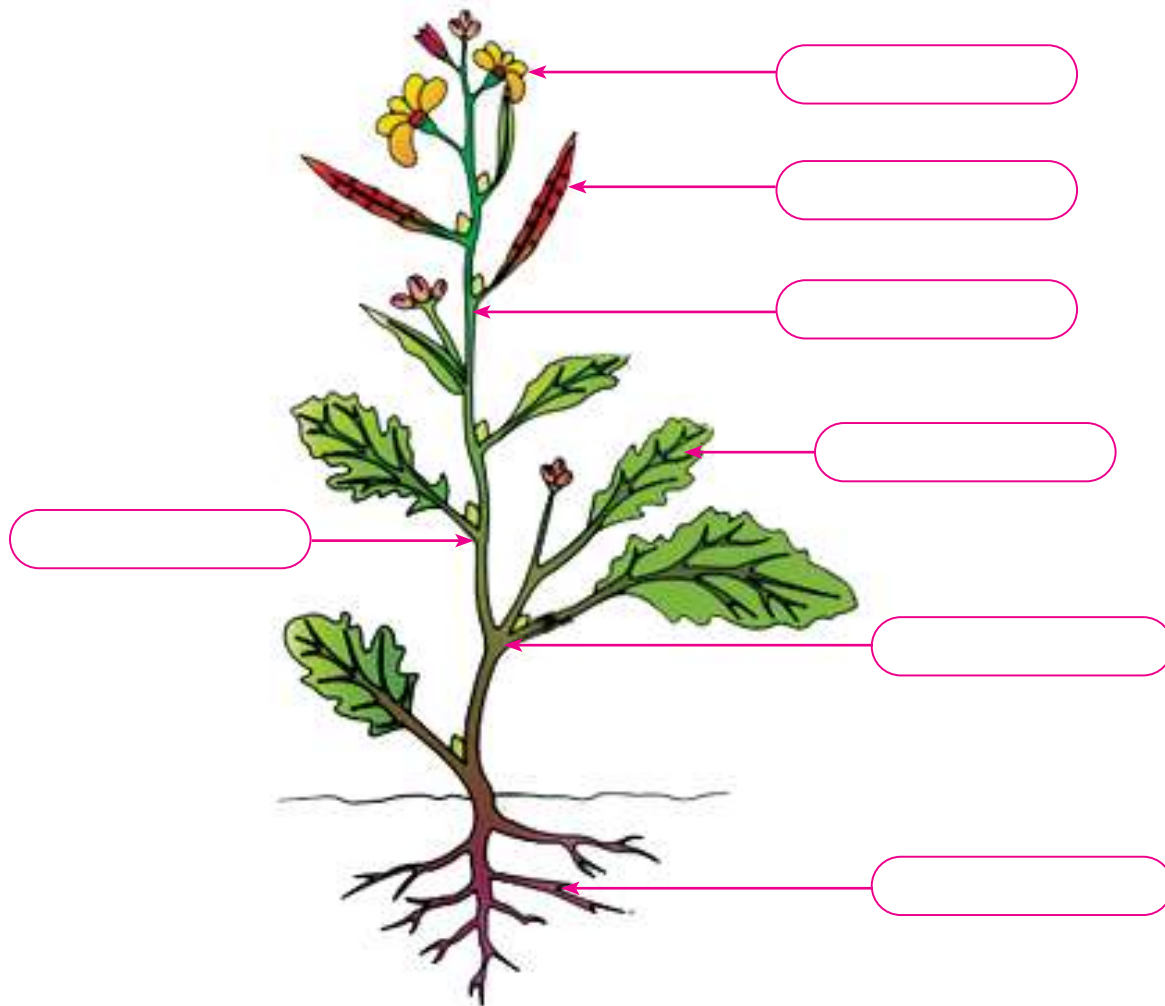
leaf : _____.

fruit : _____.

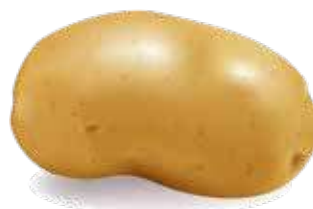
seed : _____.

H. Name the parts of a plant that are above the soil.

I. Label the different parts of the plant.



J. Circle the parts of the plants.



K. Match the following:



L. Name the following parts of plants.



M. Make meaningful words from the jumble letters.

WFLOER



EESD



UFTRI



ESTM



LFEA



Warm up activity



a.



b.



c.



d.



1. Can you identify the given leaves? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really seen these leaves? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write their names?

a	b	c	d



Project Idea (With the help of teacher)

1. Collect different type of cereals and pulses. Paste them on a chart paper with their names.
2. Collect the pictures of different fruits and vegetables and paste them on a chart paper.



Note to the Teacher

- Help your students to identify different parts of a plant.
- Explain how leaves help a plant.
- Visualize different fruits and flowers of different plants.



Unit

4

Useful Plants



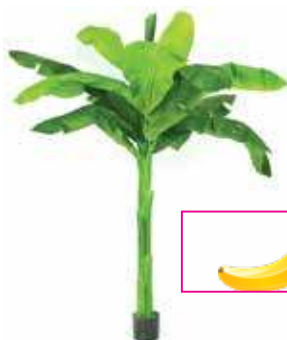
Key Words

treatment medicine cereals pulses fibre spices balance

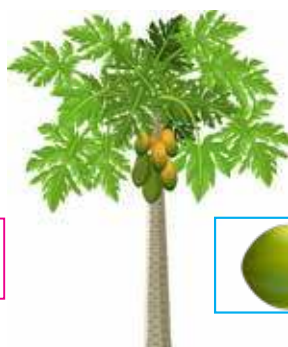
Plants are useful to us in many ways. We get most of our food from plants. Plants give us fruits to eat. Plants are also used as medicine especially in Ayurvedic treatment. They help to keep balance in environment.

Fruits

Some plants give us fruits. We eat different type of fruits. Apple, mango, grapes and bananas are some common fruits.



banana



papaya



mango



water melon



pineapple



apple

Vegetables

We get vegetables from plants. We eat many types of vegetables. Some are eaten raw while others are eaten after cooking them.





radish



potato



tomato



cabbage



brinjal



carrot



pumpkin



onion

Cereals

We use grains as food. Some plants such as maize, wheat and rice give us grains. Cereals contain high level of carbohydrates.



rice plant



seed



rice



wheat plant



seed



roti



maize plant



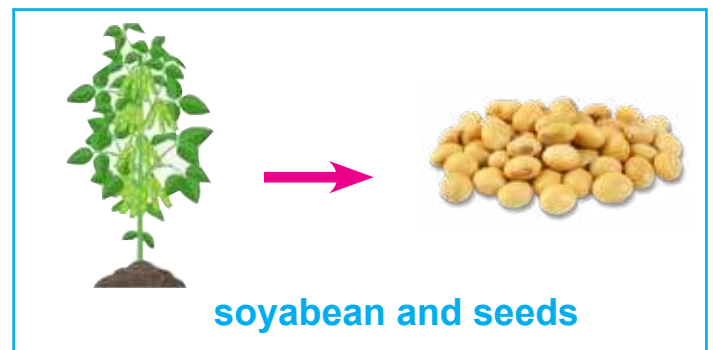
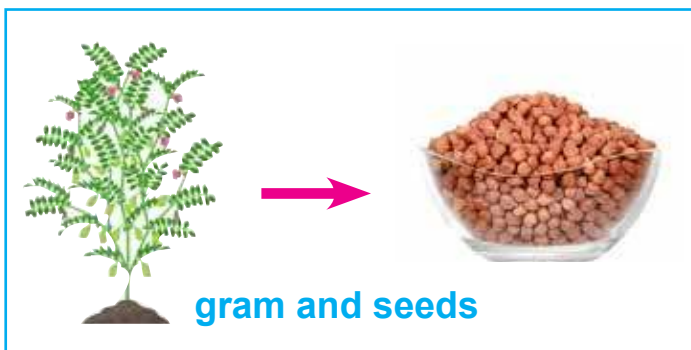
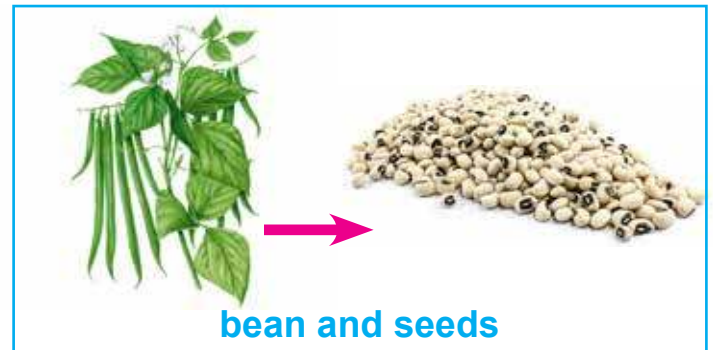
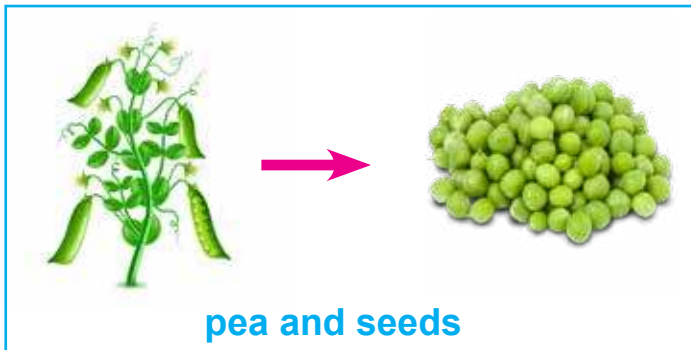
seed



pop corn

Pulses

We get pulses from plants. Pulses are the edible seeds of plants. Pulses contain high level proteins.

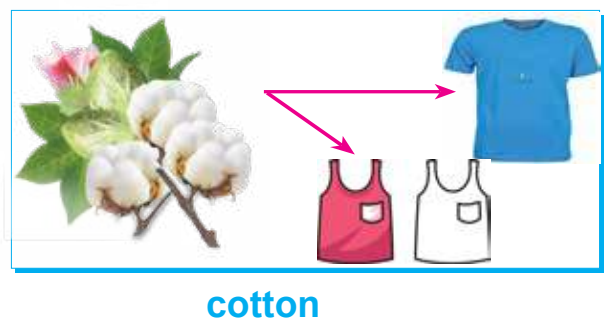


We get sugar from sugarcane.



Fibres

We get fibres from different plants. Fibres are used in making ropes, bags, clothes, mattresses, socks, etc. Bark of the tree is used in making paper.





jute



bark of tree



Oils

Some plants such as mustard and sunflower give us oil. Oil is used for cooking food.



mustard plant



mustard oil



sunflower plant



sunflower oil

Woods

Some plants give us wood. We use wood to make furniture, toys and houses. Trees such as pine, saal and sisau give us wood.



saal



pine



Medicines

Some plants are very important to us. This is because they give us medicines. Some plants such as neem, tulsi, mint and amla are used as medicines.



mint



neem



tulsi

Others

Plants also give some other food. We get sugar, tea, coffee and spices from plants. Ginger, chilli, clove, turmeric are spices. Spices make our food tasty.



sugarcane



coffee



Quick Reply

- Name the vegetables you like the most.
- Name the fruits you like the most.
- From which plants do we get fibres?
- What are vegetables, fruits, cereals, pulses you ate yesterday ?



Points to Remember

- Plants are useful to us in many ways.
- We get most of our food from plants.
- We get fruits vegetables sugar pulses, and cereals from plants.
- Many plants such as tulsi, neem, mint, etc are used to make medicines.

Glossary

- balance** : a condition in which different things exist in correct amounts
- medicine** : a substance which is used to cure illness
- fibre** : a thin thread of natural or artificial material that is used to make clothes, paper, etc
- spices** : a substance having pleasant smell used to add flavour in food



Exercise



A. Choose a word to fill in the blanks below.

pulses

fleshy

sugar

vegetable

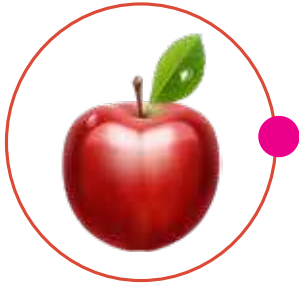
grains

1. Wheat and rice are _____.
2. Brinjal is a _____.
3. Beans and peas are _____.
4. Mango is a _____ fruit.
5. We get _____ from sugarcane stems.

B. Write T for true and F for false statements.

1. Sugar is used to make chocolates.
2. Fruits and vegetables are bad for health.
3. Fruits are used for making paper.
4. Cucumber is eaten raw.
5. Pulses are obtained from jute plant.

C. Match the followings:



● Cotton

● Jute

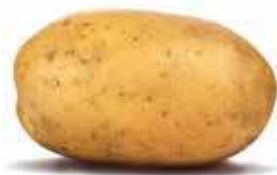
● Apple

● Sugarcane

● Cabbage

● Sunflower

D. Write the names of given vegetables and fruits.



E. Answer these questions.

1. Name any six vegetables.

_____	_____	_____
_____	_____	_____

2. Name any six fruits.

_____	_____	_____
_____	_____	_____

3. Name any three pulses.

_____	_____	_____
-------	-------	-------

4. Name any three grains.

_____	_____	_____
-------	-------	-------

5. Name any three plants that give us medicines.

_____	_____	_____
-------	-------	-------

6. Name any three spices.

_____	_____	_____
-------	-------	-------

7. How are plants useful to us?

_____	_____	_____
-------	-------	-------

8. What are rope and mat made from?

9. What do we use to make our bench, desk and chair?



Project Idea

(With the help of teacher)

1. Collect the figure of useful parts of different plant with their uses.

Plant	Useful part	Uses
		 to make rice.



Note to the Teacher

- Discuss with students about the food from plants they like most for breakfast, lunch and dinner.
- Help them to identify different types of fruits and vegetables which are obtained from plants. Make them understand the importance of plants as the main source of food.



Unit 5

Animals

Key Words

wild

domestic

pet animals

insects

fun

We see many kind of animals around us. Animals are of different shapes and sizes. Some animals are big and some are small.

Wild Animals

Animals that live in the forest are called **wild animals**. The elephants are the largest land animals. The giraffe is the tallest animal.



elephant



giraffe



rhino



deer



wild buffalo (arna)



bear



lion



tiger



zebra



squirrel



leopard



monkey

Domestic Animals

Animals that are tamed and live in our houses are called domestic animals. Some animals are kept as fun at home are called as pet animals. Parrot, dog and cat are pet animals.



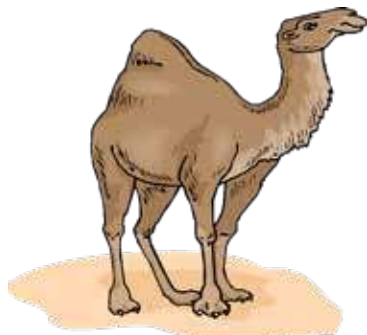
dog



horse



sheep



camel



goat



parrot



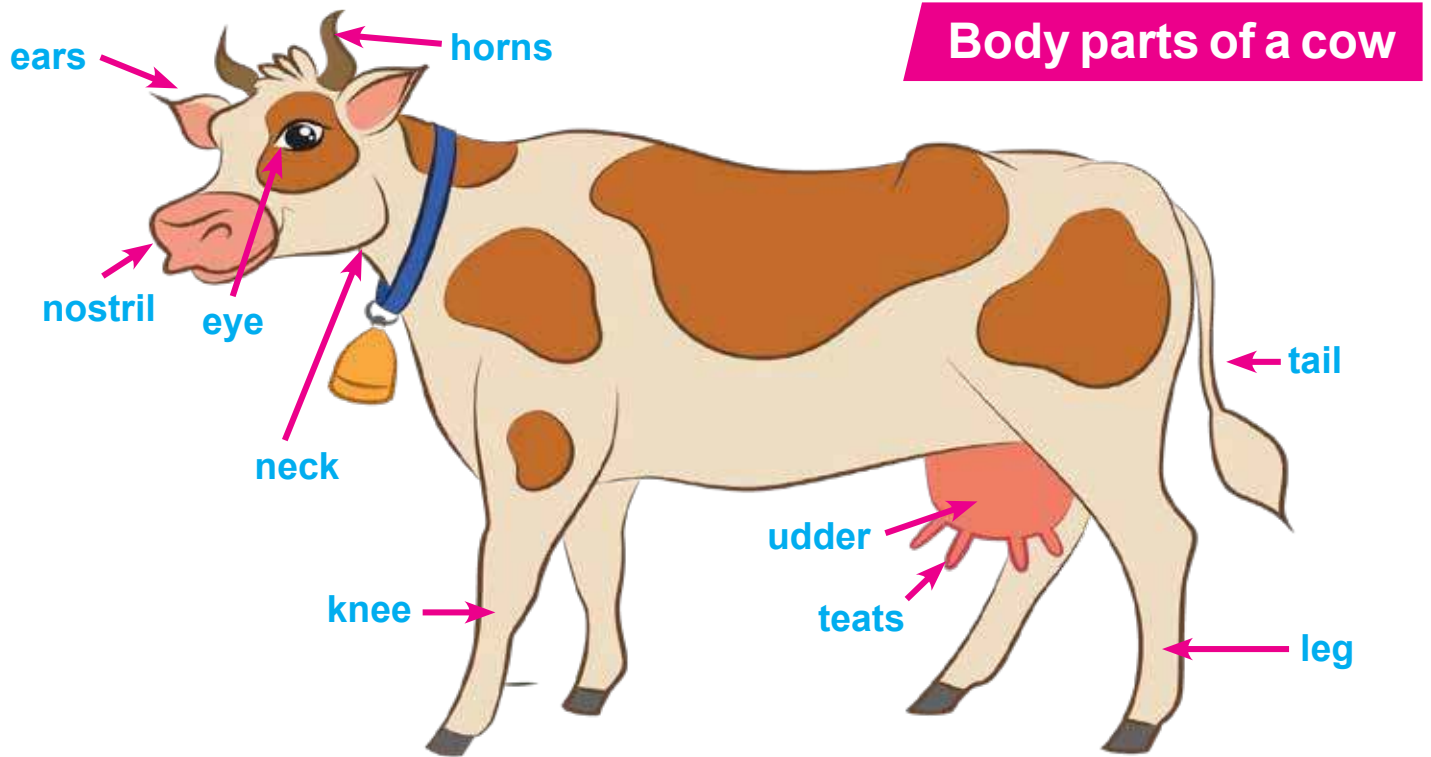
yak



cat



donkey

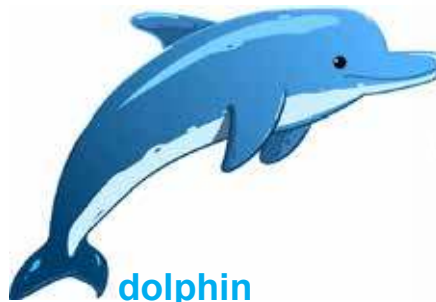


Water Animals

Animals that live in water are called water animals. Whale is the largest animal on the earth. that lives in water.



fish



dolphin



whale



star fish



prawn



octopus

Some animals live in water as well as on land.

Do you know?

- Dogs can see better when the light is low.





frog



crab



tortoise



crocodile



hippo potamus

Birds

Animals having wings, legs and a beak are called birds. Most birds can fly. The wings help them to fly. Ostrich, kiwi and penguin are some birds which cannot fly. Birds are of different colours.



peacock



kiwi



ostrich



owl



duck



pigeon



danfe
(lophophorus)



eagle



vulture



crow



sparrow

Insects

Small animals having six to eight legs are called insects. Most insects have wings. Some insects are wingless and have many legs.



mosquito



butterfly



ladybird



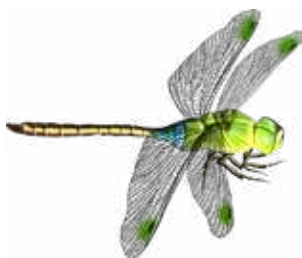
housefly



grasshopper



cockroach



dragonfly



ant



bedbug



centipede



millipede



scorpion

Do you know?

- Snakes do not blink.

Do you know?

- The owl has a small brain.



Quick Reply

- Name domestic and pet animals around your house and school.
- Name some big and small animals.
- Name the biggest animals on the earth.
- How many legs does a goat have?
- Which birds can swim in water?
- How many beaks do a bird have ?
- How many horns do a cow have?



Points to Remember

- Animals are of different shapes and sizes.
- Animals that live in the forest are called wild animals.
- Animals that are tamed and live in our houses are called domestic animals.
- Animals that live in water are called water animals.
- Animals that can fly and have two legs, two wings, and a beak are called birds.
- Very small animals that have six to eight legs are known as insects.

Glossary

- forest** : region or area where we find lots of plants
- fun** : activities that are enjoyable or amusing
- pet** : a domesticated animal kept for amusement and companionship
- danfe** : lophophorus, a type of bird



Exercise



A. Choose a word to fill in the blanks below.

giraffe

wingless

swim

water

domestic

1. Prawn lives in _____ .
2. Cow is a _____ animal.
3. _____ is the tallest animal.
4. Some insects are _____ .
5. Ducks can _____ .

B. Write T for true and F for false statements.

1. Rabbit is bigger than buffalow.
2. Tortoise can live only on land.
3. Wings help birds to fly.
4. Fish can swim in water.
5. Cat is a pet animal.

☐☐☐☐☐

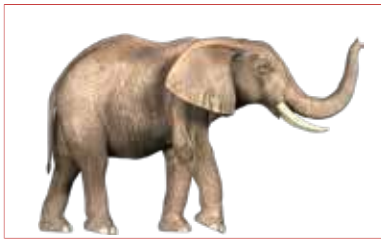
C. Match the followings:



• water animal



• domestic animal



• lives both on
land and water



• animal that lives in
hole



• largest land animal



• flying animal

D. Write the names of animals in the table given below:

cow, buffalo, dog, cat, rabbit, elephant, pig, sheep, horse, rat, frog, monkey, crow, butterfly, deer

Animals with horns	Animals without horns but with a tail	Animals without horns and tails

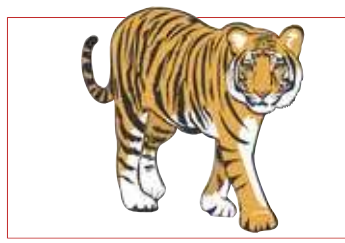
E. Write the names of animals in the table given below.

starfish, cow, lion, whale, goat, zebra, dolphin, donkey, jackel, yak

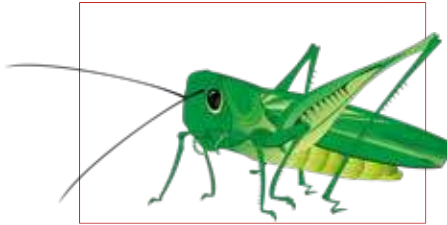
Wild animals	Domestic animals	Water animals

F. Write D for domestic animals, W for wild animals, WT for water animals, I for insects and B for birds.

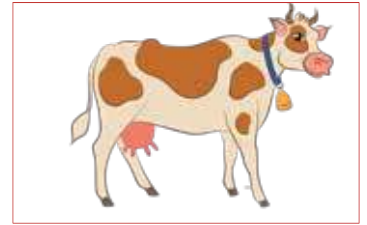


















G. Answer these questions.

1. Name any three wild animals.

2. Name any three domestic animals.

3. Name any three pet animals.

4. Name any three water animals.

5. Name any three insects.

6. Name any three birds.

7. Where do wild animals live?

8. Which is the largest animal in the world?

9. How do you know that some animals are insects?

10. How can birds fly?

11. Define the following:

a. Wild animals _____

b. Domestic animals _____

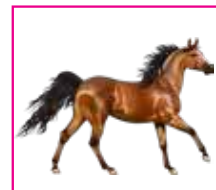
c. Pet animals _____

d. Water animals _____

e. Birds _____

f. Insects _____

H. Tick (✓) the animals which have horns.

☐☐☐☐☐☐☐☐

I. Match the following:



● has wings but cannot fly.

● a tail but no horns.

● two horns and a tail.

● has six legs.

● has fins to swim.

J. Make meaningful words from the jumble letters.

G FRO



RSEHO



OGD



NAT



BARE



K. Name the following figures.



L. Give any two examples of the following:

- i. Four-footed animals _____
- ii. Domestic animals _____
- iii. Animals with horns _____
- iv. Insects with wings _____
- v. Birds _____



Project Idea (With the help of teacher)

1. Study the animals around your house and write their names in the table below.

Domestic animals	Insects	Birds

2. Collect different picture of animals and identify wild, domestic animals, water animals, insects and birds.
3. Draw some of the above pictures and label their body parts.



Note to the Teacher

- Ask students to tell the different kinds of animals around your school and home .
- Tell your students the different parts of animals. Show them the different domestic and wild animals through chart and videos.
- If possible visit them to near by zoo.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given animals? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really seen these animals? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Tick the animals which have two horns.

a	b	c	d



Food, Home and Babies of Animals

Key Words

flesh

grain

worm

shelter

suckle

enemy

nest

burrow

cave

Food of Animals

All animals need food to grow and live. Different animals need different kinds of food. Some animals eat flesh and some eat plants. Some animals eat both flesh and plants. Animals move from place to place in search of food. Animals eat in different ways.

Plant-eating Animals

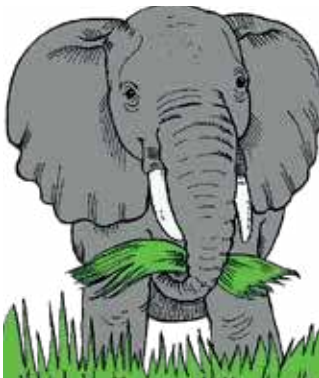
Some animals eat plant to live. They are called plant eating animals. Cow, goat, giraffe, elephant are some examples of plant eating animals.



goat



cow



elephant



giraffe

Do you know?

- Elephants is the biggest land animal.

Grain-eating Animals

Some animals eat grains. They are called grain-eating animals. Pigeon, rat, squirrel are some grain eating animals.



sparrow



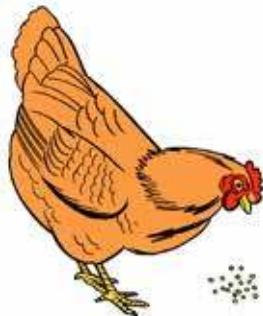
rat



squirrel

Some Animals Eat Insects and Worms

Some animals eat insects and worms as food. They are called insect eating animals. Some frogs, spiders and lizards are common examples of insect-eating animals.



hen



lizard

Flesh-eating Animals

Some animals eat the flesh of other animals. They are called flesh eating animals. Snake, crocodile, leopard and tiger are some examples of flesh-eating animals.



tiger



zebra



vulture



snake



crow

We eat plants, plant products, animal's flesh, other animal products.



egg



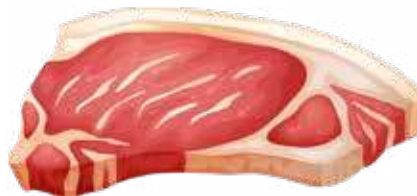
cucumber



carrot



milk



meat



Some Animals Feed their Babies

The female animals feed their babies. Animals such as cow, goat, dog, monkey and buffalo suckle their babies. Birds collect food for their babies.



pig



sparrow



monkey



goat

Homes of Animals

We need home to live in. All animals also need homes. Most animals have their own homes. Home protects animals from the sun, cold, rain, wind and enemies. Different animals have different kind of homes.



web



burrow



den



hole



nest



tree



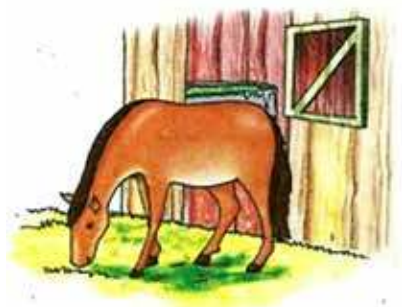
hive



sty



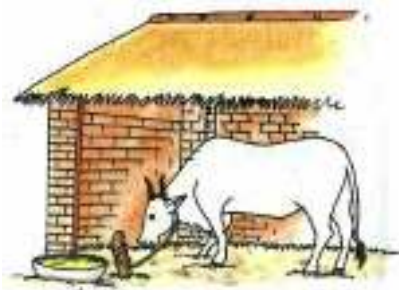
kennel



stable



coop



shed

Babies of Animals

All animals have babies.



goat and kid



duck and duckling



hen and chick



horse and colt



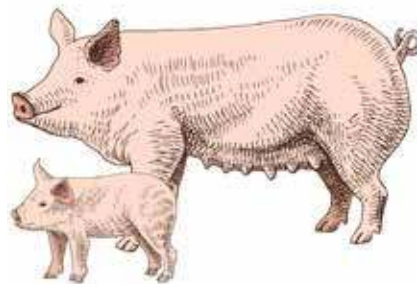
sheep and lamb



cat and kitten



cow and calf



pig and piglet



kangaroo and joey



camel and camlin



lion and cub



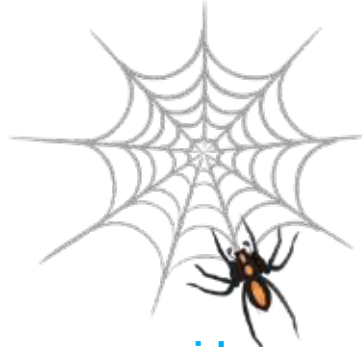
frog and tadpole

Birds Make Nests

Spiders make webs to live, bees live in hives and wasps live in nests.



bird



spider

Hares and rabbits live in burrows.

Snakes and rats live in holes. The tiger lives in a cave.



snake



tiger

We also make a shelter for our domestic animals.



cattle



kennel



stable



coop



Quick Reply

- How many members are there in your home?
- Where do you find monkey?
- Do you like fruits, vegetables or meat ?
- What does a monkey eat?
- Which foods are available in your school?
- What types of food did you eat yesterday?



Points to Remember

- We need food to live. All animals also need food to live.
- All animals need homes to live in.
- Some animals make their own homes.
- All animals reproduce their babies.

Glossary

enemy	:	someone who harms other
wasp	:	a black and yellow flying insect that can sting
shelter	:	a place to live
joey	:	a baby kangaroo



Exercise



A. Choose a word to fill in the blanks below.

homes	hive	stable	lion	food
-------	------	--------	------	------

1. All animals need _____ to live.
2. _____ is a flesh eating animal.
3. Bees live in a _____.
4. Horse lives in a _____.
5. _____ keep safe from heat, cold, rain and enemies.



B. Write **T** for true and **F** for false statements.

1. Horse lives in a den.
2. Only some animals have babies.
3. A cow eats flesh.
4. The baby of sheep is called a kid.
5. Hen is an insect eating animal.

☐
☐
☐
☐
☐

C. Match the followings:

Cow

web

Horse

tree

Spider

shed

Monkey

stable

Dog

kennel

D. Answer these questions.

1. Why do we need foods?

2. Why do we need home?



3. Name three plant -eating animals.

4. Name three grain -eating animals.

5. Name three animals that eat insects and worms.

6. Name three flesh-eating animals.

7. Name three animals that make their own homes.

8. Name three animals that live in house made by humans.

E. Match the followings:

Camel

chick

Hen

kitten

Cat

piglet

Kangaroo

joey

Pig

camlin

F. Match the followings:

Snake

Cow

Rabbit

Hen

Lion

Goat



G. Tick (✓) the flesh eating animals.



H. Match the following animals with their food.



I. Name the following figures.



J. Make meaningful words from the jumble letters.

TIERG



LARIZD



RHOSE



OCRW



BRABIT



KNENEL



SEDH



DNE



BRURWO



IVEH



K. Choose the best answer from the given alternatives.

i. It needs home to live.

- a. plant b. stone c. dog d. cloud

ii. It lives in a den.

- a. rabbit b. rat c. cat d. tiger

iii. It makes a web.

- a. housefly b. cow c. spider d. fish

iv. It lives in a tree.

- a. elephant b. monkey c. giraffe d. starfish

v. It lives in a hive.

- a. cat b. bee c. rat d. spider

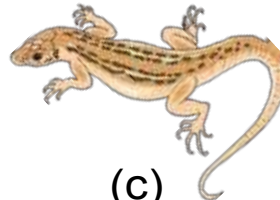
Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given animals? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really seen these animals? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Identify flesh-eating animal?

a	b	c	d



Project Idea (With the help of teacher)

1. Find out the animals that live around your house and write their names in the table below.

1.	2.	3.
4.	5.	6.
7.	8.	9.

2. Study carefully the food habits of the animals around your house and fill in the following table.

Animals	Food
Goat	Grass

3. Collect pictures of babies of different animals and paste them on a chart paper with name.



Note to the Teacher

Discuss different foods of animals. Show them the homes and babies of different animals through audio visual devices.

Unit 7

Care of Animals and Plants

Key Words

tease

manure

scrap

pluck

beat

hunt

take care

look

after

There are different kinds of animals and plants around us. Some of them are useful to us. We get food and their things from them. We have to take care of animals and plants.

Care of Animals

We have to take care of animals. We have to feed them with good food. We have to give them clean water to drink. We have to provide them shelter. We should clean the body of animals with clean water. Animals give us egg, milk, meat, manure, clothes from their skin and fur etc.



We should not tease animals. We should not beat them. We should not hunt birds and animals. We should not throw stone to bee hives and nest of birds. Teasing, beating and hitting animals are bad habits. We should love animals. We should look after animals. We should be aware about animal rights.



Care of Plants

We should always take care of plants. We should water our plants regularly. We should use plants with manure. Plants give us food, clothes and shelter. We should not pluck the leaves and flowers. We should not scrap the bark of plants and break the branches of plants. We should not pull out plants.



Points to Remember

- Animals and plant are useful to us.
- We should always take care of animals and plants.
- We should water plants regularly.
- We get different types of food from plants and animals.

Glossary

useful	:	advantageous, beneficial
manure	:	the waste products of animals (or plants) that is mixed with soil to help plant and crops grow
tease	:	to annoy an animal, especially by touching it
aware	:	knowing or realizing something by force



Exercise



A. Choose a word to fill in the blanks below.

manure

shelter

plantation

food

water

1. We need to _____ plants regularly.
2. Animals need to feed with fresh _____ .
3. Plants need _____ to grow well.
4. Tree _____ should be done.
5. We need to provide _____ to animals.

B. Write T for true and F for false statements.

1. We should not give water to animals.
2. It is good to kick animals.
3. Domestic animals need good shelter.
4. We should not pluck leaves of plants.
5. Bark of the plants should be removed.

☐☐☐☐☐

C. Answer these questions.

1. Write three ways by which we can take care of animals.

2. Write three ways by which we can take care of plants.

3. How are animals useful to us?

4. How are plants useful to us ?

D. Write Yes for good action and No for wrong action.



Discuss the above picture with your teacher too.

E. Match the following:

Cow	•	• wild animal
Tiger	•	• seed
Plants	•	• tease animals
Bad habit	•	• bathing in river
Buffalo	•	• domestic animal

F. Choose the best answer from the given alternatives.

i. It is a domestic animal.

- | | | | |
|--------|----------|---------|---------|
| a. cow | b. tiger | c. lion | d. crow |
|--------|----------|---------|---------|

ii. It is a wild animal.

- | | | | |
|--------|--------|---------|---------|
| a. dog | b. cat | c. hens | d. lion |
|--------|--------|---------|---------|

iii. We should sow it in the soil.

- | | | | |
|---------|---------|---------|----------|
| a. seed | b. leaf | c. eggs | d. bones |
|---------|---------|---------|----------|

iv. We should not do it to animals.

- | | | | |
|---------|---------|----------|-------------|
| a. care | b. feed | c. tease | d. medicine |
|---------|---------|----------|-------------|

v. It lives in kennel.

- | | | | |
|----------|--------|--------|---------|
| a. horse | b. dog | c. rat | d. duck |
|----------|--------|--------|---------|

G. Name the following figures.



H. Make meaningful words from the jumble letters.

LOBUFFA



OGD



NHE



AFEGIRR



LAPNT





Project Idea (With the help of teacher)

Visit a garden near by from school and list out the method to take care plants and animals.



Note to the Teacher

- Introduce your students the methods to care of animals and take precautions while with animals.
- Enable students to understand the importance of plants.
- Demonstrate the method of caring plants and animals through audio and visual device

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given animals? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you kept these animals in your house? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you write their names?

a	b	c	d



Section-B: Environment Science

Our Environment

Key Words

sanitation
particle

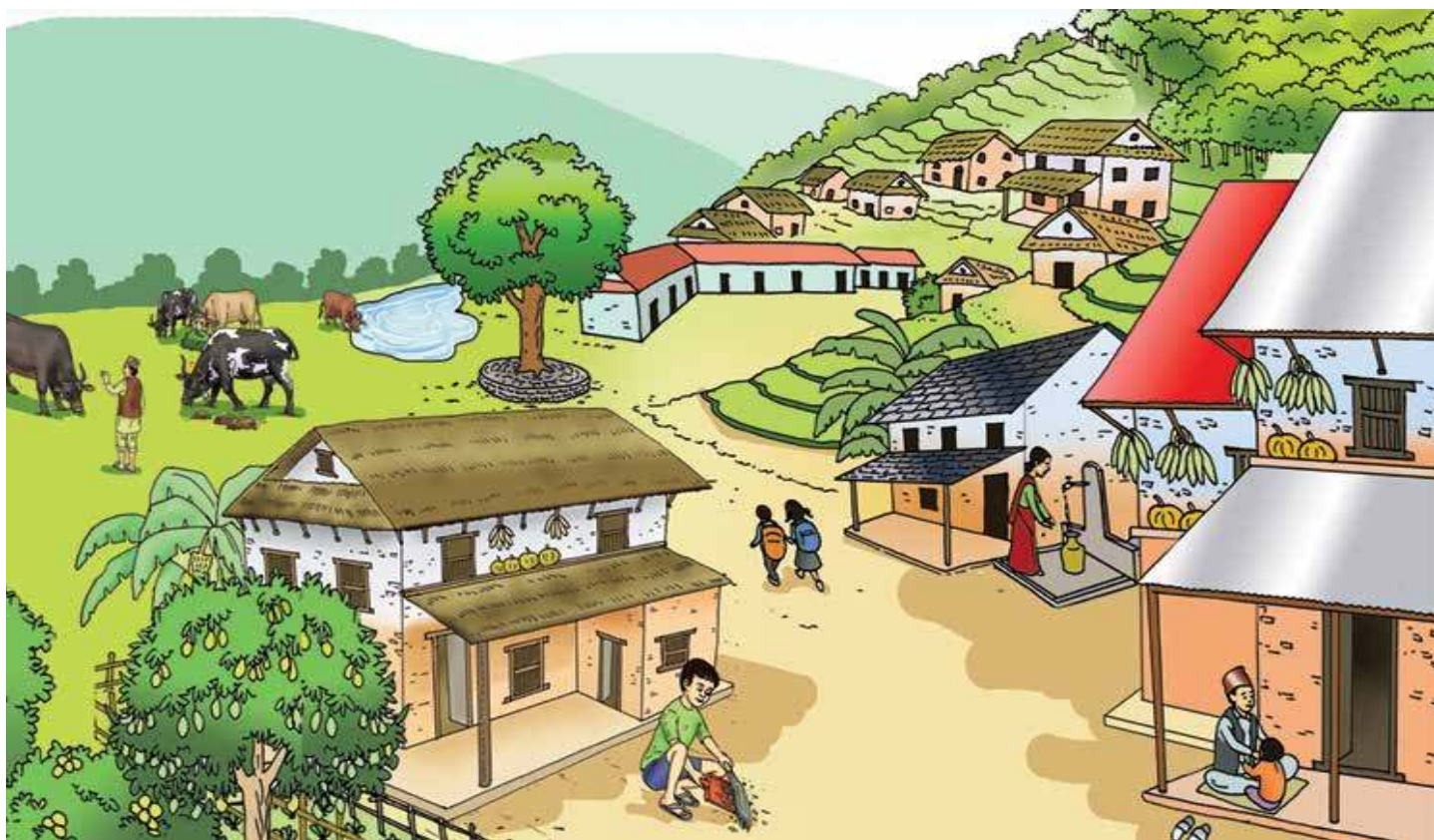
hygiene
garbage

environment
release

vehicle
emit

factor
promote

aware



We can see many things around us. Many living and non-living are around us. **Everything around us is known as environment.** Our environment means our surrounding. Living and non-living things make our environment.

All living beings depend upon the environment. The environment fulfils their needs such as air, food, water and shelter. Thus, we must keep our surroundings clean to live a healthy life. Two things are needed for a healthy life. They are sanitation and hygiene.

Sanitation is the way of keeping our environment and ourselves clean. Hygiene is the practice that we follow to live clean and healthy.

How do our surroundings become dirty?



Air, water and soil are the non-living things of our surrounding. Now a days, the air of our surroundings has become dirty.

The smoke from vehicles, factories, fire, dust particles, etc. make the air dirty. People use many things and produce wastes. They throw wastes such as garbage, plastics, paper and other things in the soil and water. These make soil and water dirty.

Many people bathe and wash clothes in the sources of water. This also makes the water dirty.

How do we keep our surroundings clean?

Some of the ways to keep our surroundings clean are as follows:

1. Garbage, plastic and paper should be put in a container or certain place.
2. Vehicles should be well maintained so that they emit less smoke.
3. Dust filters and smoke filters should be fitted in factories. This helps to release least dust and smoke to the air.
4. We should not bathe, clean and wash dirty things directly in the sources of water.
5. We should promote plantation. The different kinds of plants make our surrounding fresh.
6. We should make people aware about the importance of our surrounding.

Clean and Dirty Environment

Our environment becomes dirty due to some of our activities. We should keep our surrounding clean. A clean environment makes us fit and healthy. Dirty environment makes us sick. We need fresh and clean air to breathe. Plants keep air fresh. We should grow plants near our houses.



Quick Reply

- Do you like clean or dirty environment?
- What is the shape of a ball?
- What is a size of an elephant?
- Do you see trees around your house?



Points to Remember

- Everything around us makes an environment.
- We should keep our environment clean.
- We need fresh air to breathe.
- Plants should be grown near our house.
- Clean environment makes us healthy and fit.

Glossary

healthy	: free from disease or pain
fresh	: clean and pure
dirty	: not clean or pure
irregular	: lacking perfect evenness
garbage	: food Waste / waste material
vehicle	: a machine that is used to carry people or goods from one place to another



Exercise



A. Choose a word to fill in the blanks below.

breathe	dustbin	harmful	environment	big
----------------	----------------	----------------	--------------------	------------

1. Elephant is _____ .
2. Everything around us makes our _____ .
3. We need fresh air to _____ .
4. Dirty air is _____ to our health .
5. Keep all wastes in a _____ .

B. Write T for true and F for false statements.

1. Rocks are non-living things. ☐
2. Smoke makes air dirty. ☐
3. We should plant trees in our surrounding. ☐

C. Answer the following questions.

1. What is sanitation?

2. Write any two ways of keeping our surroundings clean.

3. What is dirty environment ?

4. Name three living things around us.

5. Name three non-living things around us.

6. What is environment?

7. What are man-made things?

8. How does air get dirty?

D. Observe the pictures A and B and answer the given questions.



A



B

1. What are the living things that make our house dirty?
2. What are the non-living things that makes our house dirty?
3. Which environment do you like in the figure above? Why?



Note to the Teacher

- Describe the importance of clean environment. Make your students familiar about different types of living and non - living things surrounding your school i.e. the factors of environment.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you involved in these activities? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Do you want to do these activities?

a	b	c	d



Weather

Key Words

sunny rainy windy winter summer rainbow woollen cotton

Weather is an important part of our lives. Weather includes many things. They are cloud, rain, snow, wind temperature and sunlight. Weather is the day to day condition of the environment of particular place, some times it is sunny and cloudy, weather may be windy, rainy or cold.

Weather changes time to time. It does not remain the same. We need to change our clothes and food according to the weather.

A Hot Sunny Day

The sun shines brightly on a sunny day. We wear cotton clothes to keep cool. We use a moving fan in summer. We like to have cold drinks and ice-cream. We take a bath several times a day and sometimes go for a swim.



A Cold Day

We have cold days in winter. We wear warm woolen clothes. We sit in the sun or near by fire. We like to take hot drinks such as tea and coffee. It snows at some places in the mountains.



A Rainy Day

In the rainy season, it rains a lot. We can see water everywhere and roads become muddy. We use an umbrella and wear a rain coat on a rainy day. We can see rainbows in the sky.



A Windy Day

The wind blows strongly. The leaves, flowers and fruits fall from the trees. Dust, leaves, pieces of paper and several other things fly around during a windy day. Strong wind can damage plant, houses and even kill animals.



A Cloudy Day

Sometimes we cannot see the sun in the sky. It is called a cloudy day. We can see lots of clouds in the sky. Cloudy weather can bring rain.



Identify the Weather?



Quick Reply

- Which weather do you like the most?
- What do you like to have on a hot sunny day?
- How is the weather today?
- In which weather do you see black clouds in the sky?



Points to Remember

- Weather changes from time to time.
- Some days are hot and some days are cold.
- Some days are windy and some days are rainy.
- Sometimes we see a rainbow after it rains.
- On cloudy days, we cannot see the sun.

Glossary

- rainbow** : a structure formed after rainfall consisting of seven colours
- cloud** : a white or gray mass in the sky with very small drops of water
- muddy** : filled or covered with mud
- monsoon** : a wind in the Indian ocean and Southern Asian that brings heavy rain in summer



Exercise



A. Choose a words to fill in the blanks below.

fire	wind	raincoat	food	time to time	clothes
------	------	----------	------	--------------	---------

1. On a _____ day leaves fall from tree.
2. Weather changes from _____ .
3. We wear _____ on a rainy day.
4. On a cold day we like to sit near a _____ .
5. We change _____ and according to the weather.



B. Write **T** for true and **F** for false statements.

1. Roads become muddy in rainy season.
2. Weather is always same.
3. We wear a raincoat in the winter season.
4. We would like to drink lots of water in summer.
5. We can see rainbows in the sky during a rainy day.

C. Match the followings:

Windy day •



Rainy day •



Hot day •



Cold day •



D. Match the columns to complete the sentences.

Summer days are •

• cold

Winter days are •

• a windy day

A strong wind blows on •

• rainy

Monsoon days are •

• hot

E. Answer these questions.

1. What should we wear to go out in the rain?

2. What do you like to drink on a hot day?

3. What changes from day to day?

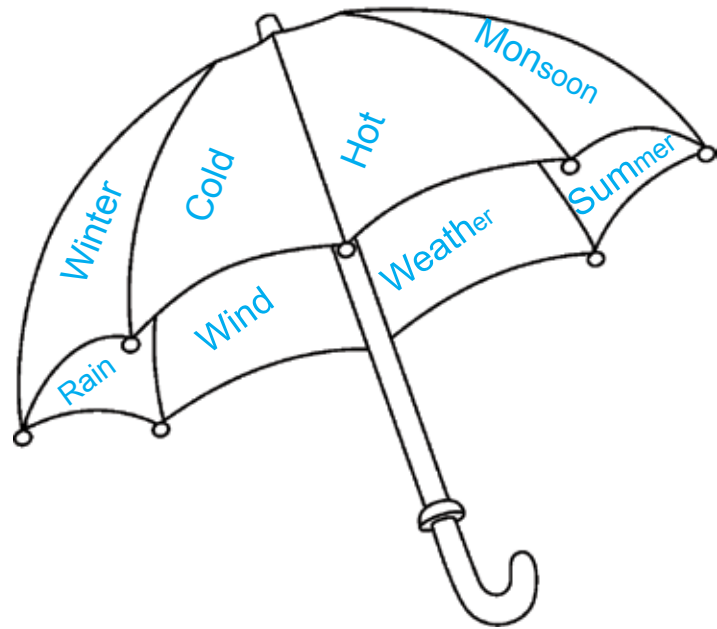
4. What are the effects of strong wind?

5. What can you see on a rainy day?

6. What type of clothes do you wear in the summer season ?

7. Why do we need to wear woollen clothes in the winter?

F. Put circles to the words in the puzzle that you can see in the umbrella.



B	Y	A	I	N	S	V	W
H	H	R	A	I	N	C	I
O	O	S	E	L	S	O	N
N	T	W	U	N	T	L	T
S	U	M	M	E	R	D	E
O	W	E	A	T	H	E	R
O	M	O	N	S	O	O	N
P	W	I	N	D	Y	A	T

G. Choose the best answer from the given alternatives.

i. It is eaten usually in hot day.

a. icecream

b. soup

c. cake

d. tea

ii. It is eaten usually in a cold day.

a. coffee

b. coke

c. soda water

d. ice cream

iii. It is used in rainy day.

a. umbrella

b. rice cooker

c. lamp

d. cap

iv. It is a fast blowing air.

a. monsoon

b. wind

c. storm

d. breeze

v. It is worn in cold day.

a. woollen cloth

b. raincoat

c. umbrella

d. shoes

H. Name the following figures.



I. Make meaningful words from the jumble letters.

AIRN



OCLUD



USN



TESWEAR



BRELUMLA



Project Idea (With the help of teacher)

- How is the weather today? Ask your students.
- Note the weather of each day for six days. Write hot, cold, windy, or rainy under the correct days.

Day - 1	Day - 2	Day - 3	Day - 4	Day - 5	Day - 6



Note to the Teacher

- Give students ideas about different types of weather. Discuss different things required during a sunny day, windy day, cold day and rainy day. Tell your students different fruits and vegetables available in different weathers.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really experienced these weathers? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you write the names of these weathers?

a	b	c	d



Key Words

occupy weight breathe storm empty burn breeze

Air is everywhere around us. We cannot see, touch or taste air. We can feel air when it moves. We cannot live without air. Moving air is called wind. Very strong wind is called storm. The storm is harmful. It uproots trees and breaks the branches.

Air helps to fly kites and balloons. Wind also helps to sail boats. Sometimes, air moves gently. The gently moving air is called breeze. Hanging clothes move slowly in breeze. Sometimes, wind blows very fast.



Air occupies space.



Blow air into a balloon. The air fills up the space inside the balloon. So, we can say that air takes up space.

Air is necessary to breathe.

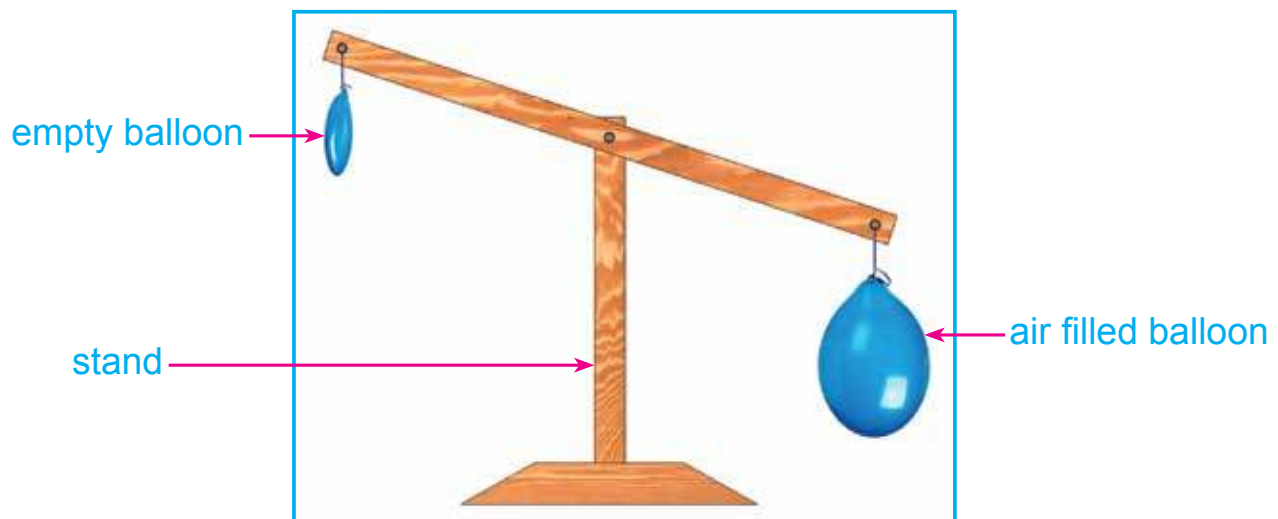


We cannot live without air.

Plants and animals need air. They will die without air.

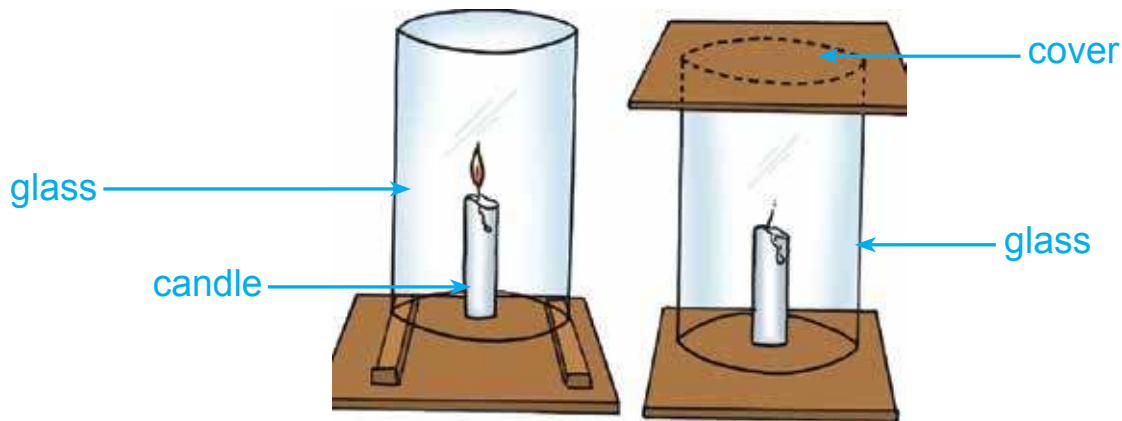
Air has weight.

Keep empty and air filled balloon at the ends of a stick. What you will observe balloon filled with air is heavier and has weight.



Air helps to burn.

Light a candle and cover it with a glass. In a short time, the candle will go out. So, air is needed for burning.



Quick Reply

- Can we see air?
- Name three objects that work because of air.
- Can we live without air?
- Do you think an aeroplane needs air to fly?
- What happens when we cover a lighted candle with a glass?



Points to Remember

- Air is everywhere.
- We cannot see air but we can feel it.
- Moving air is called wind.
- Air takes up space.
- Air is needed for breathing.
- Air is needed for burning.
- A very strong wind is called a storm.

Glossary

storm	: strong wind
wind	: moving air
breeze	: slow moving air
breathe	: taking and releasing air



Exercise



A. Choose a word to fill in the blanks below.

wind	light	animals	space	air
------	-------	---------	-------	-----

1. _____ is all around us.
2. Plants and _____ need air to live.
3. Air takes up _____.
4. We need air to _____ fire.
5. Moving air is called _____.

B. Write T for true and F for false statements.

1. A candle burns without air. ☐
2. Air has no taste. ☐
3. Storm can take away houses. ☐
4. Aeroplanes can fly without air. ☐
5. Air has a white colour. ☐

C. Answer these questions.

1. Why do animals and plants need air?

2. Where can we find air?

3. What is the colour of air?

4. What is wind?

5. As we blow air into a balloon, it becomes bigger and bigger, why?

6. What makes the fan of a windmill turn?

7. A candle does not burn inside a glass, why?

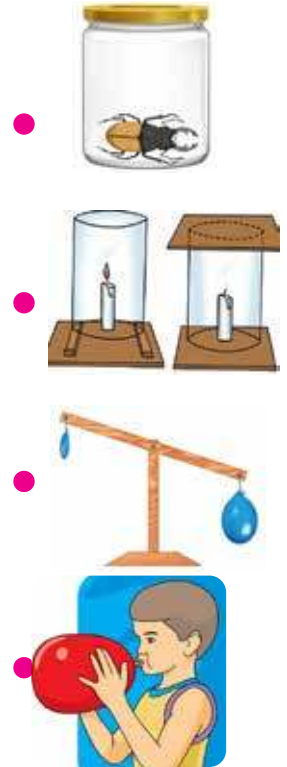
E. Match the following:

Air occupies space

Air has weight

Air helps to burn

Air is necessary to breathe



Project Idea

(With the help of teacher)



Recite this poem with actions.

Little wind

Little wind, blow on the hill-top;
Little wind, blow down the plain;
Little wind, blow up the sunshine,
Little wind, blow off the rain.



Note to the Teacher

- Help your students to understand the uses of air. Perform different activities in front of students to show that air occupies space, air has weight and air helps to burn.

Unit 11

WATER

Key Words

survive absorb frozen permanent fill up

All plants and animals need water to live. We also need water to live. Without water, we cannot survive.



We need water for different purposes. We need water to drink. We need water for cooking food. We need water for putting out fire. We need water for bathing, washing clothes and cleaning things. Plants also need water, plants absorb water from soil. They use water to prepare their food. Plants cannot live without water.



Do you know?

- Most of the earth's surface water is permanently frozen or salty.

Do you know?

- Human bones contain 25% water.

Sources of Water

We can get water from different sources.



rain



river



water fall



pond



tap



lake



sea



well

The main source of water is rain. The rain fills up ponds, lakes and rivers during a rainy season. These ponds, rivers, lakes and waterfalls are some sources of water. We must drink clean water. Sea water is salty and we cannot drink it.



Quick Reply

- Can we live without water?
- Which water is safe to drink?
- Do all plants and animals need water to live?
- How many glasses of water do you drink everyday?
- Which water is salty?



Points to Remember

- Animals and plants need water to live.
- Water is used for drinking, cooking, bathing, washing and putting out fire.
- We get water from different sources.
- Sea water is salty.

Glossary

- water** : a clear liquid having no colour, taste or smell, that falls from clouds as rain, which forms lakes, rivers, streams, reacts and used for different purposes
- rain** : water that falls in drops from clouds in the sky
- prepare** : to make
- weight** : a measurement which indicates how heavy a person or thing is



Exercise



A. Choose a word to fill in the blanks below.

boil	live	health	clean	Non-living
------	------	--------	-------	------------

1. We cannot _____ without water.
2. We should drink _____ water.
3. Drinking dirty water is bad for our _____.
4. We should _____ drinking water if it is not clean.
5. _____ things do not need water.



B. Write T for true and F for false statements.

1. Boiled water is not safe to drink.

2. Sea water consists of salt.

3. Water tastes sweet.

4. Animals need water for breathing.

5. Main source of water is rain.

C. Write the sources of water.



D. Answer these questions.

1. Name six sources of water.

2. Name six uses of water.

3. What is the colour of water?

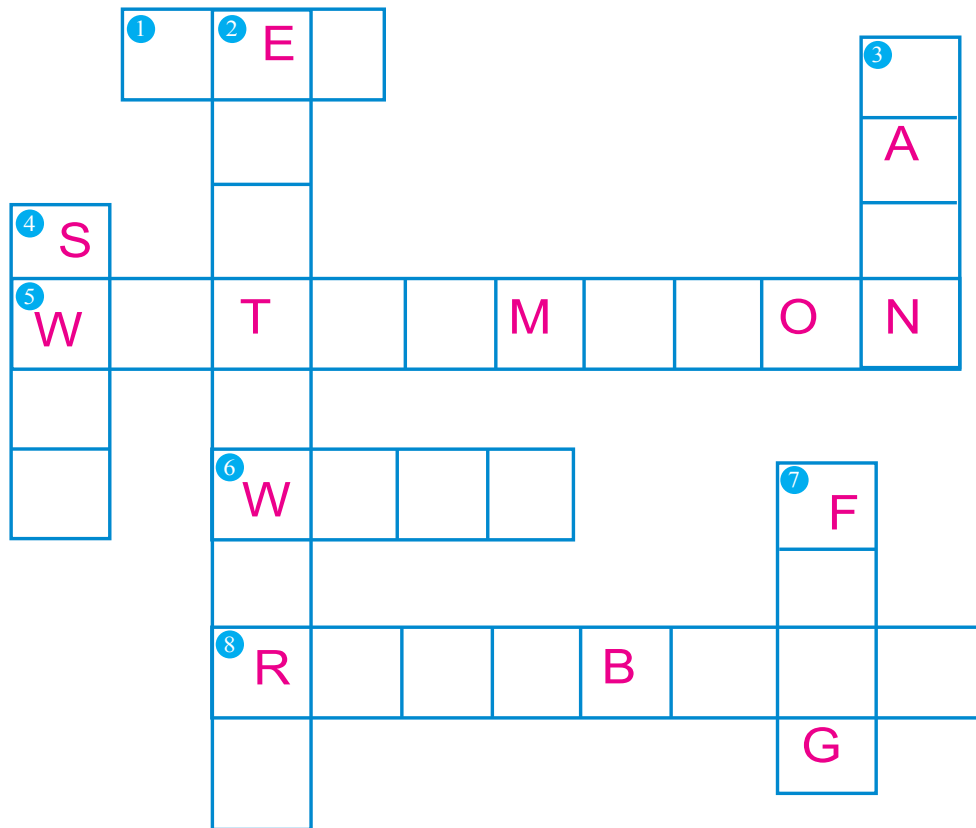
4. Which source of water is salty?

5. What is the taste of water?

6. Which source of water do you drink at your house?

7. Why should we drink clean water?

E. Solve this water crossword.



→ Across

1. Water from this is salty.
5. Fruit with lots of water in it.
6. Moving air.
8. Bow of colour across the sky seen after it rains.

↓ Down

2. A little animal that comes out of the ground after it rains.
3. Water that falls from the clouds.
4. The ugly duckling grew up to be this beautiful bird.
7. A small animal that hops and lives close to the water.

F. Choose the best answer from the given alternatives.

i. It needs water to live.

a. plant

b. rock

c. soil

d. filter

ii. It makes water dirty.

a. garbage

b. plants

c. rainfall

d. tap

iii. It makes water clean.

a. sewage

b. pond

c. rainfall

d. filter

iv. It means water pollution.

a. water getting cleaner

b. water getting dirtier

c. water cycle

d. rainfall

G. Name the following figures.



H. Make meaningful words from the jumble letters.

BAGARGE



INFRAALL



NDPO



MBRUELLA



CEOAN



I. Match the following:

Rainfall

Bathing

Watering plants

Filtering water

River



Project Idea (With the help of teacher)

- Collect pictures for your class bulletin board to show how water is useful.



Note to the Teacher

- Explain your students the importance of water for plants and animals. Demonstrate the different sources of water through multimedia.



Section-C: Matter and Energy

Objects Around Us



Key Words

rough

burn

pleasant

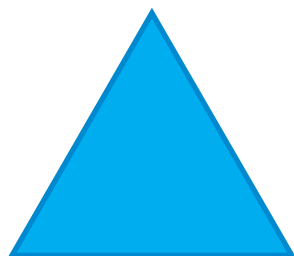
harmful

odour

There are so many types of objects around us. They have different properties. Shape, size, smell, taste, colour, softness and roughness are the properties of objects.

Shape of the objects

We can see objects of different shapes and sizes around us.



triangular



ball



orange



tyre



cylinder



door



coin



ice-cream

Size of the objects

Marble balls, and foot balls are of spherical shape. Brick is rectangular and coin is circular in shape. A ghee can is cylindrical in shape. But, stone has no fixed shape. It is irregular in shape. Objects may have same shape but different sizes.



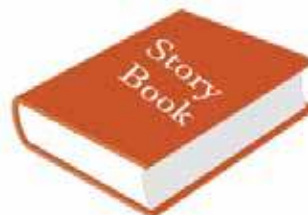
A sheep is small.



A giraffe is big.



My exercise copy is thin.



My book is thick.



A rat is small.



A rhino is big.

Hot and cold objects

Some objects are hot and some are cold around us. Boiling water and burning fire are the examples of hot objects. Ice cream and snow are cold objects.



hot



cold



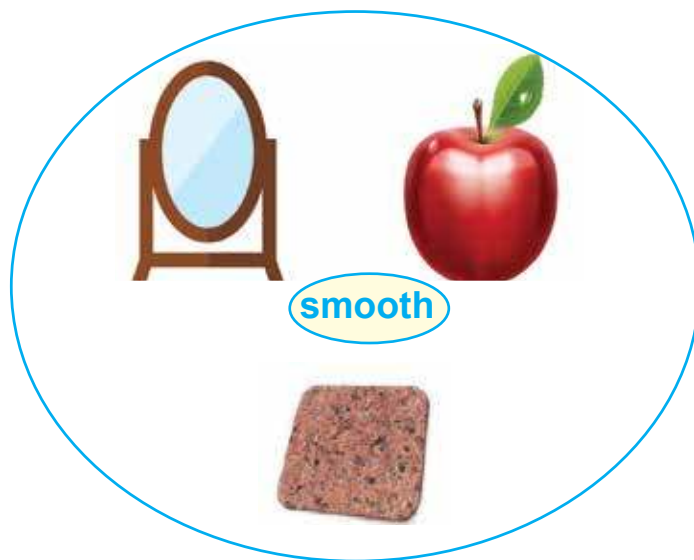
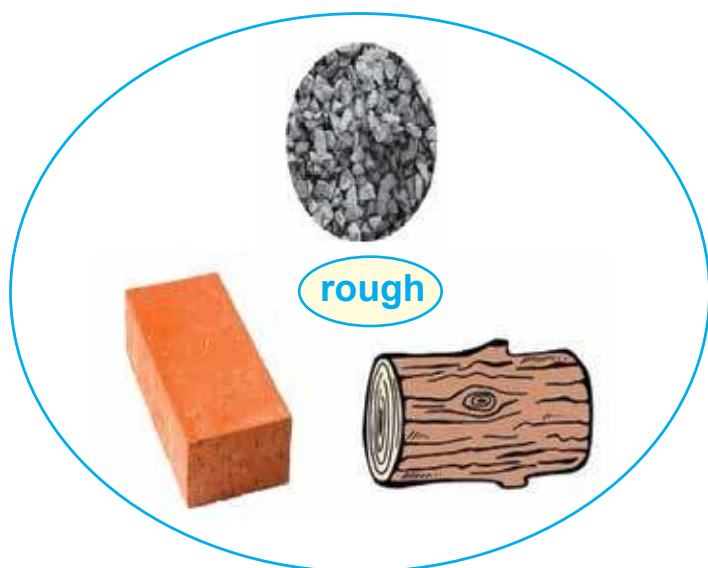
We should not touch very hot objects . They may burn our skin .Very cold objects also effect us.

Hard and soft objects

Some objects around us are very hard. We cannot break them easily. Stone, iron etc. are hard objects. Similarly, some of the objects are soft also. Cotton and wool are the soft objects.



Among the different objects around us, some have rough surface and some have smooth surface.



Smell of objects

Almost all objects have their own smell. Some have pleasant smell whereas some have unpleasant. Smell and taste help to identify the objects but we should not taste and smell the unknown objects. They may be harmful for our health.



pleasant smell



bad smell



Points to Remember

- Shape, size, smell, taste, colour, softness etc. are the properties of objects.
- Hard objects cannot be broken down easily.
- We should not taste and smell the unknown objects.
- Shapes of objects may be spherical, rectangular, circular and cylindrical.
- We should not touch very hot and cold objects.

Glossary

rough : not even or smooth

pleasant : enjoyable, attractive

harmful : causing harm



Exercise



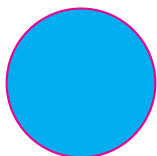
A. Choose a word to fill in the blanks below.

1. A ball is a objects. (circular/spherical)
2. A book is a objects. (triangular/rectangular)
3. The taste of banana is (sour/sweet)
4. A pillow is a object. (hard/soft)

B. Match the followings:



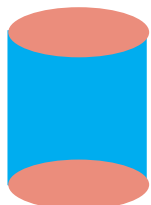
● circular



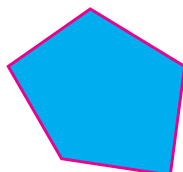
● rectangular



● irregular



● square



● cylindrical

C. Draw different shapes in the given boxes.

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rectangular

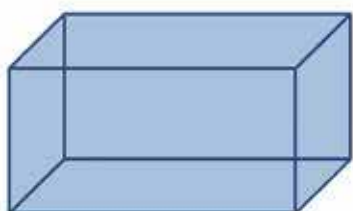
circular

cylindrical

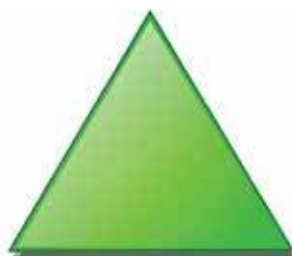
irregular

D. Identify the shape of given objects and write.

rectangular	circular	cylindrical	irregular	spherical	conical
-------------	----------	-------------	-----------	-----------	---------



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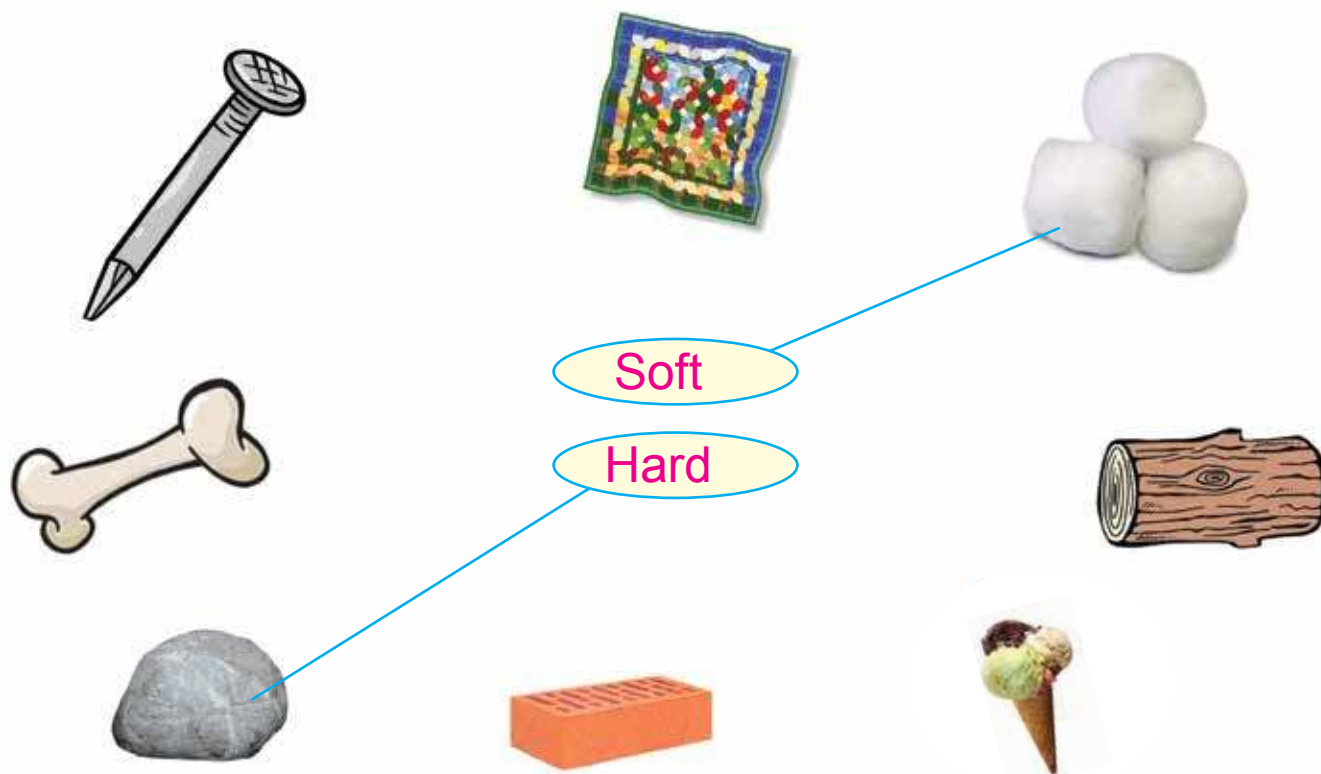


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E. Match the following:



Project Idea

(With the help of teacher)

1. Observe the things in your house, school and fill in the table given below.

Small objects	Big objects
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

2. Take some flour and make dough from it. Make objects of different shapes and sizes with this dough.

Unit 13

Sources of Energy

Key Words

energy

electricity

electric shock

operate

stove

We do several works in our home. To do these works we use different sources of energy. To cook food we use cylinder gas, electric heater, kerosene stove, firewood etc. We use electricity to run TV, computer, radio, fan, refrigerator etc. Hence, electricity, cooking gas, kerosene, firewood are the sources of energy.



Cooking with firewood



Cooking with gas cylinder/gobar gas



Cooking with electricity



Cooking with kerosene stove

Electricity is used in different purposes.

a) To light the bulb.



b) To produce heat from heater, rice cooker, electric jug, iron electricity is used.



c) To operate TV, radio, computer, sound box, electricity is used.



d) To operate motor, electric fan.



We have to be careful while using electricity. We should not touch the open and naked wire. It may cause electric shock.



Cell (battery) is used to operate watch, mobile phone, torch light, remote control of the TV and radio. It also produce is electricity.



We get heat and light from sun. Plants prepare their food in green leaves. Sunlight is needed for that process.

To run the different vehicles, diesel and petrol is used. We use petrol in car, motorcycle while diesel is used in bus, truck. Vehicles can be operated by using electricity also.



Points to Remember

- Energy is required to do work.
- The sun electricity, petrol, diesel, kerosene, cooking gas, firewood, etc. are used as sources of energy.
- Electricity is used to operate electric devices.
- We have to be careful while using electricity.

Glossary

energy	: the capacity of doing work
electricity	: a form of energy
operate	: to work or perform
electric shock	: pain by electric current



Exercise



A. Tick (✓) for true and cross (×) for false statements.

1. Electricity is used to drive cycle.

☐

2. Firewood is a source of energy.

☐

3. We have to be careful while using electricity.

☐

4. Electric fan is used to produce heat.

☐

B. Choose a word to fill in the blanks below.

electricity

wire

energy

source

1. The capacity of doing work is
2. We should not touch the naked
3. is used to light the bulb.
4. Cell is theof energy.

C. Tick (✓) the devices which run through electricity.

☐☐☐☐☐☐

D. Match the following:



Rice-cooker



Iron



Heater



Electric jug

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really used these devices? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write the names of these devices?

a	b	c	d



Sound All Around

Key Words

musical

noise

instruments

silent

quite

We hear sound from our ears. The sensation of hearing is sound. The objects which produce sound are the sources of sound. Animals and musical instruments produce their own unique sound. Flowing water and blowing air are also the sources of sound.



Musical Instruments

Sound also helps to identify the objects.

The sound of some animals are as follows.

Animals	Sounds	Figures
hens	cackle, cluck	
goats	bleat	
frogs	croak	
flies, bees	buzz, hum	
ducks	quack	
doves	coo	
dogs	bark	
crows	caw	
cows	moo	
cats	mew, meow	

Musical instruments produce pleasant sound. We enjoy to listen such sound.



guitar



harmonium

Unnecessary sound is called noise. Flying mosquito sound is a noisy sound.



We should not produce loud sound at classroom, library, hospitals, temples and other public places.





Points to Remember

- The sensation of hearing is sound.
- The objects which produce sound are the sources of sound.
- Different animals produce different types of sound.
- Musical instruments produce pleasant sound.
- Unnecessary sound is called noise.

Glossary

- noise** : unpleasant sound
- silent** : making no sound
- musical** : relating to music
- pleasant** : enjoyable, attractive, friendly



Exercise



A. Choose a word to fill in the blanks below.

sound	ear	unpleasant	sources	bark
-------	-----	------------	---------	------

1. While taking is produced from our mouth.
2. Noise is thesound.
3. Frog croaks while the dog
4. Loud sound effects our
5. The objects which produce sound are the
of sound.

B. Write the name of objects which produce sound.

C. Match the following:



Madal



Bell

Guitar



Harmonium

Flute



Whistle



D. Listen the sound produced in the surrounding and write the source of them.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really used these devices? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write the names of these devices?

a	b	c	d

Unit 15

Heat and Light Energy



Key Words

stove

energy

careful

harmful

smoke

sudden

The main source of heat and light is the sun. There are different sources of light such as torch, lamp, the sun, the moon, the stars and fire.



There are different sources of heat energy such as fire, heater, stove, etc. Heat helps us to keep our body warm and to cook food. Heat from sun warms the earth. The sun also helps to dry our clothes.



Different uses of Fire

We need firewood for burning. We like to sit near by the fire in winter. Fire energy is useful for cooking food. We get fire energy from burning wood, kerosene, cylinder gas, animals dried dung, etc.



If we misuse fire it is harmful to us. We should be very careful while using fire. It may cause accident, fire produces more smoke on burning things. The smoke makes air dirty.

Fire may burn our body parts when we are careless. Sometimes fire causes loss of property and lives.



Points to Remember

- Light and heat energy can be obtained from different sources.
- Electric bulb, torch light, the sun, the moon, the stars, and fire are the main sources of light.
- The sun, fire, electric heaters, cylinder gas and kerosene stoves are some sources of heat energy.
- Heat energy is needed for cooking food, making our body warm, etc.

Glossary

sun	: the main source of energy
accident	: a sudden event which occurs in unplanned way
fire	: the light and heat, especially the flame produced by burning
energy	: capacity of doing work
careless	: done, made or said without enough thought of attention



Exercise



A. Choose a word to fill in the blanks below.

gas	light	dung	heat	stars
-----	-------	------	------	-------

1. _____ cylinder is used to cook food.
2. Animal _____ is used for cooking food.
3. We get light from the _____.
4. The sun is the main source of _____ and _____.

B. Answer these questions.

1. Name any three uses of fire energy.

2. Name any three things that provide us light energy.

3. Name any three things that provide us heat energy.

4. How do our wet clothes become dry?

C. Answer the following questions.

1. Write any two effects of misuse of fire.

2. Write any two uses of electricity.

D. Choose the best answer from the given alternatives.

- i. It catches fire easily.

- | | |
|-------------|--------------|
| a. kerosene | b. fire-wood |
| c. cow dung | d. rock |

- ii. It is used to produce light.

- | | |
|-------------------|--------------|
| a. candle | b. gas stove |
| c. kerosene stove | d. fire-wood |

- iii. We should play with fire.

- | | |
|--------------|-----------------|
| a. sometimes | b. always |
| c. never | d. once per day |

- iv. A gas stove needs it to make fire.

- | | |
|-------------|--------------|
| a. gas | b. coal |
| c. kerosene | d. fire-wood |

- v. It is used to make fire in villages.

- | | |
|--------------------|--------------|
| a. fire-wood | b. gas |
| c. electric heater | d. induction |

E. Match the following:

Candle

Kerosene lamp

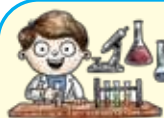
Fire-wood

Electric lamp

Kerosene Stove



F. Name the following figures.



Project Idea

(With the help of teacher)

- Write the different sources of light and heat energy used in our daily life and show it to your teacher.



Section-D: Technology

Communication and Information

Key Words

Communication
publication

device
information

internet

technology

application

We talk to family members at home. We communicate with our teachers and friends at school. It is not necessary any devices if we are close to one another. But, if we are not close to each other, we use different devices to communicate with them. Telephone and mobile phone are the common devices for communication and information.

To tell and listen something to each other is communication. Objects used to communicate are called means of communication.



Now a days, internet makes the communication easy. We can do video call and voice call from computer and mobile phone using internet. E-mail, massaging and chatting services are also available through internet. Internet is the modern technology of communication and information.



Laptop computer



Desktop computer



We use different applications in mobile phone and computer . Face book, you tube, messenger, viber, google search etc. are the common applications. We can share the photos and opinions through facebook. Viber and messenger are used to send message. Voice call and video call service is also available in messenger and viber. We can watch and upload different videos in youtube. We can search anything in google. It is the storage and source of knowledge.



Television, radio, FM radio, newspaper and books are also the sources of information. News and different entertaining programs are delivered through television and radio. In nepal, so many channels of television and newspaper publications are providing the services of information.



Radio



Television



Newspaper

Watching or listening or reading news is a good habit. Sometimes we have to listen music and play games in mobile or computer. Listening with loud sound causes noise and may affect our ears. We should not sit near to television while watching. Watching television and playing mobile for a long time is not a good habit. It may affect our eyes.



Points to Remember

- Exchange of information is the communication.
- Telephone, radio, T.V., newspaper etc. are used to get information.
- Internet has made the communication more comfortable.
- Watching television and playing mobile for a long time is not a good habit.

Glossary

communication	: exchange of information
technology	: practical application of knowledge
application	: the act of applying
information	: fact about situation



Exercise



A. Choose a word to fill in the blanks below.

radio

television

telephone

newspaper

1. Read me to know the news. I am _____.
2. Watch me for news and programs. I am _____.
3. Dial the number to talk others. I am _____.
4. Listen me for news and programs. I am _____.

B. Write T for true and F for false statements.

1. Internet makes communication easy.
2. Listening with loud sound is good habit.
3. Radio is used to watch the news and programs.
4. Newspaper is a source of information.

☐☐☐☐

C. Match the following:



Radio

Television



Mobile phone

Newspaper



Desktop computer

Laptop computer



D. Answer the following questions.

a. Write the name of any four devices of communication.

_____	_____
_____	_____
_____	_____
_____	_____

b. Write the devices of communication used in your house.

E. Tick (✓) write for good habit and cross (×) for bad habit.

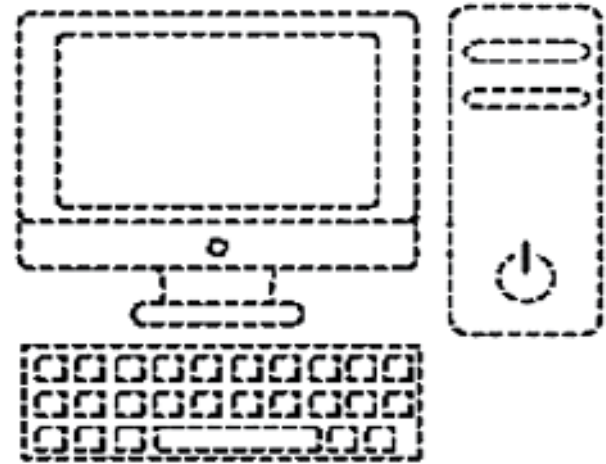

☐

☐

☐

☐

F. Join the dots and colour the given figure.



Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really seen these devices? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you write their name?

a	b	c	d

Unit 17

Means of Transportation

Key Words

Transport	boats	carts	passengers	public
government	drive	distance	travel	

We generally walk for shorter distance and take any transport for longer distance. In olden days bullock-carts, horse driven cart and boats were only means of transport for commuting from one place to another. These means are still used in villages to travel and transport things. Animals like donkeys, bulls, mules, camels, and asses are used to carry loads for longer distances.



Load carrying by bulls



Load carrying by mules



Load carrying by camels

The various means of Transport available are:

Road Transport

Roads connect different villages, town and cities. The most common road vehicles include buses, trucks, motorcycles, scooter, rickshaw, cars, vans and bicycles. Bus carries a large number of passengers near about 50-60.



Bus



Microbus



Rickshaw



Motorcycle



Scooter



Car



Cycle



Tempo

Rail Transport

Rail transport includes all transport over rails or tracks. This includes trains (both passenger as well as goods train), metros and trams. Rail transport carries more people or goods compared to road transport.



Train



Mono train



Tram



Metro train

Air Transport

Air transport includes all transport through the air such as airplanes and helicopters. It is the fastest means of transport and connects all major cities. Air transport is expensive. It is possible to reach other country in a few hours or a day through air transport.



Aeroplane



Helicopter

Water Transport

Water transport includes boat, ship and steamer. Steamers and boats sail along big rivers and ships sail in the oceans and seas carrying passengers and goods from one place to another. Water transport is slow as compared to road, rail or air transport.



Boat



Ship



Yacht

Transport can also be grouped as personal or public.

Personal transport is owned by individual for personal use. Example: car, scooter, bicycle etc. Public transport is owned by government or private individual for general public. Example: bus, train, ship, taxi etc.



Points to Remember

- To move or carry the objects from one place to another is called transportation.
- Animals like donkeys, bulls, mules, camels, and asses are used to carry loads for longer distances.
- The various means of transportation are: Road transportation, Rail transportation, Air transportation and Water transportation.
- Personal transport is owned by individual for personal use.

Glossary

transport : move or carry from one place to another

passenger : person who is traveling in a vehicle

drive : to move or travel on land

carts : a vehicle with either two or four wheels, pulled by horse



Exercise



A. Choose a word to fill in the blanks below.

water

fastest

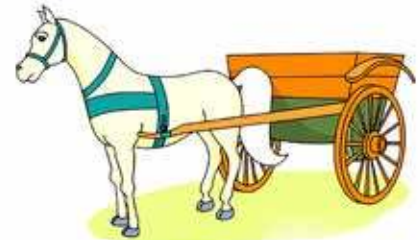
transportation

personal

cycle

1. Air transport is themeans of transportation.
2.transport is owned by individual.
3. Ship istransport.
4. has two wheels.
5. To move or carry the objects from one place to another is called

B. Identify and write the name.



C. Answer the following questions.

a. Write any two animals which are used to transport materials.

b. Write the name of any four means of transportation.

c. Make the list of vehicles:

Land transport

Air transport

Water transport

D. Match the following:



● Metro train



● Camel



● Tempo

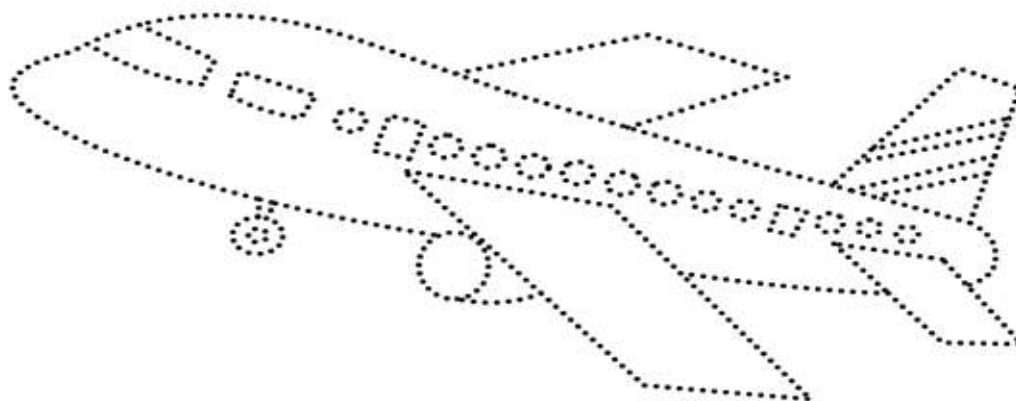


● Yacht



● Helicopter

E. Join the dots and colour the following picture.



F. Make the meaningful words from the jumble letters.

CRUTK •

•



ITNAR •

•



YECLE •

•



HPSI •

•



Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really ride these vehicles? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you write their name?

a	b	c	d



Key Words

footpath

traffic light

zebra cross

injury

Red light, red light,
what do you say?
I say stop and
stop right away.

Yellow light, yellow light,
What do you mean?
I mean wait wait,
Till the light is green.

Green light, green light,
What do you say?
I say go and go
Right a way.



We must follow safety rules in order to live safely. Sometimes we get hurt while walking, running, or playing. If you get hurt, tell your teacher or parents. They will take you to a doctor if needed.

On the Road

Walk but do not run on the road. Walk on the footpath. If there is no footpath, walk on the safe side of the road.

Use to the zebra crossing. First look to your right. Now, look to your left. Look to your right again. Cross the road only when it is clear.



In the Bus

When you are waiting for a bus, wait in a line. Let the bus stop. Then, get in one by one. When you want to get off, wait for the bus to stop. Do not lean out of the window of a bus. Do not throw things out a moving bus.



While Playing

Play in a safe place. It is not safe to play on the road. Play in a playground. Never run after a ball on the road.



Do you know?

- More than 1.2 million people die in road traffic crashes every year.

Never tease animals. Do not fly kites from an open terrace.

At Home

Do not play with fire, sharp objects or electrical things. You may get hurt. Be careful. Be safe. Use only pencil sharpeners to sharpen pencils. We should be careful in rainy season because it is slippery.



At School

Students should walk in a line while moving together. Never pull and push your friends. Never run up or down the stairs. Never jump on your desk, bench, chairs and table. If you get hurt, inform your teacher immediately.



Quick Reply

- Do you go swimming alone?
- Do you tease animals?
- Which traffic light tells us to stop?
- Name three different lights of traffic.



Points to Remember

- Always walk on the footpath.
- Do not get in or get off a moving bus
- Do not lean out of a moving bus.
- Play in a playground or in a safe place. Do not play on the road.
- Keep away from fire, sharp things and electrical things.
- Be careful. We should be safe.
- Follow traffic rules strictly.

Glossary

shock : a sudden electric impact

injury : harm, damage

avoid : stay clear from

tease : to annoy or to make angry



Exercise



A. Choose a word to fill in the blanks below.

playground

careful

fire

bus

hurt

safe

place

1. Wait for the _____ to stop before to get off.
2. The road can be a dangerous place if we are not _____.
3. If we play with _____, we might burn our fingers.
4. We may _____ ourselves if we play with blades.
5. You should play in a _____ or in a _____.



B. Write T for true and F for false statements.

1. Always walk on the road. ☐
2. Cross the road at the zebra crossing. ☐
3. It is safe to play with fire. ☐
4. We should play in the playground. ☐
5. It is good to play with stray animals. ☐
6. We should always follow traffic rules. ☐

C. Match the followings:

- | | | |
|---------------|---|------------------|
| Playing | • | • careful |
| Road crossing | • | • footpath |
| Yellow light | • | • play ground |
| Walk | • | • zebra crossing |

D. Answer these questions.

1. What should we do if we get hurt?

2. What should we do if there is no footpath?

3. Why should we be careful on a rainy day?

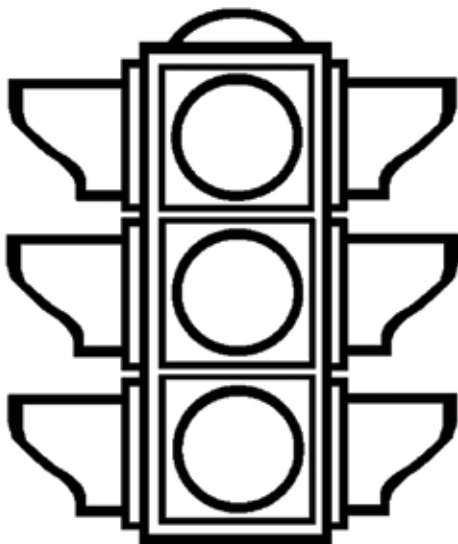
4. Where should we play?

5. Why should we not play on the road?

E. Observe the pictures below and discuss what may happen if we do not follow the safety rules.



F. Colour these traffic lights.



What do these traffic lights indicate ?

1. Red light _____

2. Yellow light _____

3. Green light _____

G. Choose the best answer from the given alternatives.

i. We should beevery time.

- a. careful b. careless c. sleepy d. active

ii. An accidentus.

- a. saves b. hurts c. likes d. frees

iii. We should cross the road at the

- a. east b. anywhere c. zebra crossing d. footpath

iv. We should not play with

- a. knives b. mobile c. ball d. dolls

H. Match the following.

Safety rules •

• on the road

Never run •

• sit properly

Bus •

• never tease

Animals •

• cross road

Zebra crossing •

• saves lives

I. Name the following figures.

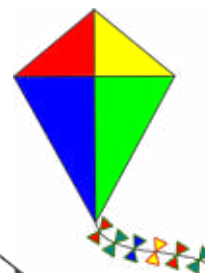


J. Make meaningful words from the jumble letters.

UBS



TEKI



IFEKN



ICKST



Project Idea (With the help of teacher)

Observe a safety week. Read all the safety rules in the lesson. Try to follow them. Draw one green star for each rule that you follow and one red star for each rule that you break.

day 1	day 2	day 3	day 4	day 5	day 6



Note to the Teacher

- Explain different types of safety rules in different places and possible accidents. Make your students become aware and safe always.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Do you really do these activities? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write what is being done in the activities?

a	b	c	d

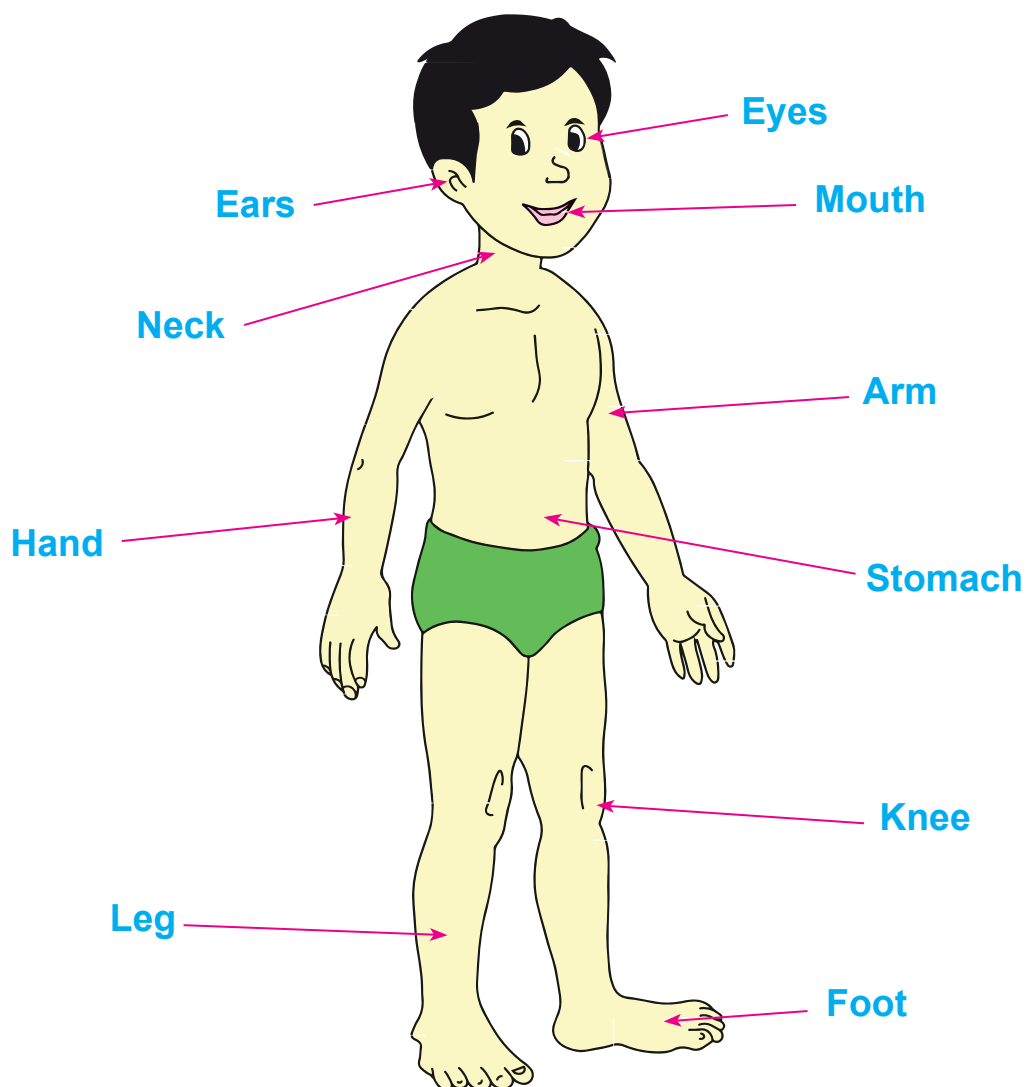


Our Body

Key Words

tongue sight defect sour bitter rough smooth

Our body has different parts. Head, trunk and limbs are the three main parts of the body. **Legs and hands are the limbs of our body.** Legs help us to walk and play. Hands help us to eat food, write and play. The head has two eyes, two ears, a nose and a mouth.



Sense organs

We have five sense organs. They are ears, eyes, nose, tongue and skin.

Ear

We have two ears that help us to hear different sounds. They also help to balance our body.



Eye

We have two eyes that help us to see different things. Our eyes give us the sense of sight. They help us to know the shape, size and colour of things. The light from different sources help our eyes to see the things.



Nose

We have a nose that helps us to perceive the smell of things. The nose has a good smell. Dirty things have a bad smell. Our nose helps to detect good and bad smells.



Tongue

We have a tongue in our mouth. Our tongue helps us to know the taste of the food we eat. Food can have a sweet, sour, salty or bitter taste. Different parts of our tongue have taste buds. These taste buds give us the sense of different tastes.



Skin

Our body is covered by skin . Skin helps us to feel when things are hot, cold, hard, soft, rough, and smooth. We should clean our sense organs everyday. It helps them to function properly.



Quick Reply

- Name our sense organs.
- Name different parts of our body.
- How many hands do we have?
- How many eyes, ears, nose do we have?
- Which sense organ do we use a lot in the day?



Points to Remember

- Our body has different parts.
- We have five sense organs.
- Sense organs have different functions.
- Sense organs make our life enjoyable.

Glossary

- limbs** : physical parts
- perceive** : to become aware of through the senses
- detect** : to know something



Exercise



A. Choose a word to fill in the blanks below.

five	see	taste	nose	walking
------	-----	-------	------	---------

1. Legs are used for _____ .
2. Our _____ helps us to smell.
3. Eyes help us to _____ .
4. We have _____ sense organs.
5. Tongue help us to _____ food.

B. Write T for true and F for false statements.

1. Our body has different parts.
2. We smell with our nose.
3. We use hands for eating.
4. Lips and teeth are parts of our body.
5. Ears help us to listen good sound only.

C. Match the followings:

- | | | |
|------------|---|----------|
| Smell | • | • tongue |
| Hear sound | • | • nose |
| Hot/Cold | • | • eyes |
| Sight | • | • ears |
| Taste food | • | • skin |

D. Answer these questions.

1. Write the different parts of our body.

2. Write the functions of the followings.

Legs: _____

Hands: _____

Tongue: _____

Skin: _____

Nose: _____

Eyes: _____

Ears: _____

E. Answer these questions.

1. Who am I ?

a. I help you to smell. I am _____.

b. I help you to feel. I am _____.

c. I help you to taste. I am _____.

d. I help you to hear. I am _____.

2. How many eyes do you have ?

3. Which sense organ is called the sense of sight ?

F. Choose the best answer from the given alternatives.

i. It makes us healthy.

a. cleanliness

b. no bathing

c. no trimming

d. no brushing

ii. We need it to wash hand.

a. soap and water

b. oil

c. kerosene

d. soil

iii. It is used to brush our teeth.

a. nail cutter

b. tooth brush

c. comb

d. towel

iv. It is used to cut our nail.

a. nail cutter

b. tooth brush

c. comb

d. towel

v. It is used to comb our hair.

a. nail cutter

b. tooth brush

c. comb

d. towel

G. Match the following:

Tooth brush •

• hair

Comb •

• nose

Handkerchief •

• nails

Nail cutter •

• soap

Bathing •

• teeth

H. Name the following figures.



I. Make meaningful words from the jumble letters.

ESLEP



ADRE



SHWA



SENO



ATHB





Note to the Teacher

- Help students to recognize different parts of our body. Make your students understand the functions of different parts of our body and sense organs.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given activities? Express your response with a tick (✓) or a cross (X).

a	b	c	d

2. Have you really performed these activities yourself? Respond with a tick (✓) or a cross (X).

a	b	c	d

3. Can you write the name of those activities?

a	b	c	d

Unit 20

Our Food

Key Words

junk food
minerals

kitchen
stale food

garden

balanced diet

nutrients

We should eat a balanced diet. Food must be rich in nutrients and minerals. The food which we eat are of three types. They are energy giving food, body-building food and body-protecting food.



Energy giving food.

We need energy to do work. Potato, rice, maize, wheat, sugar, oil and ghee are some energy- giving foods.



rice



bread



maize



roti (chapati)

Some foods are body-building.

We need such food that helps us to grow. Milk, fish, meat, egg, pea and chicken are some examples of body- building foods.

Some foods help our body to grow and be strong.



chicken



milk



fish



egg



gram



pea

Do you know?

- Vitamins make your body healthy and fight disease.

Body protecting food.

We need food to protect us from germs and diseases. Vegetables such as spinach, cauliflower, beans, pumpkin, cabbage and fruits such as grapes, apples, mangoes, and bananas are some body protecting foods.



fruits



vegetables

Some vegetables are eaten raw.



cabbage



tamato



carrot



radish

We should eat fresh and clean food. We should drink milk everyday. We eat food to grow, to be strong, to be healthy and to get energy.

Do you know?

- Fats in milk products, meat and fish help our body build healthy nerves and fight off diseases.

Eating Habits

We can grow vegetables in our own kitchen garden. We have to clean vegetables and fruits properly before eating. We must not waste food. We must eat slowly and chew food well. We should not talk while eating.



Quick Reply

- Name the vegetables and fruits you like the most.
- What makes us healthy and strong?
- Name foods you ate yesterday.
- Name the foods which we eat during our festivals.

Glossary

junk food	: food which is not good for our health as it contains high amounts of fat or sugar
nutrients	: foodstuffs consisting of essential components
disease	: feeling uncomfortable due to pain and illness in our body
kitchen garden	: a garden where we grow fruits and vegetables for our own use



Exercise



A. Choose a word to fill in the blanks below.

clean	milk	healthy	kitchen garden	hands
-------	------	---------	----------------	-------

1. Clean food , water and air make us _____.
2. We should wash our _____ before eating food.
3. We can grow vegetables in our own _____.
4. Children should drink _____ everyday.
5. The air we breathe should be _____.

B. Write T for true and F for false statements.

1. We need clean water to drink. ☐
2. Cucumber and carrot can be eaten raw. ☐
3. Rice and bread help us to protect from diseases. ☐
4. Junk foods are good for our health. ☐
5. We must eat food fast without chewing. ☐

C. Answer these questions.

1. Why do we need food?

_____.

2. Should we waste food?

_____.



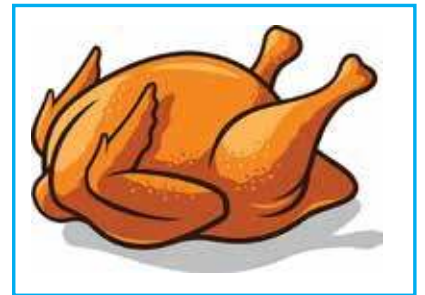
3. Name three foods that help us to grow.

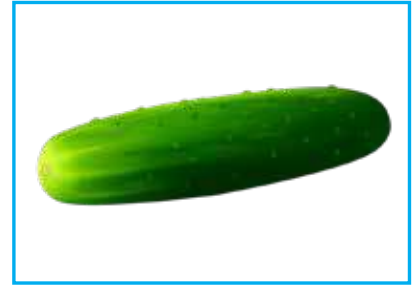
4. Name three foods that give us energy.

5. Name six foods that protect us from diseases.

6. Name three good eating habits.

D. Write E for energy-giving foods, P for protective foods and G for foods that help to grow.





E. Choose the best answer from the given alternatives.

i. It gives us energy.

- a. food b. clothes c. plastic d. glass

ii. It keeps us healthy.

- a. dirty food b. stale food c. fresh food d. junk food

iii. It is protective food.

- a. rice b. fruits c. meat d. ghee

iv. We eat leaf of this plant.

- a. cauliflower b. cabbage c. carrot d. potato

v. We eat stem of this plant.

- a. potato b. radish c. carrot d. pumpkin

F. Match the following:

Cabbage •

Cauliflower •

Mango •

Potato •

Carrot •

• flower

• fruit

• stem

• root

• leaf

G. Name the following figures.



H. Make meaningful words from the jumble letters.

IFSH

EMAT

GEG

AMONG

OTAPTO



I. Write the name of any two:

i. Energy giving food

ii. Protective food

iii. Body building food

iv. Food that can be eaten raw

v. Leafy vegetables

vi. Vegetables whose flower can be eaten



Note to the Teacher

- Help students to separate different type of foods. Enable them to understand the value of different foods for the proper functioning of body. Make your students identify different foods with their importance.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really eaten these? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you write their names?

a	b	c	d

Cleanliness



Key Words

exercise

germs

attack

sharp

damage

adverse

A clean body makes us healthy. When we work and play, our body becomes dirty. To keep the body clean is called personal hygiene.

The process of making our body neat and clean is called cleanliness.

Some tips to keep ourselves healthy and fit:

Regular exercise and eight hours sound sleep make us healthy and fit. We should play outdoor and indoor games daily. Regular morning walk, light exercise, playing games and yoga make us healthy and fit. We should manage time for

playing games. Our body also needs rest for complete rest, we need sound sleep every day. Clean body keep



Cleanliness of our Body

We must take a bath everyday to keep our body clean. We should use clean water and soap to wash away the dirt and germs from our body. We must wear clean clothes. Clean body helps us to stay fit and healthy.



Cleanliness of Hands

We must wash our hands with soap and clean water after playing, after using toilet and before eating.

We must trim our nails with a nail clipper. We should not bite our nails. Long nails consist of dirt and germs.



Cleanliness of Eyes

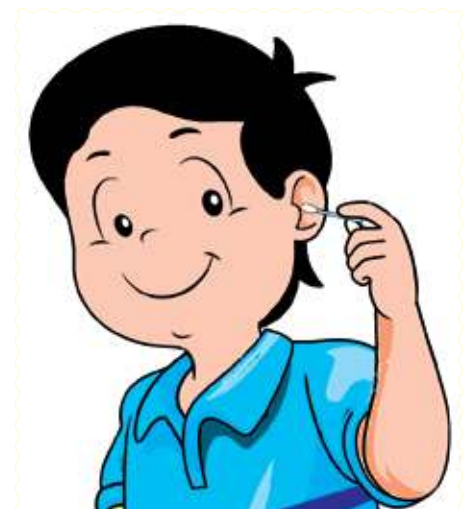
We should wash our eyes with clean and cold water. It makes our eyes attractive and keep away from attack of germs.



Cleanliness of Ears

We should keep our ears clean. We should clean our ears with soft cotton buds.

We should not use hard and sharp objects such as matchsticks, pencils or iron nails to clean our ears. Such objects can damage our ears.



Cleanliness of Nose

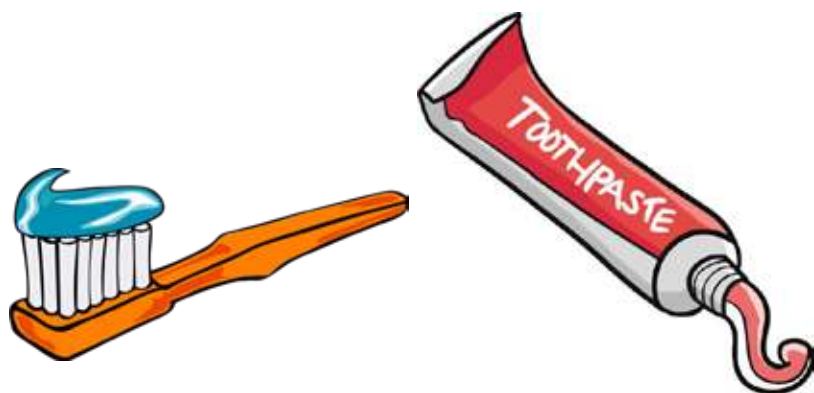
We should clean our nose with clean water. We should always use a clean handkerchief to clean our nose. We should not put a finger in our nose.



Cleanliness of Mouth

We must brush our teeth twice a day with toothpaste and a soft toothbrush. We should brush our teeth every morning and at night before going to bed. After brushing our teeth, we must clean our tongue and wash our mouth with clean water.

We should brush our teeth to remove dirt, germs and food particles from teeth.



Cleanliness of Hair

We must wash our hair with soap or shampoo and apply hair oil. We should comb our hair daily with the help of a comb.





Cleanliness of Face

We should keep our face clean. We must wash our face with soap and fresh water. Then, we should dry our face with a clean towel.



Surrounding Cleanliness

We must keep our things in their proper place in our room. We should put dust and waste in the certain dustbin.

We need to use toilet properly. We should not pass stools or urinate in open place.



We should clean our classroom, surrounding of school and house properly.

A clean environment makes us fit and healthy. Dirty environment makes us sick. We should use dustbins to collect the waste materials in our school and home.



Quick Reply

- Do you drink clean water?
- Name the things that you need to brush your teeth.
- How many times should we brush our teeth ?
- What kind of air do we need to breathe?



Points to Remember

- A clean body makes us fit and healthy.
- To keep the body clean and tidy is called personal hygiene.
- Take bath everyday with soap and water.
- We should brush our teeth twice a day.
- Cleanliness of our different sense organs is necessary to become healthy.
- We should keep our environment clean.
- A clean environment makes us fit and healthy. We need fresh and clean air to breathe.

Glossary

- germ** : a very small living thing which can cause diseases
manage : to handle or direct with a degree of skill
fit : physically healthy and strong



Exercise



A. Choose a word to fill in the blanks below.

environment

dustbin

dirt

germs

fingers

nails

1. We should not bite our _____ .
2. Use soap and water to wash away _____ and _____ .
3. We should make our _____ clean.
4. We should put all wastes in a _____ .
5. We should not use _____ to clean our nose.

B. Write T for true and F for false statements.

1. We must brush our teeth twice a day.
2. We must not keep our hair clean.
3. We should wear clean clothes.
4. Plants keep the air fresh.
5. We should spit on the floor.

☐☐☐☐☐

C. Match the followings:



D. Answer these questions.

1. What is personal hygiene?

2. When should we brush our teeth?

3. Why is it necessary to trim our nails?

4. How do we keep our hair clean?

5. How do we clean our ears?

6. Why is it important to keep our body clean?

7. Why should we use soap and water for bathing?

8. Why should we brush our teeth?

E. Write the names of the following things under the pictures.



F. Look, identify and discuss.

1. Make your students observe clean and dirty classroom
Encourage them to clean their classrooms.
2. In the below pictures, identify the things that make house and school dirty.



G. Look, identify and discuss the following picture.



H. Choose the best answer from the given alternatives.

- i. Waste is thrown in it.
a. dustbin b. lunch box c. water bottle d. geometry box
- ii. It causes diseases to us.
a. germs b. fruits c. vegetables d. plastics
- iii. It is a good habit.
a. open defecation b. throwing waste
c. dirt in front of house d. making garden

iv. It is a bad habit.

a. open defecation

b. making garden

c. sweeping home

d. cleaning toilet

v. It can be changed into manure.

a. decaying garbage

b. plastic

c. glass

d. dust

I. Make meaningful words from the jumble letters.

ICPLAST



BINDUST



EETR



OOLSCH



MHOE



J. Name the following figures.



K. Match the following:

- | | | |
|-----------------|---|------------------|
| Unhealthy habit | • | • dump properly |
| Garbage | • | • use in garden |
| Manure | • | • cause diseases |
| Germ | • | • plastic |
| Non decaying | • | • sick |



Note to the Teacher

- Make your students aware about the adverse effects of dirty things through several activities and exercises. Ask your students right and wrong activities regarding personal and surrounding cleanliness by showing several pictures. Tell about the causes of water being dirty and encourage students to use clean water.

Warm up activity



(a)



(b)



(c)



(d)

1. Can you identify the given diagrams? Express your response with a tick (✓) or a cross (×).

a	b	c	d

2. Have you really seen this kind of house or school? Respond with a tick (✓) or a cross (×).

a	b	c	d

3. Can you tick (✓) the good one or a cross (×) the bad one?

a	b	c	d



Section-F: Physical Education

Walking, Running and Jumping



Key Words

stretch

bend

erect

oppose

signals

swing

declare

Physical education teaches us different methods and rules of games. Games are fun. They also help us to be healthy and strong. Movement of the body is a major factor of games. We walk, run, jump, stretch and bend our body while playing games.

Walking

Students should stand in a line. They should stand erect and look straight ahead. They should start walking with left foot first. Followed by the right and the movements of the hands should oppose that of the legs. Students should maintain uniform speed as far as possible.



Running

While running, students should start and stop at the signals from the teacher. While running, a starting line is marked. A group of 10 to 12 students get ready, with the left leg forward at the starting point, and other students wait for their turn. The runner who touches the finishing line first is declared the winner.



Jumping

Jumping should be done with the front sole of the feet and the toes. Legs should be bent while jumping. It is necessary to force the front part of the body to go upward.



Note to the Teacher

- Demonstrate walking, jumping and running. Make your students perform in front of you. Collect all the materials which are needed for the activities. Encourage students to perform all activities which are shown above.

Glossary

- rule** : a statement that tells us what is or is not allowed in particular game
- uniform** : having same form or pattern
- erect** : straight up and down
- winner** : one who wins the contest



Exercise



A. Write **T** for true and **F** for false statements.

1. Walking should be done by standing straight.
2. Running is not good for health.
3. We should swing our hands while walking.

☐☐☐

4. We should jump on both feet.
5. Walking should be done in group.

B. Answer these questions.

1. What will you do at the start of the game?

2. How is the winner declared?

3. How is jumping done?

4. How is walking done?

5. How is running done?

C. Identify the given actions.



(a)



(b)

Stretching and Bending of the Body

Stretching and bending of the body is done alone or with the help of your friend. It makes our body parts active.



Note to the Teacher

- Identify a suitable place for the activities, Encourage students to perform all activities.

Glossary

- stretch** : to put your arms or legs out straight and contract your muscles
- relay** : a race between teams
- bend** : to move your body, leg, hand, etc. so that it is not straight



Exercise



A. Answer these questions.

1. Why is stretching and bending of the body necessary?

2. Can you do stretching and bending alone?

B. Observe the pictures and practice together with friends.



Unit 24

Physical Training (P.T.)



Key Words

attention

training

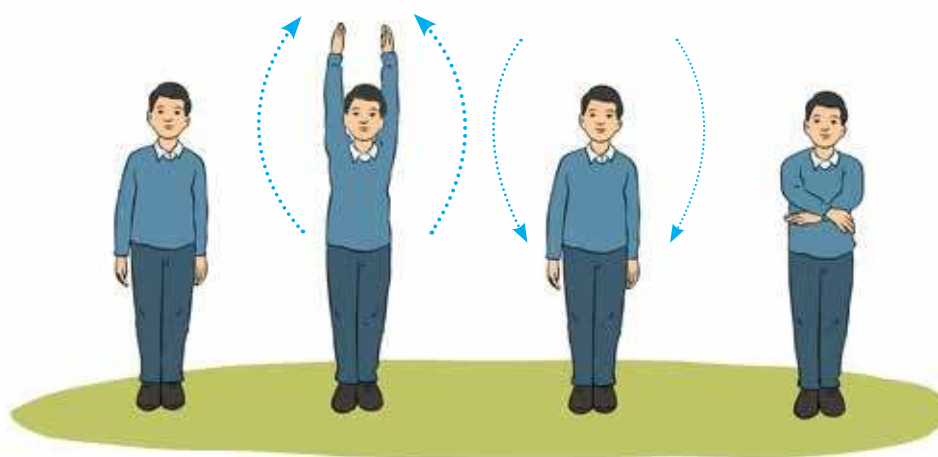
original

toes

forehead

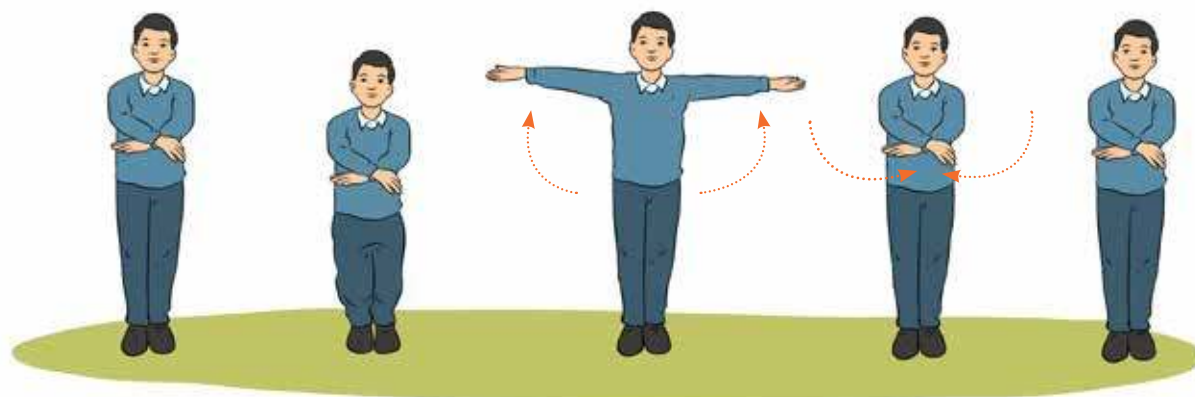
We have move different parts of our body while doing physical training exercise. It is essential for the development of strength. It develops physical fitness among the students.

Table 1



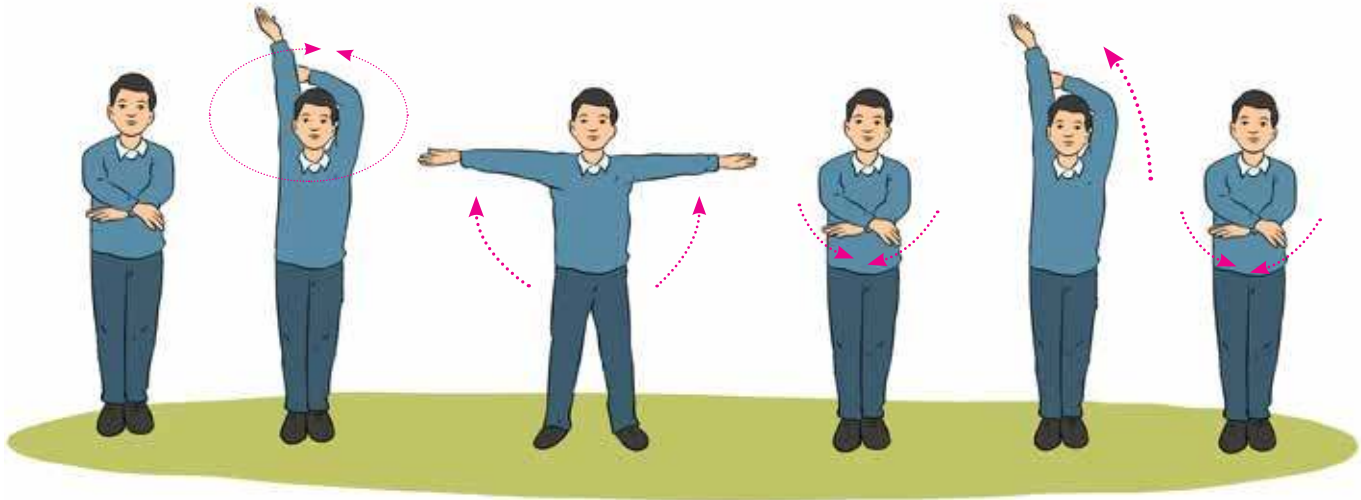
Stand in attention position. Arms should be raised up to shoulder level. Swing arms downward and return to the original position of attention.

Table 2



Bend knees while stretching, crossing hands and standing up straight. Stand on toes while crossing hands and standing up.

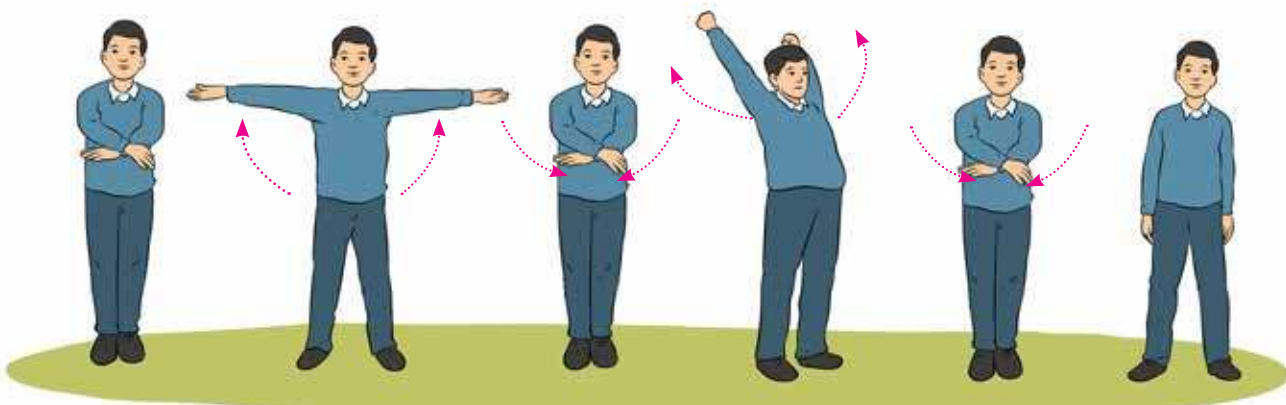
Table 3



Bring crossed hands upwards and cross around the forehead. Bring hands downwards and keep them stretched at the side. Bring the stretched hands downwards and cross them around the stomach. Raise them upwards and again bring them downwards to keep them crossed on the front.

Table 4

Keep left foot forward while rising up crossed hands. Keep them stretched along the sides. Bring both hands downwards and keep them crossed. Raise both hands upwards and keep chest stretched. Bring both hands downwards and keep them crossed. Keep both hands on the sides.



Glossary

P.T. : Physical training of the body through physical exercise

shoulder : the part of the body between the neck and the upper arm



Exercise



A. Write **T** for true and **F** for false statements.

1. Physical training develops the body strength.
2. Fingers are kept together during physical training.
3. Physical training is not necessary to develop strength of our body.
4. Teacher should help to perform physical training exercise.

B. Answer these questions.

1. Why is physical training essential?

2. It is essential to maintain the balance while doing physical training. Why?



Note to the Teacher

Make your students stand in attention position. Encourage them to perform activities according to the above instructions. Teachers should demonstrate the activities before students start to do.

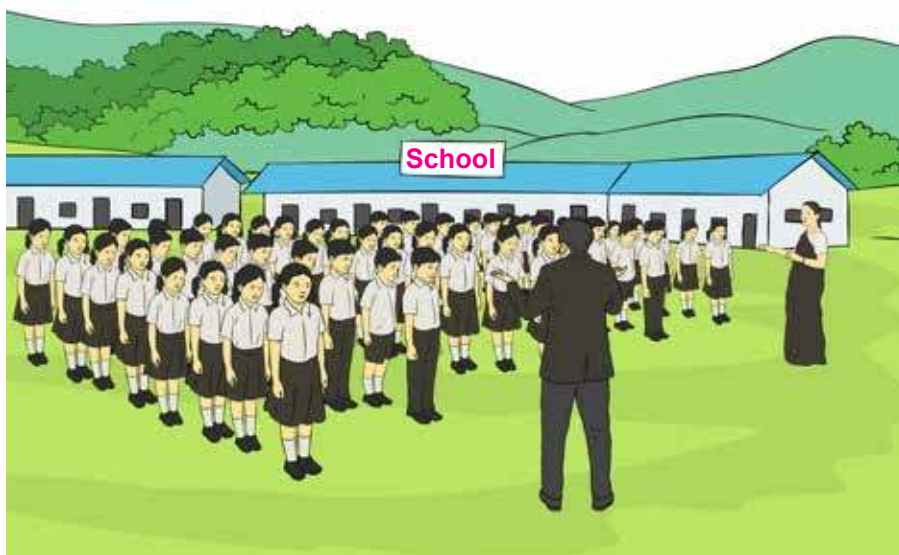


Key Words

drill discipline instruction command stiff extend relax

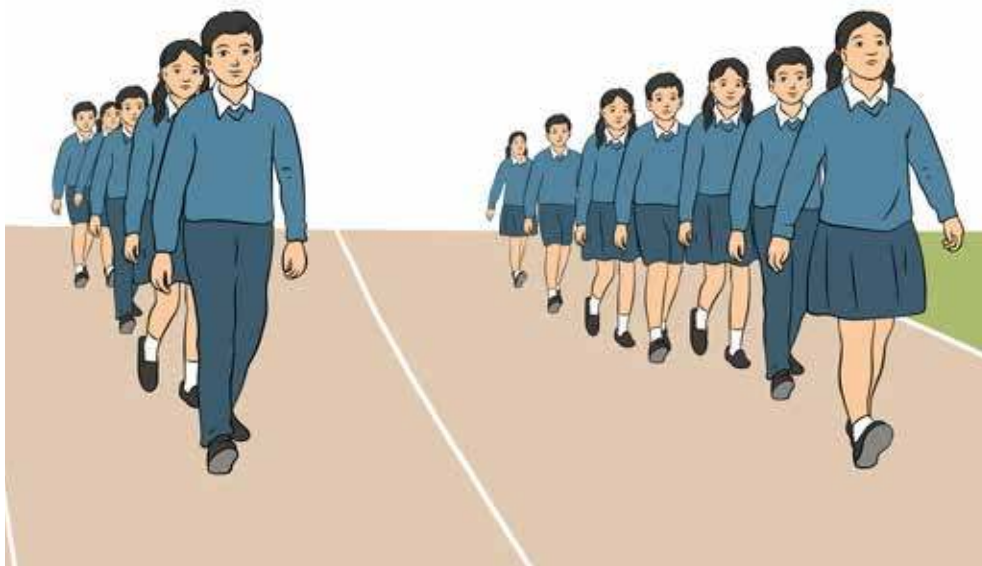
Drill is a method of disciplined training. It helps to keep the body strong. It enables a group to work together.

There are three steps in practising drill. They are called “Instruction” “Command” and “Action”.



Activity 1 : Stand and Walk in a Line

It is nice to see students standing in a line. Students should stand straight while standing in a line. Now, walk in a line by making your body straight.



Activity 2 : Attention

“Attention” (*Satarka*) is the most important position in drill. Heels must be together and in line. Knees should be straight but not stiff. Body should be straight, chest should be lifted. Arms should be hanging straight. Neck should be straight looking forward. Heels are placed together .



Activity 3 : Stand at Easy

Left leg is lifted up a little and placed with legs apart. There should be little distance between the legs. Hands are kept behind with fingers of one hand over fingers of the other hand. The fingers should be fully extended and held close.



Activity 4 : Stand Easy (Rest)

The stand easy (*Aaram*) may be used during drill period for giving students a short rest. In this position, students should stand in more relaxed position. They cannot move their legs.



Glossary

- drill** : activity which is done under the order of commander
- enables** : Makes capable of doing something properly
- training** : the process by which an athlete prepares for competition by practicing
- stiff** : difficult to bend or move



Exercise



A. Choose a word to fill in the blanks below.

students

instruction

active

Drill

together

1. _____ helps to keep our body _____.
2. Drill helps the _____ to _____.
3. First step of drill is _____.

B. Write T for true and F for false statements.

1. We can move our head and body in stand easy.
2. Feet should be moved in attention.
3. Arms should be straight in stand at ease.
4. We can talk and turn back while walking and standing in a line.

C. Answer these questions.

1. How you can perform drill?

2. How will you keep your arms during attention?

3. How can you walk and stand in a line ?

4. What will you do at the command of stand easy?



Simple Games

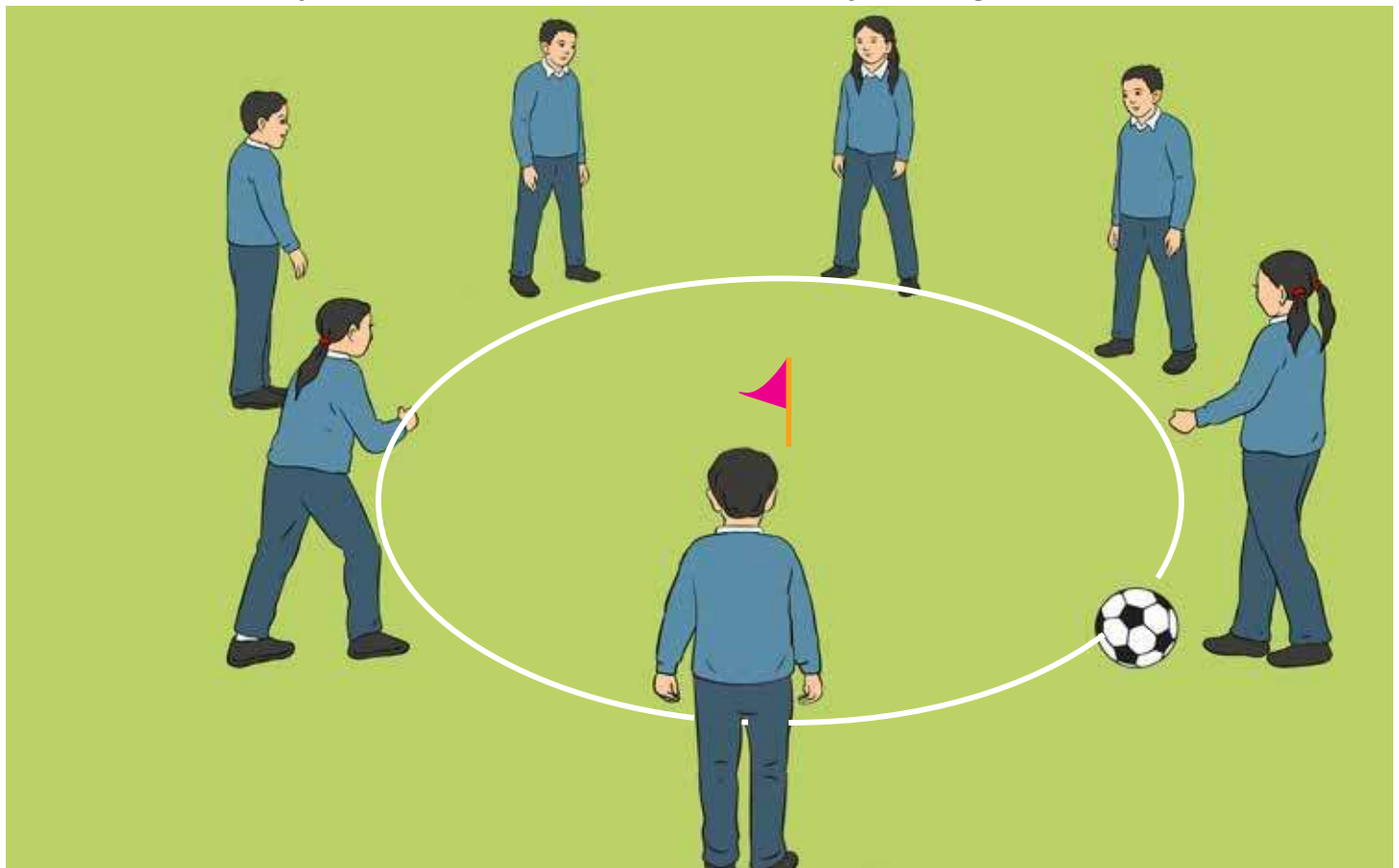
Key Words

attention training original toes forehead

Games which are easy to play are known as simple games.

Activity 1 : Inside-Outside Game

Players should stand around a circle at equal distance from each other. One player should use a ball to play this game.



Activity 2 : Cat and Rat Game

The players should stand in a circle with gaps in between and with faces turned towards the centre. Two players become a cat and a

rat. The cat says “meow” and chases the rat. Every player should get the chance to play the cat and the rat.



Activity 3 : Musical Chair

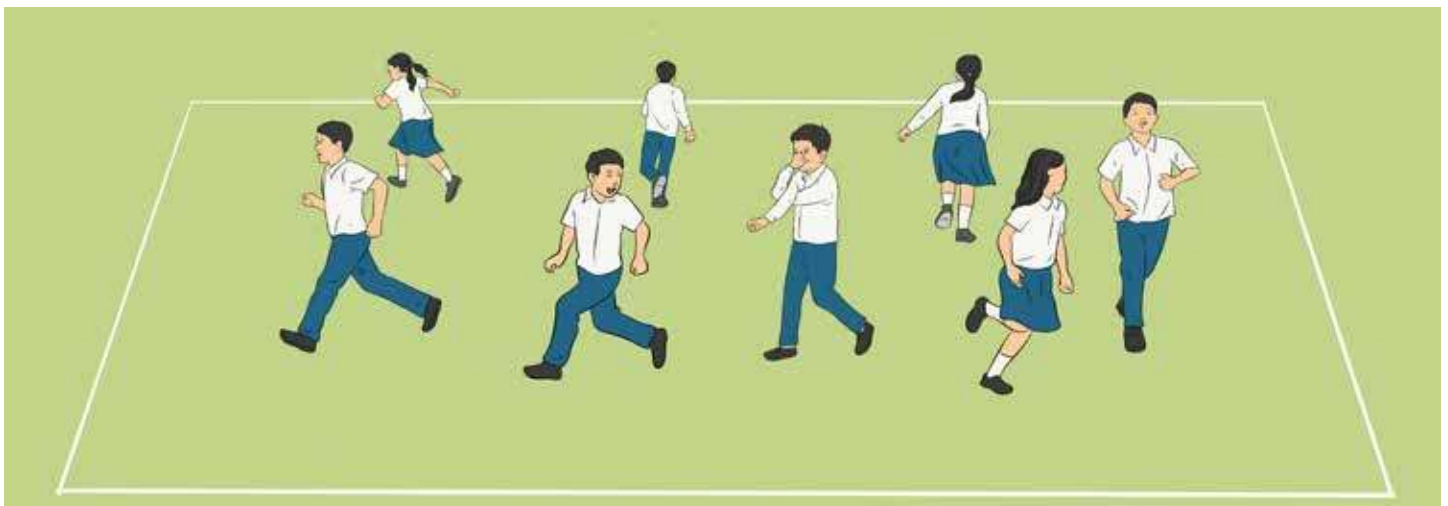
A circle is made, equal numbers of chairs are placed along the edge of the circle. Every student is asked to take the seat. When the “madal” is played, all students leave the seat and start going around the circle in anti-clock wise direction. While the students are going around, the



teacher removes a chair from its place. As music is stopped, each student tries to be seated on a chair. The player who cannot sit on a chair is sent out from the game. The last player is declared a winner.

Activity 4 : Elephant Chasing

A student assumes the shape of an elephant by holding nose with one hand and putting another hand through the first hand. The student with the elephant pose runs to touch one of the players but other students should run to avoid the touch. If any one goes outside the boundary or is touched by an elephant will become the new elephant and the previous elephant becomes one of the player.



Glossary

madal	:	a popular fold musical instrument of nepal
pose	:	posture of a body
previous	:	former
edge	:	side



Note to the Teacher

- Say attention in the number of students and playground. Observe either students playing correctly or not. Make your students practice all above simple games.



Exercise



A. Answer these following.

1. What do you understand by simple games?

_____.

2. What is inside- outside game?

_____.

3. How is cat and rat game played?

_____.

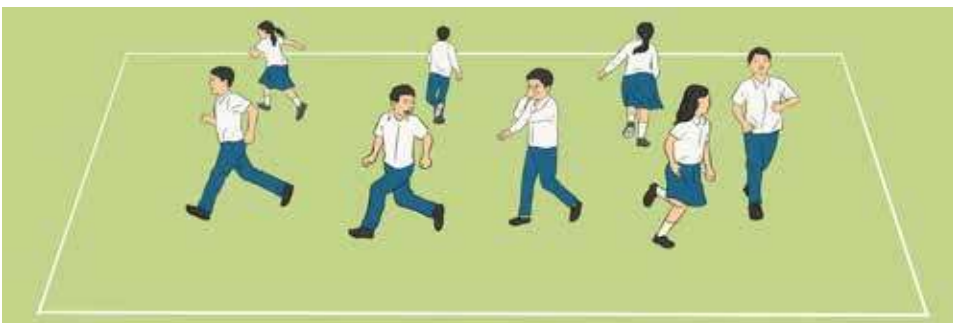
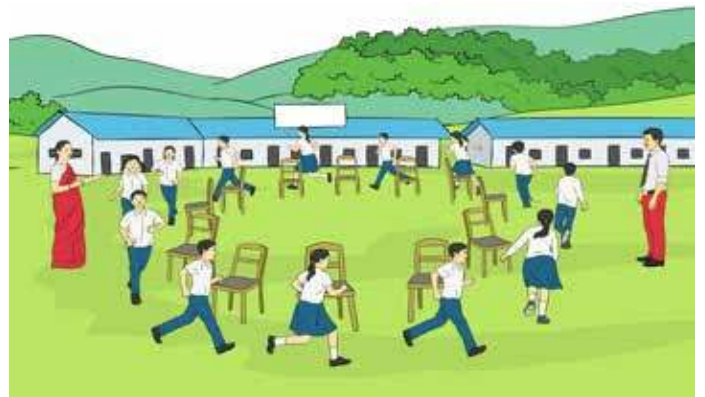
4. In which game are chairs used?

_____.

5. How is elephant choosing game played?

_____.

B. Identify the given games.



Local Games



Key Words

pile

local

locality

Games which are played in our village or locality with our own rules are known as local games.

Activity 1 : Hitting the Pile of Stones

This game is played by making two groups using a ball. A student tries to disturb the pile of stones using the ball.



Activity 2 : Gatta Game

Children like to play this game. Students use small and round stones to play this game. Mainly, girls would like to play this game.



Note to the Teacher

Make your students play this game in a suitable place.

Activity 3 : Dandibiyo Game

This is a popular game of Nepal. It is mainly played in villages. A long stick is called dandi and a small piece of stick is called biyo. Dandi is used to hit the biyo and another group of students try to catch the biyo.



Glossary

local : relating to or occurring in a particular area

biyo : wooden piece used to play dandibiyo



Exercise



A. Write T for true and F for false statements.

1. Dandibiyo is played in cities.
2. Gatta game is played using small stones.
3. Local games are played in our locality.
4. Two long sticks are used while playing dandibiyo.

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☐
☐

B. Answer these questions.

1. What do you understand by local games?

_____.

2. How is gatta game played ?

_____.

3. What types of sticks are used in dandibiyo game?

_____.

4. How is dandibiyo played?

_____.

5. How is hitting the pile of stones game played?

_____.

