

GREEN Planet

(A Textbook of Environmental Studies and Life Skills)

5

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Essential Learning

Critical Thinking

Experiential Learning

Arts-Integrated Activities



With the blessings of :
Our Parents

GREEN PLANET

5



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- National Education Policy 2020
- Activity Based
- Innovative Approach
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PREFACE

Environmental studies have assumed great significance in education of a child in recent times. The subject covers every aspect of the world in which the child lives, his ownself, how he should care for his health and the way he should behave in the society. It is very important for a child to get aware of his/her surroundings.

The book " **Green Planet** " is a series of 1 to 5 which is strictly based on the guidelines of NEP 2020 pattern to facilitate the teaching and learning of Green Planet.

The contents presented in these books have been selected keeping in view the physical and mental growth of the child. There will be an active participation of the students through regular exercises and activities within the text.

Key Features of the Series

- Covers the latest syllabus of various boards.
- All the exercises in the books can be used as tasks for Revision Test Papers and Model Test Papers.
- Interactive study approach is considered.
- An activity is provided in each chapter to facilitate hands-on learning and consolidation of environmental concepts.
- **Summary** is given at the end of each chapter to highlight some important points of the topics.
- **Exercises** are carefully graded and contain a wide variety of problems. They help the children to connect what they are learning to everyday situations.
- **Let Me Answer** is given in each chapter to enhance learning.
- **Infobits** are also given in each chapter.
- **Teacher Notes** are given in each chapter where ever required.

We hope that the series will fulfil the needs of teachers and students by its virtue of its plus points. Still, there is always a room for improvement. Any suggestions from the teachers as well as the parents would be highly acknowledged and truly appreciated.



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Internal Organs and Their Functions



LEARNING OBJECTIVE

- Our organs
- Digestive system
- Reproductive system
- Muscular system
- Excretory system
- Breathing system
- Nervous system
- Circulatory system



Let Me Answer

How many bones are present in our body?

Our Organs

Human body is a combination of different systems that work systematically together. The human body is made up of a large number of small units known as **cells**. Cells of the same kind join together to form a **tissue**. Tissues join together to make an **organ**. Our body has two types of organs **external organs** and **internal organs**. The organs which are on the outer side of our body are called **external organs**. The organs which are inside our body are called **internal organs**. We cannot see them from outside. Internal organs are packed inside our body. They perform like a group and show different functions. Group of internal organs that perform certain functions is called **organ system**.



infobits

Different Systems Of Body

No part in the human body is useless or unnecessary. Each and every part has its use.

Skeletal System



Lungs



heart



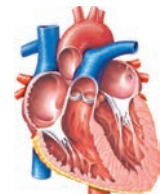
Liver



Stomach



Brain



heart

TEACHER'S NOTE

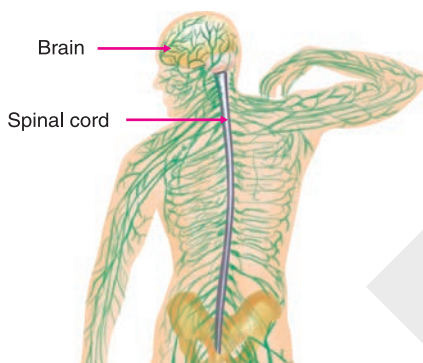
Inform the students about different internal organs and their functions in the human body.

The skeletal system is the framework of our bones. A human body has 206 bones. The bones are hard and strong. They give shape and support to the body.

Muscular System



Muscular system



Nervous system

There are more than 600 muscles in our body. Muscles along with bones help the body to move.

Nervous System

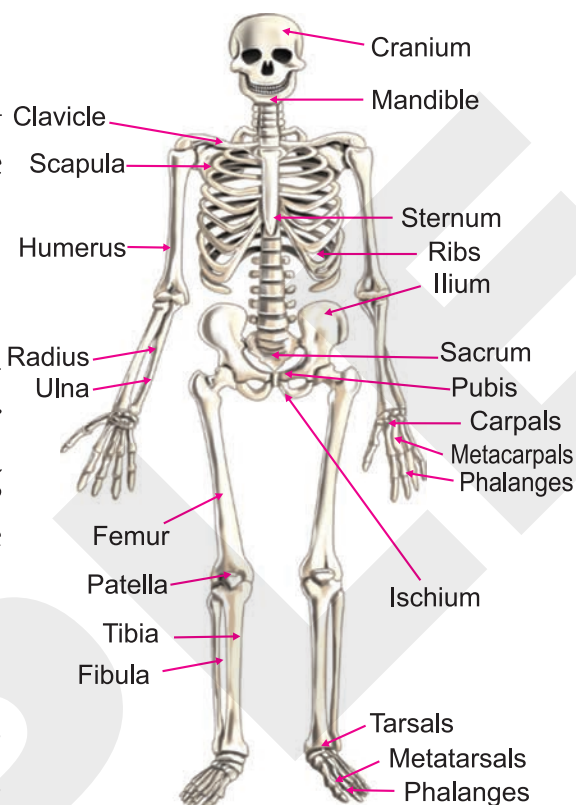
It receives messages from the sense organs and other parts of the body and orders for action. Various actions like seeing, hearing, learning, thinking, speaking are also controlled by the brain which is a part of this system. Brain controls all other systems in our body.

Digestive System

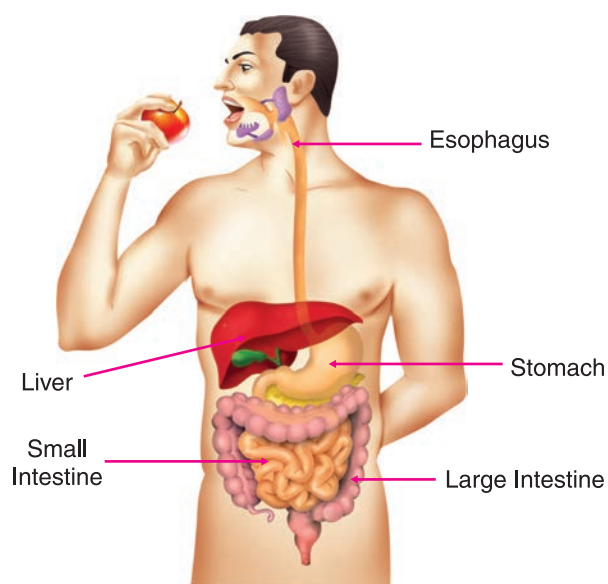
The breaking down of food from complex to simple soluble form is called **digestion**. Mouth, stomach, small intestine and large intestine take part in digestion.

What is digestion? How is food digested?

You digest food means you change it into the simplest form that can be absorbed by the blood.



Skeletal system



Digestive system

What happens inside the mouth?

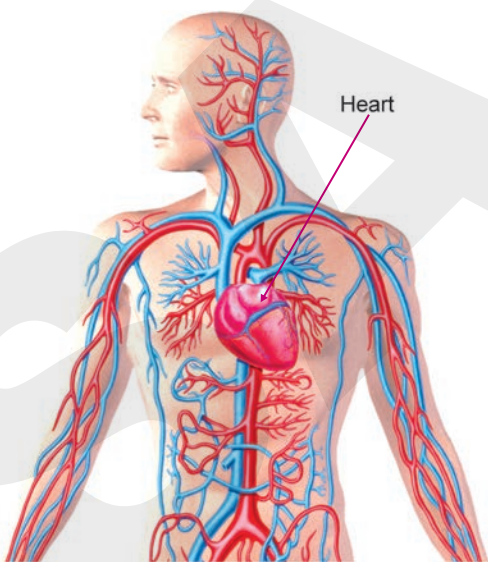
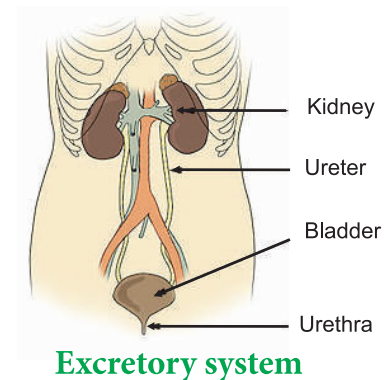
When you bite a sandwich, you find that it becomes very wet in your mouth. The saliva begins to flow into your mouth and your sharp biting teeth in the front cut it and your flat grinding teeth at the back grind the food. If you chew bread for some time, you will find it turning sweet. This is because the digestive juice, saliva, along with an enzyme (a substance which helps in digestion) changes the starch in bread into sugar. Hence, it tastes sweet.

What happens to the food inside the stomach and the intestine?

Stomach

From the mouth, the food goes into the stomach. Here the food is churned and mixed with several digestive juices produced by the walls of the stomach. Germs are killed by an acid which also helps to break the food down into simple substances. The stomach takes about four hours to digest the food. The food then goes to the lower part of the stomach and from there into the small intestine.

Excretory System : The wastes in the body have to be removed regularly. This work is done by the organs of the excretory system. The kidneys, lungs and skin help to throw out waste materials from the body in the form of urine, breathed out air (carbon dioxide) and sweat.



Circulatory System

The blood supplies food, oxygen and other materials to all parts of the body and takes back waste materials. This work is done by the process of circulatory system. In this system, heart is the main organ. It pumps the blood to different parts of the body.

Reproductive System

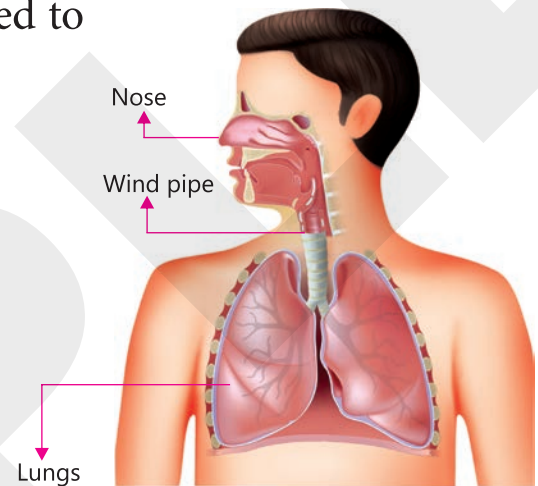
The organs of this system help to produce babies. Because of this system, life on the earth goes on.

Breathing System

Nose, windpipe and lungs make the breathing system. This system supplies oxygen to the various parts of our body. This oxygen is used to burn food and give us energy to do work.

Good Breathing Habits

1. Always breathe through your nose.
2. Breathe fresh air.
3. Keep the windows of the room open.
4. Do not cover your face while sleeping.
5. Wear loose clothes that make you feel comfortable.



Breathing system



Fact Finder

The liver, your body's chemical factory, detoxifies blood, metabolizes nutrients, and produces important proteins.



infobits

- Skin is the largest sense organ in our body.



Summary

- ★ Human body is the most wonderful and perfect machine.
- ★ The organs inside our body are grouped together to form different systems.
- ★ The skeletal system gives shape and support to the body.
- ★ The nervous system receives messages and give orders for actions.
- ★ We must learn and follow correct breathing habits.

Exercise

A. Tick (✓) the correct option.

- a. The smallest unit of human body is _____.
 ear ☐ cell ☐ tissue ☐
- b. A human body has _____ bones.
 206 ☐ 208 ☐ 207 ☐
- c. There is a skull in our _____.
 head ☐ leg ☐ hand ☐
- d. Stomach is a part of _____ system.
 digestive ☐ nervous ☐ skeletal ☐
- e. _____ is related to breathing system.
 Food ☐ Walk ☐ Oxygen ☐

B. Fill in the blanks.

- a. The breaking down of food from complex to simple soluble form is called _____.
- b. The _____, _____ and _____ throw out waste materials in the form of urine, breathed out air and sweat.
- c. Saliva is present in the _____.
- d. The human body is made up of a large number of small units known as _____.

C. Write true or false.

- a. The brain receives messages from all parts of the body. _____
- b. The food we eat is in a simple form. _____
- c. We should always breathe through our mouth. _____
- d. The skeletal system is a framework of 206 bones. _____
- e. The human body works very much like a machine. _____

D. Match the following.

- | | |
|---------------------------|---|
| a. The breathing system | (i) helps in digestion of food. |
| b. The skeletal system | (ii) helps in breathing. |
| c. The digestive system | (iii) helps in circulating the blood. |
| d. The circulatory system | (iv) gives shape and support to our body. |
| e. The excretory system | (v) helps in throwing wastes from the body. |

E. Answer the following questions.

- a. How does our body work?

- b. Write the functions of the breathing system.

- c. Write the functions of the circulatory system.

- d. What is the function of the digestive system?



ACTIVITY TIME

Draw a picture of a human ear here.



Taking Care of Body Parts



LEARNING OBJECTIVE

- ♣ Taking care of our body parts
- ♣ Exercises to remain healthy

Our body performs various functions. For this, it should always be in a good condition.

Food is the basic need of our body. But along with food we need to take care of all our body parts to remain fit and fine.

Taking care of our Body Parts

1. Eyes

Eyes are sense organs of sight.
They are very sensitive.

- ❖ Wash eyes with fresh and clean water.
- ❖ Do not rub eyes.
- ❖ Get eyes checked by a doctor regularly.
- ❖ Use spectacles if advised.



Let Me Answer

What is the hardest part of the human tooth?



infobits

There are three types of eye defects-Myopia, Hypermetropia and Presbiopia.

2. Ears

Ears are sense organs of hearing.

- ❖ Never put any sharp object like hair pin, matchstick, etc. in your ears.
- ❖ Always use soft-ear buds to clean ears.
- ❖ Consult a doctor immediately if an insect enters your ears.



TEACHER'S NOTE

Guide the students with the correct ways of taking care of their body parts. Also tell them why should we take care of our body.

3. Nose

Nose is the sense organ of smelling.

- ❖ Do not insert finger into nose, because finger contains dust and germs.
- ❖ Use a handkerchief while sneezing or blowing your nose.



4. Teeth

Care and cleanliness of teeth are as important as other parts of body.

- ❖ Brush your teeth twice a day.
- ❖ Use a toothbrush having soft bristles and brush your teeth properly.
- ❖ Never use ash or burnt coal for cleaning your teeth, as it may damage your teeth.

5. Tongue

Tongue is the sense organ of taste.

- ❖ After brushing, clean your tongue using a tongue cleaner.

infobits

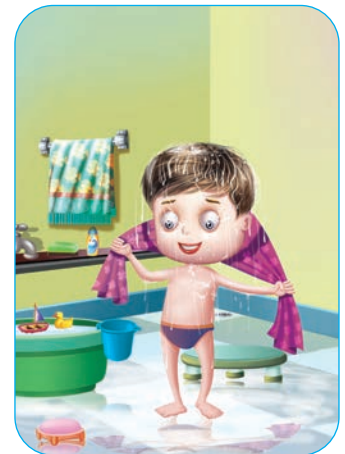
Our tongue contains different kinds of taste buds to taste the food.



6. Skin

The outer covering for the entire body surface is called skin.

- ❖ Keep your body neat and clean.
- ❖ Use a good quality soap while bathing.
- ❖ Use a soft and clean towel to wipe your body after taking bath.



7. Hair

- ❖ Hair should be clean and in a tidy condition.
- ❖ Hair should be washed every 2-3 days. Apply oil and comb hair in order to maintain their growth and shine.



8. Nails

Big nails carry germs and causes various diseases. They should be cut so that dirt does not find place to settle.

Exercises to Remain Healthy

Keep doing regular exercises. Exercises are good for health. A few exercises are

- ❖ Morning and evening walk
- ❖ Jogging
- ❖ Rope skipping
- ❖ Swimming



Fact Finder

Regularly stretching and exercising your muscles helps maintain flexibility and prevent stiffness.



Summary

- ★ Our body performs various functions.
- ★ The outer covering for the entire body surface is called skin.
- ★ Tongue is the sense organ of taste.
- ★ Nose is the sense organ of smelling.
- ★ Exercises are good for health.



Exercise

A. Tick (✓) the correct option.

- a. Which one is the sense organ of sight?

Ears



Eyes



Nose



- b. Whom should we consult with, if something enters our ears?

Doctor



Cobbler



Tailor



- c. Hair should be washed every _____.

7-8 days



10-15 days



2-3 days



- d. Which object should not be inserted in the ears?

Hairpin



Cotton bud



Medicine



- e. What should we use while sneezing?

Towel



Handkerchief



Shirt



- f. How many times should we brush in a day?

4 times



7 times



2 times



B. Fill in the blanks.

- a. We should not _____ our eyes.

- b. We should use _____ to clean ears.

- c. Never use _____ or _____ to clean your teeth.

- d. _____ are good for health.

- e. We should use a good quality _____ while bathing.

- f. Big nails carry germs and causes various _____.

C. Write true or false.

- a. Food is the basic need of our body. _____
- b. We should always use a hard toothbrush to clean our teeth. _____
- c. Rope skipping is a good exercise for the whole body. _____
- d. Dirty tongue generates a foul smell in the mouth. _____
- e. We should use spectacles, if advised. _____

D. Answer the following questions.

- a. How should we take care of our hair?

- b. How do we take care of our eyes?

- c. Why should we not put finger in the nose?

- d. How should you brush your teeth?

- e. How will you take care of your ears?



ACTIVITY TIME

- A. Prepare a chart on 'Health is Wealth'.**
- B. Make a picture of nose here.**



Digestion



LEARNING OBJECTIVE

- Why do we need food ? and their functions.
- Process of digestion
- Different types of teeth
- Right way of cooking and eating food.

Why do we need food?

All living things need food for their survival. Food gives us energy to do work.

Food helps in proper growth and development. It keeps us healthy.

It also protects us from diseases. So, food is necessary for the survival.



Let Me Answer

Name two foods that are rich in fat and two foods that are rich in vitamins.



Different foods

The energy from food builds the muscles strong that are needed to work efficiently.

We eat different types of food—wheat, rice, pulses, vegetables, fruits, spices, edible oils, etc. We eat food in various forms—cooked, ripened or raw. We get our food from either plants or animals.

Our food must contain carbohydrates, proteins, fats, vitamins, roughage and minerals. These nutrients are very essential for proper growth and development.

TEACHER'S NOTE

Everybody needs good quality of food to grow and survive. Discuss the different processes and functions of the human body to digest food.

PROTEIN

Proteins help us in body-building. It helps in our growth. It also helps in healing process. Pulses, beans, peas, egg, cheese, fish and meat are all proteinated food.



Proteinated food



Pulses

CARBOHYDRATE

Carbohydrates provide us energy to do physical work. We get carbohydrates in two forms—sugar and starch. The sugarcane contains sugar. Cereals such as wheat, rice, maize and vegetables like potato contain starch too.

FAT

Fats provide more heat and energy than carbohydrates. It is stored beneath our skin to keep us warm. Oil, butter, nuts, ghee are foods containing fats. We should take fats only in approximate quantity. Too much of oily things make us more fatty.



Fat-rich food

ROUGHAGE

For proper digestion of food, roughage is very important. Roughages are fibres, which are not digested with the food but they help in easy digestion and removal of waste. For roughage, we should eat raw leafy vegetables, fruits and cooked food like chapatis which are made of coarse flour.



Vitamins And Minerals

Vitamins and minerals keep us healthy by fighting against diseases. They help us in formation of teeth, bones and blood.



Vegetables



Fruits



Fact Finder

Digestion breaks down food into nutrients for the body's energy and growth, facilitated by enzymes and various organs in the digestive system.

We get vitamins and minerals from fresh fruits, vegetables, milk and eggs. Vitamins and minerals are also known as **protective food**.

Food that contains all the nutrients in right proportion, i.e. carbohydrates, proteins, roughage, fats, vitamins and minerals is called a **balanced diet**.



Protective food

Milk is considered as a **complete food** as it contains all necessary nutrients. The quantity of nutrients in our food is measured in **calories**.

To maintain the nutrients while cooking, we must do the following things. The boiled water of pulses and vegetables contains vitamins, so it should not be thrown away. It should be used in cooking. Wash vegetables properly before cutting, as washing destroys the vitamins and minerals of the cut vegetables.



Balanced diet

DIGESTION

The food we eat is digested by the digestive organs of our body. The nutrients in our food are broken into simpler substances and is absorbed by the blood. This process is called **digestion**.

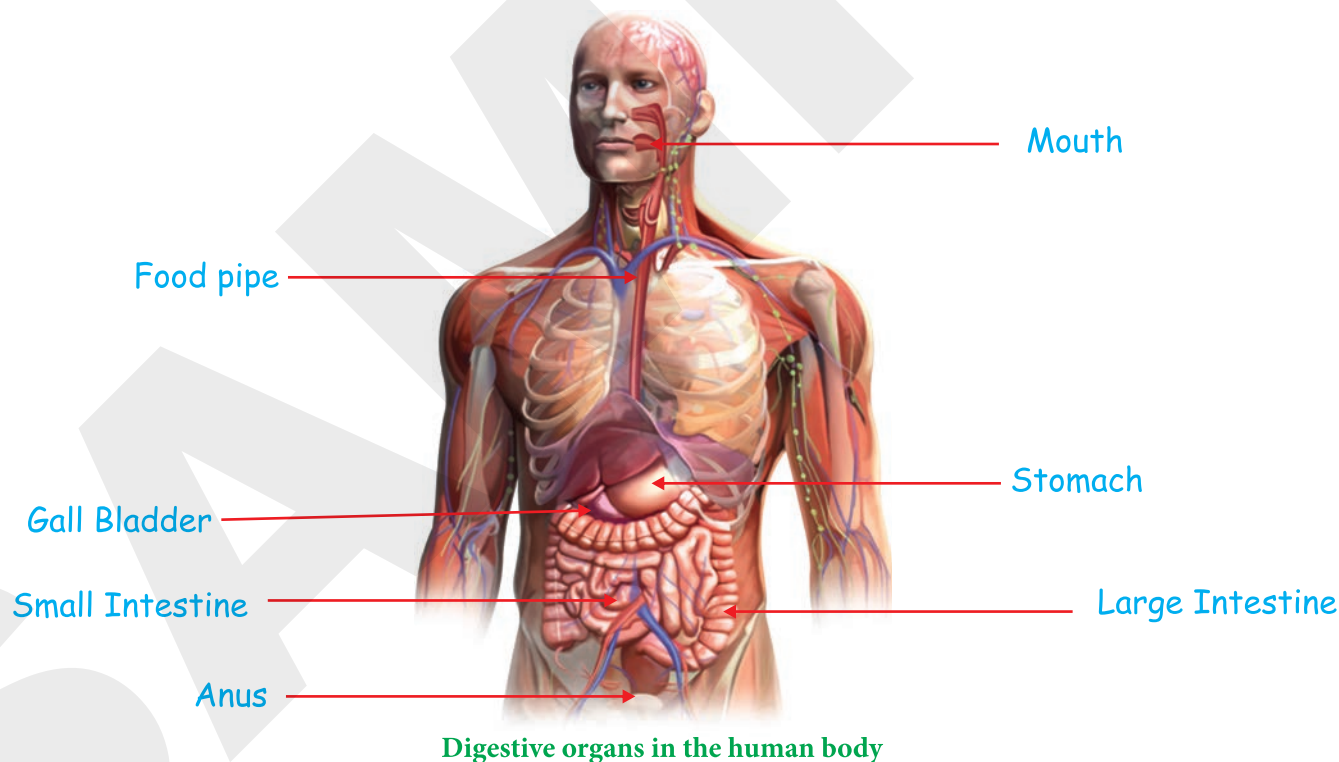
The main digestive organs of our body are mouth, foodpipe, stomach, small intestine, large intestine, pancreas, gall bladder and anus.

Process Of Digestion

Digestion of food starts in our mouth. The teeth cut the solid food into smaller bites. The saliva gets mixed with these particles and make **chyme**.

The chyme is rolled in the mouth pipe with the help of tongue. Saliva also helps in breaking the nutrients in simpler forms.

The chyme is passed to the stomach through the food pipe. The stomach with its movement breaks the nutrients in more simpler form by adding juices and passes this into the intestine.



The liver and pancreas pass their juices into the intestine which helps in complete digestion of nutrients. The simpler form of the nutrients is mixed with blood.

The nutrient-contained blood is passed to other body parts through the blood vessels.

The undigested or nutrition-less food is passed out of the body through **anus**.

Kidneys filter the blood and extra water is thrown out in the form of **urine**.

Role Of Teeth In Digestion

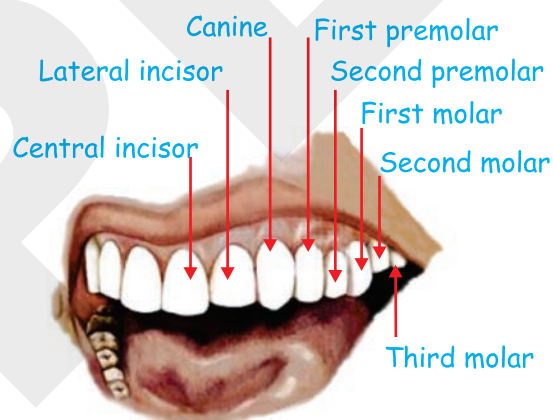
We have two sets of teeth during our life time—Temporary or Milk teeth and Permanent teeth.

Children up to the age of 7 or 8 years have temporary teeth. They are 20 in number. At the age of 7 or 8 years, the permanent teeth grow after falling of temporary teeth. There are a total of thirty-two permanent teeth in an adult.

There are different sizes and shapes of teeth.

The four main types of teeth are

1. **Incisors** : The four front teeth that are used for biting the food.
2. **Canines** : These are also called **tearing teeth**. These are sharp teeth for tearing the food. In carnivores, these teeth are very pointed to tear the flesh.
3. **Premolars** : These teeth are broad-shaped. They are four in number. They are used for cracking and crushing food into pieces.
4. **Molars** : Molars are six in number. They are also broad and flat. They grind and chew the food. The last molars are also known as **wisdom teeth**.



Teeth in the upper jaw of an adult

Eating too much of sweets like chocolate, toffee, cold drink and ice cream also decay our teeth.

For proper digestion, we must take care and improve our eating habits.

Here are a few tips for the easy digestion of food.

1. Take small bites of food. Chew it well.
2. Never eat in haste with mouth full.

3. Eat a balanced diet. Drink water. Eat both cooked and raw fruits, vegetables in the form of [salad](#).
4. Try to be regular about the eating time.
5. Go for toilet everyday in the morning.
6. Do not overeat.
7. Wash your hands before and after eating food. Rinse your mouth well with water after taking your meal.
8. Avoid eating uncovered eatables or cut fruits and vegetables.
9. Wash fruits and vegetables before eating.

Cooking The Food

Cooking makes the food easily digestible. It also makes the food delicious. To cook the food, we boil, fry, bake or roast it.

Besides eating cooked or raw food, we also take preserved food. [Food Preservation](#) is the method of keeping the food for longer time. Cooked or uncooked foods both can be preserved.

To preserve food, we generally

- ❖ freeze it as ice cream or custard.
- ❖ canned it as in tinned food.
- ❖ salt it as in pickles.
- ❖ sweeten it as in jam, jelly and chutney.
- ❖ oil it as in pickles.
- ❖ dehydrate it, i.e. by keeping fruits and vegetables in sun or condensed milk.



Ice cream

Food Preservation

Food preservation is the process that involves storing of perishable food materials for a long time, so that they do not get spoilt and can be used later. There are different ways of food preservation.

Refrigeration

The most common way to preserve food is to keep it at a low temperature. This is because germs cannot grow at a low temperature. This is called refrigeration. We can preserve milk, vegetables, fruits, eggs and meat by refrigeration for several days.



Refrigeration

Drying

This method involves the reduction of water content in food items like fish, potato chips, bananas, papayas, etc. This is to prevent the growth of micro-organisms. Food items are dried in dryers, directly in the sun, ovens, so as to remove all the moisture.



Drying potato chips

Vacuum Packing

Vacuum packing is the process in which food items are stored in air-tight containers. Nuts are preserved by vacuum packing.



Vacuum packing containers

Boiling Food

Food like milk can be preserved by boiling. Boiling kills germs present in the milk.

Salting

The process by which moisture is removed by adding salt is called **salting**. It is also called **curing**. Meat is generally preserved by this method.



Boiling milk

Canning or Bottling

Some food items go bad when they come in contact with moisture in the air. Flour, biscuits, sugar, etc. remain fresh when they are kept in a dry can, tin or jar with a tight lid.

Pickling

Pickling involves the preservation of food stuffs like mango, lemon, chilly in edible oils with salt and spices.

Fermenting Food

The process of fermentation preserves food, and also makes it more nutritious and digestible. For example, curd is fermented milk. Curd is good for you and can help you feel better if you have diarrhoea. Idlis are made from fermented batter of rice and **urad dal**. Fermented food helps you fight bad germs. Also such foods are oil free.



Pickle

 **infobits**

Food is stored in two ways.

Dry storage- wheat, pulses and sugar.

Cold storage- fruits and vegetables.



Tinned food



Freezed fruits and vegetables



Summary

- ★ Food gives us energy to do work.
- ★ Nutrients are very essential for proper growth and development.
- ★ Fats provide heat and energy. It remains stored in our body.
- ★ Roughage are fibres which help in easy digestion.
- ★ It is very important to preserve food. It is done by refrigeration, drying, vacuum packing, boiling, salting, canning, bottling and pickling.

Exercise

A. Tick (✓) the correct option.

- a. Digestion of food starts in our _____.
mouth ☐ stomach ☐ intestines ☐
- b. _____ helps in breaking the nutrients in simpler forms.
Water ☐ Saliva ☐ Teeth ☐
- c. _____ makes the food easily digestible.
cooking ☐ chewing ☐ dehydrating ☐
- d. Premolar teeth are _____.
six in number ☐ four in number ☐ eight in number ☐

B. Fill in the blanks.

- a. The _____ cut the solid food into smaller bites
- b. The last molars teeths are also known as _____.
- c. An adult has _____ permanent teeth.
- d. The chyme through food pipe is passed to the _____.

C. Write true or false.

- a. Vegetables should be washed after chopping. _____
- b. Fried food have excess fat. _____
- c. Butter gives us energy. It has protein. _____
- d. Kidneys filter the blood and extra water. _____
- e. Food is not necessary for the survival. _____

D. Match the following.

- | | |
|--------------|-------------------|
| a. Molars | (i) for grinding |
| b. Incisors | (ii) for crushing |
| c. Canines | (iii) for tearing |
| d. Premolars | (iv) for biting |

E. Answer the following questions.

a. Why is food necessary for us ?

b. Which are the main digestive organs of our body ?

c. Explain four types of teeth.

d. How can you preserve food ?



ACTIVITY TIME

Keep a mango in a fridge and another mango outside.

What will happen to them after four days?

Revision Test Paper-I

(Based on Chapters 1 to 3)

A. Tick (✓) the correct option.

- a. Digestion of food starts in our _____.
Mouth ☐ Stomach ☐ Intestines ☐
- b. Hair should be washed every _____.
7 - 8 days ☐ 10 - 15 days ☐ 2 - 3 days ☐
- c. A human body has _____ bones.
206 ☐ 208 ☐ 207 ☐

B. Fill in the blanks.

- a. The _____ cut the solid food into smaller bites.
- b. The chyme through the food pipe is passed to the _____.
- c. _____ are good for health.
- d. We should not _____ our eyes.
- e. Saliva is present in the _____.

C. Answer the following.

- a. How does our body work?
- b. Why should we not put a finger in the nose?
- c. Why is food necessary for us?
- d. Which are the main digestive organs of our body?

D. Name the organs that the following system include.

- a. Digestive System _____.
- b. Breathing System _____.
- c. Skeletal System _____.

The Food We Eat



LEARNING OBJECTIVE

- Farmers in India
- Government help farmers
- Changing food habits
- Factors favourable for cultivation
- Food habits
- Food storage

Farmers in India

We have different farmers in India who have their own ways of farming.

1. Small Farmers

Farmers which have a small plot of land are called small farmers. They need to borrow money from money lenders to purchase things like agricultural implements, seeds, fertilisers and pesticides. They are able to grow just enough to feed their family.

They are also called **subsistence farmers**. They are dependent on the rain to water their crops.



Small farmers use bullocks to plough the fields.

2. Commercial Farmers

Commercial farmers own a large plot of land. They grow crops for sale in the market. They use modern machines, irrigation facilities, fertilizers and pesticides.

3. Dairy Farmers

The farmers who rear cows, buffaloes and sell milk and milk products are called dairy farmers.



Commercial farmers use tractors.

TEACHER'S NOTE

The food that farmers grow is the real food that we get. Explain to the students the importance of food and other resources.

Factors Favourable For Cultivation

We need favourable climate and fertile soil to grow crops. Good quality seeds, modern farm machinery, good irrigation facilities, fertilisers and pesticides make a good yield of crops.

Seeds

Farmers get seeds from the seed markets. Farmers should use good quality hybrid seeds, to ensure a higher yield.

Farm Machinery

Now-a-days modern farm machinery like tractors, seed sowers, sprayers, harvesters, cultivators and threshers are used by commercial farmers. These help the farmers to do their work easily.



Tractor



Seed sower



Sprayer



Thresher

Irrigation

Farmers should have a good system of irrigation to water the crops as and when required, so that they do not depend on rain for water.

The artificial way of supplying water to the plants is called **irrigation**.

Some farmers irrigate their land from **tubewells**. They do not have to rely on rain. The tubewells pump water up from under the ground. Then the farmers dig channels to make sure that the water reaches all parts of the fields.

Some farmers irrigate their land with water from **tanks**, **open wells**, canals or water bodies like **lakes** and **ponds**. They



Tube well

dig channels from the canal or lake to their fields.

Fertilisers

Fertilisers are substances that increase the yield of crops. Most plants need manure or animal dung. These are the best fertilisers because they are natural.

Pesticides

Pesticides are chemicals sprayed on the plants to protect them from pests.

Government Helps Farmers

The government provides help to farmers in the following ways:

- ❖ It gives agricultural loans to farmers at low rate of interests.
- ❖ It helps farmers to buy their own land.
- ❖ It ensures that farmers get good price for their produce.
- ❖ It provides high quality seeds, fertilisers and pesticides at subsidised rates.

Food Habits

People in different parts of our country and the world eat different kinds of food. Food habits of people depend upon the region where they stay, availability of food type, beliefs, customs, religion and culture.

- ❖ The people of Rajasthan eat **dal-bati-choorma** and **bajre ki roti**.
- ❖ The people of Punjab love to eat **makki-ki-roti** and **sarson ka-saag**.
- ❖ The people of West Bengal eat **rice with fish curry**.
- ❖ The people of Tamil Nadu eat **idli, dosa** and **sambhar**.
- ❖ The people of Kolkata (Bengal) eat **rice, rasogulla** and **sandesh**.

Changing Food Habits

The food habits are changing because there is so much variety in food items. Children and even adults love to eat pizzas, burgers, pastas, momos and more of other junk food items.



Taking out water from a canal to irrigate the field.



Pesticides

infobits

Artificial fertilisers are made from chemicals eg. urea.



Food eaten in different parts of India.

When your grandparents were of your age, there was not much variety in food.

Food habits have changed because of the following reasons

- ❖ New varieties of crops have been introduced with the advancement in science and technology.
- ❖ We have access to different kinds of perishable food items throughout the year due to large cold storage facilities.
- ❖ Large variety of processed food is available in the market due to the growth in the processing industry.
- ❖ Packed food is easily available and is used by many people.
- ❖ People love to eat readymade food.

Keep Food Safe

It is important to maintain cleanliness to keep food safe.

- ❖ The utensils in which food is stored or prepared should be clean.
- ❖ The person handling food should always wash his/her hands with soap and water.
- ❖ Keep the food always covered.
- ❖ Cook the food properly to kill all germs.
- ❖ Fruits and vegetables can be eaten raw. These should be washed well before eating.
- ❖ Avoid eating stale food.

Food Storage

There are times when farmers are not able to grow enough food, crops fail either because of lack of adequate rainfall or due to floods. At times like these, when

there are more people and less food, prices hike and poor have to suffer because they cannot afford the high food prices. When there is an extreme shortage of food it is called **famine**. It occurs due to destruction of crops because of natural calamities like droughts, floods, earthquakes, cyclones and tsunamis.



Flood



Earthquake



Drought



Tsunami

There are also times when food shortage is created artificially. This happens when enough food is produced but is not released in the market to keep the prices high. Traders hoard the foodgrains and make more money by selling it at a substantial higher rate.



Fact Finder

Fruits and vegetables are rich in antioxidants, supporting the body's defense against harmful free radicals.

infobits

In 1943, a severe famine struck Bengal and lakhs of people died of starvation.



Summary

- ★ We have different farmers in India who have their own ways of farming.
- ★ Favourable climate and fertile soil are necessary to grow crops.
- ★ Good quality seeds, modern farm machinery, good irrigation facilities, fertilisers and pesticides make a good yield of crop.
- ★ The food habits are changing because there is so much variety in food items.

Exercise

A. Tick (✓) the correct option.

a. Who are subsistence farmers?

Small farmers



Commercial farmers



Dairy farmers



b. Which of these is needed for a good yield of crops?

Good quality seeds



Fertilisers



Both (a) and (b)



c. Which farmers grow crops as well as rear animals?

Dairy farmers



Mixed farmers



Pisciculturists



B. Fill in the blanks.

a. _____ farmers own a large plot of land.

b. Some farmers irrigate their land from _____.

c. _____ are substances that increase the yield of crops.

C. Write true or false.

a. Idli and dosa are eaten in Punjab.

b. Commercial farmers use tractors.

c. Farmers get seeds from the seed markets.

d. Pesticides are chemicals sprayed on animals.

e. Government helps farmers to buy their own land.

D. Define the following terms.

- a. Famine _____

- b. Irrigation _____

- c. Hybrid seeds _____

- d. Fertilisers _____

E. Answer the following questions.

- a. Who are small farmers?

- b. Which factors are favourable for cultivation?

- c. How are the food habits changing now a days?

- d. What is food shortage? How does it occur?



ACTIVITY TIME

A. Interview a farmer and ask him about the problems he faces while growing crops. Make a project report.

B. Find out the popular dishes of these states.

States	Dishes	States	Dishes
a. Punjab	_____	b. West Bengal	_____
c. Tamil Nadu	_____	d. Rajasthan	_____



Food For Health



LEARNING OBJECTIVE

- Malnutrition
- Deficiency Diseases



Let Me Answer

Write the name of disease that are caused by the deficiency of vitamin B.

There are large number of people in our country and even outside, who go hungry because they cannot buy food for themselves and their families. Such people suffer from many diseases, become weak and eventually die. Thus, in order to stay healthy we must eat wholesome food and drink clean water.

There are many reasons for people in this world who are not able to eat the right kind of foods.

- ❖ Poverty is the main cause behind it. Poor people are not able to eat enough to meet their nutritional requirements.
- ❖ Certain groups of people do not eat certain kinds of food because their communities or religion forbid them to do so.
- ❖ Excessive cooking destroys the nutrition present in the food.
- ❖ Also the food gets spoilt when it is not stored properly.



Hungry poor peoples

Malnutrition

Hunger and disease are closely related. A person who does not get enough food to eat suffers from **malnutrition** or **undernutrition**. Deficiency of nutrients in the body results in **deficiency diseases**. A condition in which a body does not function properly is called a **disease**.

Thus, we should eat a diet that contains all the essential nutrients in adequate amounts. The different type of nutrients are **proteins**, **carbohydrates**, **fats**, **vitamins**, **minerals** and **roughage**.

A diet that contains all the essential nutrients in the right amount is called a **balanced diet**.



TEACHER'S NOTE

Bad quality of food causes different issues in our body. Allow the students to have a discussion regarding the same using different flashcards.

Here is a table that tells us about the essential nutrients, their sources and how do they help us.

Nutrients	Sources	How They Help Us?
Proteins	Pulses, milk, cheese, nuts, eggs and beans.	Proteins repair our body cells and help us to grow.
Carbohydrates	Bread, wheat, rice, sugar and potatoes.	Carbohydrates give us energy to do work.
Fats	Oil, ghee, butter and mutton.	Fats also give us energy.
Vitamins	Fresh fruits and vegetables.	Vitamins protect us from diseases and keep us healthy.
Minerals	Green leafy vegetables and fruits.	Minerals also protect us from diseases and keep us strong.
Roughage	Vegetables and fruits.	Roughage helps in excretion.

Deficiency diseases

Diseases which are caused due to deficiency of one or the other nutrient are called **deficiency diseases**.

Many children in our country look pale and sick. This is because they suffer from malnutrition. They do not get enough nourishment from their diet. Malnourishment occurs in children of the age of 1 to 5.

A child suffering from malnutrition may have diseases like **Marasmus** and **Kwashiorkor**. A child suffering from Marasmus has stunted growth and a weak body. The skin is dry and wrinkled and stomach disorders occur.

Kwashiorkor is another disease caused by the deficiency of carbohydrates and proteins in the diet of children. A child suffering from this disease has low appetite, swollen belly and reduced growth.

Night Blindness

Night Blindness is caused due to lack of Vitamin A in the diet. A person suffering from night blindness finds it difficult to see in dim light. The eyes become dull.

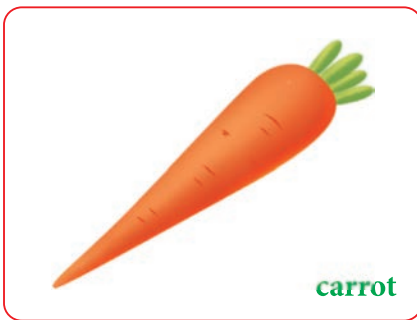


A child suffering from Marasmus



A child suffering from Kwashiorkor

To prevent this disease, a diet rich in green leafy vegetables, carrots, papaya, mango and milk should be taken.



carrot



milk



papaya

Beri-beri

Beri-beri is caused due to deficiency of **Vitamin B** in our diet. It affects the nervous system. In this disease, loss of appetite occurs.

The skin of the hands become rough and dry. To prevent this disease, a diet rich in Vitamin B like unpolished rice, whole grains, milk, tomatoes, peas, should be taken.



Scurvy

Scurvy is caused due to deficiency of **Vitamin C** in the diet. In Scurvy, there is swelling and bleeding from the gums and pain in the joints. To prevent this disease, foods rich in Vitamin C like oranges, grapes, lemons, amla, tomatoes etc. should be taken.





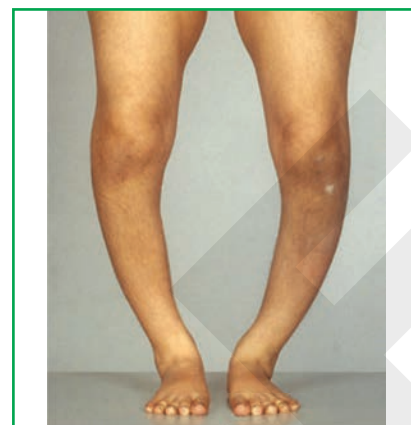
Amla



Lemon



Orange



Bow-shaped legs

Rickets

Rickets is caused due to deficiency of Vitamin D. In rickets, the legs become bow-shaped.

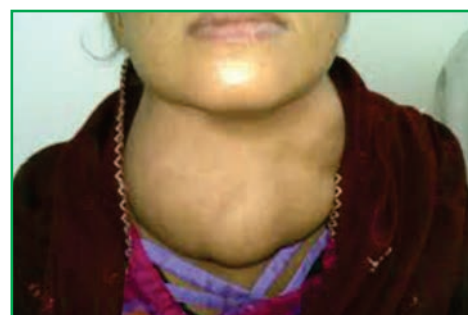
To prevent rickets one should take a diet rich in milk cheese and eggs.

**infobits**

Vitamin D is produced in our skin when it is exposed to sunlight.

Goitre

Deficiency of iodine in our diet leads to goitre. People suffering from goitre develop a swelling in the neck. To prevent this disease one should take iodized salt and eat a lot of seafood.



A person suffering from goitre

Anaemia

Anaemia is caused due to deficiency of iron in our diet. In such a condition, the haemoglobin content of the blood is reduced. An anaemic person gets tired easily. To avoid such a condition, one should take a diet rich in iron like apple, carrot, spinach, egg yolk, meat and other green leafy vegetables. Deficiency diseases are non-communicable diseases and are not transferred from a sick person to a healthy person.



An anaemic child



Summary

Deficiency diseases are caused due to deficiency of a particular nutrient in our body.

- ✦ Excessive cooking destroys the nutrients present in the food.
- ✦ Night Blindness is caused due to deficiency of Vitamin A.
- ✦ Beri-beri is caused due to deficiency of Vitamin B.
- ✦ Rickets is caused due to deficiency of Vitamin D.



Fact Finder

Choosing a balanced diet rich in whole foods like fruits, vegetables, lean proteins, and whole grains supports overall health and well-being.

Exercise

A. Tick (✓) the correct option.

a. Which nutrient gives us energy?

Fats



Carbohydrates



Both



b. Which disease is caused due to deficiency of Vitamin A?

Beri-Beri



Scurvy



Night Blindness



c. Which disease is caused due to deficiency of Vitamin D?

Night Blindness



Rickets



Scurvy



d. Which disease is caused due to deficiency of Vitamin C?

Anemia



Scurvy



Beri-beri



B. Fill in the blanks.

a. A diet which contains all the essential nutrients in the right amount is called a

_____.

b. In rickets, the child becomes _____.

c. Anaemia is caused due to deficiency of _____ in our diet.

d. The food gets _____ when not stored properly.

e. Goitre is caused due to deficiency of _____.

C. Match the following.

- | | |
|--------------------|-----------------|
| a. Night-Blindness | (i) Vitamin C |
| b. Scurvy | (ii) Iodine |
| c. Goitre | (iii) Vitamin A |
| d. Anaemia | (iv) Iron |
| e. Rickets | (v) Vitamin B |
| f. Beri-beri | (vi) Vitamin D |

D. Give two examples of each of the following.

- | | | |
|----------------------------|-------|-------|
| a. Nutrients | _____ | _____ |
| b. Deficiency diseases | _____ | _____ |
| c. Foods rich in Vitamin B | _____ | _____ |
| d. Foods rich in fats | _____ | _____ |
| e. Source of Vitamin C | _____ | _____ |

E. Answer the following questions.

- a. What is a balanced diet?

- b. What is malnutrition?

- c. What is rickets? How is it caused?

- d. What is beri-beri?

- e. What are deficiency diseases?



ACTIVITY TIME

Make a nutritional chart for a week for yourself.

Revision Test Paper-II

(Based on Chapters 4 to 5)

A. Tick (✓) the correct option.

a. Which nutrient gives us energy?

Fats



Carbohydrates



Both of these



b. Who are subsistence farmers?

Small farmers



Commercial farmers



Dairy farmers



c. Which disease is caused due to deficiency of Vitamins A?

Beri-Beri



Scurvy



Night Blindness



B. Fill in the blanks.

a. A diet which contains all the essential nutrients in the right amount is called a _____.

b. Goitre is caused due to deficiency of _____.

c. Some farmers irrigate their land from _____.

d. _____ are substances that increase the yield of crops.

C. Write true or false.

a. Idli and dosa are eaten in Punjab. _____

b. Pesticides are chemicals sprayed on animals. _____

c. Government helps farmers to buy their own land. _____

D. Answer the following questions.

a. Who are small farmers?

b. How is pickling done?

c. What is food shortage? How does it occur?

d. What is a balanced diet?

MODEL TEST PAPER-I

(Based on Chapters 1 to 5)

A. Tick (✓) the correct option.

- a. Which disease is caused due to deficiency of Vitamin D?
Night Blindness ☐ Rickets ☐ Scurvy ☐
- b. _____ is related to the breathing system.
Food ☐ walk ☐ Oxygen ☐
- c. What should we use while sneezing?
Towel ☐ Handkerchief ☐ Shirt ☐
- d. Which farmers grow crops as well as rear animals?
Dairy farmers ☐ Mixed farmers ☐ Pisciculturists ☐
- e. Premolar teeth are _____.
Six in number ☐ four in number ☐ Eight in number ☐

B. Fill in the blanks.

- a. The _____, _____ and _____ throw out waste materials in the form of urine, breathed out air and sweat.
- b. _____ farmers own a large plot of land.
- c. An adult has _____ permanent teeth.
- d. A diet which contains all the essential nutrients in the right amount is called a _____.
- e. Goitre is caused due to deficiency of _____.

C. Define the following terms:

- a. Scurvy - _____
- b. Digestion - _____

- c. Irrigation - _____
- d. Pesticides - _____
- e. Drying - _____

D. Write true or false.

- a. The brain receives messages from all parts of the body. _____
- b. Food is the basic need of our body. _____
- c. Fried food have excess fat. _____
- d. Farmers get seeds from the seed markets. _____
- e. We should always breathe through our month. _____

E. Answer the following questions.

- a. How does our body work?

- b. What is the function of the digestive system?

- c. How are food habits changing nowadays?

- d. How can you preserve food?

- e. Which are the main digestive organs of our body?



Water



LEARNING OBJECTIVE

- Sources of water
- Changes in sources of water
- Means of Irrigation
- Floating and sinking
- Soluble and Insoluble
- Miscible and Immiscible

Sources of Water

Rain is the main source of water. The other sources of water are lakes, ponds, rivers, seas and oceans. During earlier times there were no taps or pumps. People had to walk long distances to bring water in pots, buckets etc.

Baolis

A baoli is a huge well. It has steps to reach to the bottom. In earlier times, baolis were built to collect and store rainwater.

A **baoli** is also called a step-well. These are used as a meeting place by people. Baolis are common in Rajasthan and Gujarat.



Baoli

Changes in Sources of Water

In ancient times, women used to walk many kilometres every day to fetch drinking water from a well. To take a bath and wash clothes, they used water from a nearby **pond**. Then a **handpump** came into use. Then **electric pump** were installed which pulled the ground water to fill up the overhead **tank**. From the overhead tank, water came to the taps in the kitchen.



Let Me Answer

Where do you get water from? Write the names of sources of water.



Bundi in Rajasthan is called the 'City of Step Wells' because it has 381 baolis.

TEACHER'S NOTE

Inform learners about the various sources of water and its importance.

Piaos

Many people serve free water to people on the road sides. Piao can be seen along the road sides. Some people organise free water camps to provide drinking water to people. It is a common sight to see earthen pots filled with water and kept on the road side under tree, for the use of people.

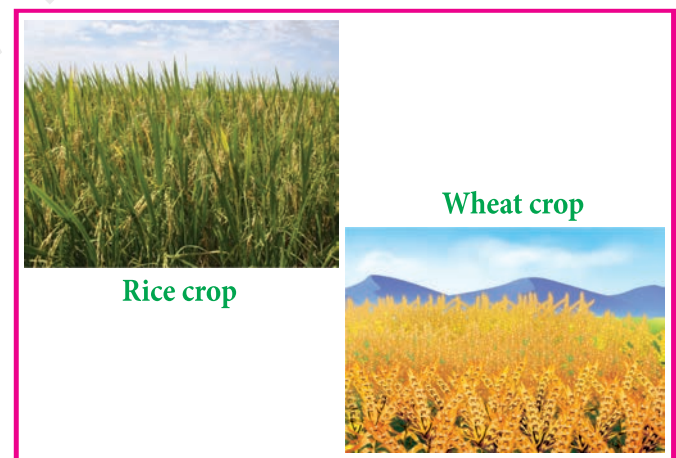
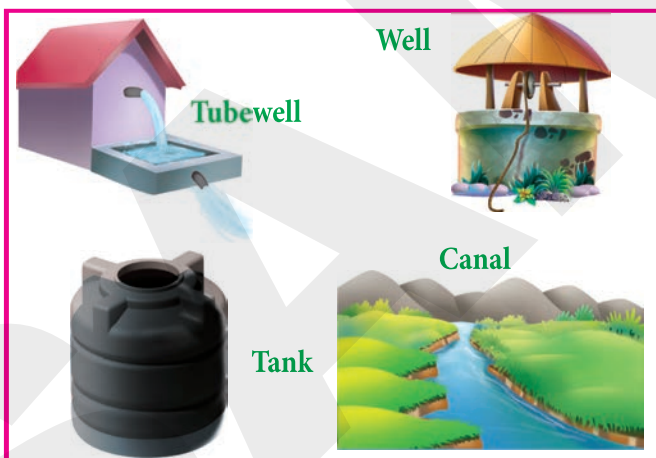


Fact Finder

Water is essential for life, regulating body temperature, transporting nutrients, and aiding in various metabolic processes.

Means of Irrigation

In India, our fields are irrigated with the rains that we get during monsoons. But it is unevenly distributed. So, we need some artificial means to water our crops timely. This is called **irrigation**. The different sources of irrigation in our country are wells, tubewells, tanks and canals. Different crops have different water requirements. For example rice crop requires more water, wheat crop requires to be irrigated at different stages. Crops like sugarcane, rubber and tea require less water.



Well

A well is a deep hole in the ground where water is available. The water is drawn out using a pulley. A rope attached to a basket is pulled over the pulley to draw the water out. The string goes around the grooves of the pulley.

Tubewells

Tubewells are used to draw underground water by means of electric pumps. When the water is found deep under the ground, **tubewell** is the best method to draw out that water. The bore is dug deep and tubes are sunk in it. Tubewells are widely used by the farmers because it is an easy method of irrigation.

Tanks

In some places, like the Southern Plateau, the ground is hard. It is very difficult to dig wells there. During the rainy season, some low lying areas get filled with water. These are called **tanks**. This water is used to irrigate the fields during the dry season.

Canals

Canals are small channels dug to take water out from the rivers and irrigate the fields.

Devices Used for Irrigation

The crops in fields are irrigated by tubewells, wells, canals and lakes. Some devices that are used for irrigation are:

Sprinklers

Water is distributed through the pipes at regular intervals, using a pump. Irrigating crops in this way gives the effect of rainfall. The sprinkler system helps to save water.



Water Wheel

A water wheel consists of a large wheel mounted vertically on a horizontal axis. A number of blades or buckets are arranged on its outside rim forming the driving surface. When the water strikes the buckets, the wheel rotates and the water in the buckets falls on the other side and is directed into water channels to irrigate the crops.

Wind Mill

In some places, wind energy is used to draw water from wells.

Water Pump

Motorised water pumps are also used to draw underground water, to irrigate fields.



Wind mill



Water pump

Floating and Sinking

There are some objects that float on water and some that sink in water. Whether the object floats or sinks in water depends on its density.

Density is the amount of matter present in a given volume of a material.

Objects like iron nails, coins and stone sink in water because they are denser than water. Objects like cork, thermocol and plastic toy float on water because they are less dense than water.

When an object is put in water, it tries to push aside the water below it with its weight and takes up the space. Water also exerts an upwards force on the object, which is called **buoyancy**. If the object displaces water equal to its weight in water, it floats. But if the weight of the object is more than the water it displaces, it sinks.

Soluble and Insoluble

Substances are said to be **soluble** in a liquid, when they dissolve easily in it. For example, if you put sugar in water, it mixes with the water and becomes a part of it. The water now tastes sweet. This mixture of sugar and water is called a **solution**. The sugar is called the **solute** and the water that dissolves the solute is called the **solvent**.



infobits

An egg will float if we add sugar in water.

When substances are not soluble in a liquid, they do not dissolve in it. They are said to be **insoluble**. For example, if you add sand to water, you can see that the particles of sand do not mix, even if the particles are very small. If you pour the mixture through a cloth filter, the liquid goes through but the insoluble substance will be left behind on the cloth.



Sugar

Water

Sugar-solution

Miscible and Immiscible

Liquids, which mix with each other, are called **miscible liquids**. For example, lime juice and water. Add a few drops of oil to water and stir. The oil will not mix with water. It will separate out and float on the water surface. Water and oil do not get mixed. They are said to be **immiscible** liquids.

Measuring Liquids

Liquids do not have a definite shape. They take the shape of the container they are poured in. But

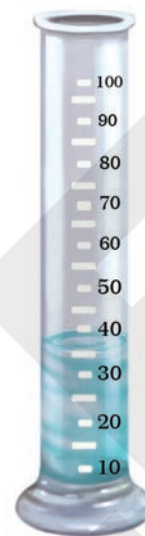
liquids have a definite volume. The volume of a liquid is always equal to the inner volume of the container. The volume of liquid is measured in **litres (l)**.



**infobits**

Water is called a universal solvent as it can dissolve many substances.

The small unit of volume is **millilitre**, which is denoted by **ml**.
A **measuring cylinder** is a cylinder with markings that indicate the volume in litres and millilitres.



Summary

- ★ Rain is the main source of water.
- ★ A baoli is a huge well.
- ★ The different sources of irrigation in our country are wells, tubewells, tanks and canals.
- ★ Wells are dug to bring the underground water to the surface.
- ★ When the water is found deep under the ground, tubewell is the best method to draw out that water.
- ★ Different crops require different amount of water.
- ★ Different devices used for irrigation are sprinklers, water wheels, windmill and water pump.

Exercise

A. Tick (✓) the correct option.

a. Which is the main source of water?

Pond



Baoli



Rain



b. Which of these require less water?

Jute



Milletts



Tea



c. A deep hole in the well where water is available is called _____.

well



handpump



tubewell



d. Step wells are also called _____.

water wheels



baolis



piaos



e. Which of the following is called universal solvent?

Water



Milk



Oil



B. Fill in the blanks.

1. _____ is the main source of water.
2. During earlier times there were no _____ or _____.
3. A _____ is called a stepwell.
4. Baolis are common in _____ and _____.
5. In India, our fields are irrigated with the _____ that we get during _____.

C. Define the following.

- a. Well _____
- b. Tubewell _____
- c. Miscible liquid _____
- d. Immiscible liquid _____
- e. Solute _____
- f. Solvent _____

D. Answer the following questions.

- a. What are the different sources of water?

- b. What is a baoli?

- c. What are the changes in sources of water?

d. What is a tube well?

e. What are different means of irrigation?



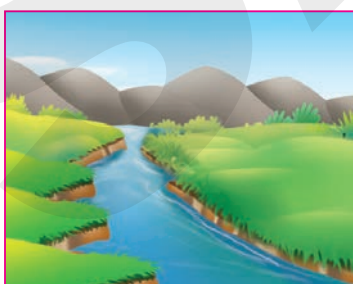
ACTIVITY TIME

Name these water resources and write 2-3 lines about it.











Clothes



LEARNING OBJECTIVE

- Dresses of Different Seasons
- Dresses of Different States

The dresses we wear depend upon the climatic conditions and regions in which we live. Therefore we shall study the different types of dresses which men and women wear all over the country.

Dresses of Different Seasons

There are three main seasons. They are **summer**, **winter** and **rainy season** in our country.

During each season people wear different kinds of clothes.

During summer season, the weather becomes very hot. We wish to wear **cotton** clothes. These clothes protect us from heat of the sun. They have enough pores to let air come in contact with our body. These are very suitable for summer season.

During winter season, we need to wear **woollen** clothes which protect us from intolerable cold weather. We wear sweaters, coats, scarfs, mufflers, etc. to save ourselves from the freezing cold. They help us to keep warm.

During rainy season, people wear **raincoats** and use **umbrellas** to protect themselves from rain.



Let Me Answer

Name the traditional dress of Tamil Nadu.



Cotton clothes



Woollen clothes



Umbrella and Raincoat

TEACHER'S NOTE

Assist the students to understand different kinds of dresses in India. Also, tell them why clothes are an essential part of our lives.

Dresses of Different States

People living in different states of India eat different types of food. Similarly, dresses too depend on the places where people live.

Some places in India are very hot and some are very cold, some are hilly areas, while others are coastal. So, the diversity in geographical areas affect the choice of our clothes to a great extent.

1. Hilly Region

The hilly areas, like Jammu and Kashmir are very cold areas. People wear woollen clothes to protect themselves from cold.

In these areas men and women wear long woollen coat called **phiran** over their clothes, to protect themselves from cold.

Women also wear sweaters and shawls.

The reason to wear **phiran** is to protect body from cold and also to easily move in the mountains. Being loose, **phiran** does not obstruct movement of body in hilly areas.



Kashmiri dress

2. Coastal Areas

In the coastal areas, such as Maharashtra, Gujarat, Tamil Nadu, Kerala, West Bengal etc. People like to wear light and simple dresses.

The men wear **Kurta-pyjama** and an **achkan** over **kurta**.

They wear a special kind of turban too. Women of Maharashtra wear **saree-blouse**. But way of dressing is different from other states.

The Gujarati men like to wear **Dhoti-kurta** with a **Gandhi cap**. **Lehnga-choli** is the favourite dress of women in Gujarat.

In Tamil Nadu, men wear a traditional dress called **mundu**. It is a **lungi**. Women wear **sarees** in this region.

People in West Bengal wear loose clothes. Men



Maharashtrian dress



Gujarati dress

wear **dhoti-kurta** with **angostra** over their shoulders. Women wear sarees in a different style. They usually tie bunch of keys to their **pallu** (corner of the saree).

3. Plains

People living in plains such as Uttar Pradesh, Punjab, Haryana, Rajasthan and Madhya Pradesh like to wear simple clothes.

The main dress of the people in Punjab is **salwar-kameez** for women. Men wear **kurta-lungi**. Men tie a turban called **pagdi**.

In Uttar Pradesh men wear **kurta-lungi**. Women wear saree-blouse. Some women also wear **salwar-kameez**. Men in Uttar Pradesh wear **Gandhi cap** as headwear.



Punjabi dress



Haryanvi dress

In Haryana, women wear **ghaghra-kurta** and **odhani**. Men of Haryana wear **dhoti-kurta** with a **turban**.

In Rajasthan, men wear **kurta-pyjama** with different kinds of turban. **Angarakha** is also worn there. Women wear **Ghagra** with **kachli**.

In Madhya Pradesh, women wear **saree blouse** and **ghaghra choli**. Men wear **dhoti-kurta**.

Dresses of Special Occasions

On different occasions we wear different kinds of clothes. During marriage, we wear colourful and bright clothes. Special dresses are made for bride and groom.

For activities like swimming, exercising and dancing we wear special outfits.

In school, children wear clothes called **uniforms**.

People like doctors, policemen, army men, postman etc. wear different uniforms.

So, you have studied the various types of dresses worn for different seasons and occasions.



Bajrainbah is a big piece of cloth that is used by mothers in North-East states to tie their children on their backs.



Cook



Sweeper



Student



Policeman



Postman



Soldier



Doctor



Summary

- ★ There are three main seasons- summer, winter and rain.
- ★ In Tamil Nadu, men wear a traditional dress called mundu.
- ★ The main dress of women in Punjab is salwar-kameez.
- ★ People like doctors, policemen, soldiers etc., wear different uniforms.



Fact Finder

Wearing weather-appropriate clothes can help protect the body from environmental elements and maintain comfort.

Exercise

A. Tick (✓) the correct option.

- a. In which region, do the men wear mundu?

Gujarat



Tamil Nadu



Kashmir



- b. Which of these people wear uniforms?

Students



Postman



Both (a) and (b)



- c. People of which region wear phiran?

Hilly region



Plains



Coastal region



- d. Which is the most common dress of women?

Saree-blouse



Ghagra-choli



Skirt-top



B. Fill in the blanks.

- In _____ region temperature remains normal throughout the year.
- In U.P., _____ cap is a popular headwear.
- Woollen clothes are suitable for _____ season.
- School children wear _____.
- _____ is a dress of people in hilly areas.

C. Write true or false.

- a. We wear woollen clothes in rainy season.
- b. Rajasthani men wear an angarakha.
- c. We do not have any special dress for the bride.
- d. Dhoti-kurta is a modern dress.

D. Answer the following questions.

- a. Which type of clothes do we wear in winter?
- b. Which type of clothes do we wear in summer?
- c. Which type of clothes do you like to wear in parties?
- d. Which type of clothes do people wear in plains?
- e. What type of clothes do students wear in school?



ACTIVITY TIME

A. Which is your favourite dress? Draw it in the space provided.

B. Know about the dresses your relatives and friends wear and where they live.



Natural Calamities



LEARNING OBJECTIVE

- Natural disasters
- Help in times of disasters
- Consequence of natural calamities
- Dealing with natural disasters
- First-Aid

Natural Disasters

Many times we hear about events that cause damage to human life and property. They may happen when we are just not prepared for them. We have no control over them. Such situations which pose immediate threat to our life and property are called **emergencies**. When such emergencies are caused by natural factors, these are called **natural calamities** or **natural disasters**. **Earthquakes**, **tsunamis**, **cyclones** and **floods** are some common natural disasters. Let us know more about some of the natural calamities and their effects.

An Earthquake is caused by sudden movements below the Earth's surface. When large mass of hot, liquid rocks are pushed under the Earth's surface, an earthquake occurs. Some earthquakes are very mild and cannot be felt, while some are so strong that they cause extensive damage to life and property.



Earthquakes cause great damage



Let Me Answer

What should one do if there is an earthquake?

infobits

Study of earthquakes is called seismology.

TEACHER'S NOTE

Guide learners about different calamities and how to protect others by giving first aid.

What should one do if there is an earthquake?

- ❖ Keep calm. Walk out of the building and move to an open area.
- ❖ Do not enter a building immediately after the earthquake stops.
- ❖ Do not stand near windows, mirrors, hanging pots during or immediately after an earthquake.
- ❖ Stay away from electric poles and trees.

Volcanic Eruptions

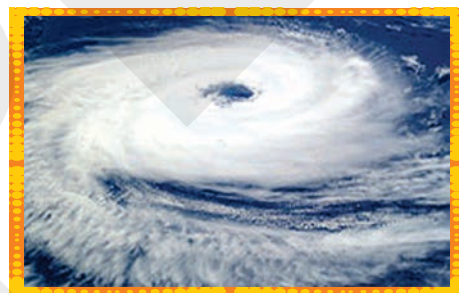
A volcano occurs when hot molten rock under the Earth's surface is forced out of rocks from the earth's crust. The molten rock is called **lava**. The hot lava causes damage to everything around it.



Volcano

Cyclones

A **cyclone** is a very strong rotating windstorm, accompanied by heavy lashing rain. Cyclones are very common in the coastal regions of India. The strong winds and rain cause loss to life and property.



Cyclone

What should you do in case of a cyclone?

- ❖ Listen regularly to the weather forecast if you live near a coastal area.
- ❖ Keep a first-aid kit ready.
- ❖ Be careful about snake and insect bites.
- ❖ Check for gas leaks after the cyclone.

Tsunamis

Tsunamis are huge sea waves caused by an earthquake or a volcanic eruption under the sea. The waves travel with great speed and can be as high as 50 feet. The tsunami that occurred in Japan, in March 2011, made many people homeless and caused great destruction.



Tsunami

What should be done if there is a tsunami?

Just before a tsunami strikes, the sea often recedes from the coast. If you see such a thing, run away from the coast.

If you live in a coastal area and feel an earthquake quickly run to a higher ground.

Landslides

Landslides occur in hilly areas when big rocks, stones and mud slide down the mountain slopes towards valleys. Landslides are more common in the rainy season. The Himalayas are very prone to landslides.



Landslide

Floods

When the water level in rivers and lakes rises due to heavy rainfall and flow to the nearby land, it causes floods. Floods cause damage to the crops, animals, property and human life. When flooded water recedes, epidemics like malaria and cholera break out.



Flood

Droughts

A drought is a long dry spell, with little or no rainfall. It causes severe damage to the soil, crops, animals and even people. It usually results in a water shortage that seriously hampers human activities. Droughts are common in the desert regions of Rajasthan. Crop failures occur due to drought, resulting in a famine. **Famine** is a condition when people die due to shortage of food.



Drought

What should we do in case of a drought?

- ❖ Take a bath using a bucket.
- ❖ Do not waste water in any way.
- ❖ Do not leave the tap running unnecessarily.
- ❖ Do not throw away water that has been used for plants or to clean the floors.

Wildfires

These are destruction fires in forests and other areas covered by vegetation. Uncontrolled fire can destroy forest, vegetation and animal species.



Wildfire

What should be done in case of a wildfire?

- ❖ First of all, inform fire brigade so that the situation can be controlled.
- ❖ Create a safety zone around the house that separates your home from plants and bushes that can burn easily.
- ❖ Clear dry bush and grass from your property because it can act as fuel for a fire.

Consequences of Natural Calamities

Natural calamities have an adverse effect on our lives and property. There is loss of life and property. Some people become handicap for a lifetime. Dams and roads are damaged. Many people become homeless. Services like electricity, transport, water supply etc., are disrupted.

Help in Times of Disasters

The government provides relief to the people during times of emergencies. Besides the government, many national and international non-governmental organisation (NGOs) and the United Nations Disaster Management Team (UNDMT) also provide aid and support to the affected people. Some other organisations that provide help are-

United Nations Children's Fund (UNICEF) :-

Indian Red Cross

First Hand Foundation

The armed forces supply essential items like food, water, blankets, clothes etc., to the people in disaster site.

- ❖ The police helps to maintain law and order.
- ❖ Policemen, firemen, soldiers and volunteers help in rescue work. They help to remove people trapped under the rubbles of collapsed buildings.

Your Role

Join hands with NGO and do your bit.

Collect essential items like food, water, clothes, etc.

Encourage the people in your neighbourhood to contribute in cash or kind.

Emergency Kit

Every family should have an emergency kit in their home. If there is an earthquake or tsunami for instance, there could be a power cut or the water could get polluted. You might get stuck in your home for several days because of a storm or a flood. Having an emergency kit ready could help if anything like this happens.



Emergency Kit

The emergency kit should contain the following things

- ❖ Food and drinks
- ❖ Clothes
- ❖ Other things like torch and medicines

First-Aid

First-Aid is the immediate help given to a wounded or injured person before the proper medical aid arrives. Timely first-aid can save one's life.

Tips while giving First-Aid

- ❖ Stay calm.
- ❖ Act quickly.



Fact Finder

Natural calamities, like earthquakes and hurricanes, remind us of Earth's immense power and the need for preparedness and resilience in the face of unpredictable events.

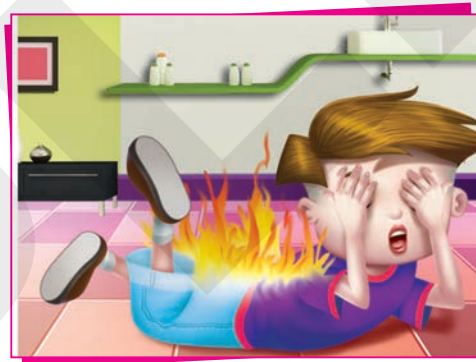
- ❖ Do what you can or call an elder.
- ❖ Do not allow people to crowd around the victim.

In case of fire what should we do?

Raise an alarm and inform the fire brigade by calling on 101.

Rush for the nearest available exit.

- ❖ If caught in the fire don't run or panic. Stop, drop and roll on the fire.
- ❖ Turn off all electrical appliances if possible.
- ❖ Use a fire extinguisher.
- ❖ If the fire is caused by kerosene or petrol, never throw water over it. Throw sand or mud on the fire instead.



Common First-Aids

Burns

In case of minor burns, apply cold water or ice on the burnt part. Apply any antiseptic cream to get relief from the pain.

In case of major burns, take the victim to the doctor immediately.



infobits

In case of fire do not use elevators or escalators rather use stairs.

Nose bleeding

In case of a nose bleed, make the patient sit upright with his/her head back. Pinch his nostrils and ask him to breathe through his mouth for about 10 minutes.

Apply an ice-pack to the nose of the patient.



Sprain

A sprain is a twist in a joint. In case of a sprain

- ❖ Put on elastic bandage or crape bandage around the sprained area to immobilise it.
- ❖ Apply a pain relieving ointment like 'Iodex' on the sprained area.



Fracture

A fracture is a break or crack in a bone. In case of a fracture

- ❖ Do not move the fractured part.
- ❖ Tie a splint to the broken bone.
- ❖ A sling can be used to support a fractured arm.
- ❖ Take the victim to the doctor.



Fainting

Make the victim lie down with his head a little lower than his body.

This will make extra blood reach his/her brain. Do not crowd around him/her.

Let her/him breathe fresh air.



Wounds and cuts

In case of wounds and cuts, one needs to be very careful as germs enter our body through these uncovered cuts and wounds.

Follow these first-aid tips in case of cuts and wounds.

- ❖ Wash the wound with water.
- ❖ Apply any antiseptic lotion with cotton gently on the affected part.
- ❖ Cover the wound with a clean bandage.
- ❖ If the wound or cut is deep, take the victim to the doctor.



- ❖ If the cut is due to any metal object, the victim requires an anti-tetanus injection.



Summary

- ★ Situations that pose immediate threat to our life and property are called emergencies.
- ★ When such emergencies are caused by natural factors, these are called natural calamities disasters.
- ★ Earthquakes cause great damage to life and property.
- ★ A cyclone is a very strong rotating windstorm accompanied by heavy lashing rain.
- ★ Landslides occur in hilly regions.
- ★ Tsunamis are huge sea waves caused by an earthquake or a volcanic eruption under the sea.



Exercise

A. Tick (✓) the correct option.

- a. Which of these is caused by sudden movement below the Earth's surface?

Tsunami



Drought



Earthquake



- b. Raise an alarm and inform the fire brigade by calling _____.

105



101



102



- c. The molten rock is called _____.

drought



lava



cyclone



- d. Which is a long dry spell with little or no rainfall called?

Cyclone



Drought



Volcano



B. Fill in the blanks.

- a. An earthquake is caused by sudden movements below the _____.

- b. A _____ is a very strong rotating windstorm accompanied by heavy lashing rain.
- c. A _____ is a long dry spell, with little or no rainfall.
- d. In case of _____, apply cold water or ice on the burnt part.

C. Answer the following in short.

- a. What is first-aid?
- b. What is the use of an emergency kit?

D. Answer the following questions.

1. What are natural calamities?
2. What is an earthquake?
3. What is a drought?
4. What is a cyclone?



ACTIVITY TIME

What first-aid will you give in these situations?



Revision Test Paper-III

(Based on Chapters 6 to 8)

A. Tick (✓) the correct option.

- a. Which is the main source of water?
Pond ☐ Baoli ☐ Rain ☐
- b. A deep hole in the ground where water is available is called _____.
Well ☐ handpump ☐ tubewells ☐
- c. In which region, do the men wear mundu?
Gujarat ☐ tamil nadu ☐ kashmir ☐
- d. Raise an alarm and inform the fire brigade by calling _____.
105 ☐ 101 ☐ 102 ☐

B. Fill in the blanks.

- a. An earthquake is caused by sudden movements below the _____.
b. In case of _____, apply cold water or ice on the burnt part.
c. In _____ region temperature remains cold throughout the year.
d. _____ is the main source of water.

C. Write true or false.

- a. Rajasthani men wear an angarakha. _____
b. Landslides occur in hilly regions. _____
c. We do not have any special dress for the bride. _____
d. A baoli is not a huge well. _____

D. Answer the following question?

- a. What are the different sources of water?

- b. Which types of clothes do we wear in summer?

- c. What are natural calamities?

- d. What is a drought?



Renewable and Non-Renewable Resources



LEARNING OBJECTIVE

- Natural Resources
- Non-renewable Resources
- Some Renewable Resources
- Soil

Natural Resources

Nature is an abundant source of things which we use for our daily needs. When we are about to prepare food, we need food items like wheat flour, rice, vegetables, water, utensils, cooker and heat source like gas, etc.

All these things are provided to us by nature. One can create nothing new on their own. We depend on nature for finished products or raw materials.

The materials which we use for making things that are provided by nature are called **natural resources**. Air, water, food, petroleum, soil, forest are all natural resources.



A hydroelectric station uses the power of falling water to turn its generators. Water is stored in a reservoir behind a huge dam.



Let Me Answer

How we get hydroelectric power?



Different types of energy

TEACHER'S NOTE

Tell the students that this world is full of different resources. Make learners understand their various uses.

The natural resources which we cannot consume wholly, are called **renewable resources**. Nature provides renewable resources again and again periodically.

For example, river water is a renewable resource as the amount of water used by us is replaced by nature in the form of rain.

Food is also renewable resource as the farmers can grow more food for us.

Energy we get from sun (solar energy), energy we get from water (hydroenergy) and the wind energy are the examples of renewable sources of energy. Renewable sources of energy remain renewable until we use not more than required.

Most of the energy resources are non-renewable.

For example, coal, petroleum and natural gases are **non-renewable** resources of energy, as their amount is fixed and cannot be replaced or even if they can be replaced the pace is very slow.

Renewable Resources

The Sun

The Sun is a source of life. It gives heat and energy for the survival of all living things. It is a renewable resource.

The Sun rays are absorbed by the huge solar panels to get its energy. This energy called the **solar energy** can be used for cooking food, to heat up water or room.

Solar cells convert sunlight into electricity. Solar energy is a good option to be used by the common people.



Solar Energy



Hydroelectric Power

Water

We get water from many sources like rain, streams, ponds, sea, rivers and oceans. Water is used by us for many purposes.

Water is also used to generate electricity as it has energy. Electricity generated by water is called **hydroelectric power**. It is generated by turbines by the falling water. This generates electricity.

Since the amount of water used is replaced by rain, it is a renewable resource. But the extensive use of water cannot be replaced by nature alone. We should use it more carefully to save our future.

Wind

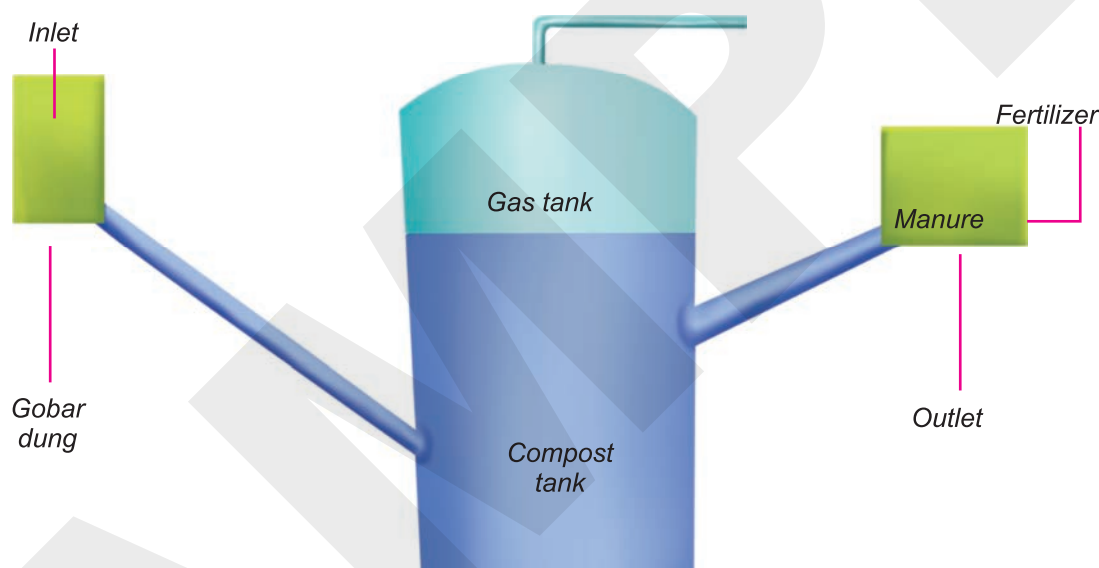
Wind energy is also used to generate energy and to do other mechanical works. Wind is a renewable resource because we will go on getting wind till nature exists.



Wind farm

Dung of animals

The dung of animals is also a natural renewable resource. You must have heard about **gobar gas plant**.



Gobar Gas Plant

Gobar gas plant is used to generate fuel for cooking and other purposes.

The residue of dung is used as fertilisers for the plants. It is the best manure for the growth of plants.

Non-renewable Resources

Coal

Coal is formed by the dead plants and trees buried under the ground for very long periods. The buried trees and plants get converted into coal by heat and pressure of the earth for a long time. This process takes several years. So, coal is a non-renewable resource. The extensive use of coal should be avoided because one day this natural resource may be finished from nature.



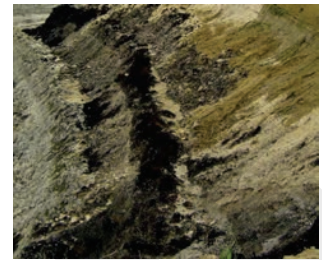
A drowned animal sinks into the mud.



An animal whose soft parts are rotten away, leaving the bones, layers of mud covered the skeleton.



The skeleton and layers of mud pressed into rock in time.

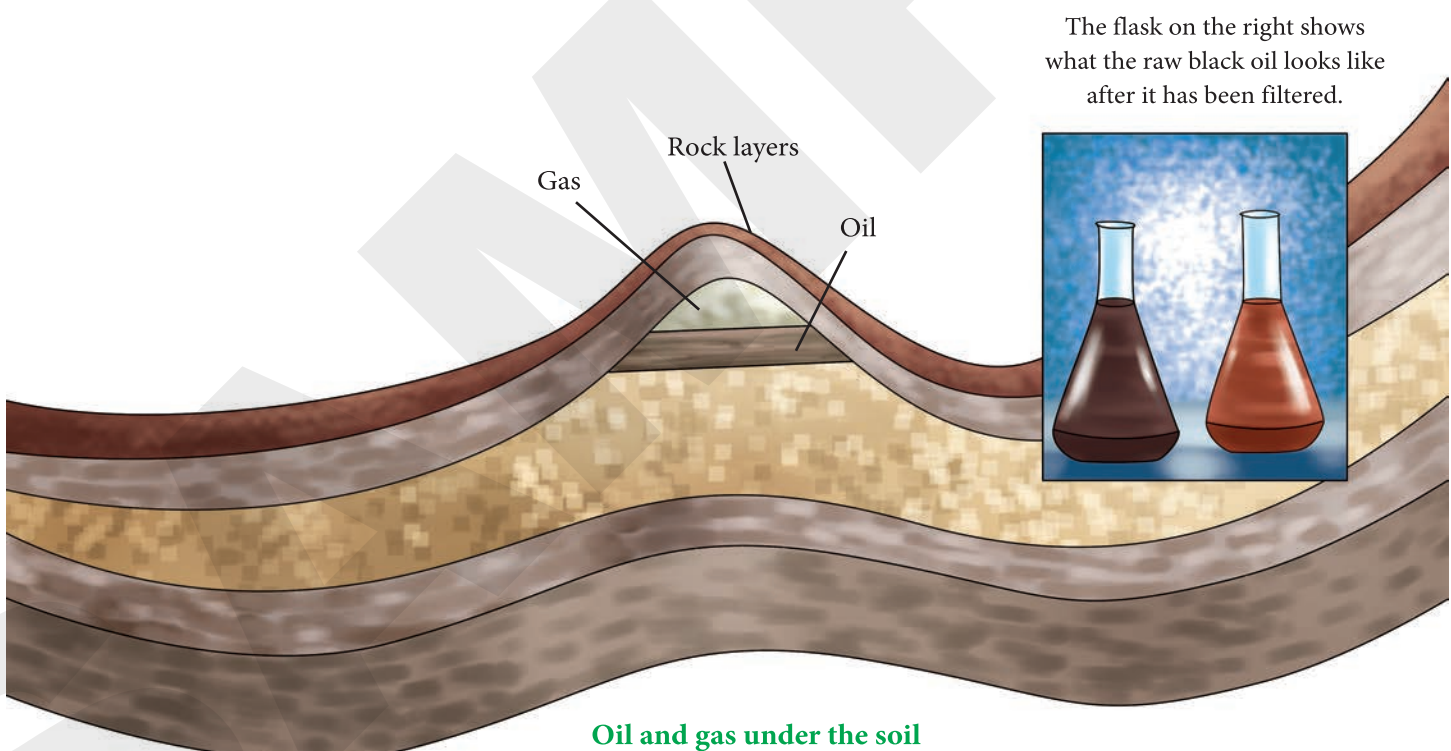


Coal layer

Petroleum And Natural Gas

Petroleum and natural gas are formed over millions of years beneath the sea. The dead sea-organisms get buried into the layers of rocks. The heat and pressure transforms them to oil and natural gas.

The drilling of rocks for extracting oil and gas is an expensive process. The formation of petroleum and natural gas also takes millions of years. We should use petrol, diesel, kerosene, natural gases, etc. more wisely to face the future.



Metals And Minerals

Nature has provided us with valuable gifts of metals and minerals. These gifts should be used properly because these are non-renewable sources. Our household articles are made of different metals.

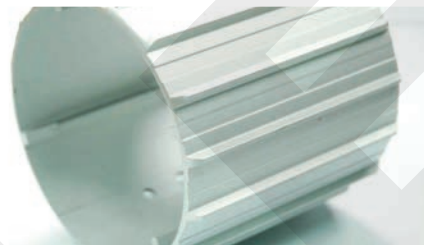
Some metals are abundant in nature, like aluminium, iron and magnesium while some metals are limited like tin, silver, gold and platinum. So, we should use them more wisely.



Gold bar



Mining



Aluminium sheet

Soil

Soil is the most valuable resource on earth. Soil not only contains metals and minerals in its layers but also grows the plants, which are the food-producers. It supports plants as well as animals. It gives us food through the growth of plants. Life cannot be imagined in the absence of soil.

Sometimes, deadly poisonous gases are found in coal pits. Many miners have died inhaling such poisonous gases.

Formation of Soil

The weathering and breaking of rocks form the soils. The wind, water and living beings are the causes of breaking of rocks. Due to cooling, heating and drying, the rocks crack and break up into small pieces to form soil. The process of soil formation is a slow, long and continuous process.

The quality of soil is an asset of a nation. It adds wealth to the country.



Soil formation by breaking up of rocks

Uses of Soil

Our basic needs such as food, cloth, shelter, etc. are fulfilled by soil. Forests which grow in soil, bring rain and support various plant and animal activities. Large deposits of metals and minerals are present in the soil. Microorganisms present in soil make it fertile and help in maintaining the ecosystem. Soil is also used for making bricks, pots and porcelain, etc. Soil also stores water under the ground. This underground water is pure and free of germs, so it can be used for drinking purposes.



Soil used for making bricks



Soil used for making pots



Soil stores water under the ground which is used for drinking, cleaning, etc.

Soil Erosion

The carrying away of soil from one place to another by water or wind is called **soil erosion**.

Heavy rainfall in hilly areas causes soil erosion on the slope. In plains, flood-water carries away the soil. The storm and wind also carry away the soil from one place to another. the soil erosion leads to loss of upper layer of soil. It reduces the fertility of soil, by removing the layer of humus, in soil.

Man is equally responsible for the soil erosion. To meet his needs, man continuously cuts forests and trees. To acquire land, he changes grasslands into cemented land.

Soil erosion is also carried out by animals. Overgrazing by the animals make the soil bare. The grass holds soil in its long, continuous roots and thus checks the soil erosion.

Soil Pollution

Man produces different types of wastes from mines, factories and homes. Most of the wastes are buried in land. This causes serious **soil pollution**.

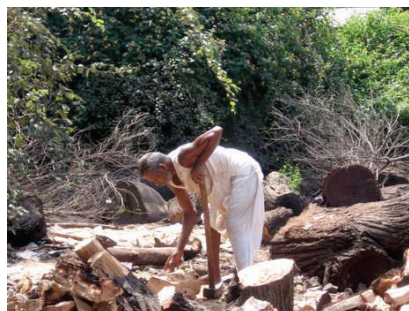
The careless use of pesticides, insecticides and fertilizers also lead to soil pollution. The soil pollution causes infertility of soil and contamination of water as well as air.



Soil Erosion by water



Cattle Grazing



Wood Cutting



Grassland changed into cemented land

Soil Conservation

The soil is being damaged by the activity of men. Thousands of tons of soil is carried away by wind or water due to the deforestation.



Due to huge soil erosion, rivers are losing their depth.

The desert land is spreading speedily. The careful protection of the soil or to check soil erosion is called **soil conservation**.

Different methods are adopted to check soil erosion.

1. More trees should be grown at slopes of mountains.
2. Overgrazing by the cattle should be avoided.
3. Terrace-farming should be done in the hilly areas.
4. Strong embankments along river banks reduce soil erosion.
5. Trees should be planted in large numbers.
6. Proper use of fertiliser reduces the infertility of soil.



Fact Finder

Renewable resources, like solar and wind energy, can be replenished naturally, while non-renewable resources, such as fossil fuels, are finite and deplete over time.



Summary

- ★ Natural resources are the substances which we get from the nature.
- ★ Renewable resources do not reduce even after using them again, e.g. riverwater, solar energy, the food grains, etc. which farmers can grow periodically.
- ★ Non-renewable resources are in fixed amount. They are replaced very slowly, e.g. coal, petroleum and natural gases.
- ★ Electricity generated by water is called hydroelectric power.
- ★ Coal is formed by the dead plants and trees buried under the ground for a very long period.
- ★ Soil is formed by the weathering and breaking of rocks.

Exercise

A. Tick (✓) the correct option.

- a. Water is a _____.
 non-renewable source of energy
 renewable source of energy
 hydroelectric power
- b. Solar cells convert _____.
 potential energy to kinetic energy
 heat energy into chemical energy
 sunlight into electricity
- c. The metal which is not much abundant in nature is _____.
 aluminium ☐ magnesium ☐ gold
- d. Soil pollution is caused due to _____.
 cutting of tree.
 grassland changed to cemented land.
 waters from mine factories and homes in the soil.



B. Fill in the blanks.

- a. The amount of water used by us is replaced by _____.
- b. Metals are extracted from the _____.
- c. _____ convert solar energy into electricity.
- d. Most of the energy resources are _____.
- e. _____ is formed by breaking and weathering of rocks.

C. Write true or false.

- a. Wool that we get from sheep is an example of renewable natural resource. _____
- b. The plants cause soil pollution. _____
- c. If the resource available to us, do not reduce, it is called non-renewable resource. _____

d. Substances which we get from nature are called natural resources. _____

e. Micro organisms present in soil make the soil fertile. _____

D. Match the following.

- | | |
|----------------------|------------------------------------|
| a. River water | (i) Non-renewable natural resource |
| b. Soil erosion | (ii) Natural resource |
| c. Natural gas | (iii) Renewable natural resource |
| d. Soil conservation | (iv) Planting more trees |
| e. Soil | (v) Wind and water |

F. Answer the following questions.

a. How can the dung of animals be used?

b. How can we conserve soil? Write any four ways.

c. Why is it important to use coal and petroleum more wisely?

d. What is soil erosion? Name the agents that bring soil erosion.

e. Name various natural renewable resources.



ACTIVITY TIME

Draw a picture of a gobar gas plant.



Our Heritage Culture and Unity



LEARNING OBJECTIVE

- Type of Heritage
- Paintings
- Literature
- Dance and Music
- Monuments
- Decorations

We have got varieties of things from our ancestors. These include history, traditions and qualities. These things have been passed on to us from generation after generation and is known as our heritage. We should be proud of it and conserve it so that it can be passed on to the next generation.

TYPES OF HERITAGE

There are two types of heritage—natural heritage and cultural heritage.

Natural Heritage

Animals, birds, forests, rivers, mountains, valleys, minerals, deserts and other natural features of our country are our natural heritage.

Cultural heritage

Dance, music, paintings, poetry, monuments, pillar and rock inscriptions, coins, places of worship, language, pottery, oral traditions of India and literature are our cultural heritage. The rituals and customs that we follow in our society are also a part of our cultural heritage.

Dance and Music

India has a rich tradition of "dance" and "music". There are two types of **dance** and **music** — classical and folk. Mohiniattam of Kerala, Bharatnatyam of Tamil Nadu, Kathak of Uttar Pradesh, Manipuri of Manipur, Odissi of Odisha/Orissa are classical dances of India.

TEACHER'S NOTE

Ask students about the different cultures of our country. Let them talk about different states.

Most of these dances started as a form of worship in temples. While some dances like Kathak were performed in the courts of the Indian kings.

Groups of people perform folk dances on special occasions like festivals, marriages, harvesting time, etc., Bhangra and Gidda of Punjab, Bihu of Assam,



Kathakali dance

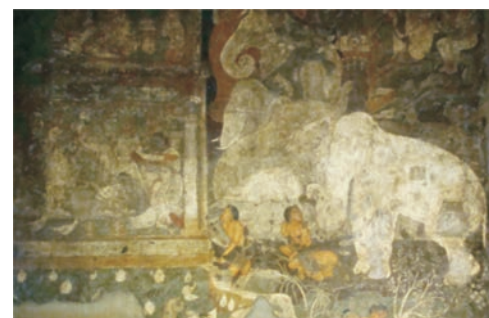
Garba and Dandia of Gujarat are some of the popular folk dances. The north-eastern states are well known for tribal dances.

Classical music has been performed in the courts of the Indian kings and in temples since ancient times. There are two main styles of classical music. Carnatic music developed in south India and Hindustani music developed in north India. Sarod, Veena, Tabla,

Sitar, Flute and Mridangam are classical instruments used in classical music.

Paintings

Since ancient times, there have been various styles of **paintings** in India. The early humans painted on the walls of the caves where they lived. The scenes from the life of Buddha have been portrayed on the wall paintings in the Ajanta and Ellora Caves in Maharashtra. Miniature paintings became popular during the Mughal dynasty. The paintings depict sceneries, hunting, court scenes, battles and scenes from the Ramayana and Mahabharata.



Ajanta Cave Paintings

Monuments

The old buildings such as palaces, forts, temples built by earlier rulers of India are known as **monuments**. We get valuable information regarding the life of ancient people from these buildings. Some examples of our architectural heritage are the Jain Temple at Mount Abu, Sun Temple at Konark, the Taj Mahal at Agra, Sanchi and Sarnath, the temples of Khajuraho and the forts and palaces in Rajasthan.



Bharatnatyam

Literature

Our country has a vast collection of **literature** which forms an important part of our heritage. This includes religious literature as well as non-religious literature. Books that deal with religion are known as **religious literature** which includes the Gita, the Mahabharata, the Ramayana, the Vedas and the Puranas. The books that do not deal with religion are known as **non-religious literature**. These include poems, stories, folk tales, dramas, etc. written by famous writers.

There are also oral traditions, related to stories or knowledge that have been told or passed on from generation to generation by words of mouth. There is no proof of any written material. Grandma's folk tales and stories form an important part of this tradition. There are 22 official languages in India and almost every state in our country has its own mother tongue language. Hindi being the most common language is spoken by majority of people in our country.

Jewellery, dress and food are also an important part of our heritage. The ghagra-choli is a popular dress in Madhya Pradesh, Gujarat, Haryana and Rajasthan. Sari is a popular dress among most of the women. Salwar kameez is mostly worn by women in North India. The dress code for men is kurta-pyjama, lungi-shirt, dhoti-kurta or pants-shirt. Trousers and shirts are worn by both men and women in towns and cities. Bread, naan, rajma-chawal, chole-chawal are popular foods in north India. In South India idli, dosa, sambhar, chutney are relished by people. In Eastern India, rice and fish are the popular food. All these food items are a part of our heritage.

Decorations

Decorations such as alpana and rangoli made of different types of flowers or powdered colours, that are made on the entrances and walls of houses also form part of our heritage. Embroidery or stitching on



Ladies making Rangoli

clothes like kantha work. Chikan kari, Kashmiri stitch are some of the traditional forms that are passed on from generation to generation. In parts of Jharkhand and Bihar, the walls are decorated with beautiful drawings called Madhubani art. Craftwork such as terracotta, bidri work, weaving and other handicraft are also part of our heritage.



Fact Finder

"Heritage echoes the whispers of our ancestors, culture paints the canvas of our identity, and unity weaves the tapestry of our strength."

Sports

There are also a number of sports that are a part of our heritage. India has a vast and unique culture, so every state has its own traditional sports to follow. India become the land of traditional sports like Kushti, Vallamkali, Jallikatu and many more. One of the traditional sports in India is Mallakhamb, also known as the pole dance of India.



Let Me Answer

"How does the tapestry of our heritage and culture contribute to our sense of unity?"

infobits

"Through diverse heritage, we celebrate a tapestry of cultures, fostering unity that bridges differences."



Summary

- ★ The things or qualities that have been passed on to us from earlier generations is know as our heritage.
- ★ Natural heritage includes animals, birds, rivers and mountains.
- ★ Cultural heritage includes music, dance, paintings, monuments etc.
- ★ Dress, food, crafts work and sports are also a part of our heritage.
- ★ We get valuable information regarding the life of ancient people from our monuments.

Exercise

A. Multiple Choice Questions(MCQs)

Tick (✓) the correct options.

1. Which one of these is a classical dance of Tamil Nadu?

(a) Bharatnatyam



(b) Odissi



(c) Mohiniattam



2. Where is the famous Sun Temple situated?

(a) Konark



(b) Mount Abu



(c) Delhi



3. Which dance form is famous in Odisha?

(a) Kathak



(b) Odissi



(c) Bharat Natyam



4. Ghagra-choli is the popular dress in?

(a) Madhya Pradesh



(b) Gujarat



(c) Haryana



5. Which classical dance form is famous in kerala?

(a) Munipuri



(b) Mohiniattam



(c) None of these



6. Which of these is the folk dance of Assam?

(a) Garba



(b) Bhangra



(c) Bihu



7. How many official languages are there in India?

(a) 20



(b) 23



(c) 22



8. Carnatic music was developed in?

(a) North India



(b) South India



(c) Central India



9. Which of these is the popular food in North India?

(a) Dosa



(b) Idli



(c) Rajma - chawal



10. Since ancient times, there have been various styles of _____ in India.

(a) monuments



(b) paintings



(c) dances



B. Fill in the blanks with the words given in the box.

Madhubani North India tribal sarod veena Gidda
religious music Konark 22 cultural

1. The Gita is a part of literature.
2. The famous Sun Temple is in
3. Dance and music are heritage.
4. There are languages spoken in India.
5. Hindustani and Carnatic are two main styles of classical
6. Hindustani music is developed in
7. and are classical instruments used in classical music.
8. art is famous in the parts of Bihar and Jharkhand.
9. is a folk dance of punjab.
10. The north-eastern states are well known for dances.

C. Tick (✓) the 'True' and cross (✗) the 'False' statement.

1. Most of the classical dances started as a form of worship in temples.
2. Kathak is a folk dance of Uttar Pradesh.
3. English is the common language spoken in India.
4. Alpana is a type of drawing.

☐
☐
☐
☐

D. Match the following.

Column A

1. Mridangam
2. Dandia
3. Ramayana and Mahabharata
4. Chole - chawal
5. Idli and sambhar
6. Folk tales and dramas
7. Carnatic music
8. Ajanta and Ellora caves
9. Alpana
10. Terrakota, bidri

Column B

- (a) Non-religious literature
- (b) South India
- (c) Maharashtra
- (d) Decoration
- (e) Craftwork
- (f) Religious literature
- (g) Gujarat
- (h) Classical instrument
- (i) North India food
- (j) South Indian food

E. Answer the following questions:

1. What do you understand by national heritage?
2. Mention the two styles of music still practised in India.
3. What are the two main styles of classical music?
4. What do you know about the literature of our country?
5. How are sports a part of our heritage?



ACTIVITY TIME

Collect pictures of different kinds of painting, monuments, dances in India and paste them in your scrapbook.



Globe and Map



LEARNING OBJECTIVE

- Globe
- Limitations of a globe
- Map
- Limitations of a map
- Languages of maps
- Directions on the map

The Earth is the only planet on which the existence of living beings has been confirmed. Although the possibilities of life on the Mars is being explored, we are yet to achieve important breakthrough in this regard. We live on the surface of the Earth. A Globe is a small model of the Earth. It shows us the true shape of the Earth. It is an exact model of the Earth but it is not very convenient to handle. You can not carry a globe everywhere you go. So it becomes important for us to have something that helps us in locating the places.

Limitations of a Globe

- ❖ It occupies a lot of space.
- ❖ It lacks portability. In other words, it is difficult to transport it from one place to another.
- ❖ It does not show detailed information.
- ❖ It cannot be used in books.



Globe



Let Me Answer

Name the smallest model of the earth.

In order to overcome these drawbacks, map came into being.

Map

Map is made up by cutting and opening the globe on the two poles.

A map is a drawing of the surface of Earth on a flat surface, like paper. Since a map is made on a flat surface, it is very handy. A map made on a paper can be carried in pockets or rolled and kept with you while travelling. Because of the wide utility of maps, it has become very popular. The map has many advantages over a globe. It is



TEACHER'S NOTE

Allow the students to have an open discussion about different continents and countries with the help of a map.



easy to locate a place using a map. It can show even the smallest area in great detail. The globe shows the entire Earth.

The use of map makes possible to see the whole of Earth's surface at one time. But it also had some limitations.

Limitations of a Map

- ❖ It is not fully flat so cannot be used in books.
- ❖ To show all the features of the Earth on a single sheet is not possible for it.
- ❖ Surface of the Earth is curved and it is not easy to show curved surface of the Earth.
- ❖ It lacks accuracy.
- ❖ Despite of many limitations, maps are useful in many ways.

They can be used to show whole of the Earth or small part of Earth's surface.

Separate maps can be made for continents, countries, cities or even local neighbourhood.

Size of map varies according to location covered. It is easily portable.

Atlas

A collection of a number of maps in the form of a book is called an **Atlas**.

Let us see how a map uses some special elements that help us to locate the place correctly.



A person who makes maps is called cartographer and the skill of making maps is called cartography.

Language of Maps

Language of maps incorporates the colours, signs, symbols, directions and scales that are used to depict various locations and their details.

Directions on the map

There are four major directions in a map. They are — the North, the South, the East and the West.

All countries in world have adopted strict uniform ways of naming these directions.

Directions can be easily studied with the help of a map.

See the map of India given alongside

- ❖ Top of the map is known as **North**.
- ❖ **South** is always directly opposite to North i.e towards the bottom of the map.
- ❖ To the right side is **East**.
- ❖ To the left side is **West**.

In India's Map

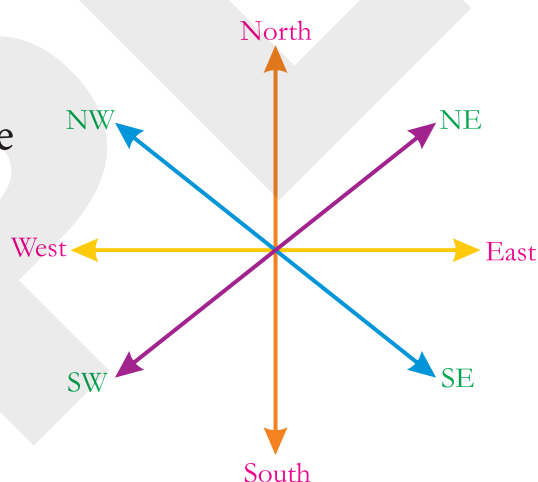
- ❖ Jammu and Kashmir is in the North.
- ❖ Tamil Nadu is in the South.
- ❖ Gujarat is in the West.
- ❖ Assam is in the East.

Sub directions

Apart from major directions, there are four sub-directions

1. Between North and East lies North-East.
2. Between North and West lies North-West.
3. Between South and East is South-East.
4. Between South and West is South-West.

In India, Meghalaya, Mizoram, Manipur, Assam, Tripura, Arunachal Pradesh, etc.



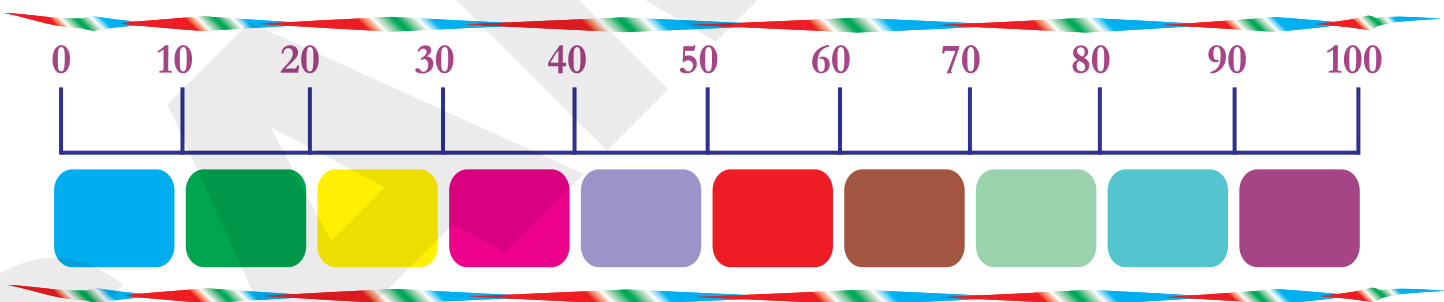
India

Dynastio Chinese culture and some other Central Asian cultures view center as the fifth direction.

are the north - eastern states. These eight directions and sub-directions help us in finding the position of a place. Everyday, Sun sets in the west. So, to know the direction if you go to a new place, in the morning stand facing towards the Sun. Imagine that your face is pointing towards the Sun. The direction at which the face will point will be East. The back will be pointing towards the West. Your right-hand will point towards the South and your left hand will point towards the North direction. The map show the basic system of the direction.

Scale and Distance

A map is a small representation of the big area or region shown by it. So we can not draw the actual distance of the place on a small piece of paper. To write correctly the distance of the place on a map, a scale is used. Every map is used to represent distance in its own way. So every map gives the measure of distance in the form of a scale in the corner of the map scale is the relation between the actual size of the place and its size on a map. For example, some maps use a scale of 1 cm = 100 km.



This means one centimetres on a map is equal to 100 kilometres on the ground. Distance can also be shown by darkening a straight line on a map dividing it into equal parts. By taking the first point on the line as zero, the subsequent points can be measured as multiples of 100. That is, the kilometre and the other points can be used to represent distance of the place from the first point.

Colour Scheme

Colours are very important components of a map. Different types of colours are used to show different features of a map. The unevenness of land is shown using various colours.

1. Green is used to show low land or plains.
2. Yellow or light brown are used to show land higher than the low lands or plains.
3. High land are shown using deep brown.
4. Shades of blue are used to show water.
5. Pale blue shows shallow waters and deep blue shows deep water.



These maps give a key to the colour in box indicating the depth or height from the sea-level. All maps use the same colours.

The colours are universally used commonly, so that anybody who knows the language of colours can understand it.

Signs and Symbols on a Map

Things are represented by using signs and symbols. Look at the political map of India. The cities are shown by using a circle and the double circles show a city which is also a capital.

Dotted lines or dashes show the boundary of the land. Similarly, other places as railways, etc. are also marked by using symbols. There is a key which tells us what symbol stands for which thing as you refer to the map more often. You will learn each symbol and understand it even when there is no key with the map. So, by knowing the language of the map, understanding the direction, the scale, the colour the signs and symbols. We can learn various things about a place which the map represents.



Summary

- ✦ A globe is a small model of the Earth.
- ✦ A map is a drawing of the surface of the Earth on a flat surface.
- ✦ There are four major directions in a map. Colours are very important component of a map.
- ✦ Things are represented on a map by using signs and symbols.



Fact Finder

A globe represents the Earth's curved surface accurately, while maps offer flat representations with distortions that vary based on projection methods.

Exercise

A. Choose the best alternative.

- a. The book of maps is called _____.
 atlas ☐ guide ☐ dictionary ☐
- b. Towards downward in the map is _____.
 north ☐ east ☐ south ☐
- c. In which direction is Jammu and Kashmir located?
 north ☐ east ☐ south ☐

B. Fill in the blanks.

- a. A book of maps is called an _____.
- b. The North shows _____ in a map.
- c. Maps use special _____ to give us a lot of information.
- d. The bottom in map shows _____ direction.

C. Write true or false.

1. We use maps to help us in locating the places. _____
2. A globe is a map. _____

3. Map has its own language which is followed universally. _____
4. Roads, railways, temples etc., are shown using symbols. _____
5. Colour is used only to make the map beautiful. _____

D. Match the columns.

- | | |
|-----------------------|----------------------------|
| a. Scale on the map | (i) Position |
| b. Direction | (ii) Distance |
| c. Colours in the map | (iii) Features of the land |
| d. Symbols on the map | (iv) Book of maps |
| e. Atlas | (v) Dotted lines or dashes |

E. Answer the following questions.

- a. How does a map help us?

- b. How does the directions and sub-directions on the map help us to locate the places?

- c. What is a scale? What does it tell us on a map?

- d. What do the colours in a map tell us? Name five colours used in the map.

- e. Name five common symbols and signs used in map.



ACTIVITY TIME

Take a world map. Colour it according to the landscape of the place.

Mark the important cities of the world in it.



LEARNING OBJECTIVE

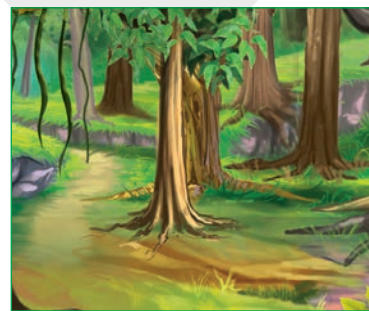
- Importance of forests • Tribes of India • Sacred groves • Deforestation
- How can we protect our forests?

A forest is a large area of land that is covered with trees, shrubs, climbers and creepers.

Importance of Forests

Forests have always been of great importance to man since early times. Prehistoric people obtained food from wild plants and by hunting animals. They lived in forests that provided them with all the basic needs.

Today, we get wood, latex to make rubber, gum, oils etc., from the forests. Forests help to conserve the soil as roots of trees do not allow the soil to erode. Forests keep the air clean by absorbing carbon-dioxide and releasing oxygen.



Let Me Answer

What is the relation between the tribes and the forest

Tribes of India

There are many tribes in India. Some of them are



Santhals



Mundas



Garos



Nagas

Dependence of Tribal People on The Forest

The tribes of India are very much dependent on the forests for their livelihood.



TEACHER'S NOTE

Allow the students to have an open discussion about the tribal life.

So they think forests are sacred and will never harm them.

They get wood, fruits, seeds, honey, wax and herbs from the forests.

They make baskets and toys from bamboo and cane. They know the art of making perfumes from the wild flowers. Some of them specialize in making plates and bowls from sal leaves. They sell these products in the local markets called *haats* to earn their living.



Tribal people making baskets, bowls and plates of leaves.



A tribal haat

Sacred Groves

An area in forest, which contains trees and medicinal plants that are on the verge of extinction are called sacred groves.

These groves are sacred as they are said to be associated with some deities. Tribal people protect these groves and do not allow people to cut trees. Hence, they help in the conservation of forests.

Deforestation

The cutting down of trees on a large scale is called deforestation. It is either done to clear lands for cultivation or to grow towns. The trees are also cut down to obtain wood.

But deforestation has many adverse effects. As roots of trees bind the soil and prevent soil



Conservation of forest



Deforestation

erosion, so when deforestation has occurred the soil becomes loose and easily gets eroded. It has made animals homeless. It has led to natural calamities like landslides and floods. It has made the survival of tribal people very difficult. It affects the climate adversely.

Deforestation results in global warming.

How can we protect our forests?

Our government has set up many national parks and wildlife sanctuaries in almost every part of our country to protect the trees from being cut down. It has also launched many programmes like **Social Forestry Movements** and **Vanamahotsava** to plant more trees.

Vanamahotsava is a week long festival that is organised every year in the month of July across India. It was initiated by K.M. Munshi in 1950.

Chipko Movement

In 1973, villages in the Alaknanda valley in Uttarakhand protested against the cutting down of trees.

The women hugged the trees and refused to let go till the tree-cutters left the place. This activity became popular as the Chipko Movement. Sunderlal Bahuguna has been the leader of the Chipko Movement.



Women hugging a tree during the Chipko Movement.



Sunderlal Bahuguna

For the **Bishnois** of Rajasthan, preservation of animals and vegetation is a religion. Bishnois women and local villagers once hugged trees when the soldiers of Maharaja Abhay Singh of Jodhpur came to chop trees.



Summary

- ★ A large area of land, thickly covered with trees, bushes, creepers and climbers is called a forest.
- ★ We get many things from the forest like wood, wax, gum, fodder, fruits and medicine.
- ★ Many Indian tribes depend on forests for their livelihood.
- ★ The cutting down of trees on a large scale is called deforestation.
- ★ We all need to make efforts to protect our forests.

Exercise

A. Tick (✓) the correct option:

- a. What do we get from forests?
Wood ☐ Wax ☐ Both of them ☐
- b. The cutting down of trees on a large scale is called
afforestation ☐ deforestation ☐ none of these ☐
- c. Which movement is related to hugging the trees?
Vanamahotasava ☐ Chipko Movement ☐
Social Forestry Movement ☐

B. Fill in the blanks.

- a. The cutting down of trees on a large scale is called _____.
- b. Our _____ has set up many national parks and wildlife sanctuaries in almost every part of our country.
- c. _____ has been the leader of the Chipko Movement.
- d. Forest keep the air clean by absorbing _____ and releasing _____.
- e. Deforestation results in _____.

C. Answer the following questions.

- a. How are forests important?

b. How are the tribes of India dependent on forests?

c. What are sacred groves?

d. What is deforestation? What are its effects?

e. What was Chipko Movement?



ACTIVITY TIME

Write a paragraph on 'Sunderlal Bahuguna' and what all he did to save our forest wealth.



Revision Test Paper-IV

(Based on Chapters 9 to 12)

A. Tick (✓) the correct option.

- a. The book of maps is called _____.
Atlas ☐ Guide ☐ Dictionary ☐
- b. What do we get from forests?
Wool ☐ Wax ☐ Both of them ☐
- c. Since ancient times, there have been various styles of _____ in India?
Monument ☐ Paintings ☐ Dances ☐

B. Fill in the blanks.

- a. The cutting down of trees on a large scale is called _____.
- b. Deforestation results in _____.
- c. A book of maps is called an _____.

C. Write true or false.

- a. We use maps to help us in locating the places. _____
- b. Ghagra choli is a popular dress in Madhya pradesh. _____
- c. The plants cause soil pollution. _____
- d. Microorganisms present in soil make the soil fertile. _____

D. Answer the following questions.

- a. How can dung of animals be used?

- b. What is soil erosion? Name the agents that cause soil erosion.

- c. Name any three religious literatures.

- d. How does a map help us?

MODEL TEST PAPER-II

(Based on Chapter 6 to 12)

A. Tick (✓) the correct option.

- a. Which one of these is a classical dance of Tamil Nadu?

Bharatnatyam

☐

Odissi

☐

Mohiniattam

☐

- b. How many official languages are there in India?

20

☐

23

☐

22

☐

- c. Which movement is related to hugging the trees?

Vanamahotsava

☐

Chipko movement

☐

Social Forestry Movement

☐

- d. In which direction is jammu and kashmir located?

North

☐

East

☐

South

☐

- e. The molten rock is called _____

Drought

☐

Lava

☐

Cyclone

☐

B. Fill in the blanks.

- a. A _____ is a very strong rotating windstorm accompanied by heavy lashing rain.
- b. Forests keep the air clean by absorbing _____ and releasing _____.
- c. The cutting down of trees on a large scale is called _____.
- d. The gita is a part of _____ literature
- e. There are _____ languages spoken in India.

C. Answer the following question in short.

- a. What is first aid?

- b. What do you understand by national heritage?

- c. What are the one main styles of classical music? _____
- d. What is the use of an emergency kit? _____

D. Write true or false.

- a. A map has its own language which is followed using symbols. _____
- b. Colour is used only to make the map beautiful. _____
- c. Alpana is a type of drawing. _____
- d. The plants cause soil pollution . _____
- e. Wool that we get from sheep is an example of renewable natural resource. _____

E. Answer the following questions.

- a. What is a cyclone?

- b. Name five common symbols and signs used in map.

- c. How are forests important?

- d. What are sacred groves?

- e. What are directions and sub directions?
