

Grade



Textbook

General Knowledge

Based on Curriculum 2020

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Khyber Pakhtunkhwa Textbook Board
Peshawar

Textbook

General Knowledge

Grade



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**Khyber Pakhtunkhwa Textbook Board
Peshawar**

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Table of Contents

S#	Topic	Page No.
1	The Sun	1
2	Resources and Their Types	7
3	Conservation of Natural Resources	14
4	Quaid-e-Azam Muhammad Ali Jinnah	22
5	Allama Muhammad Iqbal	26
6	Changes in Living Things	30
7	Habitat	35
8	Food	52
9	The Role of Government and Citizens	63
10	Working Out Disagreements	71



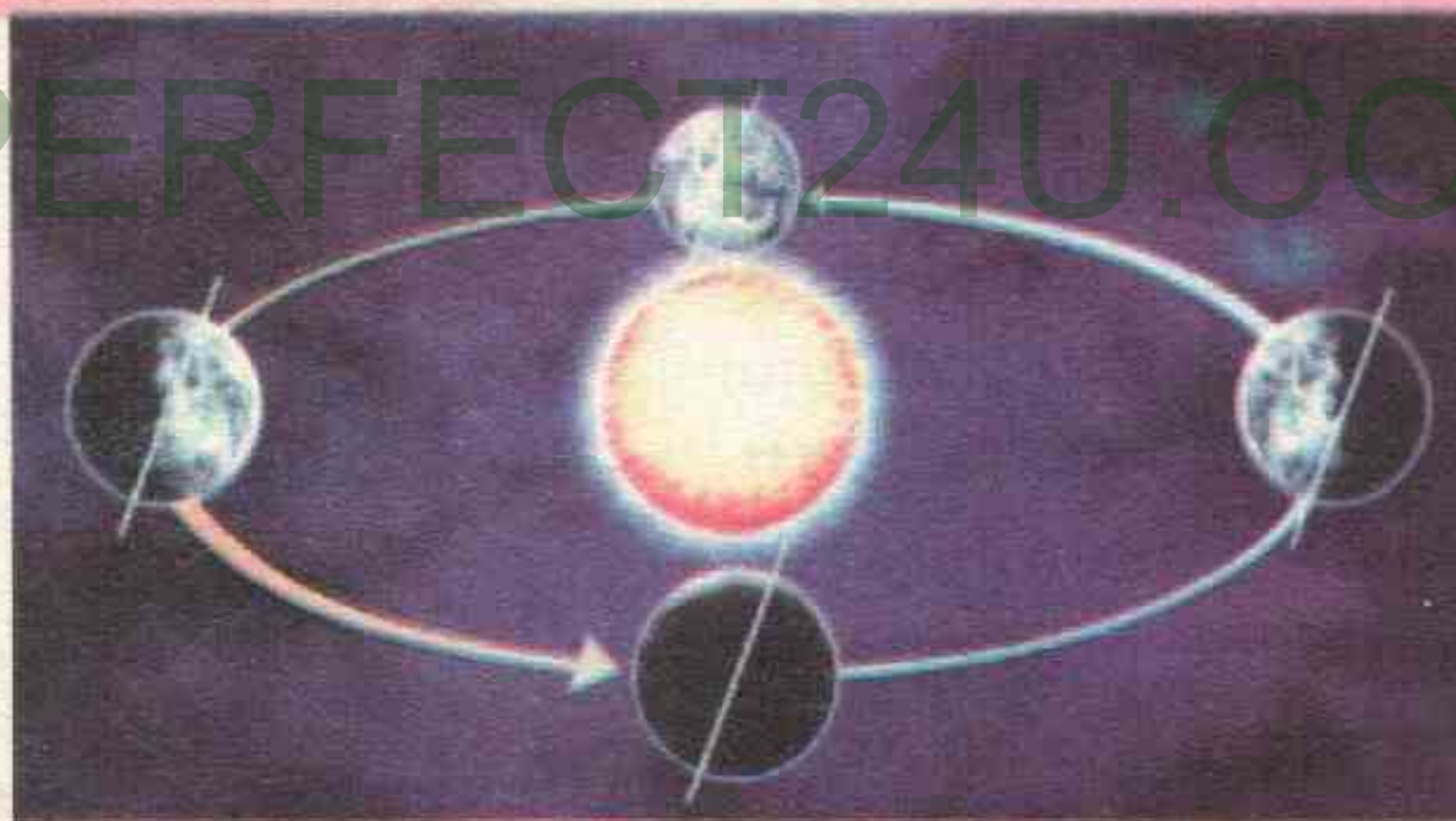
Table of Contents

S#	Topic	Page No.
11	Matter	80
12	Energy and Its Sources	88
13	Changing World	95
14	Inventions	101
15	Force and Machines	107
16	Safety	116

The Sun

Students Learning Outcomes

- After completing this chapter, the students will be able to:
- Identify South and North with respect to East and West, name South and North.
 - Identify that on Earth, the direction of sunrise is East and the direction of sunset is West.
 - Name places towards North, South, East and West of the school/home.
 - Describe the formation of shadows.
 - Recognize that the size and direction of the shadow can be used to estimate (guess) time.



Our universe is made up of too many bodies including the Earth and the Sun. The Earth revolves around the Sun in its orbit which causes seasons. The Earth also rotates around its axis which causes day and night. Part of the Earth facing the Sun has day while the other part has night.

Know that!

- i. The Earth completes its revolution around the Sun in its orbit in 365 days.
- ii. The Earth rotates around its axis in 24 hours.



Sunrise and Sunset

Sun seems rising in the East and setting in the West. Actually the Sun does not rise and set. The Earth revolves around the Sun in its orbit from West to East. Due to this revolution, the Sun seems rising in the East and setting in the West.

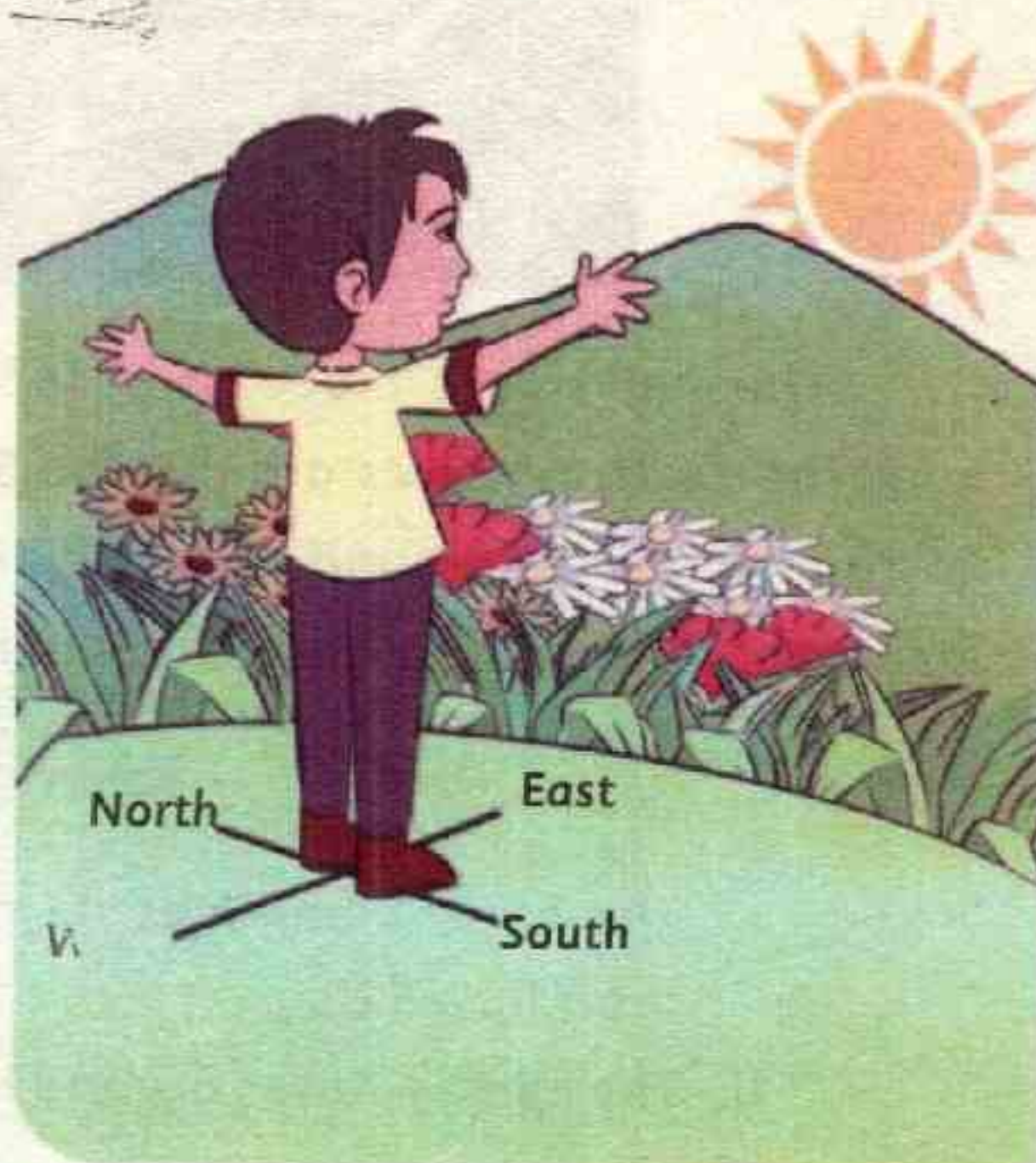


Cardinal Directions

Directions are important to know the position of a place or thing. There are four cardinal directions namely, North, East, West and South. We can guess the direction with the help of the Sun. If you stand facing the Sun in the morning, East will be in your front and West behind. Similarly, South will be at your right and North at the left.

Know That!

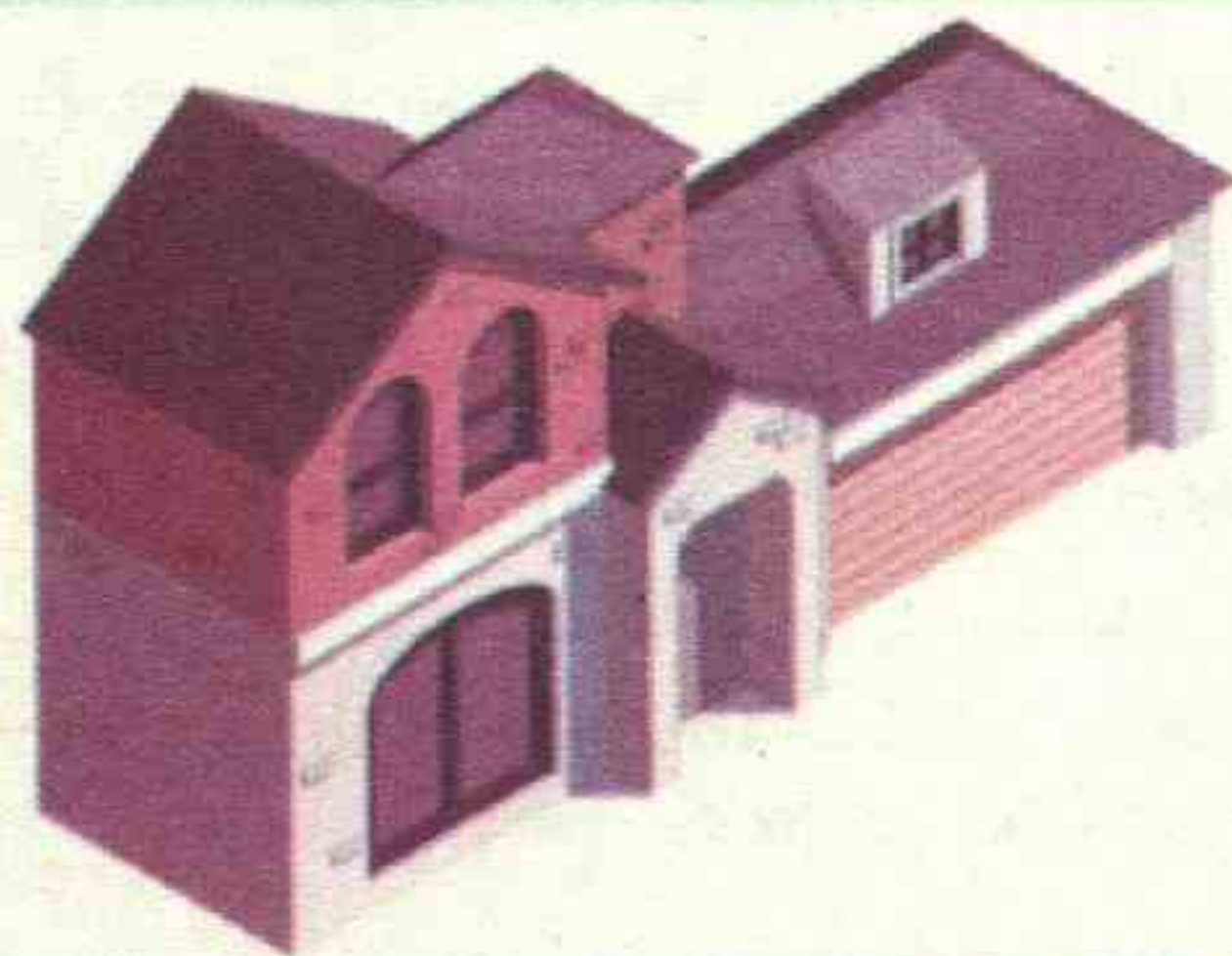
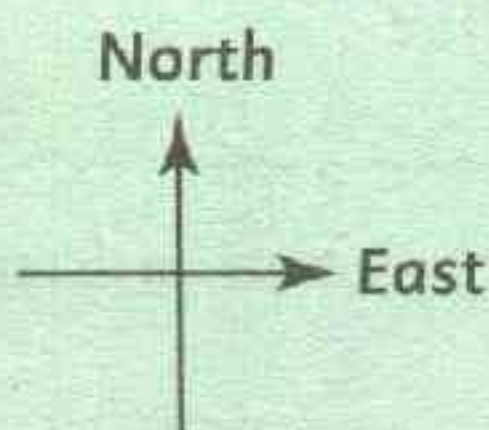
The instrument used for the identification of directions is called compass.





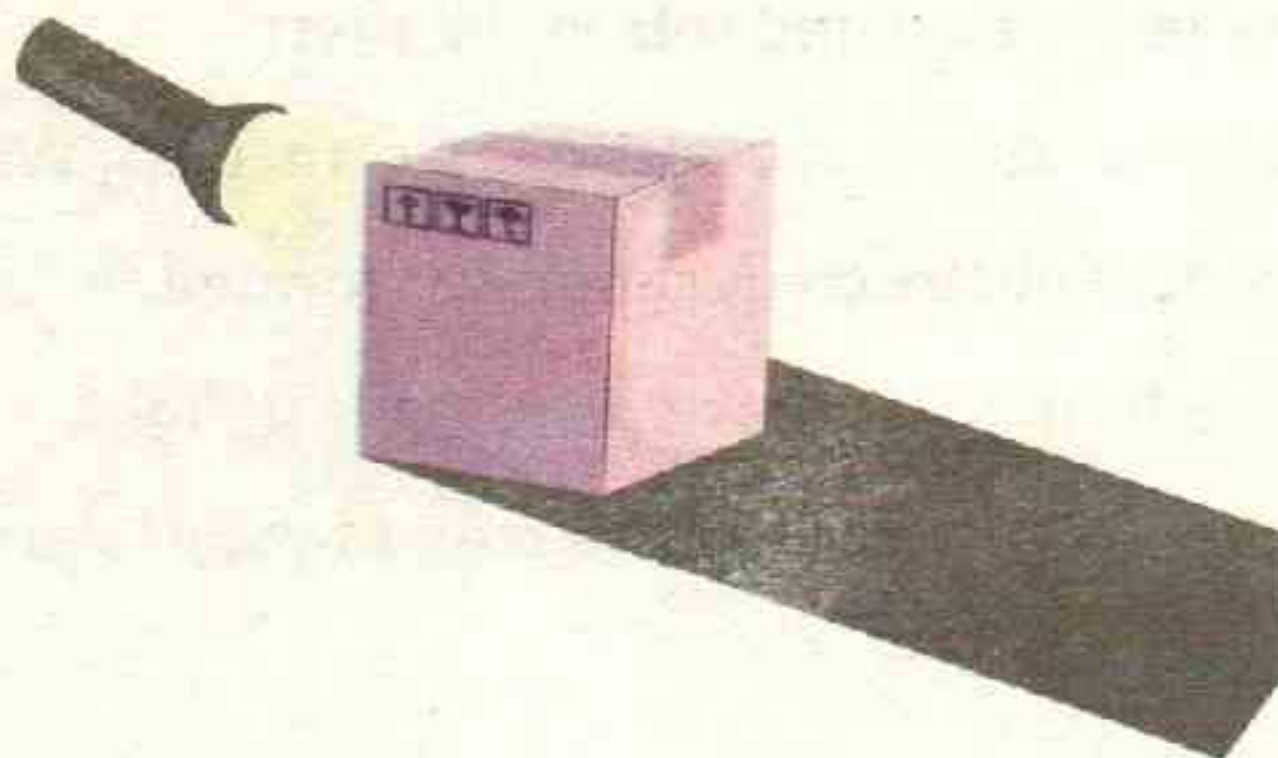
Activity

Below is the picture of your home. Write names of places surrounding it.



Formation of Shadow

Rays of light travel in straight lines from its source. If something obstructs light on its way, then it cannot pass through it. In this way, shadow of that thing is formed on the other side. This shadow is limited to the point where light cannot reach due to obstruction. Light is necessary for the formation of shadow. It is always formed on the opposite side. The shape and size of shadow depends on the direction and angle of light. We can guess time with the help of shadow. Shadow is long at morning and evening while it is short at noon time.





Activity

Teacher shall light a candle in a dark room. Bring your hand in front of candle. Students shall observe the shadow on the wall. They shall answer the following questions on the basis of their observation.

i. Shadow is formed on which side of the candle?

ii. What happens to the size of the shadow when hand is brought closer to the candle?

iii. What happens to the shadow when hand is moved away from candle?

iv. When hand is moved to the other side of the candle, shadow is formed on which side?

Key Points

- ✓ The Earth revolves in its orbit from West to East.
- ✓ Days and nights are formed due to rotation of Earth around its axis.
- ✓ Sun rises in the East and sets in the West.
- ✓ There are four cardinal directions North, East, West and South.
- ✓ When light is obstructed, shadow is formed.
- ✓ Shadow is formed on the opposite side of light.
- ✓ Size of the shadow varies at different time of the day.

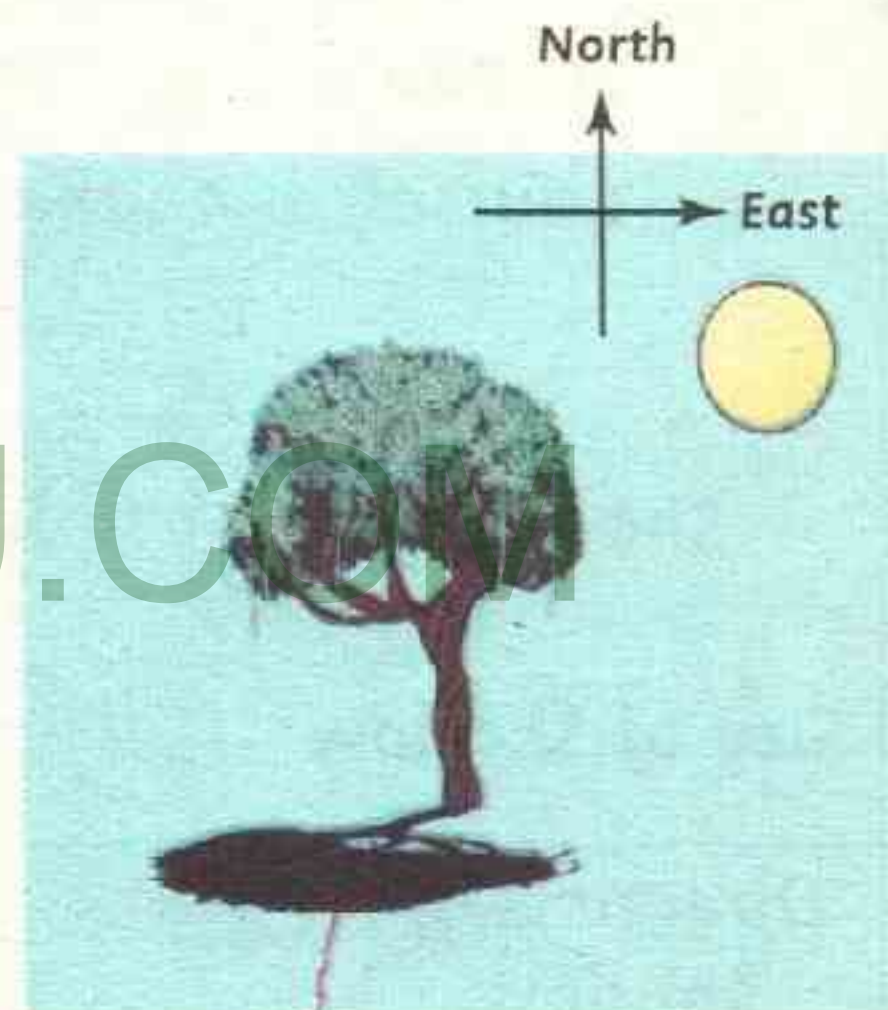


Exercise

1. Fill in the blanks with suitable words.

- i. The Earth revolves around the _____ in its orbit.
- ii. We can guess _____ with the help of size of a shadow.
- iii. Shadow is formed on the _____ side of light.
- iv. Sun sets in the _____.
- v. Shadow is _____ at morning and evening.

2. With the help of the following pictures, point out morning, noon and evening.



3. Read the following statements carefully and mark them with correct or wrong.

- i. East is opposite to North.
- ii. Size of a shadow varies at different times of the day.
- iii. Shadows are longer than their real size at morning and evening.
- iv. Time can be guessed with the help of changes in the shadow.
- v. Light travels in straight line.

Correct	Wrong
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>



Q4. Answer the following questions.

- i. Write cardinal directions.
- ii. How is shadow formed?
- iii. Why Sun seems rising in the East?

Practical Work

- i. Draw a sketch of your school and point out important places situated at North, South, East and West of it.
- ii. Stand in the lawn of your home and school according to the schedule given in the table below. Observe the shadows of yourself and other things and complete the table.

Shadow	8 am	12 noon	4 pm
Size of Shadow			
Direction of shadow			



Teaching Points

- Guide the students to learn directions with the help of compass.
- Provide additional information to students about solar system with the help of videos.

Resources and Their Types

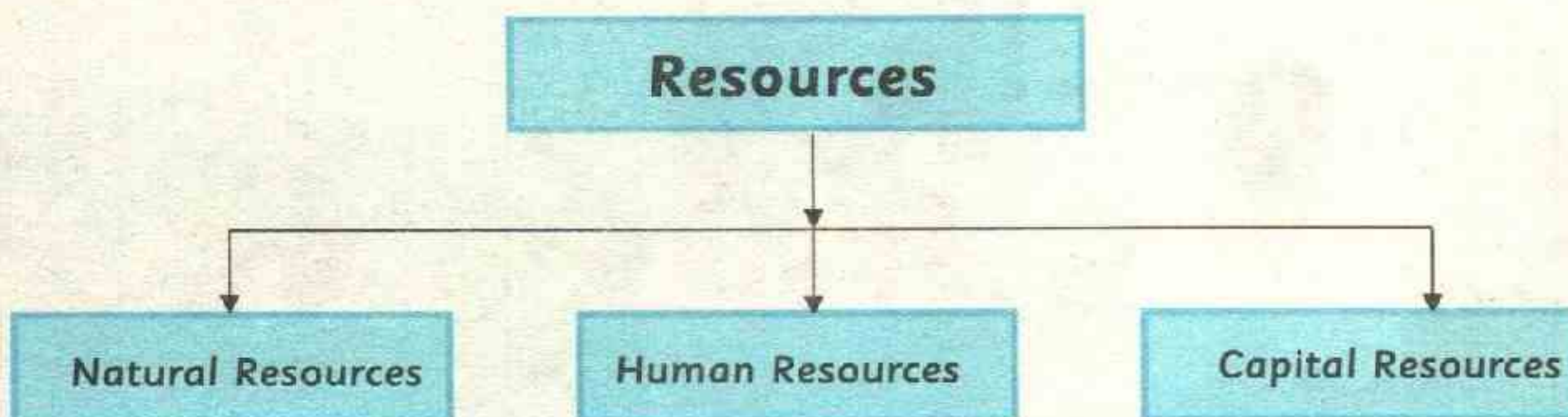
Students Learning Outcomes

After completing this chapter, the students will be able to:

- Define the term “resources”.
- State types of resources, natural resources, human resources, and capital resources.
- Identify natural resources (plants, animals, water, air, land, forests, and soil), human resources (farmers, builders, painters etc.) capital resources (trucks, computer, factory, buildings etc.).
- Define the term goods, services, buyers and sellers.
- Identify the main goods and services of their local area.
- Recognize the need for interdependence as not all goods and services are available in their area.
- Define scarcity.
- Recognize that people make economic choices because goods and services are limited.

Resources

Those things which are utilized for meeting the needs of life are called resources. There are three kinds of resources.





i. Natural Resources

All those resources which are provided to us by nature are called natural resources. Human beings have no role in the provision of these resources. Natural resources include water, land, air, forests, minerals, rivers and ocean etc.

Know
That!

Pakistan has plenty of natural resources. The second largest salt mines are situated in Khewra.



ii. Human Resources

The skill, specialization and ability of doing a job is called human resources. Human serve each other in different ways. Farmer grow crops. Carpenter make chairs and tables. Police protect people. Doctor treat patients. Farmers, carpenters, police and doctors are included in human resources.





iii. Capital Resources

Capital resources are those man-made things which generate wealth or money. For example dams, vehicles, factories and machines etc.



Activity

Collect pictures of natural, human and capital resources. Make an album of these pictures.

Goods and Services

Goods

We need many things in our daily life. These things are the products of natural and man-made resources. These are material things. They are called goods. For example bread, fruits and shoes etc.



Services

People serve one another in different ways in their daily life. For example, doctor, teacher, tailor and carpenter etc. These are called services.



Activity

Below is a list of goods and services. Separate them and write them in their respective column.

Repairing Bicycle, Polishing Shoes, Computer, Chair, Teaching, Tractor, Examination of Teeth, Driving, Pencil, chocolate.

No	Goods	Services
i.		
ii.		
iii.		
vi.		
v.		



Activity Prepare a list of five goods and five services of your area.

Buyer and Seller

Humans need many goods and services to live. They cannot make everything themselves. Therefore they buy goods and services made by other people. In this way they are called buyers. Similarly, the one who sells goods and services is called a seller.



Interdependence

We cannot do all the jobs ourselves nor make everything we need. Therefore we need other persons. This is called interdependence. Consider the case of sugar. From farmer to shopkeeper, how many people are involved in its preparation?

Scarcity

When goods, resources and services are less than required, people face problems. This situation is called scarcity. For example, sometimes there is scarcity of petrol, sugar and flour.



Economic Choice

In general people do not have enough resources. They want to buy different things. They fail to buy things which they desire due to lack of resources, scarcity and increasing prices of things. Therefore, they buy substitutes of those things. This is called economic choice. For example, people use bicycle when petrol is expensive. Fans are used instead of air conditioners.

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Key Points

- ✓ Resources are utilized to meet the needs.
- ✓ Resources are of three kinds natural, human and capital resources.
- ✓ Goods and services are the products of natural, human and capital resources.
- ✓ A person who sells goods and services is called seller while the one who buys them is called a buyer.
- ✓ When resources, goods and services are less than their demand, it is called scarcity.
- ✓ People need one another to fulfill their daily needs. This is called interdependence.
- ✓ The use of substitutes due to lack of resources, increasing prices and scarcity of things is called economic choices.



Exercise

Q1. Write the given resources in their relevant columns.

rivers, forests, aeroplane, tailor, dentist, natural gas, driver, bicycle, scientist, lawyer, desert, factory, power house, mountains, tube well.

Natural Resources	Human Resources	Capital Resources

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Q2. Answer the following questions.

- I bought a story book. What am I? (Buyer)
- I wanted to buy a large ice cream for Rs. 100, but I had only Rs. 60. So, I bought a smaller one for Rs. 60. What is this decision called?
- Sugar is not available in the market. What is this situation called?
- We need other people in our daily life. What is this called?
- What is a person called who sells goods?



Q3. Match column (A) with (B).

Column A	Column B
Shortage of goods and services	Goods
Products of natural and material resources	Economic choice
Human skill, ability and specialization	Services
Treatment of patients	Human resources
Use of substitutes due to scarcity or dearness	Scarcity

Q4. Answer briefly.

- How many resources are there? Give example of each.
- What is scarcity?
- Why do we depend on others in our daily life?
- What is the difference between goods and services?
- Why do we opt for substitutes?
- Can we lead a good life without interdependence?



Teaching Points

- Provide awareness to the students about natural, human and capital resources.
- Tell them how their relationship provides foundation for development.

Conservation of Natural Resources

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Describe ways in which human have changed the natural environment.
- Define the term pollution.
- List different types of pollution (land, water, air, and noise).
- Suggest ways to save natural resources.
- Predict that what would happen if natural resources were all used up.
- Identify the endangered animals of Pakistan (Indus dolphin, Markhor, Blackbuck etc.).
- Suggest ways to protect the endangered animals.
- Identify animals, which are extinct (Dinosaur etc.).

Changes in the Natural Environment

Human beings use available resources in nature for their needs. Excessive use of natural resources affects environment in different ways.

- i. Deforestation for fulfilling the needs of the growing population.
- ii. Smoke of factories and vehicles.
- iii. Polluted water from homes and factories.
- iv. Garbage of houses, factories and hospitals.
- v. Use of chemical fertilizers and pesticides.
- vi. Noise produced by aeroplane, vehicles and machines.



Clean Environment



Polluted Environment



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Activity

Make a chart. Illustrate how can you conserve water, gas and electricity at home.

Pollution

Smoke, harmful gases and chemical matter are polluting environment caused by human activities. It has been making environment harmful to living organism. The inclusion of harmful contents in the environment is called pollution. Pollution is of different kinds.

- i. Land pollution
- ii. Water pollution
- iii. Air pollution
- iv. Noise pollution



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Conserving Natural Environments

Air, water, forests and minerals are natural resources. Nature has offered these in limited quantity. If these resources are used more than needed, it seems they will be exhausted. It will create a lot of problems for us.

- Scarcity of water will make the land barren. Crops will not be grown which will cause starvation.
- Forests are the habitat of animals. Due to lack of forests animals and birds will be unable to live and the temperature also rises.
- Scarcity of minerals available in land like coal, oil and gas will cause shortage of energy. It will create a lot of problems for human beings.

Conserving Natural Resources

Natural resources are symbol of life. Conservation of nature is necessary for saving life. Conservation of natural resources can be made possible through the following measures.

- i. Natural resources shall be used carefully according to the need.
- ii. Trees shall not be cut needlessly.
- iii. New plants and trees shall be planted to replace the cut trees.
- iv. Water drained from factories and houses shall be cleaned for usage.
- v. Rain water shall be stored.
- vi. Water, electricity and gas shall be used according to the needs.
- vii. Alternate sources of energy like solar and wind energy shall be used.
- Viii. Garbage shall be used to produce energy.



Activity

Observe your surrounding and tell that the following resources are used for which purpose.

Sr.No	Land	Water	Crude oil
i.			
ii.			
iii.			



Protecting Endangered Animals

Forests are the habitat of animals. Due to destruction of habitat and illegal hunting, the numbers of some animals are decreasing. There is a danger for the existence of some species. Such animals are called endangered animals. Endangered animals include Indus dolphin, snow leopard, black deer, markhor, brown bear and marcopolo sheep etc. Government is trying to conserve their species.



Markhor



Indus Dolphin



Snow Leopard



Black Deer



Marcopolo sheep



Brown Bear

Know That!

Every year 17th May is celebrated as day of endangered animals to create awareness among the people for their protection.



Collect pictures of endangered animals from different sources. Get information about them and arrange an exhibition in the classroom.



Measures for the Protection of Endangered Animals

- i. Forestation.
- ii. Banning hunting of endangered animals.
- iii. Increasing awareness about endangered animals.

Know That!

Markhor is the national animal of Pakistan and Partridge is the national bird of Pakistan.

Extinct Animals

Those animals which once lived but today no animal of their species is found on Earth are called extinct animals. One important animal among them is Dinosaur. Other extinct animals include Dodo bird, Tasmanian tiger and Wild bull.



Know That!

When the whole species of an animal is lost, it becomes extinct. Once it is become extinct, it is lost forever.

Key Points

- ✓ Human beings used natural resources present in nature for fulfilling their needs. Ruthless use of resources affect environment negatively.
- ✓ The entry of harmful substances into the environment is called pollution.
- ✓ If natural resources are wiped out, we will face many problems.
- ✓ Natural resources are a symbol of life. Conservation of natural resources is essential to save lives.
- ✓ Animals that are rapidly declining in number are called endangered animals.
- ✓ Animals that once existed in the world and today no animal of their species exists in the world are called extinct animals.



Exercise

Q1. Identify endangered and extinct animals in the pictures given below. Circle the endangered animals in red and extinct animals in blue colours.



Jelly fish



Dodo Bird



Markhor



Cow



Rabbit



Tasmanian tiger



Brown Bear



Lion



Dinosaur



Marco Polo Sheep



Crow



Black Deer

Q2. What would happen if:

i. Natural gas is exhausted.

ii. Minerals are exhausted.

iii. Deforestation occurs.



Q3. Different resources are given in the following table. For preservation of these resources, suggest two methods for each.

Resources	Methods of Preservation
Water	i. _____ ii. _____
Forest	i. _____ ii. _____
Air	i. _____ ii. _____

Q4. Write short answers to the following questions.

- Name any three human activities which are harmful for natural environment.
- What kind of problems will water scarcity create?
- What should be done to protect endangered animals?
- Describe any three steps for preventing natural resources from destruction.
- What is meant by extinct animals?



Teaching Points

- Arrange a "save resources, save life" campaign at school to encourage the careful use of resources.
- Arrange a pictorial exhibition in the form of posters made by students titled as "Pollution is the enemy of Humanity."

Use the following link for more information on these topics.



https://www.worldwildlife.org/species/directory?sort=extinction_status&direction=desc

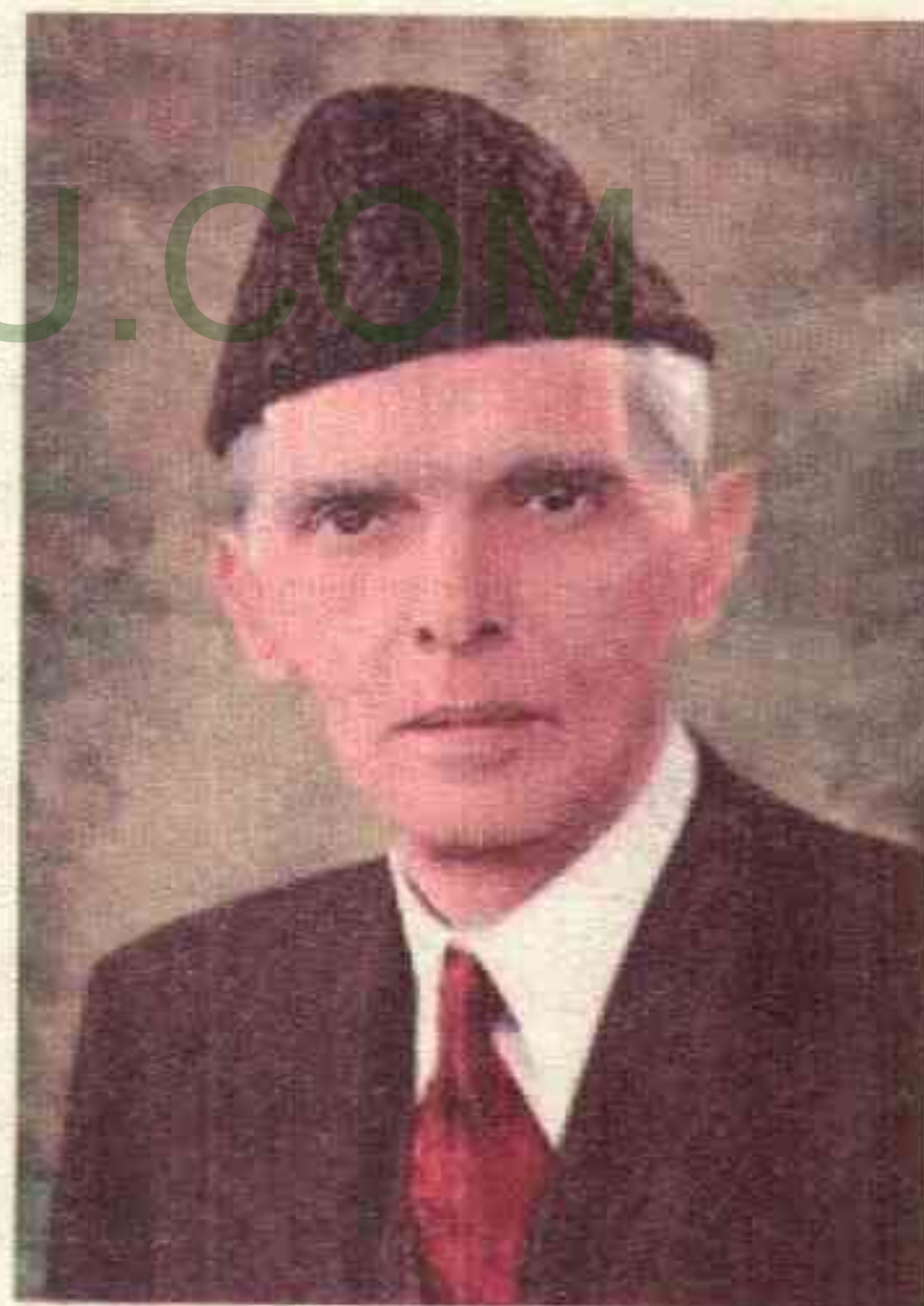
Quaid-e-Azam Muhammad Ali Jinnah

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Introduce Quaid-e-Azam Muhammad Ali Jinnah as the founder of Pakistan.
- Narrate the major events in the life of Quaid-e-Azam Muhammad Ali Jinnah (date of birth, founder of Pakistan, few major contributions and the date when he died).

The real name of Quaid-e-Azam was Muhammad Ali Jinnah. He was born on December 25, 1876 in Karachi. After getting his early education in Karachi, he went to England for higher studies in law. On his return to India, he started practicing law. Quaid-e-Azam started his political life in 1906. At that time India was under British occupation. He wanted Muslims and Hindus to work together to liberate India from the British. He worked a lot for the cause of Hindu Muslim unity. He soon realised that the rights of Muslims in India would not be protected after getting independence from the British. Therefore, he demanded separate country for Muslims in Lahore Resolution in 1940. For this purpose, he united the Muslims of India. Muslims struggled hard for a separate country and Pakistan came into being on August 14, 1947.





Because of his this achievement, he is called father of the nation and founder of Pakistan. He became the first Governor General of Pakistan. He wanted to make Pakistan a strong, peaceful, prosperous and Islamic welfare state. Quaid-e-Azam Muhammad Ali Jinnah died on September 11, 1948. His tomb is in Karachi.



Quaid-e-Azam had great qualities. He was truthful, honest, hardworking and had love for justice. His rivals also praised him. His greatest quality was his punctuality. Faith, unity and discipline are important principles given by Quaid-e-Azam. We can make Pakistan a great and developed country by acting upon Quaid-e-Azam Muhammad Ali Jinnah's principles.



Activity

Get more information about Quaid-e-Azam from your grandparents. Hang these information in classroom in the form of a chart.

Do You Know?

- i. Why Muhammad Ali Jinnah is called Quaid-e-Azam?
- ii. What is the complete name of Pakistan?



Know That

- i. The word "Pakistan" was introduced by Chaudhry Rehmat Ali.
- ii. Pakistan's national anthem was written by Hafeez Jalandhari.



Key Points

- ✓ Pakistan came into being on 14th August, 1947.
- ✓ Quaid-e-Azam worked hard for Hindu Muslim unity in India.
- ✓ Quaid-e-Azam is called founder of Pakistan and the father of the nation because he made Pakistan.
- ✓ Quaid-e-Azam Muhammad Ali Jinnah had great qualities.
- ✓ He wanted to make Pakistan a strong, peaceful, prosperous and Islamic welfare state.

Exercise

Q1. Choose the correct option.

- i. Quaid-e-Azam was born on 25th _____, 1876.
a. September b. November c. December
- ii. Quaid-e-Azam Muhammad Ali Jinnah received his higher education from _____.
a. Germany b. India c. England
- iii. Quaid-e-Azam was the first _____ of Pakistan.
a. president b. prime minister c. governor general
- iv. In _____ Quaid-e-Azam Muhammad Ali Jinnah started his political life.
a. 1906 b. 1913 c. 1916
- v. The tomb of Quaid-e-Azam Muhammad Ali Jinnah is in _____.
a. Quetta b. Peshawar c. Karachi



Q2. Give the following information about Quaid-e-Azam Muhammad Ali Jinnah.

Name : _____

Date of birth: _____

Place of birth _____

Profession _____

The most important achievement

Titles _____

Date of death _____

Tomb _____



Q3. Give short answers.

- i. Why Quaid-e-Azam Muhammad Ali Jinnah is called the founder of Pakistan?
- ii. Why did Quaid-e-Azam Muhammad Ali Jinnah make a separate country?
- iii. Describe the three guiding principles of Quaid-e-Azam Muhammad Ali Jinnah.
- iv. Describe any four qualities of Quaid-e-Azam Muhammad Ali Jinnah.



Teaching Points

- i. Arrange an exhibition of Quaid-e-Azam Muhammad Ali Jinnah's photographs.
- ii. Tell the children in detail about the different periods of Quaid-e-Azam's life.
- iii. Introduce Pakistan Resolution to children.

Allama Muhammad Iqbal

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Introduce Allama Muhammad Iqbal as a personality who expounded the idea of Pakistan.
- Narrate the major events in the life of Allama Muhammad Iqbal (date of birth, national poet, famous poems for children and the date when he died).

Do you know who introduced the idea of a separate country for the Muslims of India? This idea was introduced by Allama Muhammad Iqbal. That is why he is called the dreamer of Pakistan.

Allama Muhammad Iqbal was born on November 9, 1877 in Sialkot, Punjab. He got his early education from Sialkot and MA from Government College Lahore. He got his higher education from England and Germany. Allama Iqbal was a great poet. He is called the poet of the East. Allama Iqbal wrote poems in Urdu and Persian. His poetry is taught in many countries of the world. He served as a teacher at Government College Lahore and also practiced law for some time. His greatest achievement as a politician was the demand of a separate country for the Muslims of India.





Do You Know?

Allama Muhammad Iqbal is also called Hakim-ul-Ummah.



Activity

Get information about Allama Muhammad Iqbal's life and his message from your parents and grand parents.

Most of Iqbal's poems are for the youth. He has also written many poems for children. Among these poems, a Spider and a Fly (مکڑا اور مکھی), a Mountain and a Squirrel (پہاڑ اور گھری), Firefly (جگنو), a Bird Cry (پرندے کی فریاد), Sympathy (ہمدردی) and a Child's Prayer (بچے کی دعا) are very famous. The main themes of his poetry include Islam, Muslims, freedom and patriotism. Allama Muhammad Iqbal had a great love for Hazrat Muhammad (رسول اللہ خاتم النبیین ﷺ) which he also expressed in his poetry.



Think About It:

Why Allama Muhammad Iqbal is called "Allama"?

Know That:

His books have been translated into many languages of the world besides English, German, French, Chinese, and Japanese. He also wrote two books in English.



He received the title of “Sir” from the British government. Allama Muhammad Iqbal died on April 21, 1938. His tomb is in Lahore near Badshahi Masjid.



Activity

Memorize Iqbal poem “Child’s Prayer” orally and recite it together with rhythm.

Key Points

- ✓ Allama Muhammad Iqbal was born on November 9, 1877 in Sialkot.
- ✓ He got higher education from England and Germany.
- ✓ He gave the idea of a separate homeland for the Muslims of India.
- ✓ He loved Islam and Muslims very much.
- ✓ He was a great poet, thinker and politician.

Exercise

Q1. Choose the correct option.

- i. Allama Muhammad Iqbal was a _____.
a. religious leader b. poet c. scientist
- ii. The tomb of Allama Muhammad Iqbal is in _____.
a. Lahore b. Multan c. Sialkot
- iii. It was _____ who introduced the idea of a separate homeland for Indian Muslims.
a. Quaid-e-Azam Muhammad Ali Jinnah
b. Allama Muhammad Iqbal
c. Sir Syed Ahmad Khan
- iv. Allama Muhammad Iqbal was born in _____.
a. Lahore b. Karachi c. Sialkot



Q2. Give short answers.

- i. Allama Muhammad Iqbal wrote many poems for children. Write the names of your three favourite poems.
- ii. Write two important themes of Allama Muhammad Iqbal's poetry.
- iii. Name any one of Allama Muhammad Iqbal's book.
- iv. From which countries Allama Muhammad Iqbal received higher education?
- v. Who gave Allama Muhammad Iqbal the title of 'Sir'?

Q3. Provide the following information about Allama Muhammad Iqbal.

Name _____

Date of birth _____

Place of birth _____

Profession _____

The most important achievement _____

Titles _____

Date of death _____

Tomb _____



Project Work

Divide the class into four (4) groups. One group should get information about Allama Muhammad Iqbal's family life, another about education, third one about his poetry and fourth one about his political life. All groups shall present their collected information at the school on the occasion of Iqbal Day.



Teaching Points

- i. Provide guidance to children on the above practical task.
- ii. Inform the children in detail about the poetry of Allama Muhammad Iqbal and his message.
- iii. Guide the children to recite Kalam-e-Iqbal in rhythm.



Chapter-6

Changes in Living Things

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Compare different stages of life span of plants and animals (from pictures through observation/videos etc.).
- Identify the changes in the life span of an animal and a plant.

Look at the pictures carefully. What changes do you observe?



Living organisms are different from each other but some basic characteristics are similar in them. For example, respiration, reproduction etc. All living organisms have the ability to produce organisms of their own kind. Some offsprings of animals are like their parents in form and shape at the time of birth. For example, lion, goat, dog etc. while offsprings of some animals are not like their parents at the time of birth. Later on they assume the form of their parents. For example frog, butterfly, etc.



Activity

Below are the names of different animals. Draw a circle around those similar to their parents at the time of birth.
cat, butterfly, lion, frog, mosquito, human beings.



Life Cycle

Living organisms pass through different stages after their birth and growth. They can reproduce their own kind. The period of plants and animals from birth to reproduction is called life cycle. Life cycle of plants and animals consists of different stages.

Life Cycle of Plants

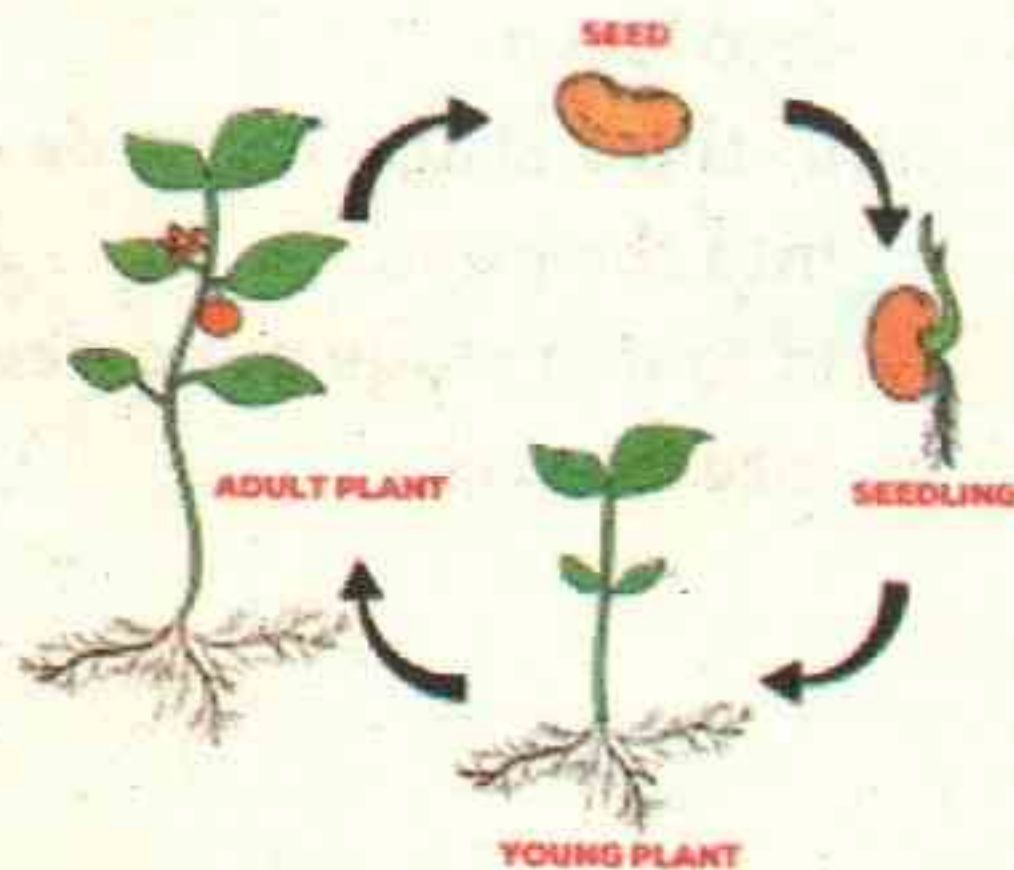
Life cycle of plants consists of four stages.

1st stage: Seed is sown in the soil.

2nd stage: Plant comes out of the seed.

3rd stage: With the passage of time plant grows in size.

4th stage: Flowers are grown on plants and seeds are formed in flowers. For examples, bean plant.



Activity

Draw the stages of life cycle of sunflower.

Life Cycle of Birds

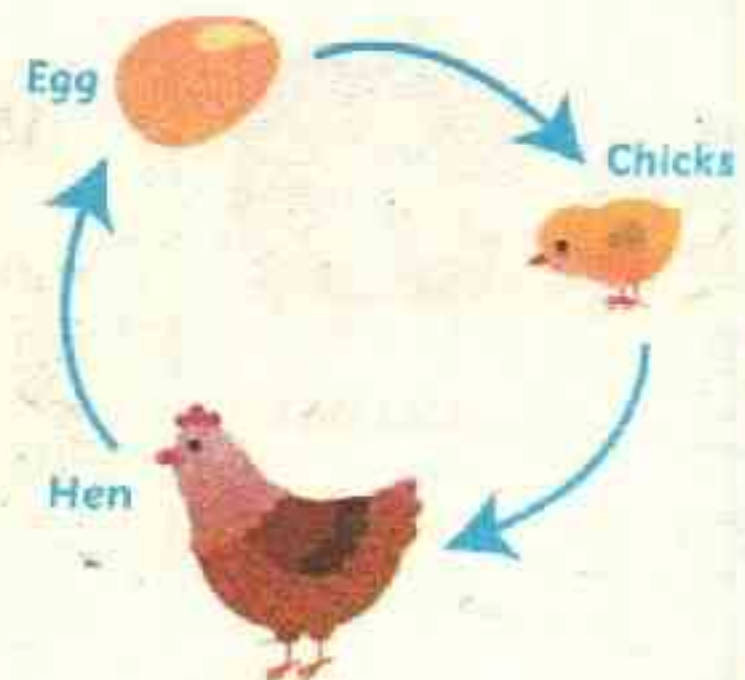
All birds are born from eggs. Life cycle of birds consists of three stages.

(i) In the first stage, birds lay eggs.

(ii) In the second stage, chicks come out of eggs.

(iii) In the third stage, chicks grow into birds.

For example: life cycle of a hen.

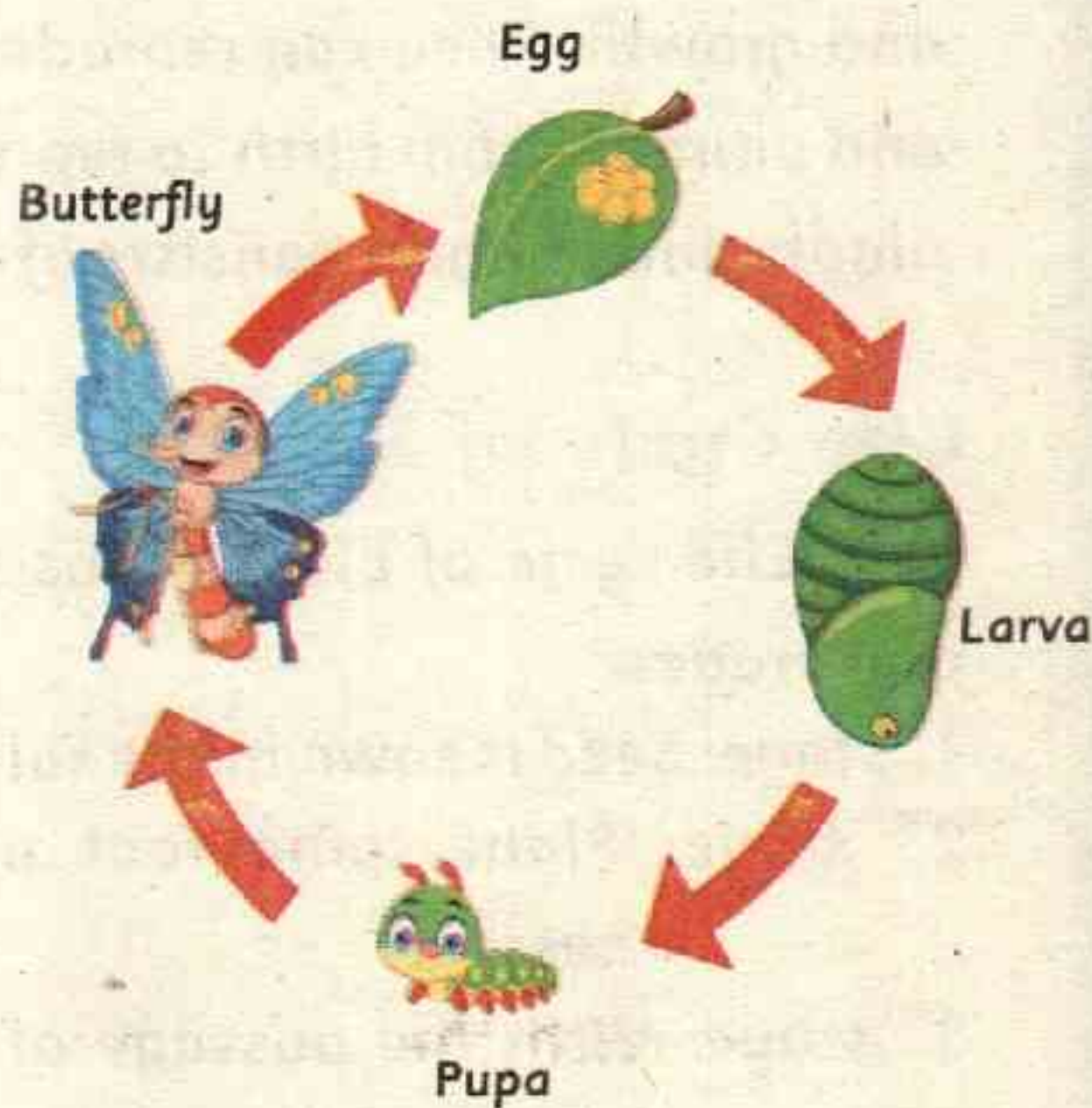




Life Cycle of Insects

Most of the insects are born from eggs. Life cycle of insects consists of four stages.

- i. In first stage insects lay eggs.
- ii. In second stage, eggs develop into larva.
- iii. In third stage larva develops into the pupa.
- iv. In fourth stage pupa develops into insects.



Life Cycle of Frog

1st Stage:

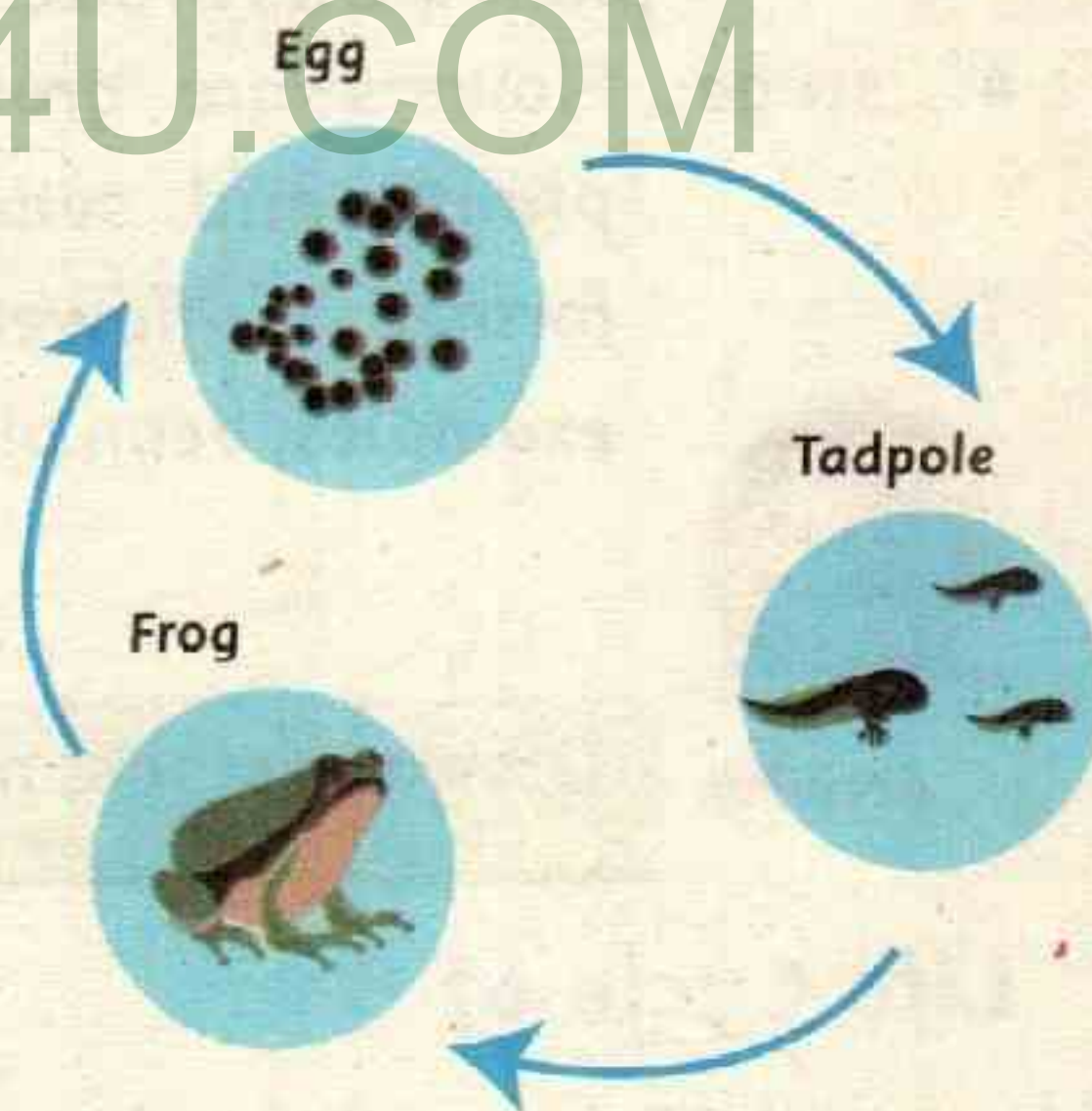
Female frog lays eggs in water.

2nd Stage:

Eggs develop into tadpoles.

3rd Stage:

Tadpoles completely grow into frogs.



Activity

What is the difference between

- i. Larva and butterfly
- ii. Tadpole and frog
- iii. Larva and pupa



Key Points

- ✓ All living organisms have the ability to produce organisms of their own kind.
- ✓ At the time of birth some living organisms are similar to their parents, for example, lion, cat, dog, etc.
- ✓ At the time of birth, some organisms are not similar to their parents, for example, butterfly and frog etc.
- ✓ The period from birth to reproduction is called life cycle.
- ✓ The life cycle of animals and plants have different stages.
- ✓ The life cycle of plants consists of four stages.
- ✓ The life cycle of birds has three stages.
- ✓ The life cycle of insects consists of four stages.

To know more about the topics given in this chapter please visit the following link:

www.makemegenius.com

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Exercise

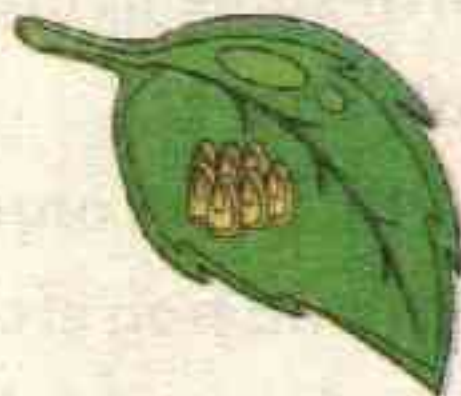
Q1. Complete the following table.

S#	Organisms which are similar to their parents at the time of birth.	Organisms which are different from their parents at the time of birth.
i.		
ii.		
iii.		



Q2. The life cycle of butterfly is shown in the pictures. Fill in the blanks with the name of stages of its life cycle.









Q3. Write short answers of the following questions.

- i. What is meant by life cycle?
- ii. Are the life cycle of plants and animals are similar?
- iii. Write stages of life cycle of birds.
- iv. What happens in the last stage of life cycle of plants?



Chapter-7

Habitat

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize that heat and light of sun help to sustain life on Earth which is the only known planet where life exists.
- Define the term habitat.
- Describe the different habitats, for living things (polar region, desert, forest, aquatic).
- Name plants and animals which live in each of the different habitats.
- Briefly introduce what an ecosystem is.
- Identify the environmental factors (temperature, light, water) that support the life in a habitat.
- Understand the ways plants and animals have certain features adapted to their habitat (camel, fish, polar bear, cacti, lotus, Pine trees etc).
- Identify the ways human activities affect the natural habitats.

In universe Earth is the only planet where life exists. Heat and light is necessary for the maintenance of life and its biggest source is sun. This light and heat are called solar energy. Plants prepare their food by using solar energy and other living organisms depends on plants. Life is not possible without sun.



Do you know?

- Earth is also called Terra.
- Sun is 11990 times bigger than Earth.



Activity

Is light necessary for growth of plants? Take three plants of the same kind. Place one plant in sunlight, the other in dark place and cover the third one in polythene (or in plastic) bag. Give equal amount of water to these three plants on daily basis. Observe the changes occurring in them and write them in the observation table in your note book.

Observation	Plant placed in sun light			Plant in dark area			Plant covered in plastic bag		
	2 nd day	4 th day	6 th day	2 nd day	4 th day	6 th day	2 nd day	4 th day	6 th day
Height of Plants									
Colour of leaves									
Other changes									

Habitat

Living organisms need light, heat, food and an area where they can live for the maintenance of life. The place where organisms live is called their habitat.

Habitat is a natural environment where organisms live, grow and fulfill their needs, which are necessary for life.





Types of Habitat

Different plants and animals live in different habitats. There are two main habitats. (1) Land Habitat (2) Water Habitat

1. Land Habitat

The habitat of animals on the surface of Earth is called land habitat. Types of land habitat includes forest, desert and grassland.

(i) Forest

Forest is a large area which is covered by green plants and trees. There are different types of forests based on different factors like soil, climate and water. There are different types of animals (lion, wolf, monkey, giraffe, etc.) and plants (Pine trees, gum arabic trees etc.) found in forests. Forests are known as the habitats of plants and animals.



(ii) Desert

Desert are mostly sandy, hot and dry areas. Night is relatively cold. It rains very little in desert, so there is





scarcity of water. Only those animals and plants can live in desert which can bear the extreme weather conditions of desert. For example, camel, ostrich, cactus etc.

Know that! There are three big deserts in Pakistan, Thar, Thal and Cholistan.



Do you know?

Gobi desert is located in China and Mangolia. It is one of the coldest deserts in the world. Here the temperature drops upto -40°C .

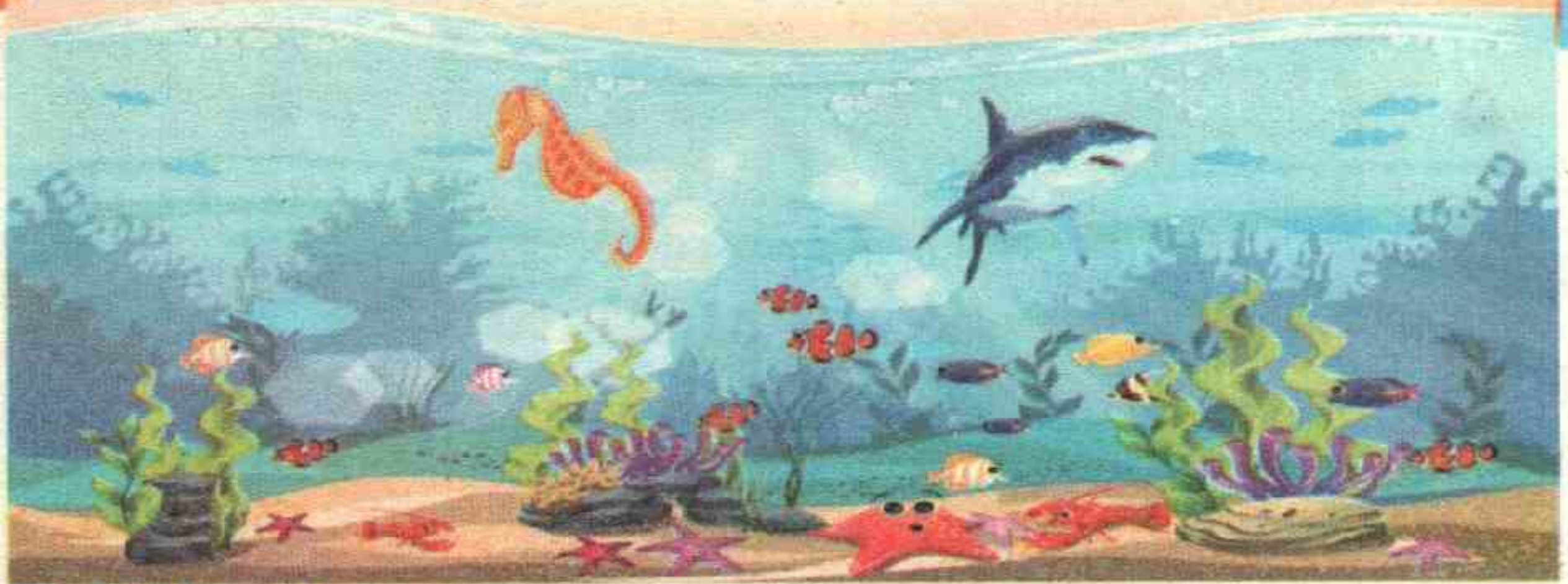
(iii) Grasslands

Wide area which is covered by grass and bushes is called grassland. Many types of grass grows here with less trees. Grasslands are the habitat of various animals such as deer, elephant and zebra etc.



(2) Water Habitat

The water reservoirs present on Earth is called water habitat. Various types of plants and animals are found in water. Water is their habitat. Fishes, sea horses and frog etc. live in water. Likewise many plants grow in water such as sea weeds, algae and sea lilies etc. Like the land habitat, there are many types of water habitat.



(i) Fresh water

Rivers, lakes, ponds, streams etc. are included in fresh water. Fresh water is the habitat of frogs, fishes and lilies.



(ii) Marine Habitat

Oceans are the biggest water habitats. A large variety of plants and animals are found in this habitat. Ocean is the habitat of jelly fish, crab, star fish, sea turtle, sea weed and algae.





Do you know?

The biggest living organism present on earth is blue whale which lives in ocean.

(iii) Coastal Habitat

This is the area where land and oceans meet. In this habitat different types of plants and animals can be found. For example, mangrove, swamp grasses, crabs etc.



(iv) Polar Regions

Polar regions are the coldest regions. It is covered with snow throughout the year. Plants are present in very little number. Polar regions have animals like polar bear, penguins, and wolves etc.





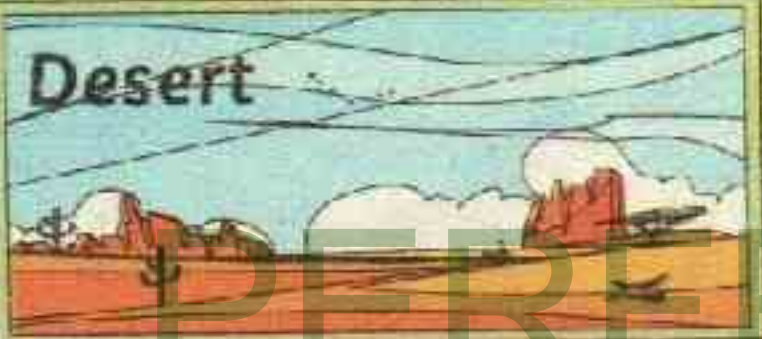



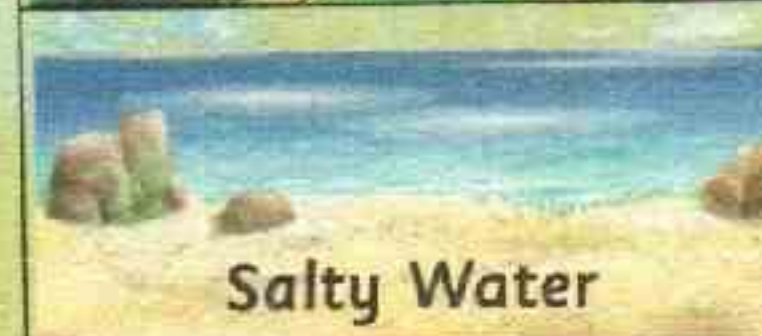
Do you know?

1. 90% area of Antarctica is covered with snow.
2. Penguin is the bird that can't fly but can swim very nicely.
3. The animals of the polar regions contain a fatty layer under their skin which protects them from cold.



Activity

Attach a picture of a bird or animal or plant that can be found in the following habitats.

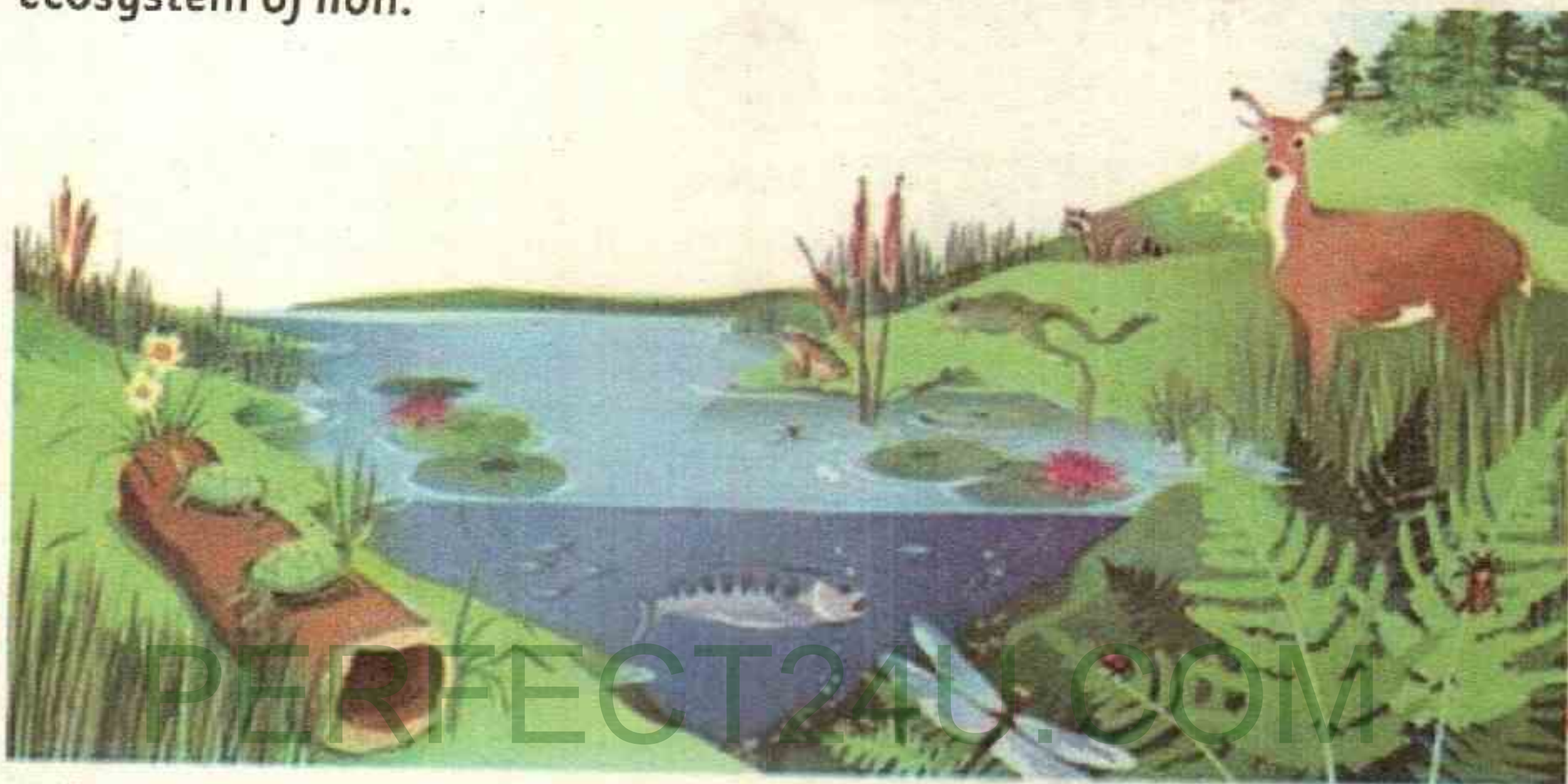
Habitat	Plant	Animal or Bird
 Desert		
 Forest		
 Grassland		
 Polar Region		
 Fresh Water		
 Salty Water		





Ecosystem

Living and non-living things present at one place affect each other. They include plants, animals, birds, insects, water, mountains, soil etc. It is called ecosystem. Ecosystem is different for different animals. For example, the ecosystem of frog is different from the ecosystem of lion.



Adaptation

In natural environment changes occurs due to various factors. Living organisms prepare themselves for various changes which occur in environment. The appearance of a characteristic in a living organism in a specific habitat due to changing conditions is adaptation. These adaptations are necessary for getting food, protection from climatic changes and enemies. Let's see how the organisms adapt themselves to their environment.



Think!
How humans adapt themselves to their environment.



Teaching Point

Explain ecosystem briefly to students.



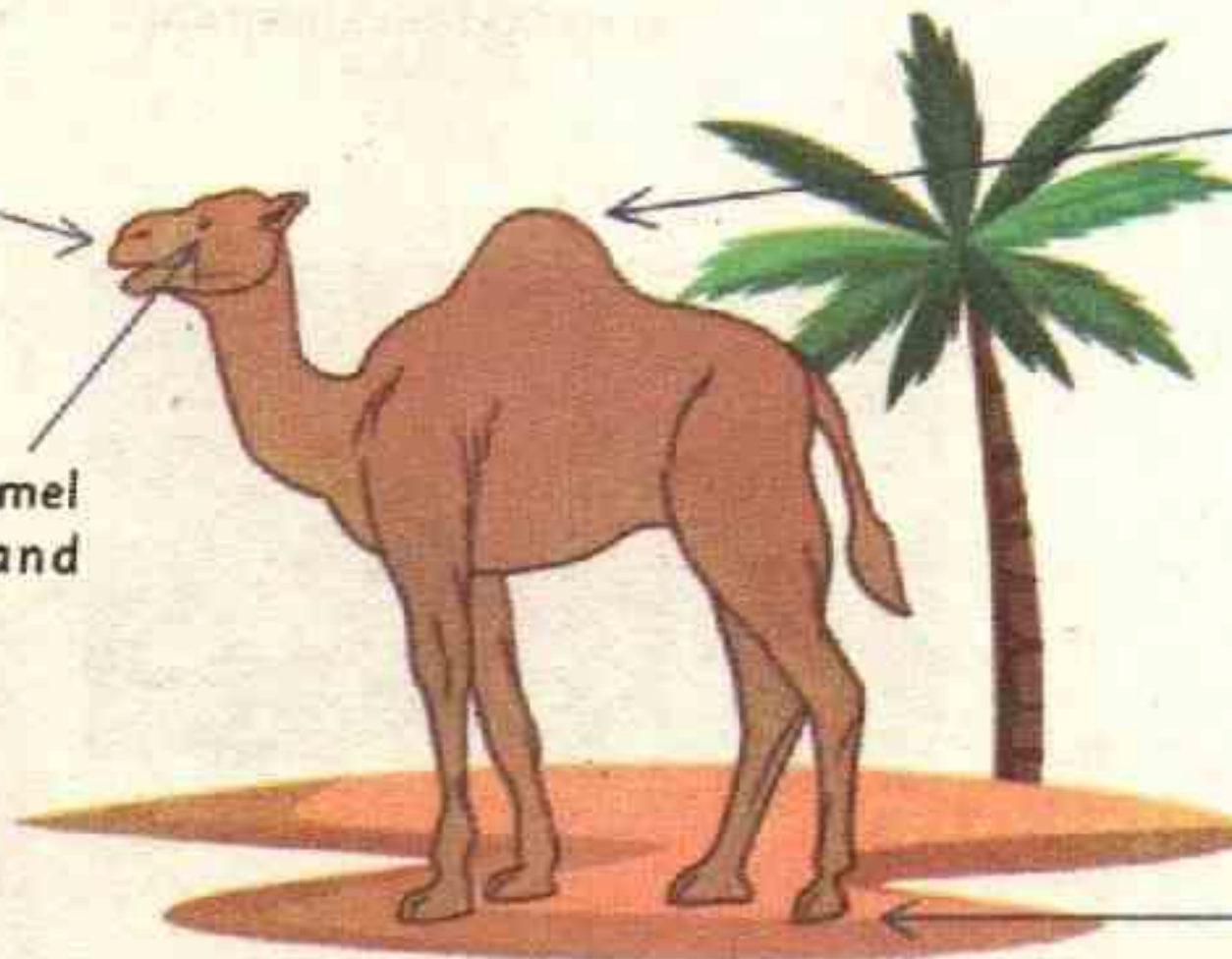
Adaptation in Animals

Camel

Camel is an animal of desert. To face desert conditions camel has the following adaptations.

Camel protects itself from sand by closing its nostrils.

The long eyebrows of camel protect eyes from sand particles.



Camel stores fats in hump and can live for many days without eating food.

The soft and wide feet of camel help it to walk on sand.

Fishes

Fishes are found in every type of water habitat. For living in water habitat fishes have the following adaptations.

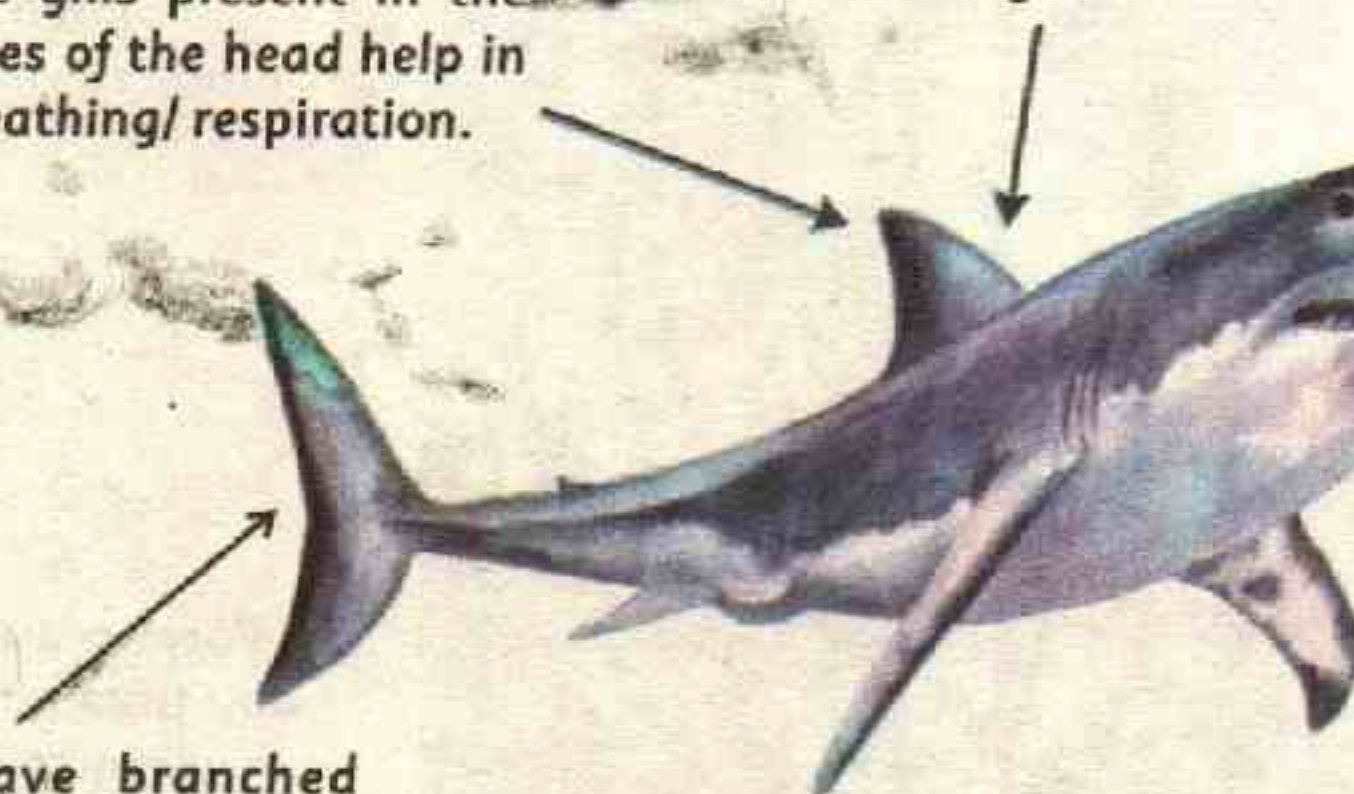
The gills present in the sides of the head help in breathing/ respiration.

Fins on both sides of their bodies which help in swimming.

The mouth of the fish is thin and pointed.

Fishes can see in water through their special eyes.

Fishes have branched tail which helps them in swimming.





Polar Bear

Polar bears are found in polar regions. It is very cold region. To bear these cold conditions, the following adaptation occurs in polar bears.

The colour of skin protects them from enemies in the snow

The skin of polar bears is thick and hard. A fatty layer under the skin protects them from cold.

It closes nostril during swimming.

The feet are soft, wide and twisted which help in walking on snow.



Strong sense of smell helps them in searching prey.

Adaptation in Plants

Cactus

Plant found in hot and desert areas have hard and thick cuticle (skin). It increase their capacity to store more water. Their leaves are small or pointed and their roots go deep into the soil to get water easily. For example, cactus.

Thick stem helps in storage of water.

Long, thin and deep roots help in absorbing water from soil.



Pointed leaves protect from animals.

Pores are closed at day time and open at night to reduce evaporation.



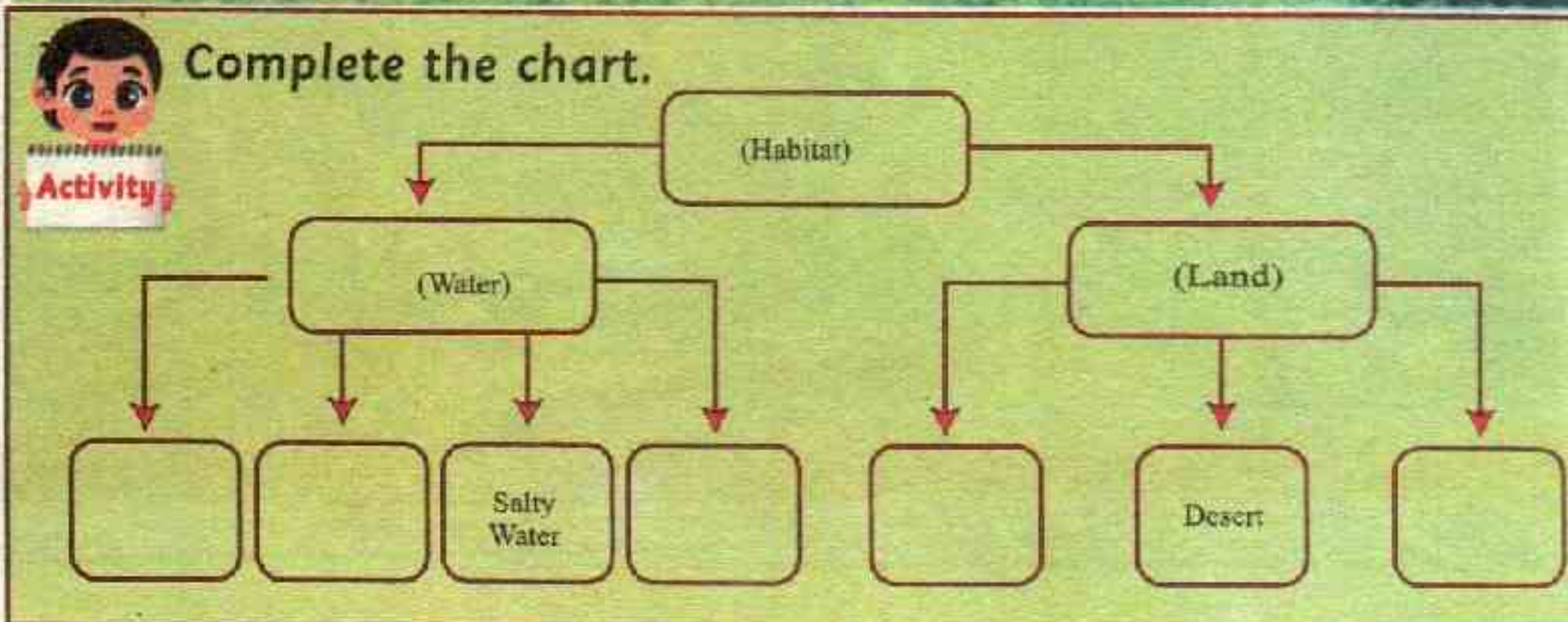
Lilies

The leaves of the plants which grow in water are big and flat. They help them in swimming in water. Their stems are thin, elastic and submerged in water. For example lilies.



Pine Trees

Plants grown in cold area have narrow and pointed leaves. Instead of flowers, they have cones which remain closed during winter. These cones open in summer and reproduction occurs by the spread of seeds. For example, pine trees.





Effects of Human Activities on Natural Habitats

You know that forests, deserts, grasslands, fresh and salt water reservoirs are the habitats of various living organisms. Human beings are effecting these natural habitats for their own benefits. Due to this, changes occur which are harmful to both plants and animals. As a result of human activities, living organisms face scarcity of food, water and space. It puts their lives in danger.



Think!

Amazon forests are the biggest rain forests on Earth. Due to human activities in past 50 years 17% decrease has occurred in their area.

Effects of Human Activities on Land Habitat

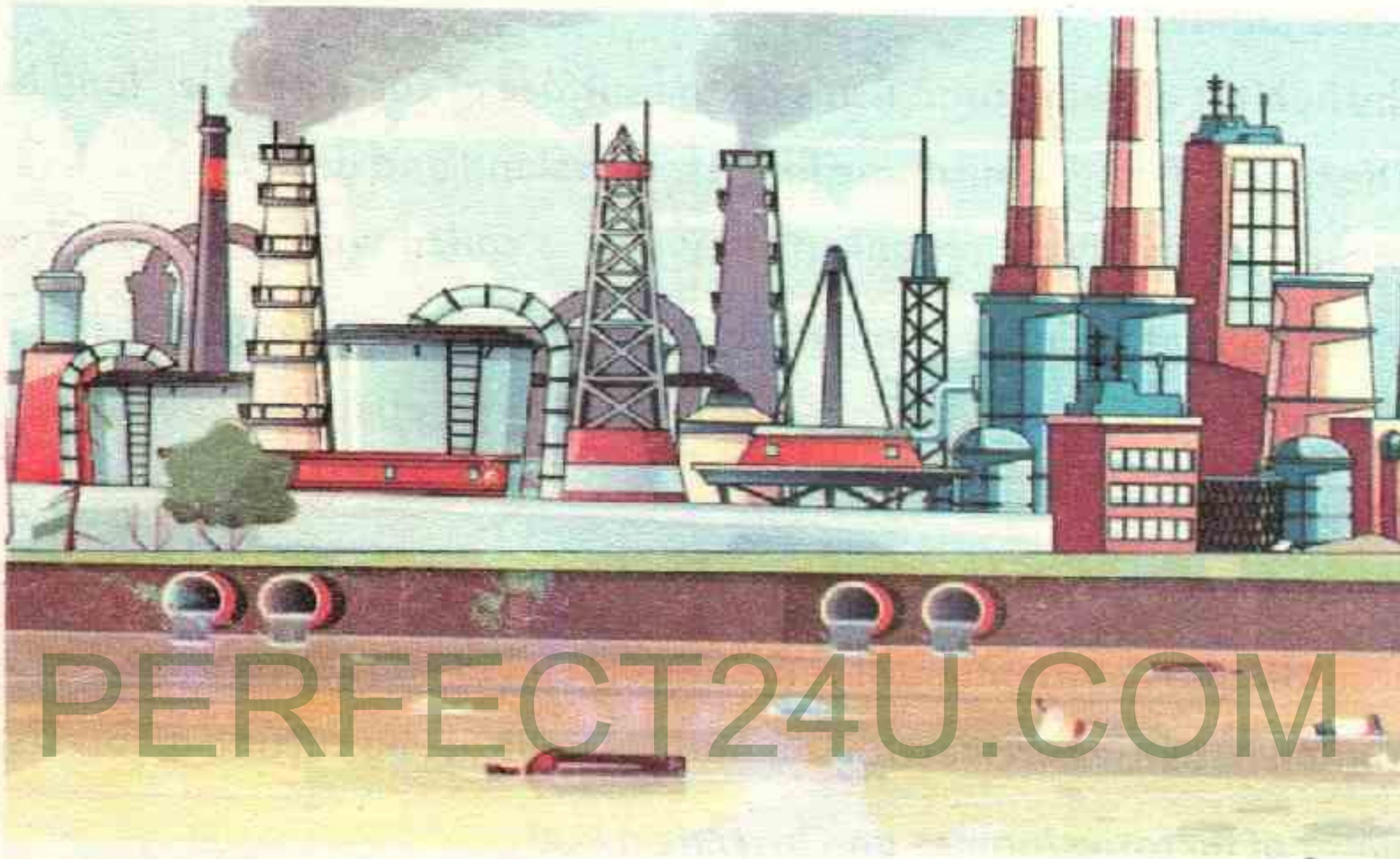
Humans are destroying forests and grassland for constructing buildings, timber and fuel. Due to which plants and animals are deprived from natural habitats and their life is in danger. Due to the use of fertilizers and insecticides not only plants and animals are affected but human beings are also effected.





Effects of Human Activities on Water Habitat

Water released from factories and homes are polluting water habitats. Due to which the lives of living organisms are in serious danger.



The oil released by ships are destroying ocean life.





Key Points

- ✓ Sun is the source of heat and light which maintain life on earth.
- ✓ All living organisms need food, air, water and light for living.
- ✓ Habitat is the place where living organisms are found naturally and get their needs fulfilled.
- ✓ The habitat of living organisms on the surface of earth is called land habitat.
- ✓ The types of land habitat are forests, grassland and desert.
- ✓ The habitat of living organisms in water is called water habitat. The types of water habitat includes pond, river, ocean and polar regions.
- ✓ The living and non-living organism in an area affecting each other is called ecosystem.
- ✓ The natural characteristics present in living organisms that help them to live according to environmental conditions is called adaptation.
- ✓ Human activities are destroying natural habitats by cutting of forests, polluted water of factories/homes and insecticides etc.



Exercise

Q1. Fill in the blanks with suitable words.

- i. The _____ is the biggest source of heat and light.
- ii. For the preparation of _____ plants use sunlight.
- iii. Due to its _____ polar bear is safe from enemies.
- iv. Desert is an example of _____ habitat.
- v. On Earth _____ are called polar regions.



Q2. Write T for true and F for false in front of the following statement.

- i. Ocean is the biggest water habitat.
- ii. The stem of plants which are found in water are flexible.
- iii. Human beings are not harming natural environment.
- iv. Sea water is sweet in taste.
- v. Any living organism can live in any habitat easily.

Q3. Match column (A) with (B).

Column A	Column B
Polluted water of factories	Hot and dry area
Fresh water habitat	Less number of trees
Desert	Cold regions
Polar region	Dangerous for the life of water dwelling animals.
Grass land	Streams

Q4. Write short answers of the following questions.

- i. Define habitat.
- ii. Write three effects of human activities on natural habitats.
- iii. Why sun is important for living organisms?
- iv. How camel is adapted to desert habitat?
- v. Write the characteristics of aquatic plants.



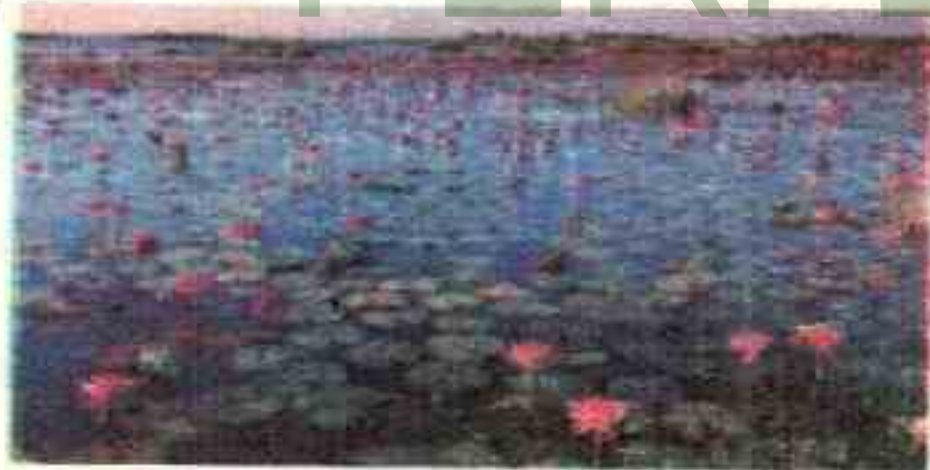
Q5. Write the types of habitat under the given pictures.

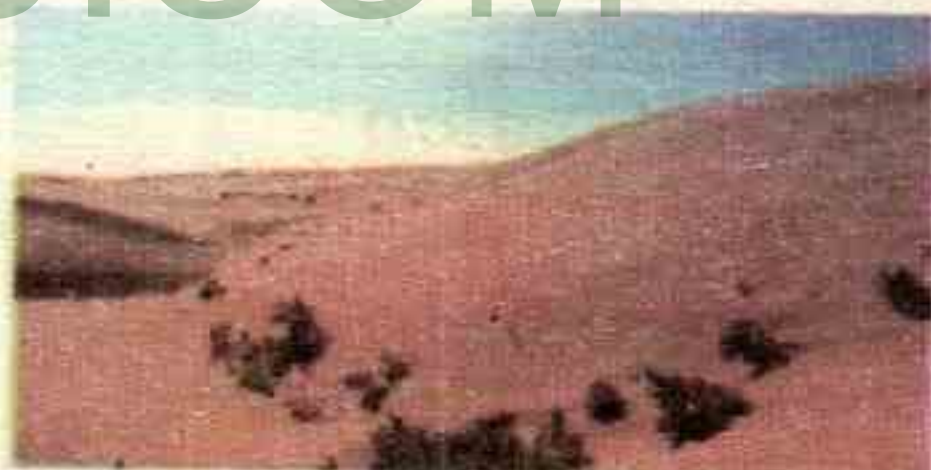
















Q6. I am an ostrich, can you tell me how my given characteristics help me in adaptation to desert habitat.

Long and strong legs _____

Long and thick eyebrows _____

Big eyes _____

Long elastic neck _____



Project Work

Divide the students in three groups. Give the topic of desert habitat to one group, grassland habitat to second group and fresh water habitat to third group. Every group shall present the obtained information about the given topic in form of chart or model in class.

To know more about the topics given in the chapter you can visit the following link.

www.sciencekids.co.n2/sciencefacts/earth/antarctica.html

Food

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize that plants make their own food in the presence of sunlight.
- Recognize that different animals eat different kinds of food.
- Identify certain food groups as fruits, vegetables, grains, dairy product, meat and dry fruits.
- Define a balanced diet.
- Recognize that healthy living requires eating a balanced diet, keeping clean, sleeping well and exercise regularly.
- Identify the ways to get sufficient exercise to stay healthy.



Food

Living organisms need energy for their life. They get energy from food. Therefore, food is the basic need of all living organisms. Plants prepare their food in the presence of sunlight, while the remaining organisms depend directly or indirectly on plants for their food.



Also understand!

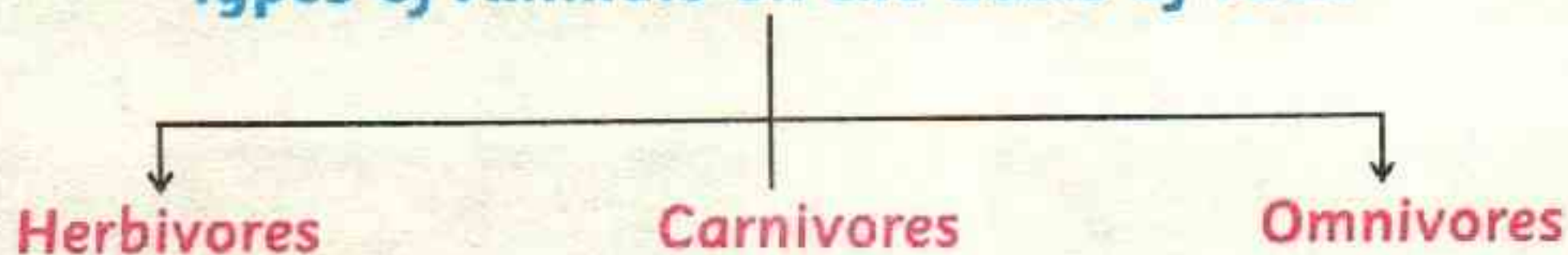
The process in which plants prepare their food in the presence of sunlight is called photosynthesis.



Keeping in view all the animals present in your environment, elaborate that do all animals eat the same type of food?

No! All living organisms do not eat the same type of food. Different animals eat different food. Some animals only eat green plants while other eat meat and some animals eat both green plants and meat. On the basis of food types, animals are divided into three groups.

Types of Animals on the Basis of Food



Group	Food	Example
Herbivores	grass, plants and their fruit	Goat, cow, rabbit etc.
Carnivores	meat of other animals	Lion, cheetah, wolf etc.
Omnivores	meat, plants and their fruits	Ostrich, rat, crow etc.



Think!
Which group do you belong to on the basis of food?



Activity

Following are the pictures of some animals. Write the group of each animal on the basis of food in the lines below the pictures.



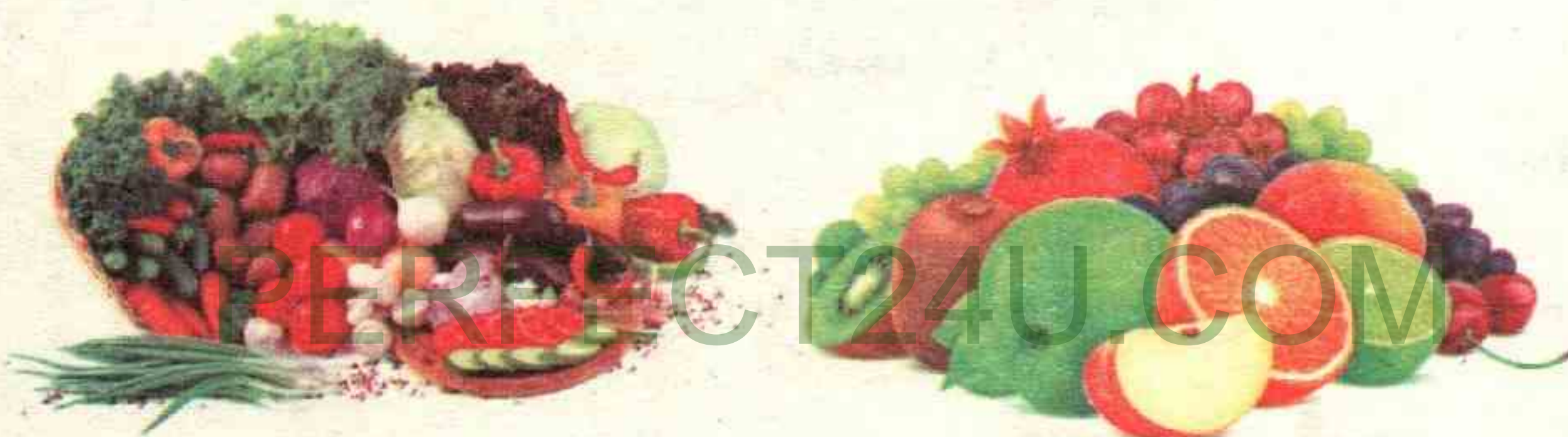


Basic Food Groups

Food, is the basic need of all living organisms. Food is divided into the following groups.

Fruits and Vegetables

Fruits and vegetables are important part of our diet. Vitamins and minerals are obtained from them, which are very important for our body. Fruits include apples, bananas, mangoes and guavas etc. while vegetables include carrots, potatoes, pumpkins, peas, cauliflowers and turnips etc.



Grains

Grains are important part of our daily diet. It is biggest and important source of energy. Grains include wheat, rice, maize and pulses etc.





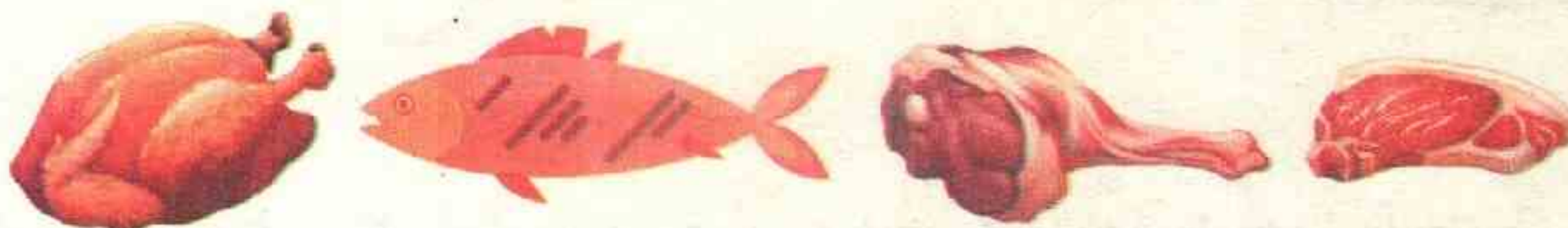
Dairy Products

Milk is a complete diet. It is necessary for strong teeth and bones. For the growing babies milk is the most important diet. Milk is obtained from cow, buffalo, goat etc. Milk is used for the production of yogurt, butter, ghee, cheese etc.



Meat

Meat is an important source of energy. It is obtained from animals, birds and fish. Meat is very important for our growth.



Dry Fruit

The method of preservation of fruits is in use for centuries. Dry fruits are available throughout the year, while fresh fruits are available only in particular season. Dry fruits include nuts, almonds, peanuts and pistachio etc.





Balanced Diet

We need such diet which contains all basic groups of food for a healthy and active life. Food which contains fruits, vegetables, grains, meat, milk and eggs etc. is called a balanced diet. If we do not use balanced diet then needs of our body are not fulfilled and we do not remain healthy.



Think!

What will be the result, if we do not eat balanced diet?



Activity

Write names of two vegetables and fruits which you like and complete the following table.

S.No.	Name: Vegetable/Fruit	Season in which found	Colour
i.			
ii.			
iii.			
iv.			



Factors of Healthy Living

For a healthy life, apart from balanced diet, the following measures are necessary.

1. Cleanliness

For good health, cleanliness of body and environment are necessary. To avoid diseases and stay healthy, following measures are necessary.

- i. Washing hands with soap before and after meal.
- ii. Washing hands with soap after attending washroom.
- iii. Washing hands after playing.
- iv. Brushing teeth daily.
- v. Wearing neat and clean clothes.
- vi. Taking bath regularly.
- vii. Cutting nails.
- viii. Keeping the room, surrounding and plates of food clean.



2. Proper Sleep

Proper sleep is very important for health. Proper sleep makes the body fresh and ready to work.



3. Exercise

Regular exercise keeps the body strong, healthy and protects it from diseases. The following exercises are important for children.

- To ride on bicycle
- Swimming
- Playing different sports like football and volleyball etc.

Spending more time on TV, video games computers etc. is harmful to health.





Give the following information about your favourite game.

- i. What is your favourite game?
- ii. Why do you like this game?
- iii. Where do you play this game?
- iv. At which time do you play?
- v. How many players participate in it?
- vi. What are your feelings after you finish your game?



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Key Points

- ✓ All living organisms need energy to live.
- ✓ Living organisms get energy from food.
- ✓ According to the type of food, animals are divided into three groups, herbivores, carnivores and omnivores.
- ✓ Food is divided into many groups, which include vegetables, meat, grains, dairy products and dry fruits.
- ✓ The diet which contains all group of food is called a balanced diet.
- ✓ For a healthy life, balanced diet, clean environment, regular exercise and proper sleep are necessary.



Exercise

Q1. Choose the correct option.

- i. Different organisms eat _____ food.
 - a. same
 - b. different
 - c. balanced
- ii. Polar bear is _____ animal.
 - a. herbivore
 - b. omnivores
 - c. carnivores
- iii. On the basis of food consumption animals are divided into _____ groups.
 - a. 3
 - b. 4
 - c. 5
- iv. For good health taking bath _____ is necessary.
 - a. regularly
 - b. sometimes
 - c. every month
- v. Animals are called _____ which eat meat, plants and fruits.
 - a. omnivores
 - b. herbivores
 - c. carnivores

Q2. Write T for true and F for false in front of the following statements.

- i. Balanced diet is important for good health.
- ii. Fruits preservation method is not too old.
- iii. Different fresh fruits are available throughout the year.
- iv. Keeping home clean is only the duty of parents.
- v. For good health, balanced diet along with proper sleep is important.



Q3. Encircle the pictures of carnivores with **red**, herbivores with **green** and omnivores with **yellow** colour.



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Q4. Answer the following questions.

- i. Where do plants get their food from?
- ii. What is balanced diet?
- iii. Give four examples of fresh and dry fruits each.
- iv. Why is milk necessary for children?
- v. What measures are necessary for healthy life?

Practical Work

Arrange cleanliness competition among children once a month. Give prizes to students getting 1st, 2nd and 3rd position in body cleanliness (nail, hair, clothes etc), and cleanliness of things (bag, chair, table etc.).

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Teaching Points

- i. Make the students aware about the importance of balanced diet.
- ii. Motivate them for outdoor games.





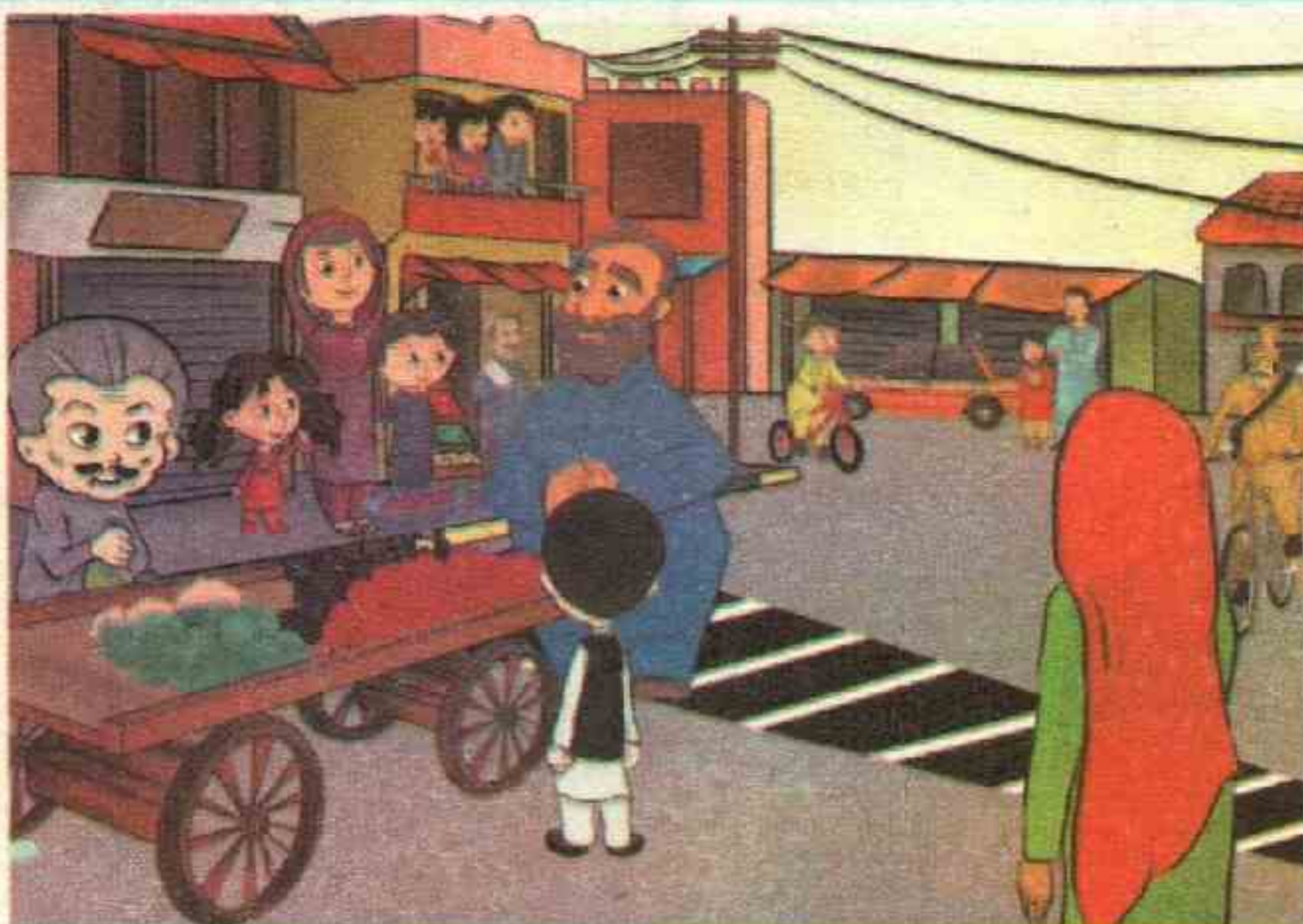
Chapter-9

The Role of Government and Citizens

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Define community and its importance.
- Describe the activities that individuals perform for the welfare of the community.
- Identify key problems in their local area (shortage of drinking water, lack of health and educational facilities, poor sewerage system etc.).
- Recognize that citizens, organize themselves to meet their needs.
- Describe what the government does to meet the needs of citizens.
- Suggest ways the government and people can work together to meet the people's needs in the area.
- Identify ways they can demonstrate good citizenship (playing fairly, helping others, following rules, taking responsibility for one's actions).
- Identify the personal traits of good citizens (trustworthiness, respect for law, responsibility, honesty, tolerance, gender equality and respect for other's rights).



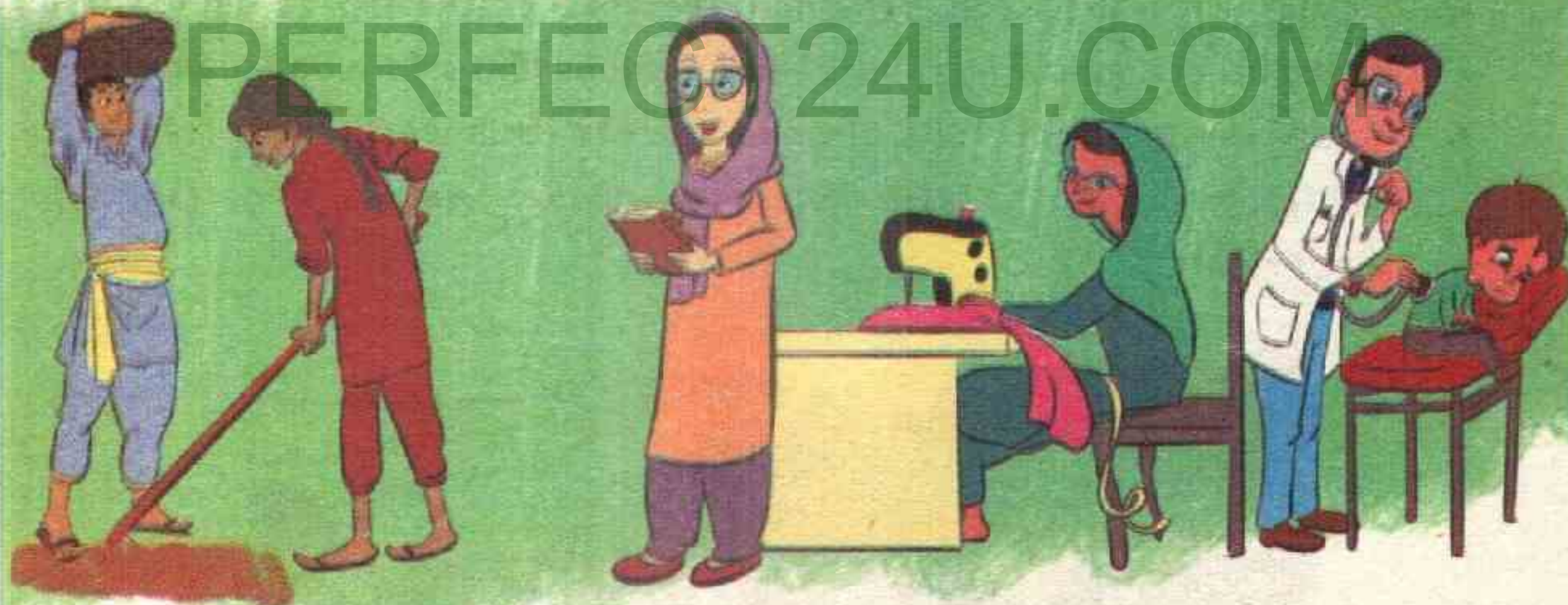


Individuals and Community

Think and tell whether:

- Can we grow grain for ourselves?
- Can we build our homes ourselves?
- Can we sew our clothes ourselves?
- Can you treat yourself, if you are sick?
- Can we make our daily use items and instruments ourselves?

Humans live together to meet their needs. They work for each others welfare and development. Living together in such a way makes a society. People work in different ways for the development and improvement of their society. For example teacher teaches children, doctor treats patients and farmer grows grains.



Activity

Tell about five people in your neighbourhood, how they work for the local population(society)?

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____



Key Problems



There are different types of problems arising due to increase in population, lack of resources and their improper use. There are some problems which can be solved individually, whereas some problems need the help of others for solution. Some of the main problems are below:

1. Shortage of Drinking Water

Availability of water is the basic need of human beings. Clean water is not available in some areas of our country, to meet the needs. Following are the causes:

- i. Increase in urban population.
- ii. Shortage of underground water.
- iii. No storage of rain water.
- iv. Poor management of water supply.
- v. Wastage of water.



2. Lack of Educational and Health Facilities

Quality education and health is the fundamental right of every citizen. A society can make development if its people are educated and healthy. People in different areas of Pakistan face lack of these facilities.



3. Poor Sewerage System

Due to lack of proper drainage system of used water, dirty water stands in streets, which causes spread of diseases.





4. Role of Government

Government provide many facilities for the welfare and development of people. People form government to get these things done. Government is responsible to provide basic needs to its people and work for their welfare. For this purpose, government establishes institutions such as schools, hospitals, army, police, post offices and banks etc. These institutions serve people according to their needs.



Activity

Write names of few government institutions in your area and tell what they do for the people.

S#	Government institutions	Responsibilities
i		
ii		
iii		
iv		

Government and People

Government provide a lot of facilities for the welfare of people. If public cooperates with government institutions, improvement occurs. For example, cooperating with police to improve traffic, proper disposal of garbage to improve cleanliness. Population of our country is very high with less resources. Due to lack of resources, government cannot meet all the needs of the people. There are many problems which people can solve on self help basis. They have to work together to achieve this. For example, providing clean drinking water for their neighbourhood, sewerage and cleanliness, building masjid, school, playground and hospital where needed.



Know that:

In Pakistan, many self-help institutions have been established with the co-operation of people to meet basic needs of the people such as Edhi Foundation etc.

Do you know?

What is the total population of Pakistan and what is the rank of Pakistan in the world in terms of population?



Activity

Good Citizen

A good citizen is one who works for the improvement of his country and its people. He loves them. He believes in equality, truth and respect for law. Good people make a good society.

I _____ (name) am a good citizen. Therefore I:

- always speak truth.
- am honest.
- take care of the rights of others.
- respect law.
- am responsible.
- take care of the environment.
- forgive others.
- avoid quarrelling.
- fulfill my duties properly.
- am loyal to my country.
- believe in providing men and women the same opportunities for development.
- respect my elders and teachers.

Paste your picture

Think and tell, in addition to the qualities described above, what other qualities do you have?

- i. _____
- ii. _____
- iii. _____
- iv. _____



Key Points

- ✓ Living together makes society.
- ✓ Our basic problems are lack of drinking water, poor drainage system, lack of education and health facilities.
- ✓ It is the responsibility of the government to provide basic needs.
- ✓ Government establishes different institutions for the welfare of the people.
- ✓ The cooperation of the people and government is necessary for the development of society.
- ✓ It is our duty to be a good citizen.



Think!

Every person in the society is important.

- i. What if sweeper does not clean-up for a few days?
- ii. If there is no puncture mechanic, what problems will be created for us?

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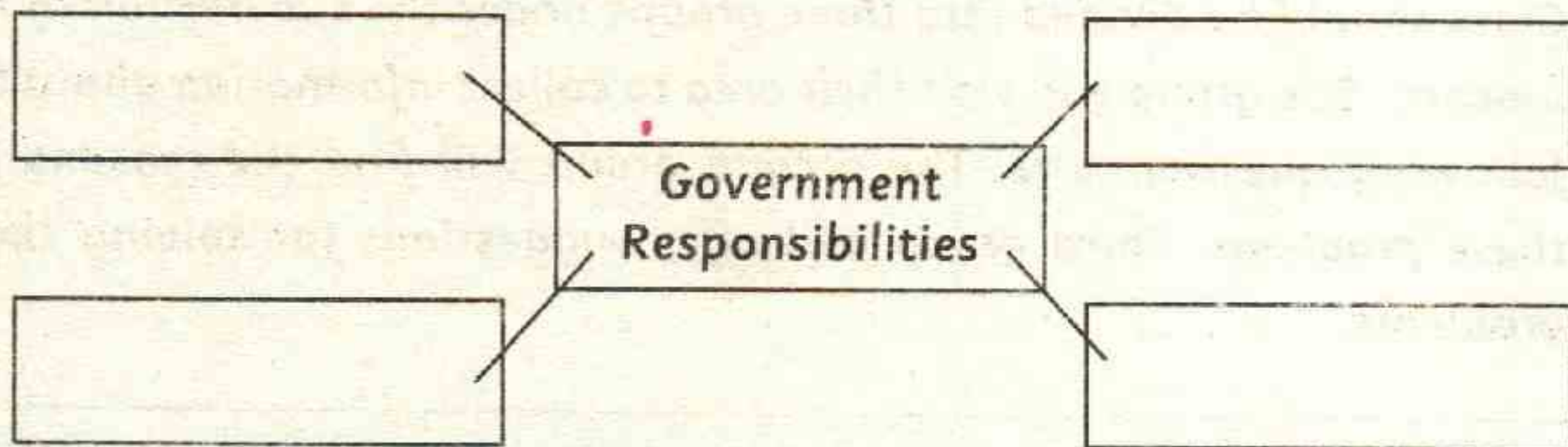
Exercise

Q1. Among the various basics facilities given below mark (✓) in front of available and mark (X) for unavailable facilities in your area.

S#	Basic facilities	✓	X
i.	Children park		
ii.	Clean water		
iii.	Hospital		
iv.	Electricity		
v.	College		
vi.	Post office		
vii.	Police station		
viii.	Carpeted roads		
ix.	System to dispose off garbage		



Q2. Complete the chart given below.



Q3. Make a list of works done on self help basis in your area.

- i. _____
- ii. _____
- iii. _____
- iv. _____

Q4. Give short answers to the following questions.

- i. Why educational institutions are established?
- ii. Why government is necessary?
- lii. How a good society is formed?
- iv. What are the problems caused by lack of proper drainage system?
- v. Describe three qualities of a good citizen.



Project Work

Class should be divided into three groups under the supervision of the teacher. One group will visit their area to collect information about the following questionnaire. The second group will find the reasons for these problems. Third group will offer suggestions for solving these problems.

S.No	Facilities	Available	Unavailable
i.	Clean drinking water according to the need.		
ii.	Proper drainage system.		
iii.	Primary school for boys.		
iv.	Primary school for girls.		
v.	Facilities in school.	Washroom	
		Light	
		Library	
vi.	Health facilities.		
vii.	Play ground.		
viii.	Proper system for disposal of garbage.		



Teaching Points

- Arrange different activities to motivate children to work together.
- Introduce different welfare organizations working in Pakistan.
- Guide children in completing project work.



Chapter-10

Working Out Disagreement

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize disagreements/conflicts that occur at home, in school and in the local community.
- Identify feelings of people in different conflicting situations.
- Identify reasons for disagreement with friends and family members.
- Identify the ways in which people resolve conflicts/disagreements at home and school.
- Apply discussion and problem-solving methods to workout disagreement.

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Common Disagreements

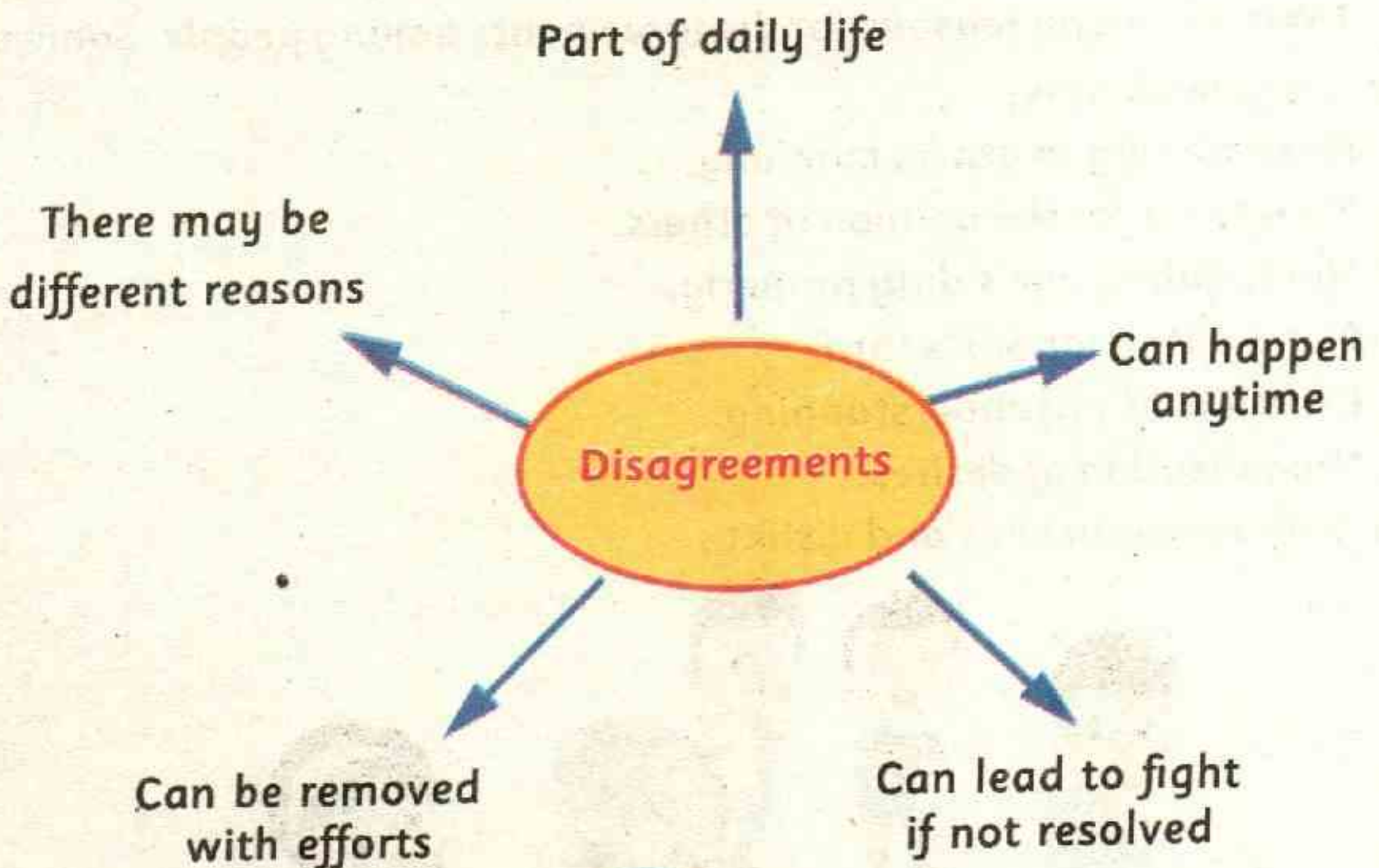
We often feel at our homes, schools and other places that people have different views on the same issue. They do not agree on any one point. It is called disagreement. Sometimes these disagreements grow into conflicts.



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Dear children! If we think, we will find that disagreements are part of our lives. For example, in homes, sibling sometimes disagree on the use and ownership of things. In the same way disagreement is found among you on seats in the class.





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Activity



Understand the differences among people in your home, school and neighbourhood and explain what types of differences generally occur.

S.No	Disagreements at home	Disagreements at school	Disagreements in neighbourhood
i.			
ii.			
iii.			



Causes of Disagreements

There are many reasons for disagreements among people. Some of them are given below:

- i. Not listening to others carefully.
- ii. No respect for the opinion of others.
- iii. Not fulfilling one's duty properly.
- iv. Not waiting for one's turn.
- v. Creation of misunderstanding.
- vi. Unrealization of desires.
- vii. Differences in likes and dislikes.



Activity

Make different expression of face to show emotions such as happiness, grief, sadness, annoyance and hatred etc.

Resolving Disagreements

Dear Children! The most important for us is to avoid disagreements but disagreements occurs as part of our lives. Therefore, we should resolve them. By observing the given guidelines we can resolve disagreements.





Activity

What should be done in addition to the guidelines described above to resolve disagreements.

- i. _____
- ii. _____
- iii. _____
- iv. _____



Resolving Conflicts Through Discussion

Usually disagreement arises at the moment when we don't respect others opinion. If we listen carefully to each other and think over it disagreements can be resolved.

Resolving Conflicts Through Problem Solving Method

- i. Hold on! Calm down and think that anger does not reduce the disagreements but increase it.
- ii. Talk and listen! If your opinion are different. Listen to everyone respectfully.
- iii. Think! Think in a positive way how can we help each other.
- iv. Choose! You have different options. If you are not satisfied, then ask an elder to solve the problem.

Stop and talk → listen → think → options → choose





Activity

Keeping in view the disagreements with a friend during the game in playground, provide the following information.

i. What was the disagreement?

ii. What was the main reason of disagreement?

iii. How the disagreement resolved?

iv. How did you feel when the disagreements resolved?

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Key Points

- ✓ When the opinion/ perception of two or more people on a single matter is different, it is called disagreement.
- ✓ It is common to disagree.
- ✓ Misunderstanding and not respecting the opinion of others are major reasons of conflicts.
- ✓ If the conflicts are not resolved, they turn into fight.
- ✓ Our attitude plays an important role in resolving disagreements.



Exercise

Q1. Think and describe.

- i. What would you do if disagreement arises between your two friends?

- ii. What would you do if you come to know that you were wrong?

- iii. If disagreement arise between you and your friend and you fail to convince him, what would you do?

- iv. If you have disagreement with your friend and your friend is wrong, what would you do?


- v. If two of your friends quarrel, whom would you support?

Q2. Keeping in mind your disagreements at home, school or somewhere else with others, mark in the relevant box.

When I have disagreement with someone else then:

- i. I am responsible for the disagreements.
- ii. I control my anger.
- iii. I try to blame others for the mistake.
- iv. Listen to others carefully.
- v. If I am wrong, I admit it.
- vi. If the mistake is of other, I forgive.
- vii. I hate the quarreler.
- viii. I try to resolve the disagreements in a good manner.

Never	Rarely	Always



Q3. Give short answer to the following questions.

- i. What is meant by disagreement?
- ii. Write down any three reasons for disagreements?
- iii. Who settles the disagreements at your home?
- iv. How can we settle disagreements?
- v. What is the result if disagreements are not resolved?



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Teaching Points

Make it clear to children:

- i. It is common to have disagreements in life.
- ii. How can these disagreements be resolved?
- iii. What problems can arise if disagreements are not resolved?



Chapter-11

Matter

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Identify matter and its states.
- Recognize basic differences between states of matter such as; water, through physically observable properties (shapes and size).

Matter

Our universe and everything present in it are made up of matter. Anything that occupies space and having mass is called matter. For example, stone, water, air, etc.



Know
That:

Every matter (solid, liquid, gas) is made up of very small particles called atoms. Atom is so small that a single sand particle contains billion of atoms.



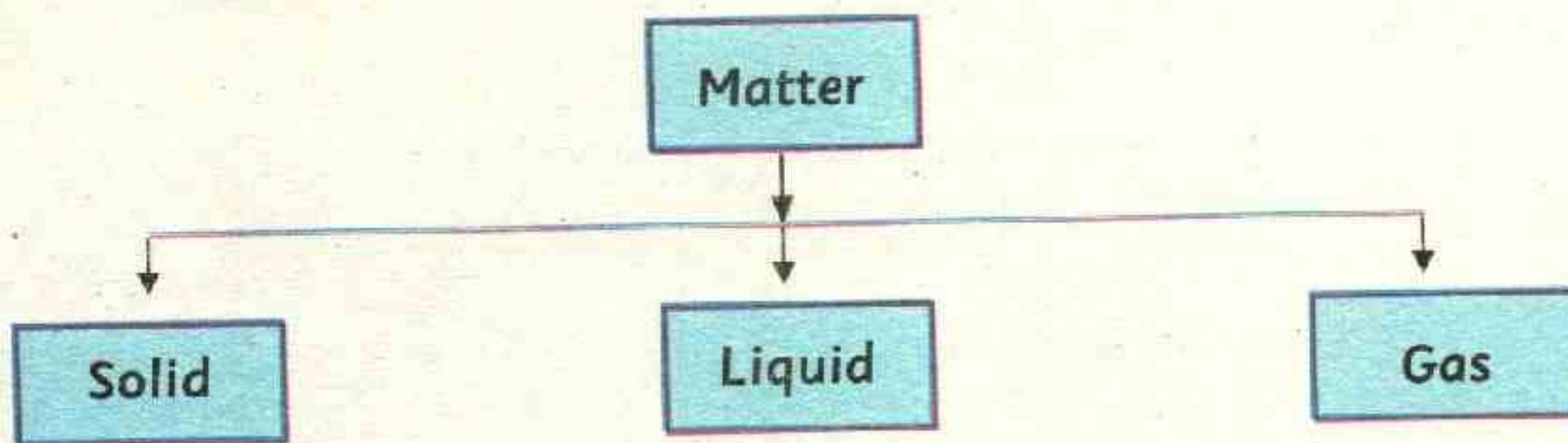
Think!

Take a few ice cubes and put them in a jug of water. The ice cubes will start swimming in water, why?

States of Matter




Basically matter exists in three states.

- i. Solid
- ii. Liquid
- iii. Gas



Characteristics of Different States of Matter

All three states of matter have different characteristics for example shape and volume.

Characteristics	Solid	Liquid	Gas
			
Shape	Specific shape	No specific shape and adopts the shape of the container in which it is placed.	No specific shape and adopts the shape of the container in which it is placed.
Volume	Specific volume	Specific volume	No Specific volume

Know That!

Plasma is the fourth state of matter. Sun is mainly composed of plasma.



Activity

Select one thing from each states of matter in you surrounding. Observe their different characteristics and write the results in the given table.

Matter (name of thing)	Shape	Volume
Solid		
Liquid		
Gas		

Changes in States of Matter

Matter can change its state for example, water can exist in all three states of matter.

Ice: Solid state of water.

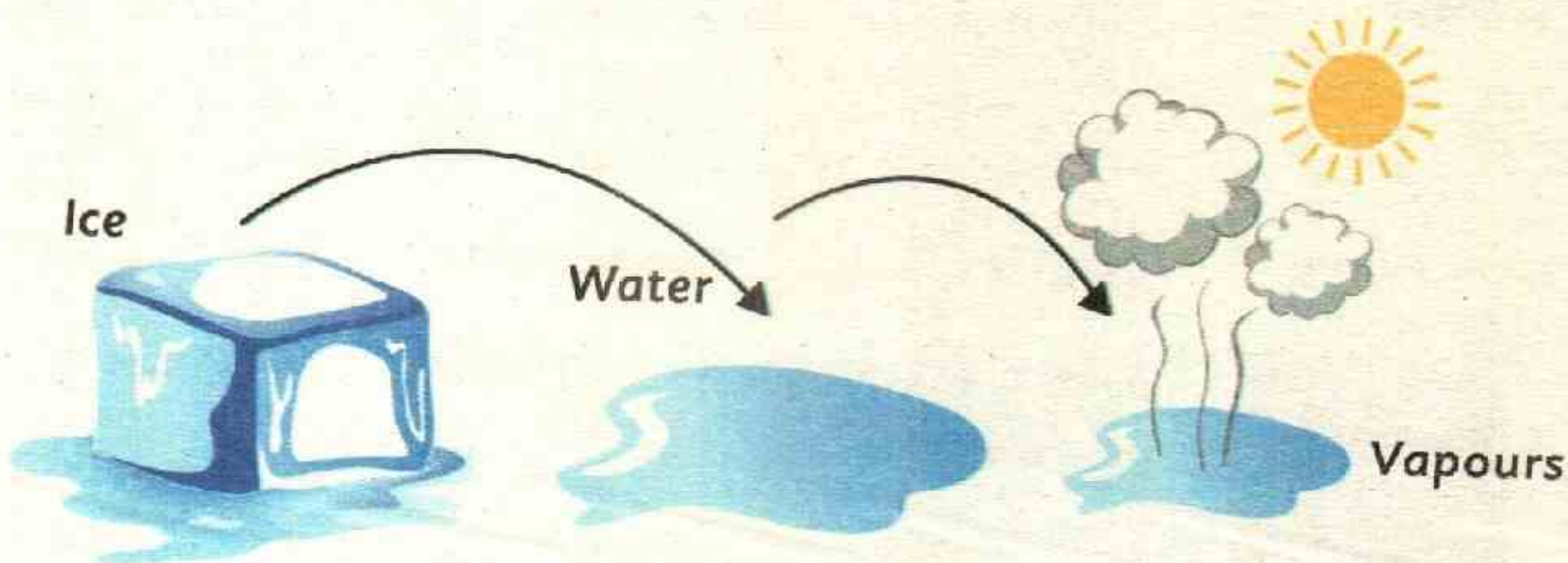
Water: Liquid state of water.

Water vapours: Gaseous state of water.



Think!

Sometimes solid can change directly into gaseous state without changing into liquid





Change in matter occurs due to the change in temperature.

Practical Work

In the presence of your teacher, take some cubes of ice in beaker and heat it. Observe and answer the following questions.

i. To which state does the ice change?

ii. Heat it more and observe the changes which occurs?

iii. Why did the changes in ice occur?



Do you know?
Melting point: The temperature at which the solid changes into liquid.
Freezing point: The temperature at which the liquid changes into solid.
Freezing point of water is: 0°C .



Key Points

- ✓ Anything which occupies space and having mass is called matter.
- ✓ Matter has three states, solid, liquid and gas.
- ✓ The three states of matter are different from each other due to their physical characteristics.
- ✓ The state of matter can be changed due to temperature.

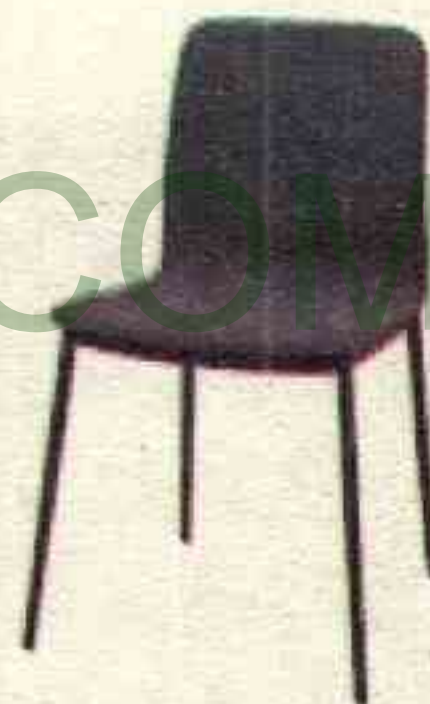


Exercise

Q1. Fill in the blanks.

- i. Water exists in the _____ state of matter.
- ii. Solid contains _____ shape.
- iii. All matters have _____.
- iv. Due to _____ in temperature, the ice changes into water.
- v. Due to increase in temperature the state of _____ changes.

Q2. In the given pictures differentiate solid, liquid and gas also write the state of matter below each picture.





Q3. Choose the correct answer.

- i. Vapours are the _____ state of matter.
- a. solid
 - b. liquid
 - c. gas
- ii. Anything which occupies space and having _____ is called matter.
- a. mass
 - b. specific shape
 - c. colour
- iii. Water is the _____ state of matter.
- a. gas
 - b. solid
 - c. liquid
- iv. The thing which has specific shape and volume is called _____.
- a. solid
 - b. liquid
 - c. gas



Q4. In the table below, first column contains the names of different things. Write state of matter as solid, liquid and gas in the second column.

Name	State of matter
Milk	
Pencil	
Water vapours	
Air in the balloon	
Apple	
Honey	
Football	
Tea	

Q5. Write short answers.

- Explain the characteristics of solid.
- How matter can be changed from one state to another?
- Explain the shape of gas.
- What is the main difference between solid and liquid?
- Which state of matter is used during breathing?



Practical Work

Carry out this experiment in the presence of your teacher with proper care. Take a candle. Candle is solid because it has a definite shape and volume. Now light the candle and observe the following.

i. What changes occur in the candle?

ii. Why this change occurs in it?

iii. After some time the melting candle changes into which state of matter?

iv. Why this change occurs?



Teaching Points

- i. Help the students in the given practical work. Tell them about the precautionary measures and present the results in the classroom.
- ii. Tell the importance of thermometer to students and note the temperature in different times in a day.
- iii. Show them practically to measure human body temperature with the help of thermometer.



Chapter-12

Energy and Its Sources

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize that energy is required for doing work.
- Understand that sources of energy are used for many things (move an object, heating, lighting, transportation, electric appliances etc.)
- Identify natural sources of energy (e.g. the sun, wood, flowing water, wind, coal, oil, gas).

Energy

Human beings need different tools to make their lives easy and comfortable. Did you ever think that what is required for these tools to work? Energy is required for these tools to work. No work can be done without the use of energy. Everything present around us either uses or provides energy.

Sources of Energy

Energy can be obtained from different sources which are called sources of energy.

(I) The Sun

Sun is the biggest source of energy. This energy reaches the Earth through rays in the form of heat and light. This energy is called solar energy. Solar energy is used for the production of electricity.

Know That:

The energy stored in Sun is enough for 6 billion years.





(ii) Flowing Water



Know That:

In many places in Pakistan, electricity is produced from water. Important among them are Turbella, Warsak and Mangla dams.

Energy is present in flowing water. For thousands of years human beings are getting energy from flowing water. For example, for grinding grains in water mill. Nowadays, dams are built on rivers to produce electricity.



Know That!

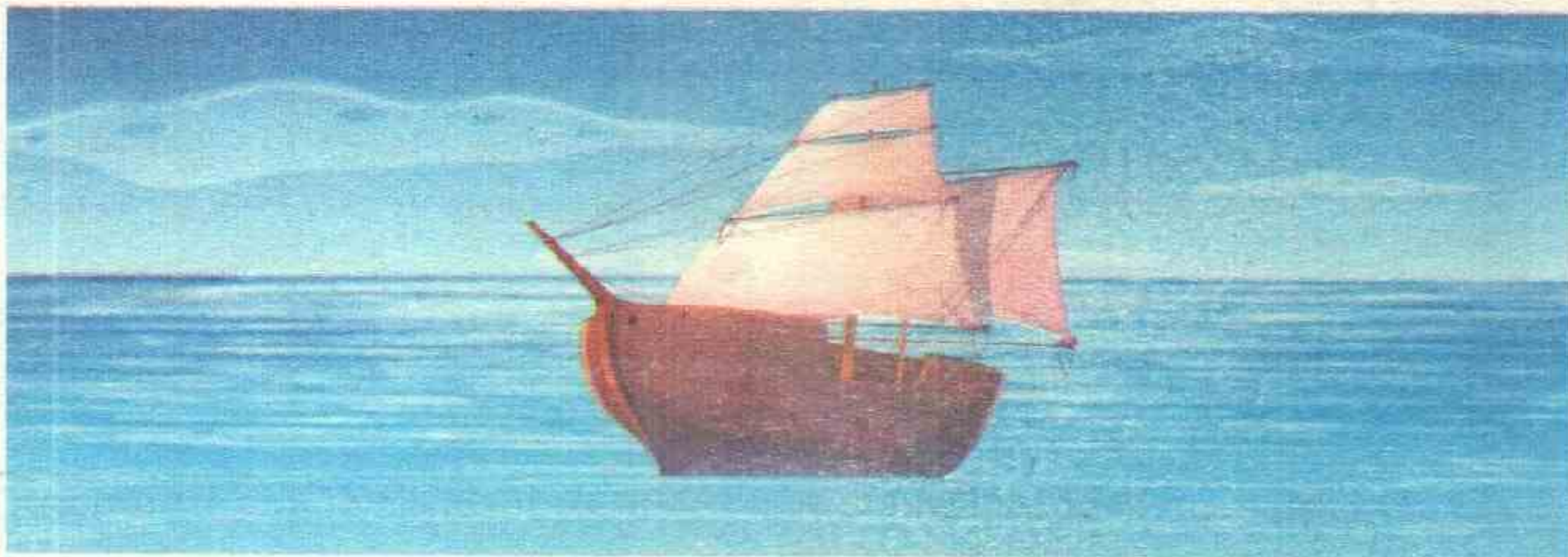
Water clock/clepsydra is the oldest tool which was used for time measurement in Babylonia and Egypt. It worked by using energy. Find out more information about water.



(iii) Air

Air is also an important source of energy. For centuries human beings have been sailing ships and boats with wind energy. Similarly, farmers use windmills to get water from wells and for other purposes. Nowadays windmills are used for electricity production.





(iv) Coal

Coal is one of the ancient source of energy. For centuries human beings used coal for heating, light and cooking food. Coal is used for running trains and ships. Now coal is used for the production of electricity. Resources of coal are found in different regions of Pakistan.



(v) Natural Gas

Natural gas is used to keep houses warm, cook food, run factories and vehicles.





(vi) Crude Oil

Oil is an important source of getting energy. It is found underground. Oil is used for producing electricity and running factories, industries, machines and vehicles.



Think!

If there were no sources of energy (coal, natural gas, water) how the world would have been?



Activity

You have read that no work can be done without energy. Different sources of energy are given below. Write the uses of each source against it.

Sources	Uses
Sun	
Coal	
Water	
Natural gas	



Key Points

- ✓ The ability to do work is called energy.
- ✓ Energy is a basic need of life.
- ✓ No work can be done without energy.
- ✓ Sun, air, coal, and gas are natural sources of energy.
- ✓ Sun is the biggest source of energy.

Exercise

Q1. Fill in the blanks.

- i. Electricity is produced by building _____ on rivers.
- ii. The greatest source of light and heat is _____.
- iii. We call _____ to the energy obtained from sun.
- iv. We need _____ to play, write and speak.
- v. An important source of getting _____ is oil.

Q2. Answer briefly.

- i. How do you use energy?
- ii. Write any two natural sources of energy.
- iii. Write the uses of natural gas.
- iv. Write any three domestic uses of electricity.
- v. How solar energy reaches the Earth?



Q3. The following things work with energy. Write the sources of their required energy.

Picture	Source of Energy
	
	
	
	
	
	





Activity

Teacher shall divide the class into four groups, name the first group water, second as gas, third one as electricity and the fourth as oil. Each group shall tell how it helps human beings and which precautions shall be kept in mind while using it.

Keep in Mind

Most of the sources of energy such as coal, gas, oil and water are limited. Therefore, use electricity, gas and water according to the needs.



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Teaching Points

- i. Explain the use of energy with examples from daily life.
- ii. Aware the students about the importance of sources of energy.
- iii. Aware the students about conservation of energy.

To know more about these topics use the following links.

<https://kidskonnnect.com/science/electricity/>

<https://smileandlearn.com/?lang=en>

Changing World

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize that present time is different from the past in terms of living style, food, communication, clothes etc.
- Identify how schools, communities and transportation have changed over time (from the given pictures)
- Sequence events in a narrative in chronological order.

It is clear from the information obtained from various sources that the life style, dress, food, source of transportation and methods of communication of people of old age were completely different from the present age. They lived in caves. Plants, fruits and uncooked meat were their food. They made their tools from stones and animals bones.



Think and Share
Why people of stone age ate uncooked meat?

With the passage of time man learned making of fire and cooking food. To meet their needs of food man started cultivating crops and petting animals. Invention of wheel and discovery of metals paved the way for human development. Due to continuous struggle of human beings the present life is very comfortable and safe than the past.

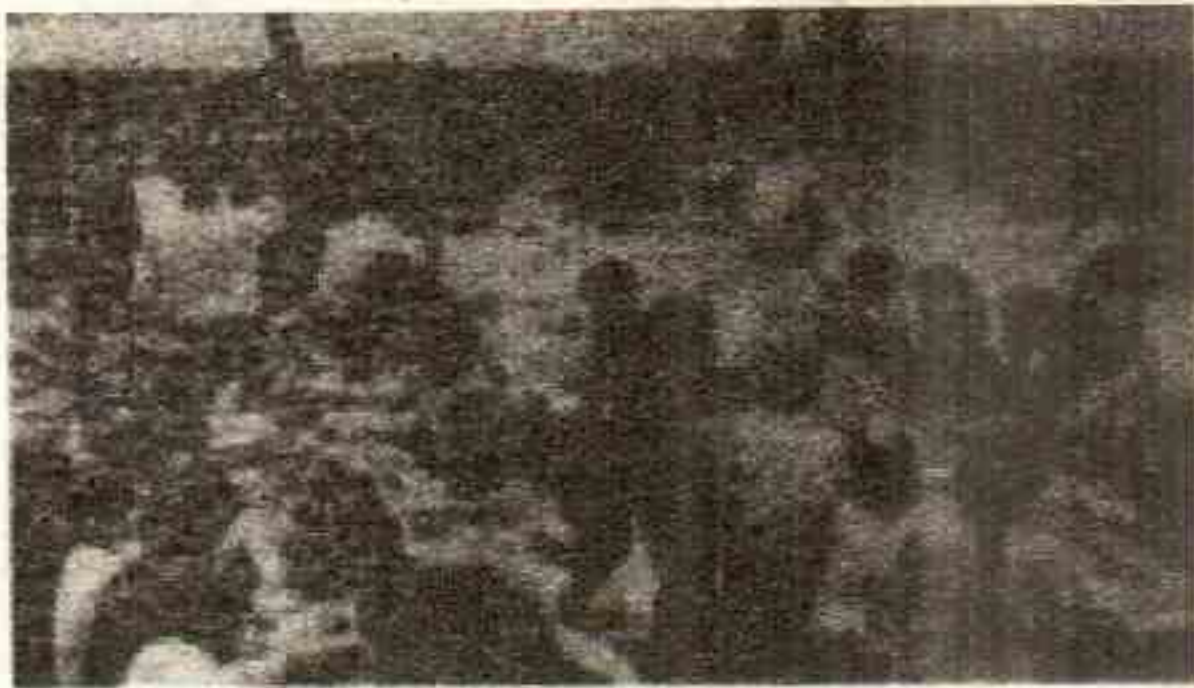


Lets compare the ancient world with the present with the help of pictures.

Post

Present

Educational Institutions



Life Style



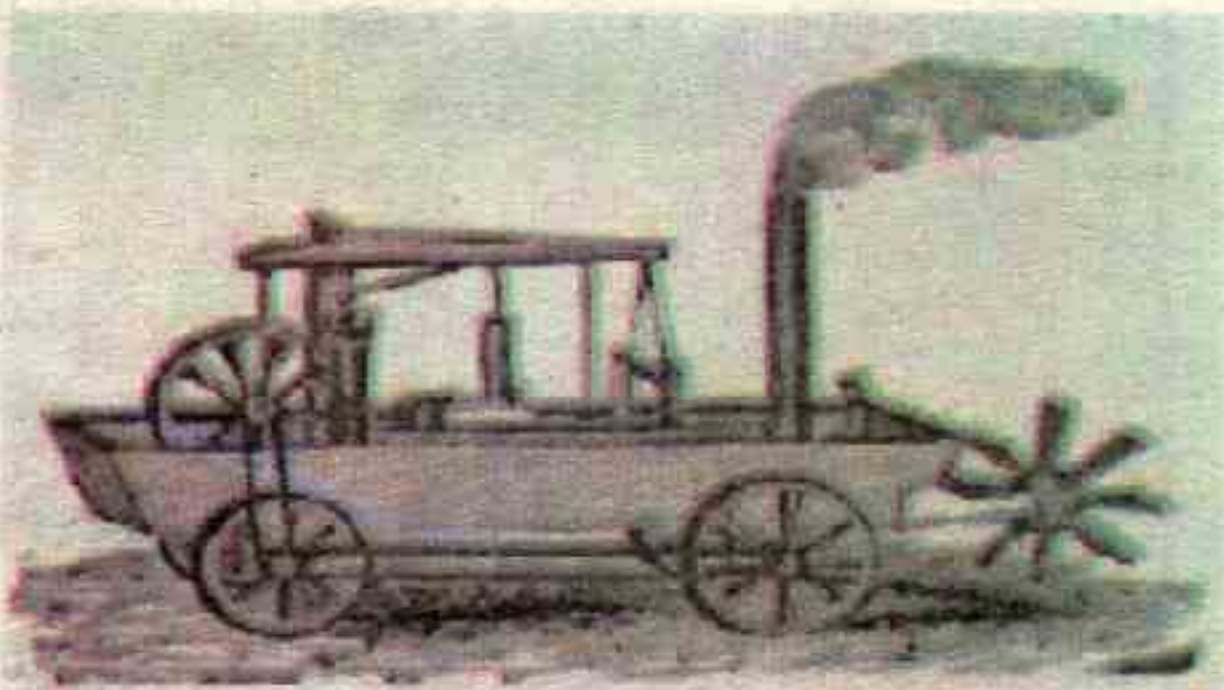
NOT FOR SALE



Past

Present

Source of Transportation





Activity

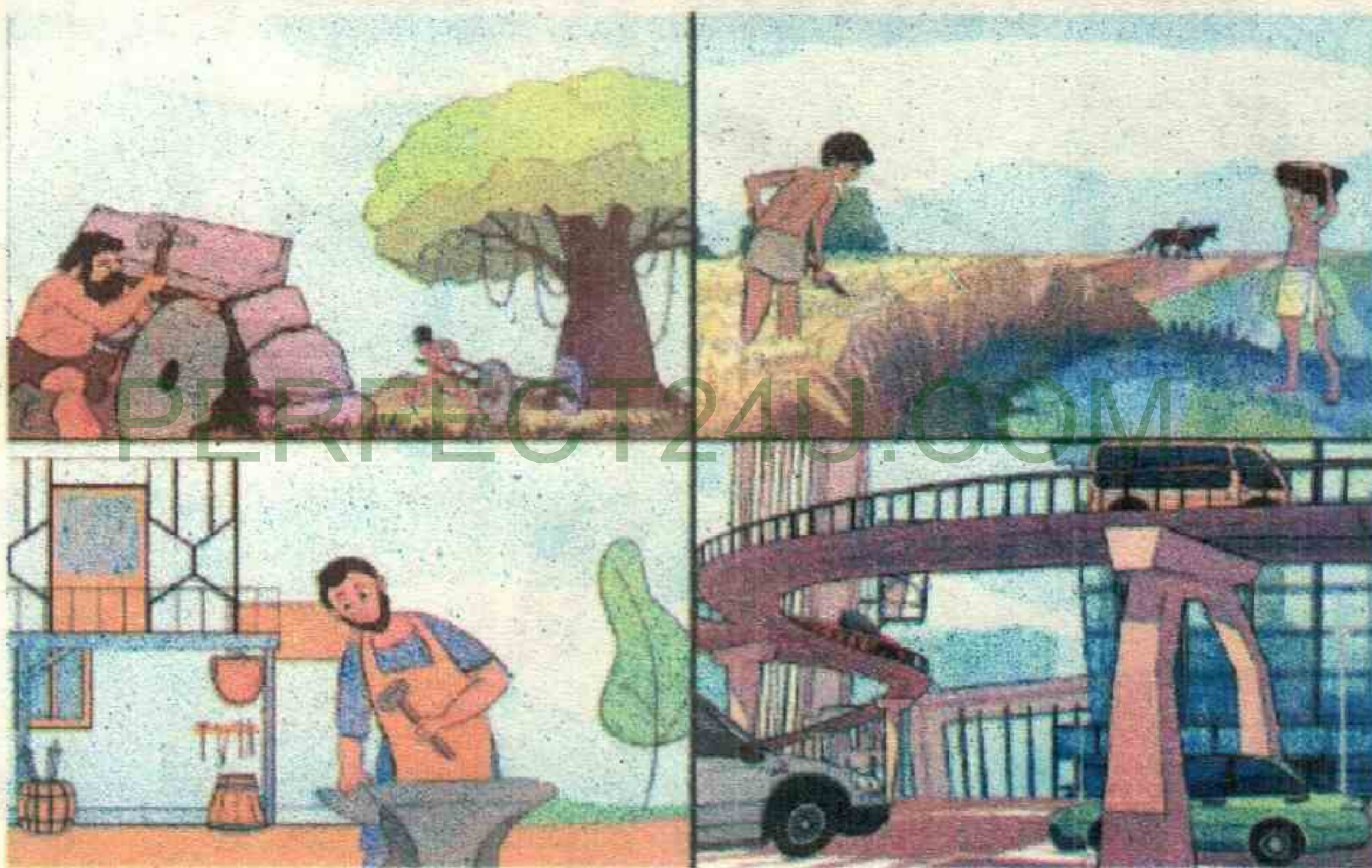
Collect the pictures of sources of transportation and paste it in your note book.



Think!

If iron was not discovered, how the life would have been?

Chronology of Periods from Past to Present



Activity

Visit a nearby museum or historical place and observe the changes with the passage of time. Write the results of observation in the form of an essay.



Key Points

- ✓ Present age is completely different from the past.
- ✓ Invention of wheels and discovery of metals played very important role in human development.
- ✓ Modern development is the result of continuous struggle of human beings.
- ✓ Present human life is very easy, comfortable and safe than the past.

Exercise

Q1. Choose the correct option.

- i. Which is the best source of information about ancient time?
 - a. museum
 - b. market
 - c. zoo
- ii. Where did the people of ancient times live?
 - a. in the cave
 - b. cemented house
 - c. in the wooden houses
- iii. Which is the most important invention of the ancient time?
 - a. train
 - b. computer
 - c. wheel
- iv. How was the life of people in ancient times?
 - a. comfortable
 - b. safe
 - c. difficult



Q2. Write T for true and F for false.

- i. Modern development is due to the continuous human struggle.
- ii. Bull cart is the modern source of transportation.
- iii. There is no difference between the houses of past and present.
- iv. There is no need of more human development.
- v. In ancient times human made weapon from stone for self defence and animals hunting.

Q3. Answer the following questions.

- i. Which things played important role in the human development?
- ii. What were the instruments used by the ancient people?
- iii. Why did humans begin to grow crops?
- iv. What are the advantages of modern means of communication?

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Practical Work

Students shall collect pictures of means of communication used in the past and present. Arrange an exhibition in the classroom. Write relevant information briefly with each picture.



Teaching Points

“What changes can occur in human lives due to scientific development. As a nation how can we prepare ourselves for these changes”. Arrange a dialogue among the students on this topic.



Chapter-14

Inventions

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Describe what an invention is.
- Identify major recent inventions (e.g. aeroplane, computer, internet etc.).
- Analyze recent inventions (electricity, computers, phone and internet etc.) have changed the lives of people.

Inventions

We use different things, instruments and machines to make our daily life comfortable. These things were not available in the past. Human life was difficult at that time. Human beings started making new things to bring comfort to their lives. For example, they hunted animals with stones. It was hard and dangerous. So they made bow and arrow and other weapons. This made hunting of animals easy. Invention means making a thing which does not exist before. A person who makes a new thing is called an inventor. Every invention is important in its own capacity. It helps in doing work quickly and easily. The work requires less labour. Inventions have made our life easier and less tiring. Journeys which took days, months and years are now travelled in hours. Today human beings can control natural disasters and diseases better than before. Messages can be sent immediately to any part of the world.





Activity

Make a list of your favourite inventions.

S.No	Invention	Inventor	Why do you like it?
i.			
ii.			
iii.			
iv.			

Modern Inventions

In the modern world development is too fast due to inventions. All the inventions of the modern period are important, but some inventions have completely changed the world.



Activity

The teacher shall ask the students to make a list of the appliances/instruments in their homes, which are operated by electricity.

Computer

Nowadays, computers are used in every fields of our daily life. Computers have changed our lives completely. Today computers are used for education, accounts in offices, getting information, diagnosing diseases, making maps of buildings and predicting weathers. This is an invention which is developing too fast.





Mobile Phone

It is an important invention of modern times. It can be used for quick communication in any part of the world anytime. Modern phone is used for different purposes. Besides communication mobile phones are also used for education.



Activity

Students! How can you use mobile phones for education?

- i. _____
- ii. _____
- iii. _____

Internet

Do you know that there was no email or things like that few years ago. All this has been made possible by internet. We get information through internet from the whole world while at home. We can buy goods from any part of the world. The world has come closer due to internet.





Activity

Suppose you are an inventor and trying for your new invention. Now answer the following questions.

i. Why do you want this invention?

ii. What would be the advantages of your invention for the people?

iii. Do you think that people need your invention?

iv. Will your this invention will have any adverse effect?

v. What will be the name of your invention?

vi. Draw the sketch of your invention.

Key Points

- ✓ Making anything which does not exist already is called invention.
- ✓ Inventions are the results of continuous human efforts.
- ✓ Inventions have made our life comfortable.
- ✓ Computer, mobile phones and internet are important inventions of modern world.
- ✓ Modern inventions brought revolution in every field of human life.







Exercise

Q1. Fill in the blanks.

- i. A person is called _____ who invents a new thing.
- ii. Our daily life has become _____ due to invention.
- iii. There might be hardly any aspect of our life where _____ is not used.
- iv. We get information through _____ from the whole world on any topic.
- v. Any part of the _____ can be communicated very quickly with the help of mobile phone.

Q2. Complete the given table.

Invention	Name	How it helps us	If it was not invented then
			
			
			
			



Q3. Match column (A) with column (B).

A	B
Invention	Hunting animals
Internet	Traveling in hours instead of days
Aeroplane	Getting information at home
Bow and arrow	Ease in doing work

Q4. Answer the following questions.

- Define invention and give its example.
- Make a list of inventions used in your school.
- How internet has changed our lives?
- Write any three benefits of inventions.



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Teaching Points

- Robot is a modern invention. Arrange a debate among the students. How will the world change due to robots in future?
- Introduce students to different scientific inventions and the scientists who invented them. Narrate their stories of invention in an interesting manner.



To know more about these topics, use the following link:



<https://goo.gl/GlhVVj>

Force and Machines

Students Learning Outcomes

After completing this chapter, the students will be able to:

- Define tool as an instrument to make people's work easier.
- Name and identify different forms of simple machines (inclined plane, lever, pulley, wheel and axle, wedge, screw).
- Recognize that push and pull moves things fast or slow (push and pull as a force).
- Recognize from pictures of the past that force applied by humans and animals moved vehicles (Tonga, bullock cart, bicycle, pushcart) while today vehicles are moved by machines (bus, motorcycle and car etc.).
- Recognize that greater the force, the greater the change in the motion of an object.
- Observe and describe how motion of objects can be changed by applying force (speed up, slow down, stop, change direction etc.)

Tools

In the beginning man did everything with hands because he had no tools. Then man started making tools from stones, wood and bones of animals. They were very simple. They were improved with the passage of time. Tools making from other metals started too. This completely changed human life.

Tool is a thing which is used to make certain task easier e.g. hammer, saw, axe, and plier etc.



Plier



Hammer



Saw



Activity

Human beings have made great development with the passage of time and the world has completely changed. But even today some tools of the old times are used. Get information about such tools and complete the following table.

S.No	Name of the tool	Use in the past	Use in the present
i.	axe		
ii.			
iii.			
iv.			

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Simple Machine

An instrument or tool which converts the applied force to make the work easy, is called simple machine.



Activity

Name any four tools used in your home.



Simple machines make our work easy in the following ways.

- i. It increase the applied force on the things.
- ii. It increase the distance of force.
- iii. Changes the direction of force.



Complex Machine

A machine which is made of two or more than two simple machines is called complex machine.

Advantage of Simple Machine

- i. More work is done with less force.
- ii. More work can be done in less time.

Types of Simple Machine

Simple machines are of six types.

i. Lever

Lever consist of a rod which rotates round a point. Force is applied on one end to lift weight on the other end.



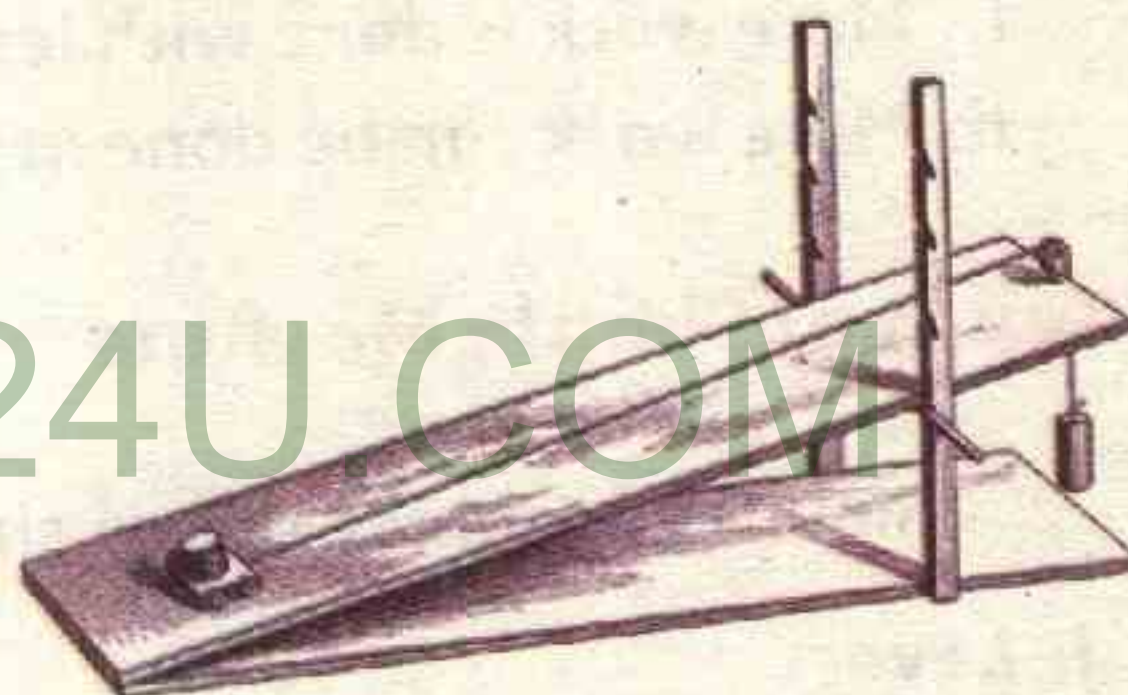
ii. Wheel and Axel

A wheel is fixed on one end of axel which reduces friction to make movement of things easier.



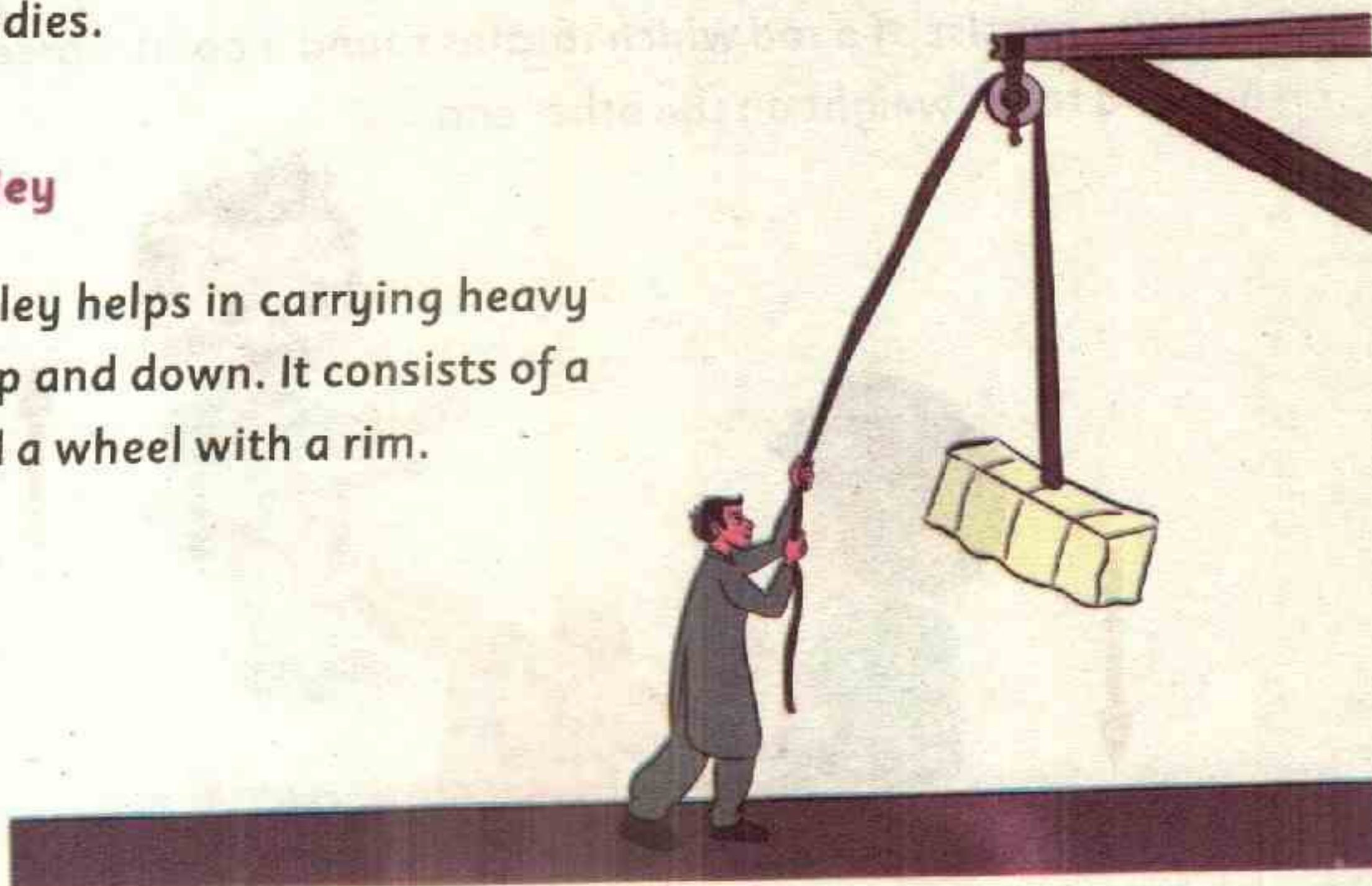
iii. Inclined Plane

It consists of a plain surface. One of its ends is higher than the other one. It is used for shifting heavy bodies.



iv. Pulley

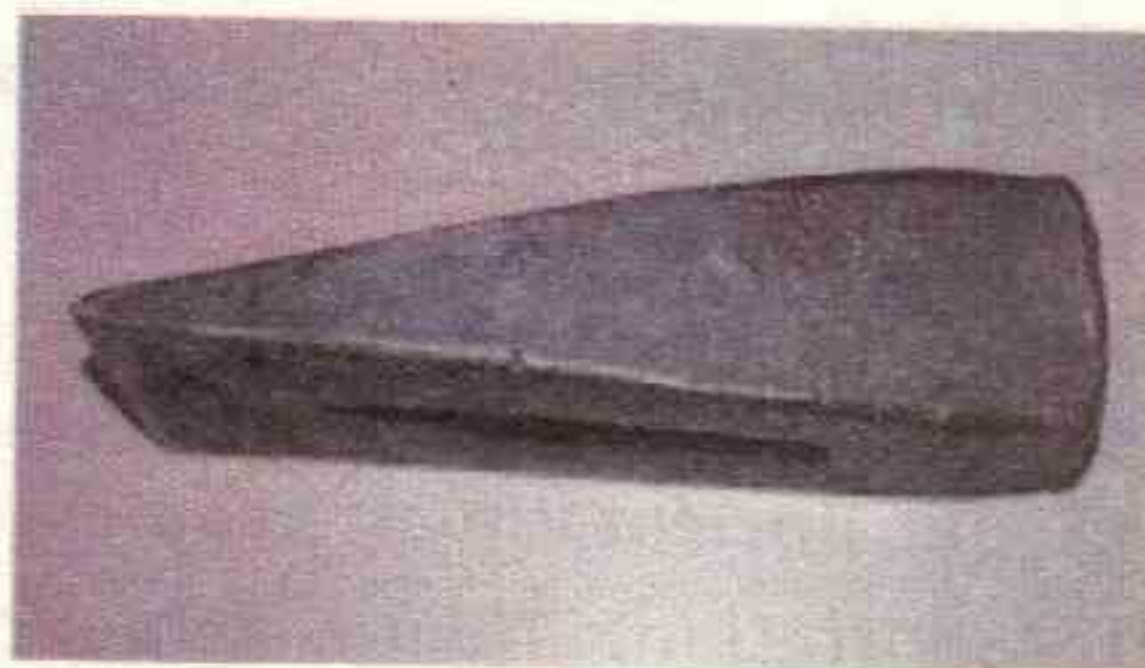
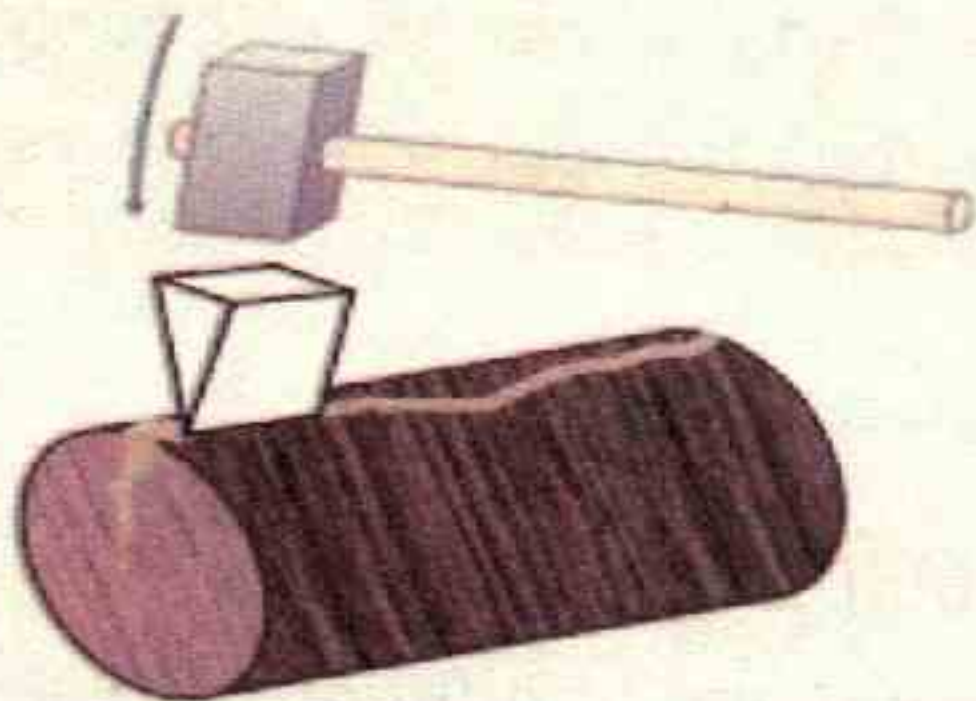
Pulley helps in carrying heavy bodies up and down. It consists of a rope and a wheel with a rim.





v. Wedge

It consists of one or two inclined planes. One of its end is thick while the other one is thin. It is used for separating, lifting or cutting things.



vi. Screw

It has an inclined plane. One of its end is pointed. Its surface is spiral.



Push and Pull

Push and pull is a force. When force is applied:

Static objects can be moved.

Moving objects can be stopped.

Speed and direction of moving objects can be changed.

Shapes of objects can be changed.

Example: Push and pull are used to open or close the door.



Push



Pull



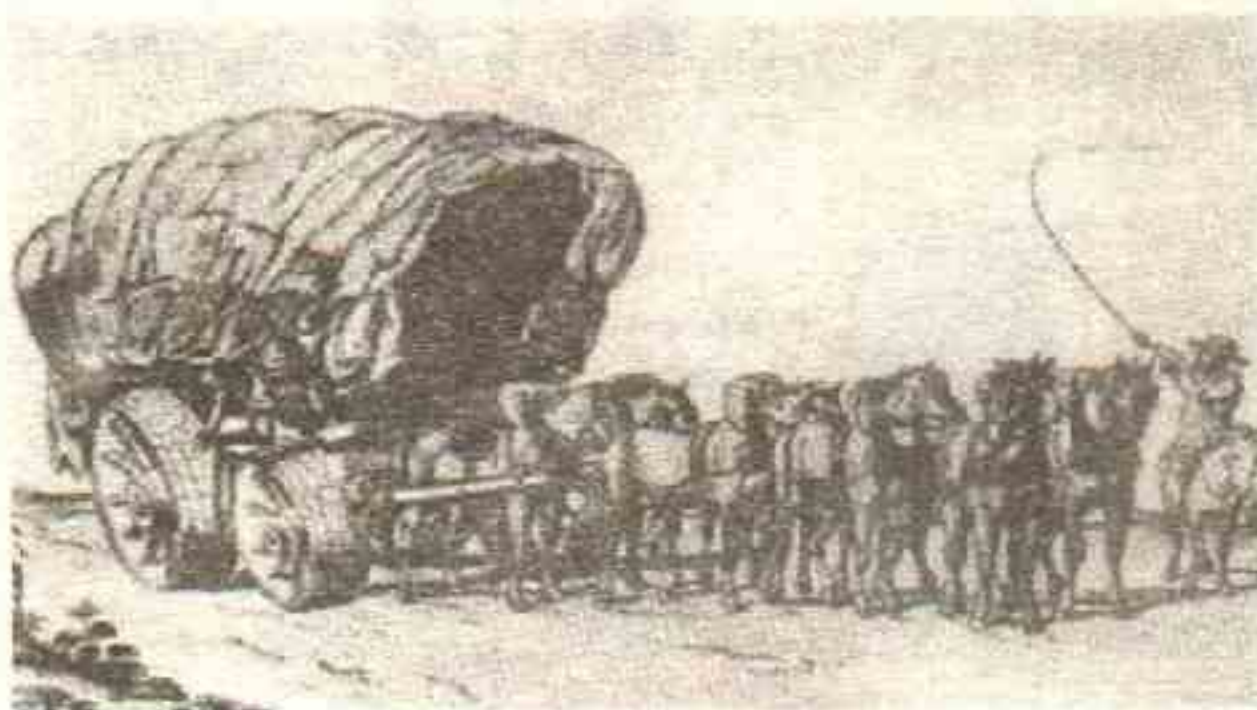
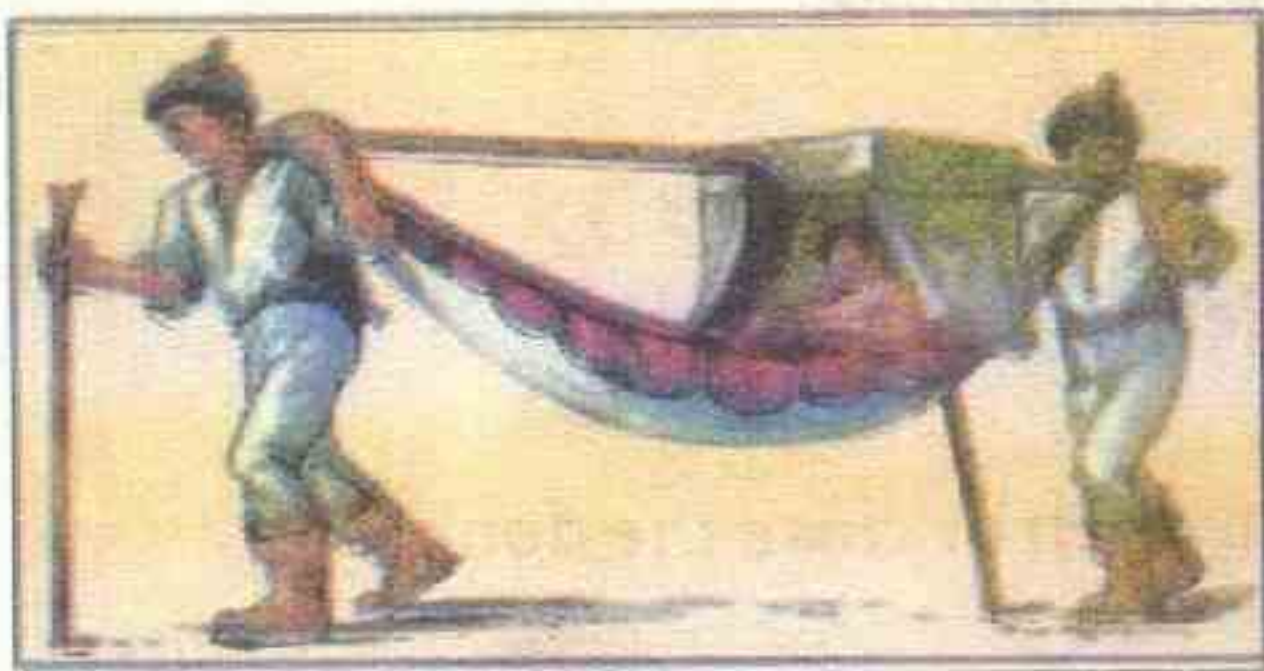
Activity

Ask students time and again to open and close the door. Give them time to observe. How door can be opened and closed with force and how movement of door is affected by applying less or more force.

Old and Modern Means of Transportation

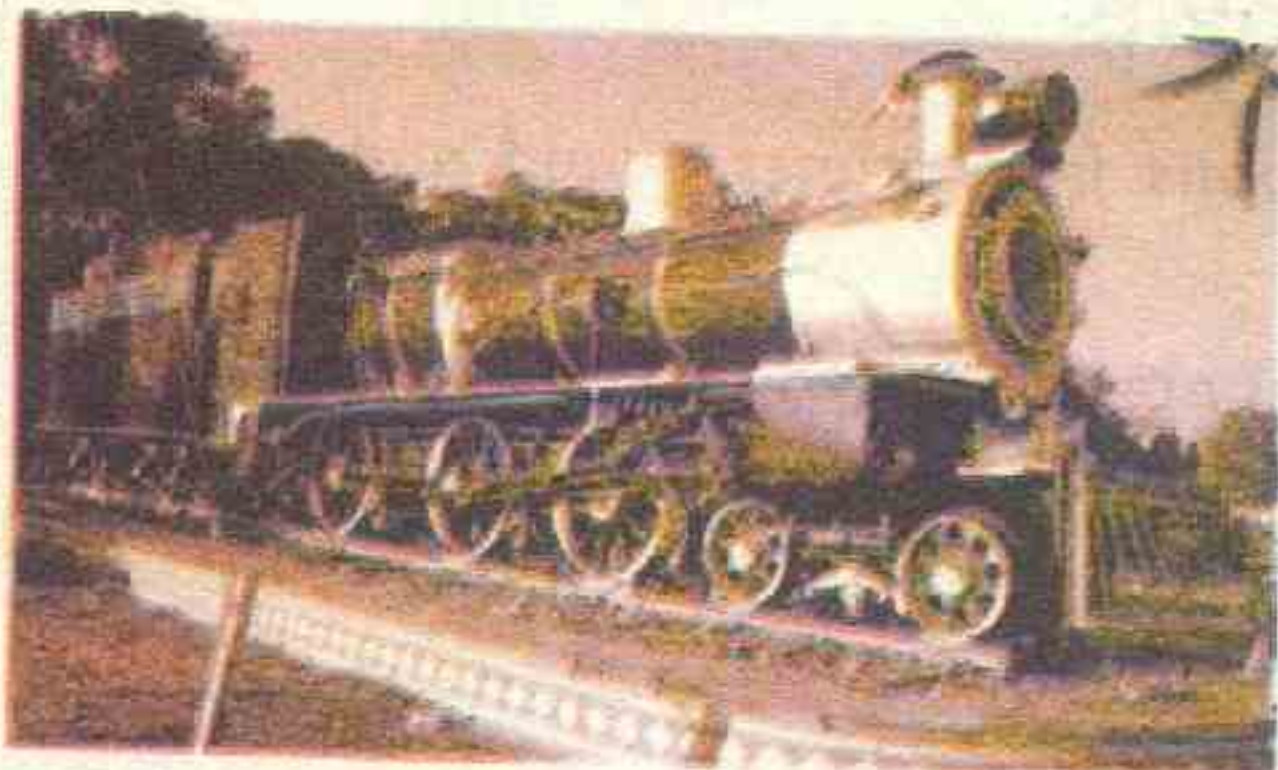
In ancient times people used bull cart, tonga and tipcart for transportation. They were pulled by humans or animals. They moved very slowly. Today human beings use aeroplane, train and car etc. Powerful engines are used to run them. This is the reason of fast modern means of transportation e.g. car, train and aeroplane etc.

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Old



Modern



Activity

Divide class into two groups. Arrange a football match between the two groups. Ask students to observe the following points during the match.

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- i. When does football move?
- ii. In which direction does football move?
- iii. When does it move fast and slow?
- iv. How a moving football is stopped?
- v. How can the direction be changed?



Key Points

- ✓ In ancient times, man made weapons from stones, wood and bones of animals.
- ✓ Some of the tools of the ancient times are being used even today.
- ✓ Tools and simple machines make our work easy.
- ✓ Simple machine has six types.
- ✓ Pull and push is a force.
- ✓ Force can change the shape, place and speed of a thing.
- ✓ Speed of a thing depends on the applied force.

Exercise

Q1. Choose the correct answer.

- i. Weapons of _____ were used in ancient time.
- a. plastic
 - b. copper
 - c. stone
- ii. To make the work _____ tools are used.
- a. easy
 - b. willingly
 - c. hard
- iii. A simple machine is called _____ which consists of a rope and a wheel with a rim.
- a. wedge
 - b. pulley
 - c. inclined plane
- iv. A machine is called _____ which consists of a rod.
- a. lever
 - b. wheel and axel
 - c. screw
- v. We use _____ to move heavy bodies up and down.
- a. wheel and axel
 - b. pulley
 - c. wedge



Q2. Choose correct and wrong statement.

- i. In ancient times, man did everything with hands.
- ii. The discovery of iron has no effect on human lives.
- iii. Machines do not play any role in making our lives comfortable.
- iv. Cart was used even in ancient times.
- v. Force can move static objects.

Q3. Match column (A) with column (B).

A	B
Lever	Door handle
Screw	Cover of bottle
Wedge	Slide
Inclined plane	Axe
Wheel and axel	Human arm

Q4. Answer the following questions briefly.

- i. How does simple machine help us?
- ii. What is the difference between ancient and modern means of transportation?
- iii. Name some tools which were used in ancient times.
- iv. Give example from daily life showing where do you use the force of push and pull.



Teaching Point

Make the students learn with example how simple machines have affected human lives.

Chapter-16

Safety

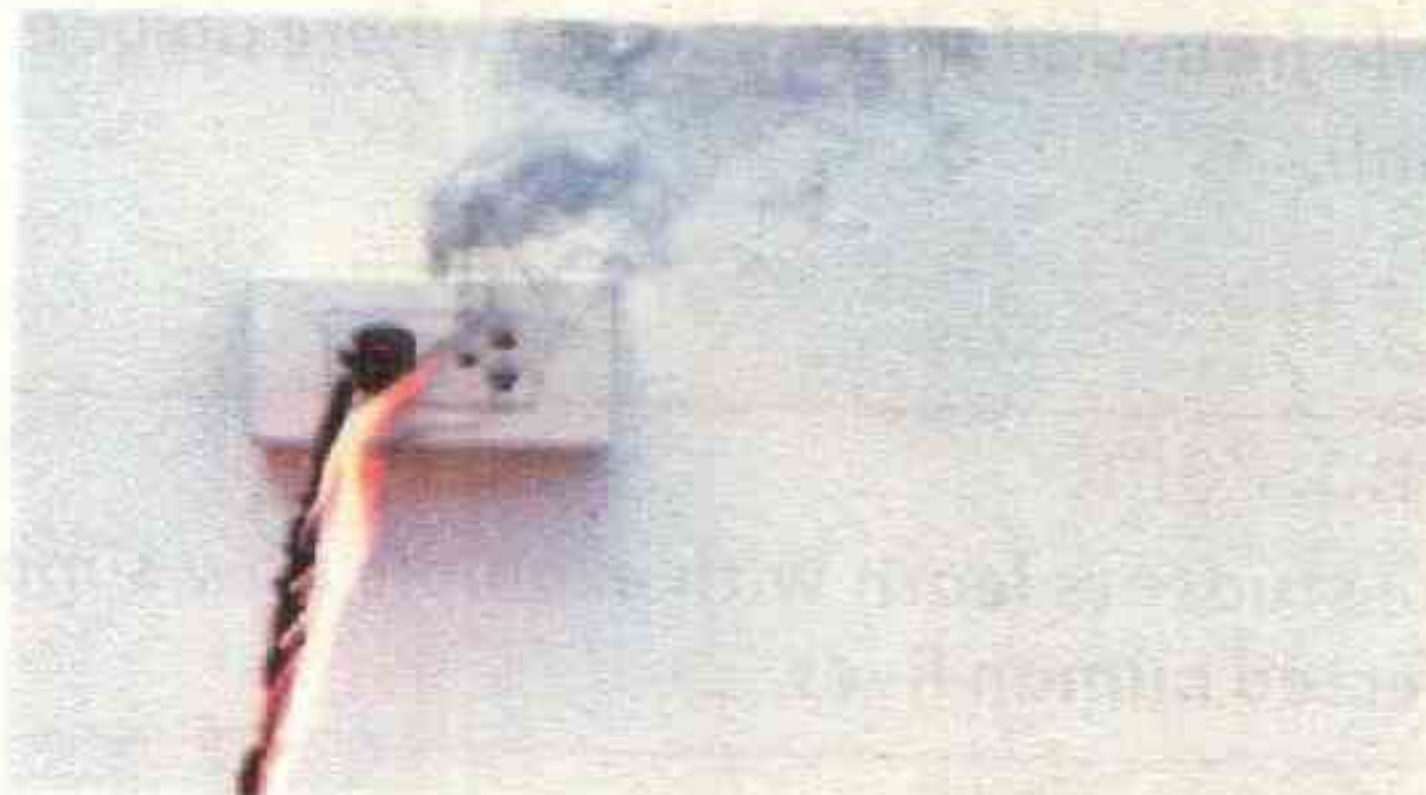
Students Learning Outcomes

After completing this chapter, the students will be able to:

- Recognize the need of personal safety.
- Understand the risk and danger associated with the use of electric appliances/sharp objects/fire.
- Practice safety measures while using electric appliances.
- List the various hazards they can face at home. (bare wires, damaged roof, broken glass, fire, scissor etc.).
- Understand the ways of being careful and staying safe.
- Identify some common disasters and ways to stay safe.
- Understand that they should not hide anything from their parents/ teachers/ guardians to stay safe from any unexpected situation.

Safety

Tools, machines and sources of energy e.g. electricity, gas have become part of our daily life. It is difficult to live without them. No doubt these tools and machines have made our lives comfortable but they also have created dangers and problems for us. Therefore, safety is necessary for us.





Activity

Below are some of the things we use in our daily life. Think how they can be dangerous to us.

S.No	Instrument	Possible Dangers
i.	Electric instruments e.g. fridge, iron, computer	
ii.	Gas instruments e.g. heater, geezer, stove	
iii.	Sharp instruments e.g. knives, forks	
iv.	Pointed things e.g. pencils, needles etc.	



Activity

Students shall prepare charts of possible harms of broken glass and electricity and hang them in the class.

Indoor Safety

Following measures shall be taken while using domestic appliances:

- (i) Don't touch bare wires.
- (ii) Don't touch electric instruments with wet hands or standing on wet floor.
- (iii) Don't use more than two instruments in one plug.
- (iv) Keep away electric instruments from water.



- (v) Switch off button while putting plug into socket.
- (vi) Don't use faulty electric instruments.
- (vii) Don't put your finger or metallic thing in socket.

know That!

It is necessary to take safety measures while using electric and gas instruments.



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Write fire safety measures.

- (i) _____
- (ii) _____
- (iii) _____

Outdoor Safety

- Don't play in a busy road or street.
- Cross road carefully.
- Don't play near water, electric wires and poles.
- Neither push nor quarrel with anyone.
- Obey traffic rules.



Do you know that?

As 70% of our body consists of water therefore, electricity can pass through our body easily.



Natural Disaster

Disaster

Sometime an incident occurs in the world which destroys human lives, buildings and resources. Such an incident is called disaster. Disasters can occur due to human activities, carelessness and blunder e.g. blasts, fires and industrial accidents.

Disasters can be natural as well where humans have no role e.g. earthquake, flood, Tsunami, volcanoes, falling of ice berg and cyclone etc.

Know that!

The most deaths are caused by fire.



Activity

Below are given different pictures which show a natural disaster (volcanoes, cyclone, flood, falling of an ice berg, earthquake and Tsunami).

Write below each picture, name of natural disaster.



Natural disasters can't be prevented but their effects can be minimized. Natural disasters can occur anywhere and anytime. Follow the following instructions during natural disasters.



- Obey the directives given by the local organizations.
- Don't go out of homes needlessly.
- Move to the safest part of your school/home.
- Take care of others.
- Every moment is important during disaster. Therefore, don't delay in taking right decisions.
- Don't lose heart and be courageous.

Dear children! Apart from the above danger, there can be other dangers too.

Therefore;

- Don't go out of home alone.
- Keep away from stranger.
- Don't take anything from unknown people.
- If you feel danger, inform your parents or teachers immediately.
- If you are alone, shout loudly or run to a safer place in case of danger.
- Don't listen to a stranger.





Key Points

- ✓ Instruments and machines of daily use are useful but can be dangerous too for us.
- ✓ Take safety measures for yourself and for others while using machines and instruments.
- ✓ Natural disasters can cause destruction of human lives, living organisms and resources on large scale.
- ✓ Natural disasters include earthquake, cyclone, volcanoes and floods etc.
- ✓ Natural disasters can't be prevented but their effects can be minimized.

Exercise

Q1. Complete the following statements with suitable words.


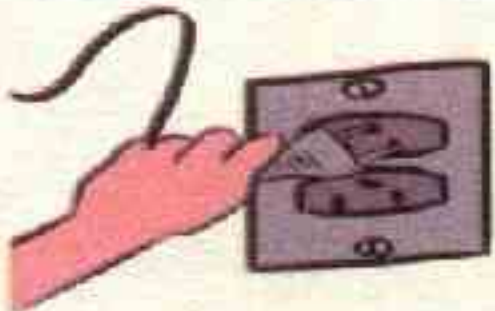


- (i) In case of natural disasters move to the _____ part of your home.
- (ii) Human can't _____ natural disasters.
- (iii) Human carelessness and mistakes cause _____ too.
- (iv) Use instruments _____ to avoid dangers.
- (v) Do _____ others in accidents.

Q2. What cares shall be taken during natural disasters? Write any three of them.

- (i) _____
- (ii) _____
- (iii) _____



Q3. Look at these pictures carefully. What will you do in these situations?

Project Work

Divide the class into three groups. 1st, 2nd and 3rd group shall get information about saving themselves and others in earthquake, flood and fire respectively. They shall tell other students through role play.



Teaching Points

- (i) Guide the students that how to use domestic instruments of gas and electricity.
- (ii) Show videos of natural disasters to students and give information that how to face effects of natural disasters.
- (Iii) Call a rescue team to school and provide an opportunity of practical training to students to avoid accidents.



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TEXTBOOK FEEDBACK FORM

S#	Statement	Remarks
1.	Overall the book is interesting and user friendly.	
2.	The language and content of the book is age / grade appropriate and the content is free of grammatical and punctuation errors.	
3.	Content is supported with examples from real life / culture.	
4.	Contents / texts are authentic and updated.	
5.	Pictures / diagrams / graphs / illustrations are informative, relevant and clear if not, then identify them.	
6.	Activities, projects and additional work is suggested for reinforcement of concepts.	
7.	Assessment achievements are thought provoking and comprise cognitive, psychomotor and effective skills.	
8.	The textbook is easy to be covered within academic year.	

Page No.	Observation/comments	Suggested amendment along with rationale

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