Topline Junior

Social Studies

PROGRAMME

Teacher’s Resource Manual
Useful suggestions and additional information for effective teaching.

- Living in a Society
- Earth Studies
- History
- Photo Album

TOPLINE PUBLISHERS
Karachi - Lahore
This lesson is specially written to discuss the importance of unity among the citizens of a nation. After reading the lesson ask the students to share their thoughts of unity.

**Section A:**

**Answer the following questions.**

**Q1. How many valleys did the birds pass through? Name them.**
**Answer 1:** The birds passed through seven valleys. These valleys were called Yearning, Love, Knowledge of Mysteries, Detachment, Unity, Wonderment, and Faqr-o-Fana.

**Q2. How many birds were there left at the end?**
**Answer 2:** Only thirty birds were left at the end.

**Q3. What was the name of the king of the birds?**
**Answer 3:** The name of the king of birds was Simorgh.

**Q4. Why were the birds surprised, once they entered the palace?**
**Answer 4:** When the birds entered the palace they were most surprised. There was a mirror in front of each bird. In the mirror, the bird saw itself. All thirty birds were looking at themselves at the same time. Then they understood that all thirty of them together were the Simorgh.

**Q5. What does the word Simorgh mean?**
**Answer 5:** In Persian, “si” means thirty and “Morgh” means bird. Therefore, “Simorgh” means thirty birds.

**Q6. Who wrote the story of Simorgh, and what is the name of the story?**
**Answer 6:** Sheikh Fariduddin Attar wrote this story. The name of this story is Conference of the Birds (Mantiqu Tayr).
Section B:

Select a word from the given words and fill in the blanks.

1. One day **Hoopoe** called all the birds.
2. The birds passed through **seven** valleys.
3. There was a **mirror** in front of each bird.
4. Almost 800 hundred years later **Jamiluddin Aali** wrote a song in Urdu which gives us the same message.
5. The name of the song is **Jeevay Jeevay Pakistan**.

Section C:

Project work to be done by students themselves.

Section D:

Encourage the students to write a few lines in their own words.
Begin this lesson by explaining the problems we are facing due to pollution. You may ask questions like:
1. What does the word environment mean?
2. What will happen if we do not stop polluting the world?
3. What can we do to reduce pollution?
4. What can each one of us do for the betterment of the environment?

Section A:

Fill in the blanks:
1. Pollution  2. Polluted air  3. Pollutants
4. Plants  5. World

Section B:

Q1. What does environment mean?
Answer 1: Environment is the world around us. It includes the physical, chemical, and biotic factors, which act upon an organism.

Q2. Explain briefly the three kinds of pollutions.
Answer 2: The three kinds of pollution are air pollution, water pollution and land pollution.

Air Pollution: Smoke from vehicles, industries, power plants and burning of trash pollute the air.

Water Pollution: Dumping of garbage into water makes it dirty. Water also becomes polluted due to the sewage, oil, and chemical spills.

Land Pollution: Sometimes people ruin the beauty of nature by throwing junk and litter on land. Soil is polluted due to excessive use of chemicals.

Q3. What can people do about the environment?
Answer 3: People can help keep the air clean by not burning trash. They can use buses or trains for travelling, bicycles can be used for short distances to reduce the air
pollution caused by vehicles. Growing more plants and trees and use of natural fertilizers makes the air fresh and clean. People can also help keep water clean by not dumping garbage into the water.

Q4. **How does pollution affect our health?**

**Answer 4:** Pollution can affect our health in many ways. Polluted air is harmful for living things it can make people sick. By using polluted water, people get severe stomach problems. Polluted soil reduces the land available for growing crops and trees, which causes shortage of food and fresh air.

Q5. **What would happen if we do not take care of our environment?**

**Answer 5:** If we do not take care of our environment then it will change for the worst. By adding harmful or unpleasant materials to it, we make our world dirty. This affects our health and life in a bad way. Polluting the environment also affects the weather and wild life.

Q6. **Find out the names of five organizations that are working to protect our environment.**

**Answer 6:** Following are the five organizations working for the conservation of the environment:

1. IUCN
2. Green Peace
3. Wild Life
4. PEPC
5. PEPF

Section C:

**Note:** Before doing activity C encourage your students to talk about their surroundings and ask them to give suggestions on how to make their surroundings pollution free.

You can do something about your environment. Visit a park near your house and answer the following question.
Q1. Is it being polluted?
Answer 1: Yes.

Q2. How are people polluting the park?
Answer 2: People are polluting the park:
- by throwing, litter everywhere.
- by destroying plants.
- by smoking in the park.
- by spitting after chewing gutka and pan.

Q3. Which kind of pollution do you find the most common?
Answer 3: Land pollution.

Q4. How are birds and plants being affected by pollution?
Answer 4: Pollution destroys the habitat of animals and plants.

Q5. Suggest ways to improve the environment of your park.
Answer 5: Ask children to give the answer orally.

Q6. List your suggestions and discuss these with your classmates.
Answer 6: Some possible suggestions are:
- A list of rules to keep the park clean should be displayed on the main gate.
- Dustbins should be kept at reasonable distances.
- Parents should teach their children ways to keep the park clean.
- Advertisement boards for a clean environment should be placed in the park.
- Smoking should not be allowed in the park.
- Messages such as 'Please do not destroy us' we are like you! 'Should be displayed on small boards and placed in between the plants.
- A separate playground for playing hockey, cricket, football etc, should be made in the park, so that the beauty of the park can be maintained.

Section D:

Project Work: Project work to be done by students themselves.
This chapter is linked with the previous one, the lesson emphasizes on the development of the civic sense among children by practicing the '3Rs'. Discuss the importance of reducing, reusing, recycling and ask them how these '3Rs' are useful to our environment.

Debating is a healthy exercise for expressing one's thoughts. The students interested in debating should be encouraged to take part.

Section A:

Fill in the blanks.
1. An increase in the world pollution.  2. Pollution
3. Reusing       4. Recycling
5. Less

Section B:

Q1. How is the land being polluted?
Answer 1: Land is polluted by throwing trash and litter improperly.

Q2. What do you understand by the word "3Rs"?
Answer 2: The word '3Rs' means:
Reduce : making less trash.
Reuse : using things over and over again.
Recycle : making new materials or products from waste materials.

Q3. What is recycling and how is it beneficial for us?
Answer 3: Recycling means making new materials or products by using waste materials. Recycling helps to reduce land pollution. By using recycled materials, we can save energy.

Q4. Which materials can be recycled? Give some examples.
Answer 4: Glass, metal, plastic and paper can be recycled, these can be turned into new materials or products, Recycled paper is used to make cartons and newsprints, recycled plastic is used to make electrical switchboards and household items like chairs, buckets etc.
Q5. Look at the chart below. How can these materials be reused?
Answer 5:
Glass jars : flowers vases, containers for keeping spices.
Paper : newsprints, cartons, paper bags etc.
Plastic Containers : switchboards and many household items.
Cloth : colourful rallies (patchwork quilts), wall hangings etc.
Boxes : cardboards, to store things.

Section C:

PROJECT WORK
Complete instructions have been given in the textbook.
A general discussion on the civil life of the city in which you live is necessary. Services in Pakistan vary from place to place. Therefore it is very important to discuss different types of services with the children for example, hospitals, banks, post offices etc.

You may ask the students about the importance of these services in our daily life. Try to discuss some more services in detail, which are not mentioned in this lesson.

Section A:

Choose the correct answer.
1. Services  
2. Clean 
3. Hospital 
4. Postman 
5. Break 
6. Banks

Section B:

Q1. What do people in the service organizations do?
Answer 1: People in service organizations help us make our lives easy, for example, Municipal Corporation helps us to keep our city clean. In the hospitals there are doctors and nurses who help the sick by giving them the services to recover from their illness.

Q2. Why is a municipal organization necessary for a city?
Answer 2: Municipal organizations of a city help keep the city clean. They take care of the sewerage and garbage. They make roads for us and lay the pipelines for sewage and water. They also help us to beautify our city.

Q3. Who are doctors and nurses? Where do they work and what do they provide us?
Answer 3: Doctors and nurses are trained people who help the sick and injured, by giving them medicine and other treatments to recover from their illness.

Q4. In case of a fire which organization is called and what do they do?
Answer 4: When a fire breaks out in a city the fire brigade is called. The firemen who are trained professionals work hard to extinguish the fire. They also rescue people who are trapped inside a house or a building and give them first aid.
Q5. Do you think schools are service organizations? What do schools do?

Answer 5: Yes, schools are service organizations. They provide education to children and play an important role in making them good and useful citizens for the society.

Section C:

Look at the following chart and then give each sentence its proper beginning by putting the correct number in the given box.

<table>
<thead>
<tr>
<th>How it serves the people</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keeps law and order</td>
<td>3</td>
</tr>
<tr>
<td>drives people from one place to another</td>
<td>2</td>
</tr>
<tr>
<td>repairs and installs phones</td>
<td>7</td>
</tr>
<tr>
<td>helps people to buy or sell their property</td>
<td>6</td>
</tr>
<tr>
<td>looks after people's money</td>
<td>1</td>
</tr>
<tr>
<td>looks after the sick or injured</td>
<td>4</td>
</tr>
<tr>
<td>cuts hair</td>
<td>5</td>
</tr>
<tr>
<td>installs and repairs electrical appliances</td>
<td>10</td>
</tr>
<tr>
<td>educates the people</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>
### Section D:

There are different organizations in your city which provide different services to you. Find out the names of such organizations and write them alongside the service offered.

<table>
<thead>
<tr>
<th>Service</th>
<th>Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>KE (Karachi Electric) and WAPDA (Water &amp; Power Development Authority)</td>
</tr>
<tr>
<td>Water</td>
<td>KW&amp;SB (Karachi Water and Sewerage Board)</td>
</tr>
<tr>
<td>Gas</td>
<td>Sui Southern Gas, Sui Northern Gas</td>
</tr>
<tr>
<td>Telephone</td>
<td>PTCL(Pakistan Tele-Communication Limited), Ufone, Jazz, Telenor etc.</td>
</tr>
<tr>
<td>City cleanliness</td>
<td>KMC(Karachi Municipal Corporation), LMC(Lahore Municipal Corporation) etc.</td>
</tr>
</tbody>
</table>
Art can be expressed in many forms including painting and sculpture. This lesson puts an emphasis on the importance of developing the love of art and craft among children.

The mosaic activity given in section 'A' is very important and is a positive way of developing art skills and colour recognition. You can also enhance their creativity by showing them some pictures of mosaics from old times.

Section A:

**PROJECT WORK**
Complete instructions have been given in the textbook.

Section B:

Q1. What is art?
**Answer 1:** Art is something beautiful made by a person. Art can be seen in paintings, carvings on rock and wood, on fabric, in jewellery, music and pottery etc.

Q2. How have we come to know about ancient art?
**Answer 2:** There are carvings and cave paintings 15,000 years old. The ancient people used to paint scenes from everyday life on their pottery vases.

Q3. What do you know about the art heritage of your country?
**Answer 3:** Our country has a rich heritage of art. The history of art in our region goes way back to the great Indus Valley Civilization. The architecture, painting and calligraphy of the Mughal period are famous all over the world.

Q4. Write the names of some famous artists of Pakistan.
**Answer 4:** Our country has great artist who have produced great works of art in all fields of art.
   - Chughtai, Sadequain, Guljee, Hajra Mansoor and many others are famous artists of our country.
   - Mehdi Hasan, Nusrat Fateh Ali, Noor Jahan, Misri Khan Jamali, Reshman, Khamiso Khan, Naheed Sidiqui, Allan Faqir and Alam Lohar are some famous names of singers.
Q5. **Write about the various forms of art.**

**Answer 5:** Art can be expressed in many forms such as visual, performing and decorative.

**Visual art:** Includes paintings and sculptures.

**Performing art:** Includes music, dance, theatre and motion picture.

**Decorative art:** Includes design and decoration of objects.
This lesson aims to develop the awareness of elections and its importance, and to understand that elections are held to benefit the people of its country. Through elections people select their own leaders to make their society free from problems.

You can make this lesson more interesting and clear by holding a mock election for the monitor of the class. Any two of the students act as monitor contestants and the class votes for them. The student who gets the most votes will be the monitor of the class or you can do the role-play given on page 25 in the textbook.

**Section A:**

**PROJECT WORK:**
Complete instructions have been given in the textbook.

**Section B:**

**Q1. What does the word 'democracy' mean?**
*Answer 1:* Democracy means "the rule of the people". Everybody cannot rule. There is a group of people who are selected through elections by the people of a country, to act as the government.

**Q2. What are elections and why are they held in a country?**
*Answer 2:* Elections are a procedure by which the people of a country or a nation select a person or persons to hold the office of authority. It is conducted through vote.

**Q3. At what age is a person allowed to vote in our country?**
*Answer 3:* All the adults over 18 years of age have the right to take part in the elections in our country.

**Q4. What do you know about the National and Provincial Assemblies?**
*Answer 4:* The people elect the members of the National Assembly and Provincial Assembly through elections. The number of members for each of these assemblies is limited. Each elected member is considered a seat in the assembly.
Q5. **Who heads the federal government?**

**Answer 5:** The party which gets the majority of seats in the National Assembly forms the federal government which is headed by the Prime Minister.

Q6. **Do you think elections are good for a country? Why?**

**Answer 6:** Elections are good for a country because in this process people select such persons who understand their problems and find ways to solve them while they are in government.
UNIT 7

HUMAN BEINGS AND MACHINES

The chapter contains facts and interesting information to enhance the knowledge of children. While teaching this chapter keep in mind that focus should be on the importance of science and technology. You may begin this chapter by asking questions like how machines can be good or bad for the human beings, what kind of machines are used in daily life etc.

Section A:

What were the problems you identified from the pictures on the previous page? List them in the box given below.

Problems due to machines:

**Pistol:** Wrong use of pistol increases crime rate.

**Cars:** Vehicles, which emit smoke in large quantities, cause air pollution.

**T.V.:** Wrong types of programs give bad ideas to young people. Television emits harmful rays of light, which are dangerous to our environment.

**Cutting machine:** Excessive cutting of trees through machines is harmful for our environment.

Solutions:

**Pistol:** Put a ban on the sale of firearms for everyone.

**Cars:** Only properly tuned cars should be allowed to run on roads.

**T.V.:** Programmes should be strictly censored. It should be in accordance with our religious values. Television sets should be environment friendly.

**Cutting machine:** We should plant new trees in large quantities and avoid cutting down the trees as much as possible.
Section B:

Q1. Which invention is considered to be the first invention of human beings?
Answer 1: The wheel is considered to be the first invention of human beings.

Q2. Why were most of the inventions made in the last four hundred years?
Answer 2: About 400 years ago people began to challenge the theories of science. Many scientists like Galileo and Newton discovered that some of the major theories about this universe were wrong. They questioned them bravely and provided new facts. After which a larger number of remarkable inventions took place.

Q3. What do you know about the "Industrial Revolution"?
Answer 3: After the discovery of new theories of science a large number of remarkable inventions took place. Industries were built where several machines would be used for producing things at a very fast speed. This is called the Industrial Revolution, which means that the world was changed with industries. This happened from about 1780 to 1820.

Q4. Who was Thomas Edison?
Answer 4: In the nineteenth century many new inventions were made such as: rail, telegram, telephone, electric light and many others. One of the most famous inventors has been Thomas Edison, who invented more things than any other single person in history.

Q5. What do you understand by the phrase "machines can be our friends, but they can be our enemies, too"? Explain briefly.
Answer 5: Machine can be our friends, but they can be our enemies, too. What is important here is not the machine but its use by human beings. We should always remember not to harm living things and the environment around us by the use of machines.
Here are some inventions. Write in your note book how they can be good and bad for people.

**Dynamite:**
Good for breaking rocks and other constructive purpose.
Bad for blowing bridges and other terrorist activities.

**Nuclear energy:**
Good to produce electricity.
Bad for human beings when used to produce nuclear bomb.

**Computer:**
Good for knowledge and research work.
Using computer for playing games is harmful to human body.

**Telephone:**
It is good for connecting people together.
The rays emitted by mobile phones are harmful to human body.

**Television:**
It keeps us well informed about the world around us.
The rays, which come out from the television set, are harmful for human beings.

**Automobile:**
Good for long distances travelling in less time.
Smoke emitting from vehicles is the major cause of air pollution.
Arguments:

Cars are better because:
1. We can go to school quickly.
2. We are safe while travelling.
3. Our uniforms do not get dirty.
4. More people can travel at a time.

Bicycles are better because.
1. I do not have to wait for someone else to do the driving.
2. It does not pollute the air.
3. It is a daily exercise, which makes people active and healthy.
4. It is easy to park.
A globe should be used to teach this chapter. It should be carefully studied in the class. The location/position of longitude and latitude should be clear in the minds of the students.

Section A:

Fill in the blanks with suitable words.
1. 360  2. 1°  3. Poles

Section B:

Q1. What are lines of longitude?
Answer 1: There is an imaginary grid of line on the globe, travelling from north to south and from east to west. The lines running from north to south are called lines of 'longitude' or 'meridians'; these lines are 360 in numbers.

Q2. What are lines of latitude?
Answer 2: The imaginary lines, which travel from east to west of the globe, are called the lines of 'latitude'. These are also called 'parallels of latitude'.

Q3. How do lines of longitude and latitude help us?
Answer 3: These imaginary lines help us to find out the location of a place on the map. With the help of these lines we can locate all the cities, rivers, deserts, towns and villages on the map.

Q4. Where is Greenwich?
Answer 4: Greenwich is a place in England at 0° longitudes.

Q5. What is the difference between the prime meridian and the equator?
Answer 5: The prime Meridian represents 0°; it serves as the starting point for measuring longitude.
    The equator represents 0° latitude; it serves as the starting point for latitude.
SECTION C:

Look at the figure. Mark the Points where these imaginary places are located.

Kohar  24ºN  68ºE  
Mangola  32ºN  74ºE  
Suncity  34ºN  72ºE  
Funland  36ºN  76ºE  

SECTION D:

You know that lines of longitude and latitude help us to find a place on the globe or in an atlas.

1. Look at a globe or an atlas and find out which cities of Pakistan are at these references.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Coordinates</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>31ºN</td>
<td>74ºE</td>
<td>Chunian</td>
</tr>
<tr>
<td>33.42ºN</td>
<td>73ºE</td>
<td>Chakwal</td>
</tr>
<tr>
<td>30ºN</td>
<td>67ºE</td>
<td>Quetta</td>
</tr>
<tr>
<td>25ºN</td>
<td>68ºE</td>
<td>Kalri Lake</td>
</tr>
</tbody>
</table>

2. Write the references for the following places with the help of an atlas.

<table>
<thead>
<tr>
<th>Place</th>
<th>Coordinates</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbat</td>
<td>26ºN</td>
<td>63ºE</td>
</tr>
<tr>
<td>Sukkur</td>
<td>27.7ºN</td>
<td>69ºE</td>
</tr>
<tr>
<td>Multan</td>
<td>30ºN</td>
<td>71.4ºE</td>
</tr>
<tr>
<td>Chitral</td>
<td>35.8ºN</td>
<td>71.8ºE</td>
</tr>
</tbody>
</table>
This chapter should be read in detail and explained thoroughly to the students as it gives information about the solar system and the movement of its planets, around the sun. Encourage your students to collect more information about the eclipses, from the Internet.

Students may be given individual or group projects to find out more details.

**Section A:**

**Fill in the blanks.**
1. Earth
2. Orbit
3. Two
4. Moon
5. Moon
6. Chinese

**Section B:**

**Q1. What causes day and night?**
**Answer 1:** As the Earth spins on its' axis the side facing the sun has day while the side away from the sun has night. Thus the movement of the Earth on its' axis causes day and night.

**Q2. How much time does the moon take to complete an orbit?**
**Answer 2:** The moon takes 27.3 days or one lunar month to orbit the earth.

**Q3. What is an eclipse?**
**Answer 3:** Sometimes during their orbits, the moon and the earth form a line with the sun. When this happens, an eclipse occurs.

**Q4. Describe the difference between a solar and a lunar eclipse.**
**Answer 4:** A lunar eclipse happens when the Earth moves between the Sun and the Moon and blocks the path of the Sun's light from reaching the Moon.

In a solar eclipse, the Moon moves between the Earth and the Sun. When this happens, the path of the Sun's light is blocked and cannot reach the earth.
Q5. How did Columbus succeed in getting food supplies from Native Americans with the help of a lunar eclipse?

Answer 5: In 1503, Christopher Columbus, and his crew were stranded on the island of Jamaica for over a year. With his ship badly damaged and the food supply low, Columbus knew that a lunar eclipse would soon occur on February 29th, 1504. On the night of February 29th, Columbus told the natives that God was angry with them for not providing him with food. He told them that God was going to make the Moon disappear.

At that moment, the natives witnessed the beginning of a lunar eclipse. They begged Columbus to ask God to forgive them and bring back the Moon. An hour passed, and as the lunar eclipse was ending, Columbus told the natives that God had forgiven them and the Moon would be returned. As the natives looked into the sky, of course they saw the Moon returning and they agreed to supply the food again.

Section C:

PROJECT WORK:

Section D:

Home Activity. Instructions are in the textbook. Ask the students to do this activity carefully. This will help them understand how a small object can block light and cast shadows on other far away objects.
LOOKING AT THE LAND

This lesson is focused on the physical features of the world. You can start this lesson by discussing the beautiful landscapes of Pakistan like valleys, deserts, mountains, rivers etc. Encourage your students to share their experience with their classmates if they have visited any of these places. This will give them a concept of understanding the location of these places.

While teaching this chapter try to arrange pictures of Murree, Hunza Valley, Safi-ul-Maluk Lake etc. it will help to clear the concept of different physical features of these places.

Section A:

Fill in the blanks:
1. Hard rock  2. Peak  
3. Very large, flat  4. Deserts  
5. Island  6. Coconut  
7. Mounds

Section B:

Q1. Describe any three types of land forms.
Answer 1: The land is shaped in many different forms. Three of these forms are:

1. Mountains: Mountains are made of very hard rock. They usually have a pointed shape and have very steep sides. Some mountains are so high that the tops are above the clouds and covered with snow all year long. The highest part of a mountain is called the peak.

2. Plains: Plains are very large areas of flat land. This type of land is usually considered to be good for cultivation and people easily live in such areas. Most of the cities and towns are situated on the plains.

3. Islands: An island is a piece of land with water all around it. Islands can be found in rivers, lakes, seas and oceans. Their sizes vary from a small island of only a few square meters to the size of millions of square kilometres.
Q2. **What is a coast?**
*Answer 2:* The earth is made up of water and land. The areas where the sea meets the land, is called the coast.

Q3. **How are valleys formed?**
*Answer 3:* A valley is an area of land between two lines of hills or mountains. Some valleys are made by rivers and streams. Over many years, the flowing water slowly wears away the rocks and soil, making way for the water to flow along.

Q4. **Where does the cactus plant grow?**
*Answer 4:* Cactus plants grow in deserts because they have long roots which can go deep down into the ground to find water.

Q5. **What is a plateau?**
*Answer 5:* A larger area of flat land that is higher than the land around it is called a plateau.

**Section C:**

**PROJECT WORK**
This should be done by the students themselves.
Show chalk, marble, clay and some other rocks, which are easily available, to the class and explain what rocks are made of.

Explain to the students how the abundance or lack of minerals affect a country i.e., if a country is rich in minerals then the people of that country are usually rich whereas a country with less minerals is a struggling nation with many poor people.

Section A:

Fill in the blanks:

1. Clay
2. Chemical compounds
3. 3000
4. Hardness and colour
5. Halite
6. Bauxite
7. Solid
8. Precious stones

Section B:

Q1. What are rocks and why are they important for us?
Answer 1: Rocks are made up of things called minerals such as granite, sand stone, chalk, marble, salt etc. Rocks are important to us because minerals make a country and its people rich.

Q2. Where can we find minerals?
Answer 2: Minerals are the useful substances generally found underground. We extract these minerals through mining.

Q3. What are metals and non-metals? Give some examples.
Answer 3: Minerals can be grouped as metals and non-metals. Some metals are copper, aluminium, and iron. Some non-metals are quartz, limestone and marble.
Q4. Write the names of some metallic and non-metallic minerals found in Pakistan.  
Answer 4: Pakistan has few metallic minerals, but there are great deposits of non-metallic minerals.

**Metallic minerals:** Some metallic minerals found in Pakistan are: Chromites, copper, iron ore, manganese and antimony.

**Non-Metallic minerals:** Some non-metallic minerals are: Gypsum, fluoride, magnetite, soap stone, sulphur, limestone, marble, clay and salt.

Q5. In which areas of our country are precious stones found?  
Answer 5: The northern areas of our country have large deposits of precious stones. We have emeralds, rubies, topaz etc.

Q6. Make a list of the areas of Pakistan which have rich deposits of minerals.  
Answer 6: Following are some areas of Pakistan where rich deposits of minerals are found: Saindak, Khuzdar, Chagai, Dera Ghazi khan, Hazara, Lasbela, Azad Kashmir, Kalat, Salt Range, Swat, Nagar Parkar and Gilgit.

**Section C:**

**PROJECT WORK:**
Arrange activity 'C' in the classroom. While doing the activity encourage the students to discuss the colour, hardness etc., of the minerals among themselves.
Before starting this chapter discuss the various forms of energy with the children. Encourage your students to talk about the uses of oil, gas and electricity in their daily life.

Explain to them that whatever the natural resources of a nation they should be used wisely and cared for very dearly so that the nation can benefit from them for a longer time.

Section A:

**Note:** In the given table 'Laghari gas field' should be read as 'Laghari oil field'.

Give a proper ending to each sentence in list A from list B.

<table>
<thead>
<tr>
<th>List A</th>
<th>List B</th>
</tr>
</thead>
<tbody>
<tr>
<td>The coal found in Pakistan</td>
<td>has become the largest gas field Of Pakistan.</td>
</tr>
<tr>
<td>Oil fields in Pakistan are found</td>
<td>in Baluchistan, Sindh and Punjab.</td>
</tr>
<tr>
<td>Our gas fields are found</td>
<td>produces a lot of smoke and ash.</td>
</tr>
<tr>
<td>The Laghari gas field</td>
<td>in Potwar plateau and lower Sindh.</td>
</tr>
<tr>
<td>Tarbela dam is built on the river Indus.</td>
<td></td>
</tr>
<tr>
<td>Mangla dam is built on the river Jhelum.</td>
<td></td>
</tr>
<tr>
<td>The nuclear power plant at Karachi</td>
<td>is known as CHASHNNUP.</td>
</tr>
<tr>
<td>The nuclear power plant at Chashma</td>
<td>is known as KANUPPP.</td>
</tr>
</tbody>
</table>
Section B:

Q1. Why do we need energy?
Answer 1: We need energy for heating, cooking, powering ships, planes, cars and producing electricity. Energy makes everything happen.

Q2. What are fossil fuels? Write about each of them.
Answer 2: Fossil fuels are substances that give off heat when they burn. The most important fuels are coal, oil and natural gas.

Coal: Coal is mined, and is crushed and washed before use. It is still used to produce most of the world’s electricity. It lies deep underground.

Oil: Oil or petroleum comes from oil wells. Oil and gas are drilled on land and under the sea. Gasoline, kerosene and diesel oil are all separated from petroleum. Oil is used for powering engines and running industries.

Natural gas: Natural gas is widely used for cooking and heating and powering vehicle engines.

Q3. How can energy be produced by sun or wind?
Answer 3: Besides fossil fuels, wind and sun are the other sources of energy.

Wind: Wind is a free and constant source of energy. Wind generators convert the motion of wind into electricity. It is a valuable energy source.

Sun: Sun is the greatest source of energy. It gives out light and heat energy, which is converted in other forms by solar collectors. It is then used to heat homes and water.

Q4. What are nuclear reactors and how do they produce energy?
Answer 4: Nuclear reactors are devices used in nuclear plants. These are vessels with in which nuclear chemicals are placed to react with each other. These reactions are carried out for experimental and manufacturing purposes.

Q5. What are the major sources of energy in our country?
Answer 5: In our country, the major sources of energy are oil, gas and hydroelectricity. The other sources are coal and nuclear energy. Solar energy and biogas plants are also used to produce energy in Pakistan.
Q6. What is the difference between hydroelectricity and thermal electricity?
Answer 6: Hydro and thermal are the two processes used to produce electrical energy.

**Hydroelectricity:** It is generated by turbines driven by falling water. Huge dams are built to store water in artificial lakes. The water is released under great pressure to drive turbines that generate electricity.

**Thermal electricity:** It is produced by burning oil, gas or coal.

**Section C:**

**NUCLEAR:**
**Advantages:** It is cheap and limitless.

**Disadvantages:** It produces radioactivity and deadly waste.

**THERMAL:**
**Advantages:** Burning of oil, gas and coal gives off large amount of energy.

**Disadvantages:** This process increases the rate of pollution in the air.

**HYDRO:**
**Advantages:** This process does not cause pollution.

**Disadvantages:** As this process depends on natural water, the amount of electricity produced drops when we receive less rainfall.

**WIND:**
**Advantages:** It is a free and constant source of energy.

**Disadvantages:** It takes hundreds of very large and costly machines to produce electricity.
This chapter emphasizes the importance of industries and their products in our daily life; therefore it is very important to discuss this with the students in general. The fact boxes should be read carefully as they contain some interesting information connected to the text of the chapter.

Section A:

Fill in the blanks:

1. Goods, services
2. Industrialized
3. Developed
4. Industrial development
5. Textile industry
6. Industrial city
7. Income
8. Small industries

Section B:

Q1. What do you understand by the word 'manufacturing'?
Answer 1: Manufacturing means making things in factories with the help of machines.

Q2. What is the difference between a 'developed' and 'developing' country?
Answer 2: The countries, which are industrialized, have become rich and are called 'developed countries'; these include Japan, U.S.A, Germany, France and England. The countries, which are becoming industrialized, are called 'developing countries'. Our country is among them.
Q3. Can you make a list of the things which you think come from industries?

**Answer 3:** Following are examples of a few things, which come from industries:

Clothes, ghee, sugar, paper, cement, iron, steel, carpets, leather goods, sports goods, surgical instruments, cars, buses and many electrical items like televisions, sewing machines, refrigerators etc.

Q4. Why are most of the industries of Pakistan agro-based industries?

**Answer 4:** Industries in Pakistan are mainly agro based industries because Pakistan is an agricultural country and the raw materials for these industries come from different crops such as cotton, rice and sugarcane.

Q5. What do you know about some of the heavy industries of Pakistan?

**Answer 5:** Some heavy industries of Pakistan are:

**Pakistan Steel Mills:** It is located near the Bin Qasim seaport in Karachi. It produces steel for different industries.

**Heavy Mechanical Complex:** It is located in Taxila. It produces heavy machinery for other industries.

**Pakistan Machine Tool Factory:** It is located in Karachi. It produces engineering goods for other factories.

Q6. What are the major export and import items of our country?

**Answer 6:** Pakistan's major imports and exports are:

**Exports:** Rice, leather goods, carpets, raw cotton, textile goods and sports items.

**Imports:** Medicine, tea, edible oil, machinery, electrical goods.
SECTION C:

Complete the following table by writing the goods produced against each industry.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Goods Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Mills</td>
<td>Pig iron and steel for various Industries.</td>
</tr>
<tr>
<td>Chemical Industries</td>
<td>Chemicals for different Industries.</td>
</tr>
<tr>
<td>Leather Industries</td>
<td>Leather goods such as shoes, jackets, bags etc.</td>
</tr>
<tr>
<td>Paper Industries</td>
<td>Paper for different purposes.</td>
</tr>
<tr>
<td>Flour Mills</td>
<td>Flour.</td>
</tr>
<tr>
<td>Rice Husking</td>
<td>Rice.</td>
</tr>
<tr>
<td>Cottage Industries</td>
<td>Pottery, shoes, surgical instruments, carpets, handicrafts etc.</td>
</tr>
<tr>
<td>Heavy Engineering Industries</td>
<td>Steel, heavy machinery and Engineering goods.</td>
</tr>
</tbody>
</table>
SECTION D:

Write down the names of some major and small industries of Pakistan.

**Major industries of Pakistan:**
1. Textile
2. Ghee
3. Sugar
4. Paper
5. Cement
6. Cigarette
7. Steel and iron.

**Small industries of Pakistan:**
1. Oil seed
2. Rice
3. Carpet
4. Pottery
5. Sports Goods
6. Surgical instruments
7. Cotton spinning and weaving
The teacher should explain to the students, how the four seasons of the year occur. If a globe is used in the class then this can be demonstrated more effectively. The area of Pakistan should be highlighted on the globe or map and different climates can be pointed out, use pictures if possible while explaining different climates to the children. Discuss the climate of the world generally.

Section A:

Fill in the blanks:

1. Weather
2. Climatology
3. Thermometers, rain gauges, barometers, instruments
4. Equator
5. Working conditions, crops, forests.

Section B:

Q1. What is the difference between weather and climate?
   Answer 1: Weather is the name given to the changing conditions of the atmosphere, which surrounds the earth. The weather on a particular day is cool, dry, cloudy or rainy. Conditions of weather are temporary and may change at any moment. The average weather condition in an area over a long period of time is called 'climate'.

Q2. How can we measure weather conditions?
   Answer 2: We can measure the weather conditions by using thermometers, rain gauges, barometers, and other instruments.

Q3. What are the main factors which affect the climate?
   Answer 3: The main factors that affect the climate of a particular place are its distance from the equator, its distance from the ocean and how high above the sea level it is.
Q4. Where is Pakistan located on the world map?
Answer 4: Pakistan is located near the equator in the northern hemisphere. It is situated at the tropic of cancer, which is an imaginary line of latitude. At this latitude the sun appears overhead.

Q5. What do you know about the climate of Pakistan?
Answer 5: Pakistan has a very diverse climate. Jacobabad and Sibi are among the hottest places of the world, while the northern mountainous regions and Balochistan are extremely cold. The areas near the coast have a moderate climate due to the sea breeze.

In summer Pakistan has monsoons. Monsoons bring rainfall to some areas of Pakistan.

Section C:

PROJECT WORK
The teacher can make groups of three or four students each and hold a competition for this project.
This lesson deals with the historical evolution of cities. Explain to the students, how and why people needed to change their places and what changes occurred when they moved to other places. Discuss how villages changed into towns and then cities.

Section A:

Fill in the blanks.

1. Food, shelter  
2. Food, clothes  
3. Hunting  
4. Trade  
5. 600 B.C.  
6. Industrial revolution  
7. Steam engines.

Section B:

Q1. What did ancient people do for their living?
Answer 1: About 12,000 years ago ancient people lived by hunting, fishing and gathering food. Some people made their homes in the caves and settled there for a while. The animals they hunted were used as food. Their fur and hides were used to make clothes and tents.

Q2. Why did the people in old times move from place to place?
Answer 2: The ancient people moved from place to place across the land in small groups seeking food and shelter.

Q3. Why did people settle permanently beside the river?
Answer 3: About 4,000 years ago people learnt about farming, which replaced hunting as a way of life. People settled where the land was good for farming. The river provided water for the people, animals and crops, as well as fish to eat. They settled permanently besides the river.

Q4. How did a village change into a town?
Answer 4: Around 600 B.C., people found out how to melt iron to make better tools and weapons. They started to build strongholds, called forts, on the hills. In this way villages started to become towns.
Q5. What do you know about the 'Industrial Revolution' and how did it help in the growth of cities?

Answer 5: Inventions brought the industrial revolution to the towns; coal was discovered; new industries powered by steam moved into towns and factories were built to house them. The population of the towns grew rapidly and the towns started to become cities.

Section C:

This exercise can be carried out orally.

Section D:

Tomorrow's World.
Look at the pictures below.

What changes do you notice in the above street? What changes do you think would occur in the street given above after 100 years?

Answers may vary according to the student's observation. Sample answer is given below.

Sample answer

There are many changes in the street above. In the first picture, the vehicles are mostly carriages pulled by animals and there are gardens in the surroundings. In the second picture there are large engine vehicles like cars and buses. The streets are crowded and there are flats and shops in the surroundings.
You may start the lesson by discussing great leaders of the past. Tell the students about the great accomplishments of some of these leaders. Tell them that what people did in the past can still affect their lives today.

Section A:

Answer the following questions.

Q1. Who do the scholars of the Quran think Cyrus the Great was?
Answer 1: Many scholars of the Quran think that Zul Qarnayn, the king mentioned in Surah Kahf of the Quran, is Cyrus the Great.

Q2. What part of the world did Cyrus the Great rule over?
Answer 2: He ruled over Iran, which was called Persia at that time, from 599 BC to 530 BC.

Q3. Which other lands did he conquer?
Answer 3: He conquered Turkey, Egypt, Middle East, Afghanistan, Central Asia and the provinces that are now Pakistan.

Q4. Which custom did Cyrus put an end to?
Answer 4: In those days kings claimed to be sons of gods. People were forced to worship their kings. Cyrus put an end to this custom. He claimed that there was only one God.

Q5. What was Cyrus famous for?
Answer 5: Cyrus was famous for justice and kindness.

Q6. What is written on Cyrus's tomb?
Answer 6: The following words are written on Cyrus's tomb; “O human being, whoever you are and wherever you come from, for I know you will come; I am Cyrus who won the Persians their empire. Do not therefore; take away from me this bit of earth that covers my bones”.

CYPHRUS THE GREAT
Section B:

Fill in the blanks.

1. Kahf
2. 559 to 530
3. Disliked
4. Greeks
5. Local rulers
6. Empire
7. Alexander
8. Preserved

Section C:

Project work to be done by the students themselves.
You may begin this chapter by telling the students about some miracles of Hazrat Issa (A.S.) and the story behind these miracles. Usually children have a general idea of the events in the history of Islam but how these events occurred is not clear to them.

Section A:

Fill in the blanks.
1. Bani israel  
2. Miracles  
3. Blind, lepers  
4. Fast  
5. Bible  
6. Pilates  
7. Hazrat Musa (A.S.)

Section B:

Q1. Who was Bibi Marium?
Answer 1: Bibi Marium was a pious woman, who lived in Jerusalem nearly 2,000 years ago. She belonged to a noble family of Bani Israel.

Q2. What did Angel Jibra’eel tell Bibi Marium?
Answer 2: The Angel Jibra’eel came to Bibi Marium and told her that she would give birth to a son and the angel also told her that he would be born without a father.

Q3. What did the young infant say when the visitors came to see Bibi Marium?
Answer 3: He said to the visitors, "I am the obedient servant of God. He has given me a Holy Book and made me His Prophet. He has asked me to be obedient to my mother”.

Q4. What miraculous powers were given to Hazrat Issa (A.S.) by God?
Answer 4: When Hazrat Issa (A.S.) grew up, God gave him the power to perform many miracles. He could make birds of clay and then bring them to life. He could cure the blind, and the lepers. He could also raise the dead. When people came to him he could tell them what they had eaten at home.
Q5. What did Hazrat Issa (A.S) ask Bani Israel?
Answer 5: Hazrat Issa (A.S.) asked the Bani Israel to follow the teachings of Hazrat Musa (A.S.), written in the Torah. He told the religious leaders to stop fooling the people. He preached love and tolerance. He told people that God was merciful to them; therefore, they should be merciful to each other. He said it was better to forgive than to punish.

Section C:
Can you find out some information about the life of Hazrat Musa (A.S.) another prophet of God, and write it down in your note book.

Hazrat Musa (A.S.):
Hazrat Musa (A.S.) was a Prophet of Allah He. was a Prophet to the Jews, and the Christians call him Moses.

Hazrat Musa (A.S.) realized how evil the king of Egypt was and how he made all his people slaves. He told them that he was their god. Hazrat Musa (A.S.) wanted to free the people. Allah then made him a Prophet and gave him the special powers that only Prophets have. Hazrat Musa (A.S.) fought with Pharaoh (Furoun) and after many years of struggles and hard work the people of Egypt believed Hazrat Musa (A.S.) and accepted the message of Allah. Hazrat Musa (A.S.) led the believers to a new land away from Pharaoh (Furoun). Pharaoh (Furoun) died a terrible death showing the people that he was not god.

Allah gave Hazrat Musa (A.S.) a book called the Torah (or the Old Testament). This is the book that the Jews follow. Hazrat Musa (A.S.) was a very pious man loved by Allah. Allah gave him the gift of speaking with Him. He could talk to Allah and for this he is also known as Kalimullah.
The Great Mughals

Read this chapter carefully and explain it in detail to the students as it gives information of a very important era of the sub-continent, thus forming a base for their future studies of history.

You can make this chapter more interesting by explaining Mughal monuments like Shalimar Garden, Badshahi Mosque etc., to the students. Also ask them questions like: Who built the Badshahi Mosque? What is Shalimar Garden famous for? Etc.

Section A:

Guess the personalities with the given clues.

Akbar : An illiterate Mughal Emperor
Shah Jahan : Loved to build beautiful buildings
Babar : The founder of the Mughal Empire
Humayun : Defeated by Sher Shah Suri
Aurangzeb : Built the Badshahi Mosque in Lahore.
Jahangir : Great lover of nature.

Section B:

Q1. Who were the ancestors of the Mughals?
Answer 1: The Turk conqueror Tamerlane and the Mongol ruler, Genghis Khan were the ancestors of the Mughals.

Q2. How was the Mughal Empire founded and by whom?
Answer 2: Babar was the first Mughal emperor and founder of the Mughal dynasty. Raiding India repeatedly, he defeated the Sultan of Delhi, Ibrahim Lodhi, at the battle of Pani Pat. He also defeated an army of Indian Kingdoms led by Rana Sanga; thus laying the foundations of the great Mughal Empire.

Q3. Who was Sher Shah Suri?
Answer 3: The real name of Sher Shah Suri is Sher Khan. He was an Afghan leader who ruled over the Mughal Empire after defeating Humayun in 1540 AD.
Q4. What do you know about the battles of Pani Pat?
Answer 4: The first battle of Pani Pat was fought between the Sultan of Delhi, Ibrahim Lodhi and Babar. It was won by the great Mughal King Babar.

The second battle of Pani Pat was fought between Sher Shah Suri and the Mughal Emperor Humayun. After defeating Sher Shah Suri, Humayun regained his empire.

Q5. Why did the Mughal Empire break apart?
Answer 5: After Aurangzeb's death, the empire broke up due to weakness of the Mughal rulers. The last Mughal ruler Bahadur Shah Zafar was defeated by the British in 1858, and the glory that was once the Mughal Empire ended.

Section C:

PROJECT WORK: to be done by the students.
Allama Iqbal was one of the greatest poets and philosophers of South Asia. He is also remembered as the 'Poet of the East'. He conveyed many messages through his poems. Collect some poems of Allama Iqbal like 'Jugnoo', 'Shehad Ki Makhkhi', 'Pahar aur Gulhari' etc. and read them in the class. Explain the message Allama Iqbal wanted to convey through these poems to the children.

Section A:

Fill in the blanks.

1. Sheikh Noor Muhammad
2. Philosophy, law
3. Literary work, Sir Muhammad Iqbal
4. All-India Muslim League
5. Munich, Germany
6. 21st April 1938.

Section B:

Q1. Who was Shams-ul-Ulama Moulvi Syed Mir Hasan?
Answer 1: Shams-ul-Ulama Moulvi Syed Mir Hasan was a renowned scholar. He was Iqbal's tutor until his graduation.

Q2. From where did Iqbal complete his graduation?
Answer 2: In 1895, Iqbal went to Government Collage Lahore to study for his B.A. and M.A.

Q3. Why did Allama Iqbal go to England in 1905?
Answer 3: Allama Iqbal went to England in 1905, to study philosophy and law at Cambridge University.

Q4. Write the names of some books written by Allama Iqbal?
Answer 4: Some of his books are Javed Nama, Bal-e-Jabreel and Bang-e-Dara.
Q5. What did Allama Iqbal say at the annual session of the Muslim League at Allahabad in 1930?
Answer 5: Allama Iqbal presided over the All India Muslim League session at Allahabad in 1930, where he first put forward the idea of an independent state for the Muslims of India, which was the basis for the idea of Pakistan.

Q6. When did Allama Iqbal die and where is he buried?
Answer 6: Allama Iqbal died on 21st April 1938 and he is buried near Badshahi Mosque Lahore.

Section C:
Discuss the importance of 14th August with the students. Tell them how Pakistan was made and how the Muslims of India struggled to get independence. Encourage the students to collect some information about the personalities who played a great part in the Pakistan movement. Ask them to share their information with the rest of the class.

Section A:

Write T for true and F for false statement.

Section B:

Q1. Why do we celebrate 14th August?
Answer 1: Every year we celebrate 14th August with great joy and excitement. Our elders achieved this great victory, after a long struggle and great sacrifices. 14th August, 1947 is the 'independence day' of Pakistan.

Q2. Why did some people think that Pakistan could not survive?
Answer 2: In 1947, it was thought by many people that Pakistan could not survive for more than 2 to 3 years because people were homeless and jobless. There were hardly any industries to offer jobs, agriculture was at its lowest, communication was in a bad state, and there were very few educational institutions.

Q3. What problems did the newly born country face?
Answer 3: After its independence one of the biggest problems was the settlement of refugees from India who were homeless and jobless.
   Another big problem for Pakistan was its territory, which was in two parts and a thousand miles apart as East and West Pakistan.

Q4. What great loss did Pakistan face in 1971?
Answer 4: East Pakistan declared its independence in 1971 as Bangladesh. After a war, Bangladesh appeared as an independent country and West Pakistan became the Pakistan we know today.
Q5. What do you know about the Kashmir issue? Explain briefly.
Answer 5: Kashmir had a Muslim majority but was ruled by a Hindu Maharaja. The Muslims of Kashmir wanted to join Pakistan, but the Hindu ruler joined India. The Kashmir issue is still unsolved.

Q6. What are the failures and successes of Pakistan during the last fifty years?
Answer 6: Many areas in our country do not have proper roads, proper sanitation and proper housing. Most of our people do not have the basic necessities of life. A larger number of our people still do not get proper drinking water even today. Millions of people in our villages still lack the basic medical care. Even after half a century, most of our people are illiterate.

There are quite a few things which really make us proud to be Pakistanis. We are a nuclear power now, and our armed forces are much stronger and well-equipped to defend the country. Our industry, agriculture, irrigation, communication etc. have improved and expanded greatly. In many fields such as education, science, medicine, economics, finance, sports and arts Pakistan has produced a great number of men and women who have won laurels for the country.

Section C:

Suppose you are made the Prime Minister of Pakistan, what steps you would like to suggest for the betterment of your country?

This is a sample answer. It may vary from student to student.

After independence, Pakistan has faced countless problems. One of the most important problems, which Pakistan is facing today, is education. If I would get a chance to become prime minister I would try to solve this problem by making education compulsory up to matriculation. I would also try to solve the sanitation, sewerage, water and other problems, which the citizens are facing.

Section D:

PROJECT WORK: to be done by the students.