



NEP 2020
ENHANCED
EDITION



4

Environmental **LEARNING** Teacher Manual

CLASS-IV
CHAPTER 1

- A** 1. (a) 2. (b) 3. (a) 4. (b)
B 1. True 2. True 3. True 4. False 5. False

Nuclear Family	Joint Family
A family where a father, a mother and their children live together is called a nuclear family.	A family in which there are more than two generations living together under one roof is called a joint family or extended family.

- D** 1. Parents and their children make a family. We live together in a family.
2. Do yourself.
3. Family lays the foundation of a human being.
4. A family is very important as it lays the foundation of a human being. A family gives us an identity.
F Our parents teach us what is wrong and what is right.
F Family members take care of each other.
F Our family gives us strength to face the world outside.
F Our family is our first school where we learn good morals from our parents.
F Family teaches us love, cooperation, discipline, commitment, selfless behaviour, honesty and truthfulness.
F It gives us unconditional support and love.

Let's have fun

- A** Do yourself.
B Do yourself.
C Do yourself.

CHAPTER 2

- A** 1. (a) 2. (c) 3. (a) 4. (b) 5. (b)
B 1. mother's 2. adults 3. milk
4. foster parents 5. eggs
C 1. (d) 2. (e) 3. (a) 4. (b) 5. (c)
D 1. True 2. True 3. False 4. False 5. True
E 1. The babies come from inside their mother's body.
2. The process by which all living things produce more of their own kind is called reproduction.
3. Some children are adopted legally by other people who love and

look after them because they lose their parents in accidents or natural disasters like earthquakes and cyclones.

4. All mammals look after their babies. The mother feeds her babies with her own milk cleans them and keeps them warm.
5. Parents who adopt the child are called foster parents.

Let's have fun

A Do yourself.

B Do yourself.

C Do yourself.

D 1. WHALE

2. MAMMALS

3. SIBLING

4. WOMB

5. EGGS

6. ADOPTION

7. TWINS

CHAPTER 3

A 1. (b) 2. (b) 3. (a)

B 1. (d) 2. (e) 3. (h) 4. (c)

5. (a) 6. (f) 7. (b) 8. (g)

C 1. difficult 2. speaking 3. smell, breathe

4. hear5. important

D 1. We have five sense organs-ears, eyes, nose, tongue and skin. Without them we cannot hear, see, smell, taste or feel.

2. Some sounds are pleasant to our ears while some are harsh. We like the sounds produced by guitar, harmonium, sitar etc. On the other hand, we do not like the sounds produced by machines, crackers etc.

3. Good touch make us feel nice, warm and comfortable whereas bad touch make us feel uncomfortable, unsafe and fearful.

4. People who are hard of hearing, seeing, speaking or walking are called differently abled people. Such people lead a difficult life then normal people.

5. Visually impaired or blind people use their acute sense of touch to read and write. They use special system known as the Braille script. Braille is a coding system where six raised dots are arranged in a particular sequence and each sequence represents a letter of the alphabet. It was developed by Louis Braille in 1824.

Let's have fun

A Do yourself.

B Do yourself.

CHAPTER 4

- A** 1. (c) 2. (a) 3. (b) 4. (c)
- B** 1. flies aeroplanes
2. mends shoes 3. delivers letters
4. cleans the streets 5. looks after sick people
6. makes furniture
- C** 1. False 2. True 3. False 4. True 5. True
- D** 1. mechanic 2. cobbler 3. potter 4. engineer
5. restauranteur
- E** 1. People do different kinds of work to earn money that is called their occupation.
2. Jobs that need special training and education are called professions. People who do these jobs are called professionals. Doctors, pilots, engineers, teachers and architects are professionals.
3. A mechanic repairs your car.
4. A doctor treats sick people.
5. Earlier, certain jobs were reserved for either men or women. Now things have changed. Now, men and women are considered the same. Women work on different job role like doctors, teachers, engineer, scientists, drivers, architects pilots etc.

Let's have fun

- A** Do yourself. **B** Do yourself. **C** Do yourself.

CHAPTER 5

- A** 1. (c) 2. (c) 3. (b) 4. (b) 5. (c)
- B** 1. indoor and outdoor 2. rules 3. work
- C** 1. We have fun when we do things which we enjoy. This is called recreation.
2. The best way of solving quarrels is to follow the rules of the games strictly.
3. Fairs are one of the most enjoyable means of recreation and enjoyment.
4. We can have a lot of fun at the circus. Acrobats, jugglers trapeze, artists, tightrope walkers and clowns amuse the audience of their amazing acts. Many trained animals entertain the people. Clowns or jokers dress up in funny costumes and do make-up to entertain the audience.

Let's have fun

- A** **Indoor Leisure Activities**
Dancing

Net surfing
Watching-TV
Listening to music

Outdoor Leisure Activities

Camping
Shopping
Fishing
Sight –seeing
Enjoying at beach
Kite flying

B Do yourself.

CHAPTER 6

- A** 1. (c) 2. (c) 3. (a)
- B** 1. True 2. True 3. False 4. True 5. False
- C** 1. (c) 2. (a) 3. (d) 4. (b)
- D** 1. Elephants, Hounds 2. Rabbit, Squirrels
3. Dogs, Cats
- E** 1. Animals like to live in groups.
2. Squirrels and rabbits are examples of shy animals. Dogs and Cats are examples of friendly animals.
3. Terrestrial animals live on land. These animals move on four legs, breathe through their lungs and feed on grass or flesh of other animals. Tiger and cow are the examples of terrestrial animals.
4. Flowers produce pollen. When a honeybee is busy in sucking nectar from a flower, pollen grains stick to it. When the bee moves on to another flower, some of the pollen grains from the first flower fall on the second flower. This is how pollination takes place. This helps the plants to generate into new plants. This is how honeybees help flowers.
5. All birds lay eggs. Female birds lay eggs in their nest. Fishes, frogs and reptiles also lay eggs. Each egg has a hard protective outer shell. Inside it, there is a space which consists of air called air cell that provides oxygen to the developing chick inside the egg. There is a clear sticky liquid in it called albumen. Inside it, there is a yellow liquid called yolk that provides food to the baby growing inside the egg. This baby is called the embryo. The embryo develops into a chick only when the egg is kept warm. The parent bird keeps the egg warm by sitting on it. The fully grown chick breaks the egg and comes out after 21 days. This is called hatching.

Let's have fun

- A** Do yourself. **B** Do yourself.
C Do yourself. **D** Do yourself.

CHAPTER 7

- A** 1. (c) 2. (c) 3. (a) 4. (c)
B 1. Carrot, turnip 2. Carrot, radish
3. Grass, rice 4. Lettuce, spinach
C 1. under 2. Root system
3. food 4. chlorophyll
5. soil erosion
D 1. (d) 2. (a) 3. (e) 4. (b)
5. (c)
E 1. A plant can be divided into two parts. The shoot system and the root system.
2. Shoot system consists of the stem, flower, leaf, fruit and bud.
3. The root system is usually found underground. In some plants, roots also grow above the ground. They keep the plants erect at one place. They absorb water and mineral from the soil. They also check soil erosion.
4. The main function of leaf is to prepare food for the plant. Therefore leaf is called the kitchen of the plant.
5. We should not cut down trees as cutting of trees will lead to serious problems, like pollution, drought and flooding.

Let's have fun

- A** Do yourself.
B Do yourself.
C 1. Stem 2. Fruit 3. Flower
4. Photosynthesis 5. Leaf

CHAPTER 8

- A** 1. (c) 2. (b) 3. (a)
B 1. False 2. True 3. False 4. True
5. False
C 1. Pollination 2. different 3. buds
4. whole year 5. Colourful petals
D Do yourself.
E 1. Seeds are found in fruits. Flowers wither and change into fruits. Fruits have seeds inside them. When conditions are favourable, seeds germinate and grow into new plants.

CHAPTER 10

- A** 1. (a) 2. (c) 3. (c) 4. (b)
- B** 1. (b) 2. (c) 3. (a)
- C** 1. ideas 2. love and togetherness
3. quantity 4. hostel mess
- D** 1. True 2. False 3. True 4. True
5. True
- E** 1. Eating together promotes a feeling of love and togetherness. It bring family members closer to each other. We share experiences, thoughts and ideas while eating together.
2. On certain occasions in our country, community eating is organised on a large scale. On such occasions, food is served to all the visitors regardless of faith, religion and background. Such community eating is termed as langar and bhandara. The people sit together on the floor and eat the same meal. Many people volunteer to help in cooking and serving meal. In Gurudwara hundreds of people sit together and enjoy langar.
3. Most of the government schools in India provide mid-day meals to students. This meal is free of cost.
4. On wedding parties, people invite their relatives, friends and loved ones. Elaborate arrangements are made to welcome the guests. Pandals are set-up in open spaces, banquet halls are booked or arrangements are made on big terraces of the houses and lawns. Special food is cooked either by halwais or catering houses.

Let's have fun

- A** Do yourself. **B** Do yourself.

CHAPTER 11

- A** 1. (c) 2. (b) 3. (b) 4. (b)
- B** 1. False 2. False 3. False 4. True
- C** 1. Premolar 2. Incisor 3. Canine 4. Molar
- D** 1. Tongue helps to taste food. It has tiny bumps on its surface called taste buds. There are 4 taste buds – bitter taste buds, sour taste buds, sweet taste buds and salty taste buds. The taste buds have tiny nerves that send a message to the brain whether the food is sweet, sour, salty or bitter.
2. Teeth are hard, bony structure firmly fixed in the upper and lower jaws. Our teeth grew out from the soft pink gums. The portion of the tooth above the gum is called the crown. Root is the portion of tooth inside the gum. A tooth has an outside white covering called enamel. Enamel is the hard material in the human body. The next layer is of the dentine. It is main part of the tooth. Pulp is

- the centre of each tooth. It has blood vessels and nerves in it.
3. There are four different kinds of teeth. They are:
 - F **Incisors:** The front four teeth in both the jaws are called incisors. They are used for cutting the food.
 - F **Canines:** Each jaw has two canines. They are sharp and pointed. They are also called tearing teeth.
 - F **Premolars:** There are four premolars in each jaw. They are broad, flat and are also called cracking teeth.
 - F **Molars:** There are six molars in each jaw. They help in grinding food and are called grinding teeth.
 4. Steps for taking care of our teeth.
 - F Brush your teeth twice a day in the morning and before going to bed.
 - F We should visit a dentist every six months.
 - F We should eat raw fruits and vegetables to make our teeth and gums strong.
 - F Do not move the brush vigorously. Move it slowly for about three minutes.
 - F We should avoid eating too many sweets and chocolates as they may spoil the teeth and gums.
 - F We should brush the teeth by using the correct method.

Let's have fun

A	Work done by them	Type	Number
	Biting front teeth	Incisors	8
	Tearing teeth	Canines	4
	Cracking and crushing	Premolars	8
	Grinding	Molars	12
	Total number of adult's teeth		32

B Do yourself.

C Crown enamel

Dentine

Pulp

Canal

D 4 5 1 3 2

CHAPTER 12

A 1. (c) 2. (c) 3. (c) 4. (c)

B 1. three toes 2. chisel-shaped 3. bills

made of mud, bamboo, straw, leaves etc. whereas pucca houses are made of cement, bricks iron etc.

4. Some big cities have slums. Slums have small congested area. The houses in slums lack open space. Many families who cannot afford an independent house live here.
5. Many people are involved in the construction of a house.
 - F An architect makes a plan of a house.
 - F A mason lays bricks and plaster walls.
 - F A carpenter makes doors and windows.
 - F A plumber fits water pipes and tapes.
 - F An electrician fits wires and plugs.
 - F A painter paints a house.
 - F An engineer supervises the construction of a house.

Let's have fun

- A** 1. Architect 2. Carpenter 3. Electrician
 4. Painter 5. Engineer
- B** Do yourself.
- C** 1. doctor 2. cow-dung 3. sheet

CHAPTER 14

- A** 1. (b) 2. (a) 3. (c)
- B** 1. True 2. True 3. True 4. False 5. True
- C** 1.

Biodegradable wastes	Non-biodegradable wastes
1. They decompose easily and mix with the soil.	1. They do not decompose easily.
2. They do not cause any harm to the environment.	2. They cause harm to the environment.
3. Example: Vegetable and fruit peels, human and animal excreta etc.	3. Example: Things made of plastic, polythenes metal glass etc.

2. In open dumping, the waste is thrown openly to decompose with the action of air, water and sunlight. The garbage is carried to an open ground outside the town or city limits. Thus heaps of garbage are made which pollute the environment.
3. Another way of disposal of waste is by dumping it at one place and then burning it. This is called incineration. It does not allow insects or germs to breed. It also does not create any foul smell. This is not a good process as it causes air pollution.
4. The three R's are- Reduce, Reuse and Recycle.

Let's have fun

A Do yourself. **B** 3 4 2 1

CHAPTER 15

- A** 1. (b) 2. (c) 3. (c) 4. (c)
B 1. False 2. True 3. False 4. True
C 1. A map needs to have a language. The language of a map remains the same all over the world. It is made up of colours, sign, symbols and scale.
2. People living next to us or near us are called our neighbours. The place near our house is called our neighbourhood.
3. A sketch is a rough drawing or a map of a place that is drawn quickly to show the way that you follow to get from one place to another.
4. Actual distance cannot be shown on a map. Therefore scale is used to represent the distance on the map. It is called the scale of the map. The scale is the ratio of the area on the map to that of the real area.

Let's have fun

- A** Do yourself.
B 1. Bridge 2. Temple 3. Town or village
4. Railway Narrow Gauge
C Do yourself. **D** Do yourself.

CHAPTER 16

- A** 1. (a) 2. (a) 3. (b) 4. (c)
B 1. True 2. True 3. False 4. False 5. True
C 1. (b) 2. (a) 3. (e) 4. (c) 5. (d)
D 1. Rain 2. salty 3. evaporates
4. temperature 5. water
E 1. The rainwater that seeps into the ground, gets collected as underground water. This water is safe and clean for drinking. Wells, handpumps and tube wells are used to take out underground water.
2. A large area of water surrounded by land is called a lake whereas a pond is an area of water smaller than a lake.
3. The different sources of water are- rain, underground water, lakes and ponds, rivers, oceans and seas.
4. There is a large amount of water found in the air in the form of water vapour. When water gets heated, it changes into steam or water vapour and goes into the air. This change of water into watervapour on heating is called evaporation.

5. When water vapours become cool, it changes into water. This process is called condensation.

Let's have fun

A Do yourself.

B Do yourself.

C Do yourself.

- D** 1. E 2. E 3. F 4. C
5. E 6. E 7. F 8. E

CHAPTER 17

- A** 1. (a) 2. (c) 3. (c)

B 1. **Boiling:** This method is used to kill the germs in water. Water should be boiled and cooled before drinking.

2. **Using Chemicals:** Chlorine tablets are added to water to kill germs in it. This process is called chlorination.

3. **Filtration:** Solid impurities like dirt and sand can be removed by filtering water.

- C** 1. infected 2. drinking 3. precious 4. Boiling

D 1. Causes of water pollution are-

F Discharge of domestic wastes in water bodies.

F Discharge of industrial wastes in water.

F Throwing dead bodies in water.

F Oil spilled by ships and tankers.

F Washing clothes on the river banks.

2. Following are effects of water pollution:

F Water plants get infected and die.

F Polluted water makes soil infertile and crops get damaged.

F Aquatic animals becomes sick and die in polluted water.

F It can cause disease like typhoid, cholera, jaundice and diarrhoea.

F When infected aquatic animals are eaten by human beings or other animals, they become sick and unhealthy.

3. Rainwater harvesting is a very good method to conserve rainwater and store it for later use. This is done in open rural areas.

4. Water that is pure for drinking is called potable water.

5. Water obtained from rivers, lakes etc. may contain impurities like dirt and germs. Water from these water bodies is brought through channels to the water treatment plant. Here, this water is purified for drinking. At the water treatment plant, water is first

filtered to remove the impurities. It is then treated with chemicals to kill the germs present in it. This purified water is then pumped into huge water tanks. From there the water reaches the taps in our houses through a network of pipelines.

Let's have fun

- A Do yourself.
- B Do yourself.
- C Do yourself.

CHAPTER 18

- A 1. (b) 2. (a) 3. (a) 4. (a)
5. (c) 6. (a)
- B 1. Plane Ticket 2. Train Ticket
- C 1. Bus, car, local train 2. Train, car, bus
3. Aeroplane

D 1.

Public means of transport	Private means of transport
1. They are not owned by people. 2. We have to pay for travelling. 3. Example: Car, jeep, scooter, bike etc.	1. They are owned by people. 2. We don't have to pay for travelling. 3. Example: Bus, ship, van, train, auto, aeroplane etc.

- 2. The carts run by a horse is called a tonga.
- 3. A horse shoe is used to cover the feet of a horse. It is made of iron. It protects their feet.
- 4. The money which is used in a country for buying things is called currency. Different currencies are used in different countries. The currency of India is rupee (₹).

In India, the currency is in the form of coins and paper currency (notes) on the notes, the picture of our National Emblem is printed in the bottom right corner. Notes also have the picture of Mahatma Gandhi, the father of our nation on the left hand side. The upper left corner has a particular code number. Each note carries the signature of the Governor of the Reserve Bank of India. A note has two faces. The other side of the note has its value written in many languages. Coins have been in use in our country from early times.

- 5. Some animals pulled the carts like bullock-cart, horse carriage, sledge. These mainly used in villages and small towns. Horses

are also used for pulling carts and riding. Horse-cart is called a tonga. The kings and queens used buggy as known as victoria which was pulled by horses. Donkeys and mules are used to carry loads. Camel is used for travelling in the desert.

Let's have fun

- A Do yourself.
- B Do yourself.
- C Do yourself.

CHAPTER 19

- A 1. (c) 2. (a) 3. (a)
- B 1. (e) 2. (d) 3. (c) 4. (a)
- 5. (b)
- C 1. concrete 2. bricks and cement
- 3. Bricks 4. smooth 5. Arch

- D 1. The basic requirement for making a house is land.
- 2. Clay is the main raw material used to make bricks.
 - F Clay is mixed with water to make a smooth dough.
 - F This dough is moulded to obtain rectangular wet bricks.
 - F Now the wet bricks are heated and dried in a brick kiln.
 - F Hot bricks are finally cooled.
 - F In this way, we get hard and strong bricks.
- 3. There are many types of bridges some of the types are:-
 - F Suspension Bridge
 - F Arch Bridge
 - F Beam Bridge

Some other types of bridges are:-

- F Girder bridge
- F Hanging bridge
- F Folding bridge
- F Folding bridge
- F Cantilever bridge
- F Temporary bridge
- F Pontoon bridge
- 4. New materials are used to make longer and stronger bridges to solve the problem of traffic jam. Strong bridges do not break easily and are safe.

Let's have fun

- A Do yourself.
- B Do yourself.

- C** 1. Beam bridge 2. Folding bridge
3. Girder bridge 4. Pontoon bridge

Model Test Paper I

- A** 1. (a) 2. (a) 3. (a) 4. (b)
5. (c)
- B** 1. True 2. True 3. False 4. False
5. True
- C** 1. (d) 2. (e) 3. (a) 4. (b)
5. (c)
- D** 1. Tortoise
It is water animal.
2. Legs
It is not a sense organ.
3. Cricket
It is an outdoor game.
- E** 1. Petals 2. Beehive
3. Ambhibians 4. Mammals
- F** Do yourself.
- G** 1. Carrot, radish
2. Lettuce, spinach
3. Rice, grass
- H** Most of the government schools in India provide mid-day meals to students. This meal is free of cost.
It has many advantages:
F It develops a sense of sharing.
F Children learn to eat together.
F It creates unity amongst children.
F It increases attendance of school.
F Children are provided nutritious food.
F It improves the health of the children.
- I** 1. All mammals look after their babies. The mother feeds her babies with her own milk, cleans them and keeps them warm.
2. Fairs are one of the most enjoyable means of recreation and enjoyment. Big fairs are organised on the occasion of festivals like Dussehra, Diwali, Christmas, New year etc. There are many stalls at a fair. People enjoy eating different kinds of food there. Children love to play games and win prizes. There are swings,

slides and other rides for children. It is a good means of recreation.

3. Flowers produce a sweet liquid called nectar. Honey bees visit flowers to get this nectar. Flowers produce pollen. When a honey bee is busy in sucking nectar from a flower, pollen grains stick to it. When the bee moves on to another flower, some of the pollen grains stick to it. When the bee moves on to another flower, some of the pollen grains from the first flower fall on the second flower. Transfer of pollen grains from one flower to another is called pollination. This helps the plants to generate into new plants. This is how honeybees help flowers.
4. Seeds are found in fruits. Flowers wither and change into fruits. Fruits have seeds inside them. When conditions are favourable, seeds germinate and grow into new plants.
5. Farmers add manure and fertilisers to the soil to increase the fertility of the soil.

Model Test Paper II

- A** 1. (b) 2. (a) 3. (b) 4. (a)
5. (c)

- B** 1. Chisel-shaped 2. electrician
3. temperature 4. Boiling
5. Bricks

- C** 1. False 2. False 3. True 4. False
5. True

D 1.

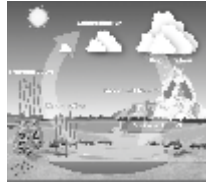
Biodegradable Waste	Non-biodegradable Waste
1. It decompose easily and mixes with the soil. 2. It does not cause harm to the environment. 3. Example: Vegetable and fruit peels, human and animal excreta etc.	1. It does not decompose easily. 2. It harm the environment. 3. Example: Things made of plastic, Polythene bags, glass, metal etc.

2.

Lake	Pond
A lake is a large area of water surrounded by land.	An area of water smaller than a lake is called a pond.

3.	Public means of transport	Private means of transport
	1. They are not owned by the people. 2. We have to pay for travelling in it. 3. Example: Bus, train, aeroplane.	1. They are owned by the people. 2. We do not have to pay for travelling in it. 3. Example: Car, jeeps, scooter, bike.

E Draw diagrams



1. Structure of Tooth

2. Water Cycle

- F**
1. Warbler's Beak
 2. King Fisher's Beak
 3. Eagle's Beak
 4. Sparrow's Beak
 5. Crow's Beak

- G**
1. Non-biodegradable waste cannot be disposed off so we should try to control its production and try to manage it by practising the three R's Reduce, Reuse and Recycle.

Reduce:

The first step is the reduction of waste. If we generate less waste, half of the problem is solved.

Reuse:

It means putting waste products into other uses.

Recycle:

Recycle means converting used items into raw materials and then making new products from them.

2. Making of Bricks

- F Clay is the main raw material used to make bricks.
- F Clay is mixed with water to make a smooth dough.
- F This dough is moulded to obtain rectangular wet bricks.
- F Now, the wet bricks are heated and dried in brick kiln.
- F The hot bricks are finally cooled.
- F In this way, we get hard and strong bricks.

H Do yourself.

I 1. There are four different kinds of teeth-

F **Incisors:** The front four teeth in both the jaws are called incisors. They are also called cutting teeth as they are used to cut food.

F **Canines:** Each jaw has two canines. They are sharp and pointed and are called tearing teeth.

F **Premolars:** There are four premolars in each jaw. They are broad and flat. They are also called cracking teeth as they help in cracking teeth as they help in cracking the nuts, candy etc.

F **Molars:** There are six molars in each jaw. They are broader than premolars. They help in grinding food and hence are called grinding teeth.

2. In big cities due to increasing population and decreasing land, tall multistory buildings called skyscrapers are built.
3. Rainwater harvesting is a very good method of conserve rainwater and store it for later use. This is done in open rural areas.
4. New materials are used to make longer and stronger bridges to solve the problem of traffic jam. Strong bridges do not break easily and are safe.
5. The different sources of water are- rain, underground water, lakes and ponds, rivers, oceans and seas.

Environmental **LEARNING**



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