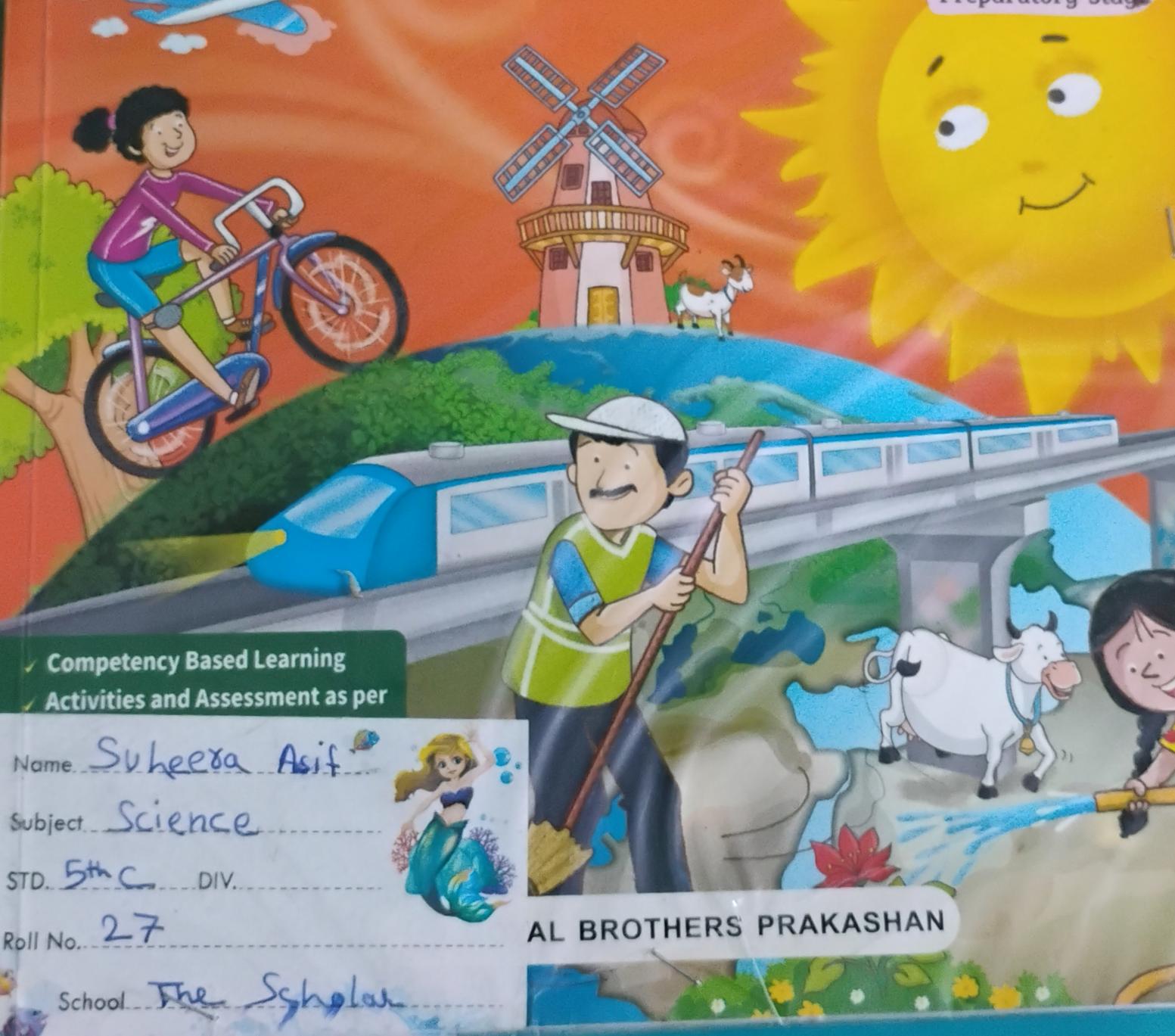


AS PER NEP 2020 & NCF 2023

# Science Success

5

Preparatory Stage



✓ Competency Based Learning  
✓ Activities and Assessment as per

Name Suherra Asif



Subject Science

STD. 5th C DIV.

Roll No. 27

AL BROTHERS PRAKASHAN

School The Scholar



Look at the pictures given below. Write the name of the seeds in the space provided.



Peas



a  
Peanuts



Cardamom



Almond



Kidney bean

Everyday we eat different types of seeds in the form of cereals, pulses, vegetables, nuts and spices.

Do you know, apart from food what is the other important role of seeds? You have seen that new plants grow from seeds? Let us discuss about it.

## Growing Plants



CODE-4PM

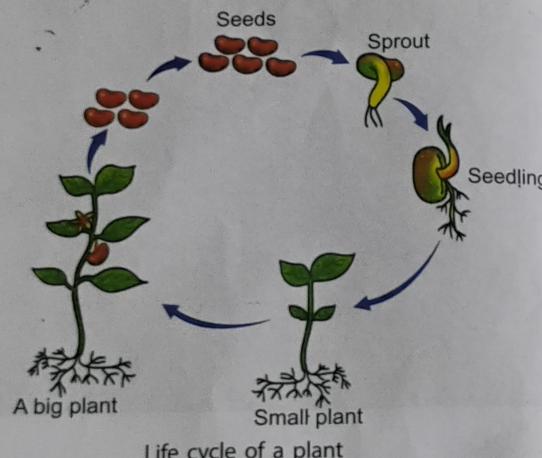
The process of production of new plants is called **plant reproduction**. Plants grow not only from seeds, but also from other parts of the plant, such as stems, roots, leaves and spores.

Reproduction in plants can be broadly categorised into two types:

- (1) Sexual reproduction
- (2) Vegetative propagation

### ► Sexual Reproduction

**Growing plants from seeds:** Most of the flowering plants grow from seeds. Seeds are found within fruits, and fruits are formed from the flowers. A plant produces many seeds. But all the seeds do not grow into plants. Some seeds are eaten up by animals and birds; some seeds get destroyed by heat, rain, etc; and some others do not get proper light, water and air to grow. Thus, only a few seeds grow into new plants.



### ► Vegetative Propagation

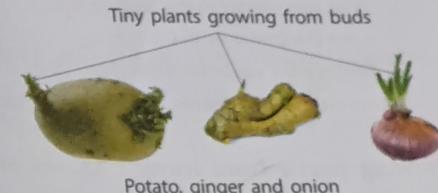
Besides growing from seeds, plants also grow from certain other parts of plant, such as stem, root, spores, etc. It is called vegetative propagation.

**Growing Plants from Stems:** Some plants, such as rose, *Hibiscus* and money plant can be grown from stem-cutting. The plant from which the stem is cut is called the mother plant. Stem cutting is planted in the soil. After a few days, the stem cutting grows into a new plant.



Rose plant can be grown from stem cutting.

Potato, onion and ginger are stems of plants which can grow into new plants. A potato has buds on it, called **eyes**. Any part of potato bearing an eye can grow into a new plant.



**Growing plants from roots :** Some plants, such as sweet potato, carrot, radish, turnip, *Dahlia* store food in their roots. Roots of these plants can grow into new plants.

Place a sweet potato in a glass of water with the help of some toothpicks and keep the glass in an open space. After a few days, you will observe a new plant growing out of it.



Sweet potato



Radish



Carrot

### Grasp More

#### Meet the Facts

Testimony

1. Bamboo is the fastest growing woody plant in the world. It can grow upto 35 inches in a single day.
2. The first potatoes were cultivated in Peru, 7000 years ago.

Squirrels bury the collected seeds to eat during winters. Sometimes, squirrels forget where they had buried these seeds and the forgotten seeds may sprout during the spring season.





## Try and Learn

To grow a plant from a carrot roots

Things needed: A carrot, a bowl, a knife and water

Method:

- Cut off the top portion of the carrot.
- Keep the cut part in the bowl with the top portion upward.
- Pour some water in the bowl so that half the carrot is dipped in water.
- Keep the container in the sun.
- Observe the carrot for a few days.

Observation: New leaves sprout from the top portion of the carrot.



**Growing plants from leaves :** Leaves of *Bryophyllum* plant have buds in the notches along the margins. These buds develop into new plantlets. When the leaf falls on soil, these plants get separated and develop into independent plants.



*Bryophyllum* buds



Groups of spores in the form of sori

## Seed

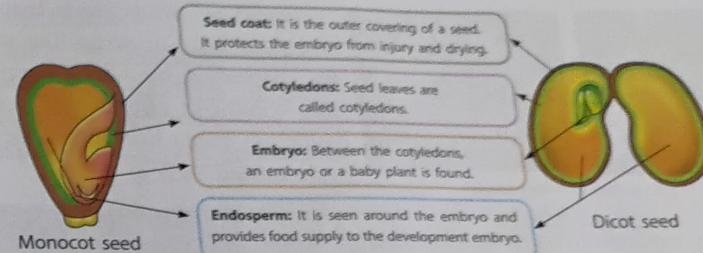


Seeds are important for plant reproduction. Let us know about the structure of the seed.

### ► Structure of Seed

Seeds of some plants contain only one cotyledon and these are called monocot seeds. Seeds of some plants have two cotyledons and these are called dicot seeds. Structure of both monocot and dicot seed is given below.

## Experiential Learning



Rose, pea, peanut, cotton, tomato and onion are dicots. Rice, corn, banana, sugarcane and wheat are monocots.

Let us observe the seed structure of kidney bean.



## Try and Learn

Direct Perception

To observe the seed structure of kidney bean, and identify the type of seed

Materials needed: a bowl, water and 5 to 6 kidney beans

Method: Take 5 to 6 kidney beans and keep them in a bowl of water for one day. Next day, take out those beans and split one bean in hand. Before splitting, remove the outer covering of the bean seed.

Observation: This outer covering is called seed coat. After splitting, you can see two seed leaves. These are called cotyledons. Between these two cotyledons, a small baby plant, called embryo is found. This embryo has two parts: baby shoot and baby root.

Conclusion: Kidney bean seed is a dicot seed as it has two cotyledons.

### ► Dispersal of Seeds

What will happen if the seeds fall straight and start growing beneath the parent plant? If all the seeds fall and start growing beneath the parent plant, there will be overcrowding and all the seeds will not be able to get proper sunlight, water and other nutrients. Therefore, seeds must be scattered over a wide area to grow properly. The process of scattering of seeds from the parent plant is called seed dispersal.

Dispersal of seeds occurs in various ways. They may be carried to far-off places through wind, water, insects and animals. These are called agents of dispersal.





Maple and dandelion seeds

**Dispersal by wind:** Seeds that are light and have hair or wing-like structures are dispersed by wind. Maple seeds have wings-like outgrowths. Cotton and dandelion seeds have fine hair and are easily carried away by wind.



Coconut fruit

**Dispersal by water:** Seeds of some plants can float and are carried away by water. Lotus plant has a spongy light fruit which float on water. Coconut has fibrous covering that helps it to float on water. Lotus and coconut seeds are dispersed by water.

**Dispersal by animals:** Birds and animals eat fruits. At times, undigested seeds of these fruits are expelled through their digestive systems unchanged. In this way, seeds are dispersed by animals and birds. Some seeds, such as cocklebur, *Datura* and tiger claw have spines or hooks. These seeds stick to the bodies of animals or birds and are carried away.



Tiger's claw seed



Xanthium seed



Poppy seeds

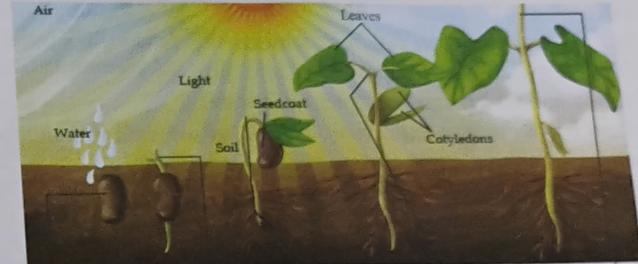
Human beings and animals eat fruits such as mango, *jamun* and cherries and throw away their seeds that result in their dispersal.

**Dispersal by explosion:** The fruits of peas, okra, *Geranium* and poppy burst open when they ripen. The seeds are automatically scattered through the forceful explosion.

After dispersal, the seeds germinate.

### Germination of seeds

Germination is the process by which a plant grows from a seed. Stages of bean seed germination are shown below. The suitable conditions for a seed to grow into a new plant includes: sufficient water, light, warmth and air. If these conditions are fulfilled, a seed grows into a baby plant or a seedling.



The seed gets air, water, light and proper temperature.

A very tiny plant comes out by breaking the seed coat.

The plant develops root downwards and shoot upwards and cotyledons unfold.

The size of the plant increases, and the cotyledons shrink and finally disappear.



### Remember and Recall

Write T for true and F for false statements.

1. Seed coat is the outer covering of the seed.
2. Seeds are present inside flowers.
3. Roots absorb water and minerals from the soil.
4. Outer covering of a seed is called seed leaf.
5. Coconut and lotus seeds are dispersed by wind.



### Enquire and Share

Critical Thinking

1. Seed dispersal is necessary for the plants to grow properly. Why?
2. Plants of radish, carrot and beetroot can be grown from roots. Is it the common practice for growing such vegetables in large quantities? Discuss.

### Agriculture



CODE-JNS

The practice of growing of crops and rearing animals on a large scale to provide food, fibre and other products is called **agriculture**. Plants of one kind, grown on a large scale in a particular area during a particular season are called **crops**. Farmers grow different



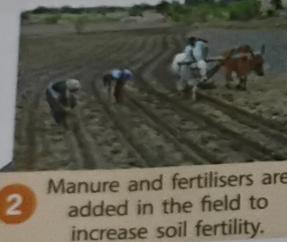
crops in different seasons. Crops, such as rice and maize that are grown in summer season and harvested at the end of monsoon season are called *kharif* crops. Crops, such as wheat and gram that are grown in winter season and harvested in the spring season are called *rabi* crops. Vegetables, such as cauliflower and peas are grown during winters whereas brinjal and gourd are grown during summers.

Different plants not only grow in different seasons but they need different types of soil also. Rice and jute grow well in clayey soil which can hold plenty of water. Wheat, *jowar* and *bajra* grow in sandy soil. Cotton grows well in black soil. Tea plants grow in the soil of hilly areas such as Assam and Darjeeling. In hilly areas, step farming is practised to prevent soil erosion.

#### ► Steps of Agriculture



**1** Ploughing is done for loosening of soil



**2** Manure and fertilisers are added in the field to increase soil fertility.



**3** Seeds are sown in the fields.



**4** The field is irrigated and watered.



**5** Crops are gathered after threshing and stored.



**6** Harvesting of crops is done after the maturation of crops.

#### Steps of Agriculture

A farmer performs the following steps for crop production.



**7** Over time, crops get mature  
**8** The crops are sprayed with chemicals and pesticides to protect them from insect & pest attack.

#### Grasp More

Plants that live for just one year are called **annuals**, those that live for two years are called **biennials** and the plants that live for many years are called **perennials**.

**Protecting crops:** Crops need to be protected from animals, birds, insects, etc., before and after harvesting. Bigger animals like cows and buffaloes can be kept away by proper fencing around the fields. Scarecrows help to keep the birds away. Pesticides are sprayed on crops to protect them from insects.

**Edible parts of plant:** We eat different parts of plants as food. For example; carrot (root), sugarcane (stem), mango (fruit), peas (seeds), coriander (leaves), etc.



Scarecrow

#### Teacher's Corner

Show a corn seed and a peanut (groundnut) seed in the class. Help children to observe the number of cotyledons and to know the difference between two types of seeds. Discuss different ways of plant reproduction. Arrange a visit to a nursery for students and help them know various methods of reproduction in plants.



#### Key Terms

**Sori:** a group of spores in fern leaves

**Cotyledons:** seed leaves

**Seed coat:** outer covering of the seed that protects the seed

**Seed dispersal:** the process of scattering of seeds

**Germination:** the process by which a seed grows into a new plant

**Agriculture:** the practice of growing crops on a large scale for the food or other purposes

**Crops:** plants that are grown in large quantities to provide food in a particular area during a particular season

**Ploughing:** to dig and turn over a field with the help of a plough



#### Points to Reflect

- Plants are grown not only from seeds but also from other parts of plants such as stems, roots, leaves and spores.
- Seeds are of two types, monocot and dicot, based on the number of cotyledons.
- A seed requires light, warmth, air and water to germinate.



- The process of scattering of seeds is called seed dispersal.
- Seeds are dispersed through water, wind, animals and explosion.
- The practice of growing of crops and rearing animals on a large scale to provide food, fibre and other products is called agriculture.
- Crops are of different kinds based on their use and growing seasons.



## Assess Yourself

### A Tick (✓) the correct answer.

- Coconut seeds are mainly dispersed through
  - a. explosion
  - b. animals
  - c. water
  - d. wind
- During germination, the seedling gets food from
  - a. seed coat
  - b. seed hole
  - c. cotyledons
  - d. embryo
- Maple and cotton seeds are dispersed by
  - a. wind
  - b. water
  - c. animals
  - d. birds
- Seed leaves are also called
  - a. embryo
  - b. cotyledons
  - c. seedling
  - d. seedcoat
- Which part of a *Bryophyllum* plant gives rise to new plants?
  - a. Stem
  - b. Root
  - c. Leaf
  - d. Flower

### B Choose the suitable word from the box to fill in the blanks.

water    1seeds    2seedling    wind    explosion

- A seed grows into a baby plant. This baby plant is called a Seedling.
- Most plants grow from Seeds.
- Small and light seeds are mostly dispersed by wind.
- Poppy and Geranium fruits burst open when they ripen. The seeds are scattered through explosion.
- When a seed grows into a baby plant in the presence of light, warmth, air and water, it is called germination.

Remembered Perception

### C Name the following.

- Two plants that are grown from roots Carrot and Radish.
- Two plants that are grown from stems Rose and money plant.

- Two seeds that are dispersed by explosion Peas and poppy.
- Two examples of kharif crops Cotton and rice.
- The part of seed that protects the baby plant inside a seed Seed coat.

Presumption

### D Guess who I am.

- I am added to make the soil fertile. Manure & fertilisers
- I contain food for the baby plant. I am a part of the seed. Cotyledon
- I am a climber. My seeds are dispersed through explosion. Peas

Application

### E Circle the odd one.

- Mango, Rose, Wheat, Coriander
- Money plant, Rose, Hibiscus, Radish
- Onion, Ginger, Potato, Sweet potato
- Dahlia, Carrot, Radish, Cotton

### F Look at the given picture.

-  Farming
- This type of farming is called Step farming.
  - Where is this farming commonly practiced?
  - What are the benefits of this type of farming?

Picture Based Analysis

Line  
9/05/20

Art Integration

### G Make a herbarium of flowers.

Collect a few flowers and put each of the flowers in between newspapers and press them gently. After a few days, take them out and paste the dried flowers in your scrapbook.



Experiential Learning

### H Grow sweet potato

**Materials needed:** a sweet potato and a small jar of water

**Instructions:** Keep the sweet potato in a jar of water. Keep it for two days.

**Observation:** You will see bunches of leaves at the top of root. You can keep this as a decorative plant. If you want to grow potatoes then cut the small plants when they are 15 to 20 cm long and plant them in the soil.

- In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.
  - If both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A).

Assertion & Reason

b. If both Assertion (A) and Reason (R) are correct but Reason (R) is NOT the correct explanation of Assertion (A).

c. Assertion (A) is true, but Reason (R) is false.

d. Assertion (A) is false, but Reason (R) is true.

1. **Assertion (A):** Fruits, such as pea and poppy burst open and scatter the seeds away from the plant.

**Reason (R):** Poppy seeds stick to the bodies of animals or birds and are carried away.

2. **Assertion (A):** Fencing keeps the bigger animals away from crops.

**Reason (R):** Scarecrows protect the crops from birds.

J. Answer the following questions.

1. What is germination?

2. What is seed dispersal? What is its importance?

3. What is the difference between kharif and rabi crops?

4. How do animals help in seed dispersal?

5. How are cotton and pea seeds dispersed?

6. Explain the structure of a seed with the help of a well-labelled diagram.

7. What is agriculture? Write the different stages of agriculture.

### Life Skills and Subject Integration

K. Learn to make sprouts at home.

Soak mung bean or chick pea seeds for at least 10-12 hours in fresh, cool water in a wide mouth mason jar. Next day, discard all the water, strain the seeds, keep them in a wet cotton cloth and tighten the cloth. Keep it for one day. Next day you will see the sprouted seeds.

L. Some plants and trees are found in specific regions of India. For example, pine trees are mostly found in hilly areas such as Uttarakhand and Himachal Pradesh. Name four such plants and the region, where they are found.

Integrated to Social Studies

Exploration



### Think Green

Visit a gardener and learn some gardening skills. Make a home garden and grow some new plants. Water them regularly.

# 2

## Animals: Habitat and Adaptations



### Focus on

Habitat of animals

Breathing and feeding in animals

Body coverings in animals

Movement in animals



Observe the given pictures carefully. Identify the animals likely to inhabit these places from the given list. (Whale, Polar bear, Lion, Shark, Penguin, Giraffe, Octopus, Wolf)



~~Whale~~  
~~Wheat~~



Whale  
Shark  
Octopus



Lion  
Giraffe  
Wolf



Polar bear  
Penguin

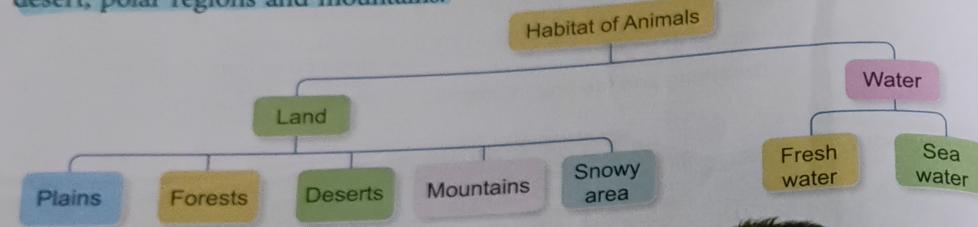
Different animals live in different places. Some live on land, some on trees and some in water. Let us discuss about the different habitat of animals in detail.

## Habitat of Animals



CODE-BJN

The place where an animal lives is called its habitat. Water and land are two major types of habitats. Water includes sea water and freshwater, and land includes plain area, forest, desert, polar regions and mountains.



**Forest:** A forest is a large area thickly covered with trees and plants. A variety of animals live in forests. For example, giraffe and zebra live on land; lion and tiger live in caves; birds and monkeys live on trees; rabbits and snakes live in burrows and holes.



Camel

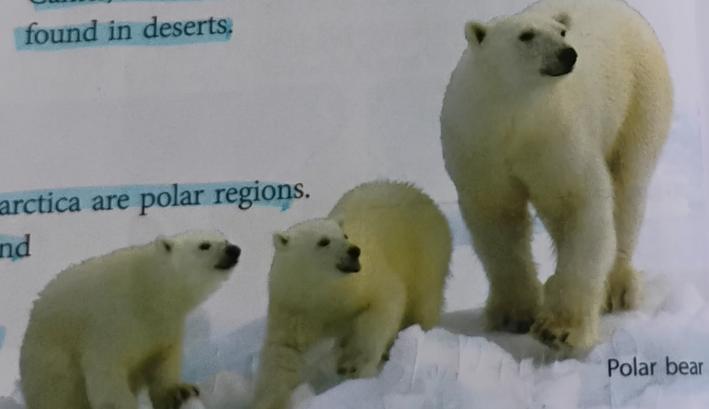
**Desert :** A desert is a dry area, often covered with sand, with little or no vegetation. It receives very less rainfall. Camel, rattlesnake, fennec fox, ground squirrel, etc., are found in deserts.



Lion

**Polar regions:** Arctic and Antarctica are polar regions.

They are covered with snow and are cold regions. Polar bear, penguin, seal, walrus, etc., are found in the polar regions.



Polar bear



Dolphin

**Freshwater:** Rivers, lakes and ponds are freshwater habitats. Fish, frog, salamander, toad, duck, swan, crane, etc., are found in freshwater habitats.

**Ocean:** An ocean is a large body of saline water. It is the largest habitat on the Earth. Whale, dolphin, octopus, seahorse, jellyfish, etc., live in oceans.

Animals living in a particular habitat adapt themselves to their surroundings. Changes in the body features or behaviours of animals that help them to survive in a particular habitat are called **adaptation**. Different animals show, different types of adaptations. These adaptations may be seen in their body coverings, organs of breathing, organs of movement, etc.



CODE-JGLX

## Body Coverings in Animals

For comfort and protection, animals have different body coverings. Scales, shells, hair, fur and feathers are different body coverings found in animals.

### Grasp More

Body covering of some animals such as stick insects and grasshopper merge with their surroundings. It makes animals hard to spot and protect them from enemies. This mechanism is called **camouflage**. Animals such as chameleons can change their body colour to match the surroundings.



Grasshopper and chameleon.



Tortoise



Oyster



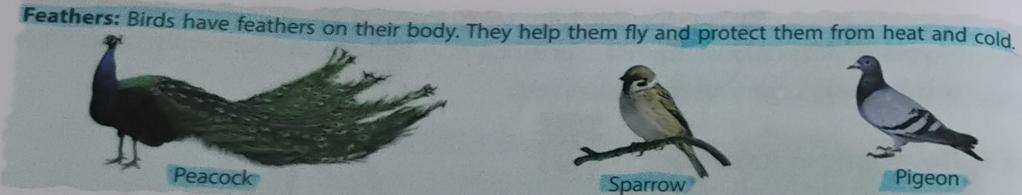
Snail

**Shell:** Animals such as turtles, tortoises, snails and oysters have shells on their body to protect them. When they are in danger, they withdraw their head and feet inside the shell.



**Scales:** Bodies of most animals such as snakes, lizards and crocodiles are covered with scales. Body of fish is also covered with scales. Snakes shed their old skin periodically, replacing it with a new one.

**Fur/hair:** The body of sheep, bears, rabbits and some other animals is covered with fur or hair. This covering protects them from heat, cold and rain.



## Breathing and Feeding in Animals

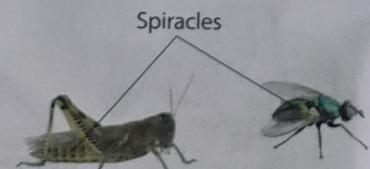
### Breathing in Animals

We know that all living organisms need air to live. They take in oxygen rich air and give out carbon dioxide rich air. Land animals breathe in oxygen from the air while aquatic animals breathe in oxygen from water. Different animals have different organs for breathing.



### Grasp More

Animals play a significant role in maintaining healthy environment. For example, bees pollinate the flowers, worms keep the soil fertile, animals help in seed dispersal, etc



- All insects such as grasshoppers, cockroaches, ants, ladybirds, flies, mosquitoes and butterflies breathe through small holes in their body. These are called **spiracles**.



- Aquatic animals, such as fishes and young frogs (tadpoles) breathe through their **gills**.

- Frogs and earthworms breathe through their moist skin. When the adult frogs are on land, they breathe through lungs.



- Except insects and some aquatic animals, all other animals including human beings breathe through their **lungs**. The air enters the body through the nose, and is carried through the windpipe to special breathing organs, lungs. Whales and dolphins are aquatic animals, but they have lungs to breathe. They cannot breathe under the water. They come to the surface of water body for breathing. They breathe through blowholes or nostrils present on the top of their head.

**Meet the Facts**

- Snakes shed their skin periodically. This shedding of skin is called **moulting**.
- The teeth of shark are modified scales.
- The porcupine has long spiny hair on the body for its protection.

### Feeding Habit of Animals

Animals need food to grow and live. An animal's food habit and its mouth parts depends on the type of food it eats.



Bees and butterflies suck nectar from flowers through a long and thin tube called **proboscis**.

		Herbivores, such as cows and giraffes have sharp front teeth to bite leaves, grass, etc., and strong broad teeth to chew the food well.
		Animals, such as tigers, lions, foxes and dogs have sharp, pointed and curved front teeth to tear the flesh. They have strong jaws. Their back teeth are broad and flat and are used for chewing the flesh.
		Some animals, such as snakes and frogs do not have chewing teeth. They swallow the whole food.
		Animals, such as rabbits, rats and squirrels have sharp front teeth with which they bite nuts, and seeds. These animals gnaw (bite something repeatedly) their food.
		Cats and dogs use their tongue to lap the milk and water.



## Remember and Recall

Write T for true and F for false statements.

1. Frogs and earthworms breathe through their moist skin.
2. Animals such as tigers and lions gnaw their food.
3. Tadpoles breathe through tiny organs called spiracles.
4. Whales and dolphins breathe through their gills.
5. Cows and horses have sharp front teeth to bite the grass.

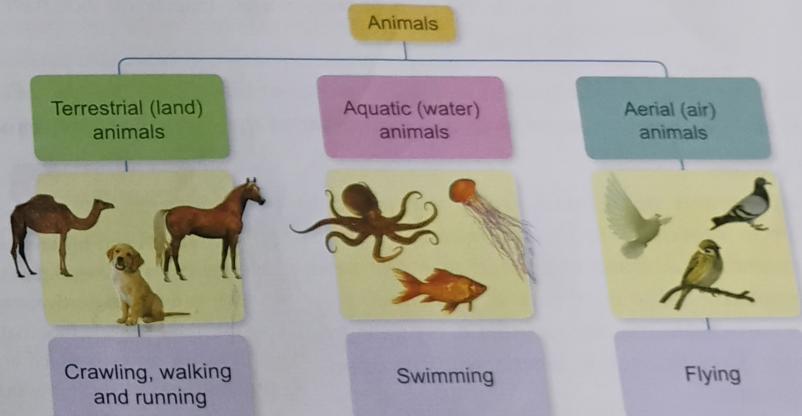
T  
F  
F  
F  
T



## Movement in Animals



Animals move from one place to another in search of food and water and to protect themselves from the enemies. They also move to build their shelter. They show different types of movements from one place to another using different body parts (fins, feet, legs and wings).



## Enquire and Share

Communication

1. Enquire about some insects that do not have wings. They move by crawling.
2. Birds and bats both can fly, but they are different. Discuss how.
3. Dolphin lives in water and dog is a land animal. But, both of them have some common features. Enquire and discuss about them.

**Terrestrial animals:** Animals, such as cat, dog, lion and tiger use all the four limbs to move, while human beings use only hindlimbs (legs) to move. They use their forelimbs as hands.

Animals, such as lizards, crocodiles, tortoises and snakes crawl on the ground with the help of their limbs. Snakes can crawl and do not have legs at all.



**Aquatic animals:** Fishes have fins to swim in water. Turtles have paddle-like limbs to move, and frogs have webbed feet to move in water. Penguins use their forelimbs as flippers, to push water and swim.



Aquatic



Aerial

**Aerial animals:** Most of the insects and birds can fly. Mosquitoes, bees, butterflies, house flies and moths are the insects that can fly with the help of their wings. Insects do not have feathers like birds.

Birds have wings that help them to fly. The wings of birds have feathers. Ostriches, emus and penguins are some birds that cannot fly, as their wings are weak for flying.

#### ► Migration

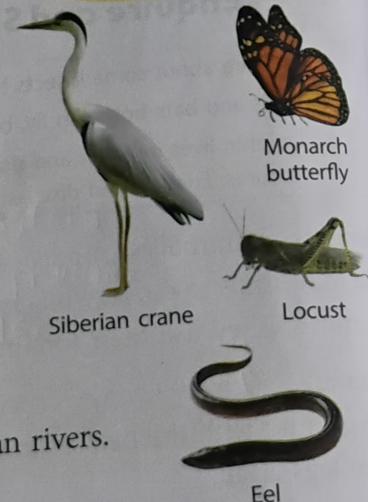
The movement of animals from one place to another in search of favourable environment is called **migration**. Animals migrate in search of food, breeding places and to escape harsh weather.

- Siberian cranes migrate to India every year in winter. They fly back to Siberia with the onset of summer.
- Arctic tern travels from Arctic circle to Antarctic circle twice a year. It covers a distance of around 35,000 km every year.
- Monarch butterflies fly from Canada to Mexico in the winter season.
- Locusts are harmful migratory insects. They migrate in swarms and destroy standing crops.
- European eels swim all the way to the Sargasso sea in the Western part of the Atlantic ocean to lay their eggs. The baby eels then take three years to swim back to the European rivers.

#### Grasp More

Testimony

**Aestivation and hibernation** are the types of sleeping pattern seen in animals. Aestivation is summer sleep while hibernation is winter sleep in which an organism passes those period in sleeping condition.



#### Teacher's Corner

Help children understand how animals show different adaptations in the form of body coverings, organs of breathing and presence of different organs for movement.



#### Key Terms

**Habitat:** the place where an organism lives naturally

**Adaptation:** the features that help organisms to survive in a particular habitat

**Camouflage:** the ability of animals to merge with their surroundings

**Spiracles:** the small holes in the abdomen of insects

**Migration:** the movement of animals from one place to another



#### Points to Reflect

- The home or surroundings of an animal where it lives, eats and grows is called its habitat.
- Different animals have different body coverings, such as scales, shell, hairs, fur and feathers.
- Animals have different breathing organs such as gills, skin, spiracles and lungs.
- Animals move from one place to another using different body parts such as feet, fins, flippers, wings and legs.
- Animals migrate in search of food, to escape from harsh weather and for breeding purposes.



#### Assess Yourself

##### A. Tick (✓) the correct answer.

1. Snails protect themselves by withdrawing

- a. fur on the body
  - b. into the shell.
  - c. feathers on the body
  - d. spiny hair on the body
2. Which of the following uses hindlimbs as legs for movement?
- a. Human being
  - b. Lizard
  - c. Snake
  - d. Tiger
3. Which of the following animals has cuticle as body covering?
- a. Ant
  - b. Lizard
  - c. Whale
  - d. Sheep

4. Which of the following animals breathe through moist skin?  
 a. Frog  b. Fish  c. Whale  d. Penguin
5. What helps a cockroach to breathe?  
 a. Nose  b. Lung  c. Spiracle  d. Moist skin

**B. Fill in the blanks with the correct words.**

1. Birds have their bodies covered with feathers (feathers/cuticle).
2. Frogs breathe through lungs (lungs/moist skin) on land.
3. Butterflies suck nectar of flowers through proboscis (feet/proboscis).
4. Penguins have flippers (legs/flippers) to swim in water.
5. Monarch butterflies (butterflies/locusts) fly from Canada to Mexico.

**C. Name the following.**

1. Two examples of animals that live in a desert Camel, rattlesnakes
2. Two animals that have a shell as body covering Tortoise, Snail
3. Two animals that breathe through gills Fish, Tadpole
4. Two animals that have six legs and can fly Mosquito, Mosquito
5. Two migratory animals Monarch butterfly, Locust

**D. Look at the pictures and answer the following questions.**

1. How do these two animals are similar to each other?
2. How are they different from each other?
3. Write about their habitat and body coverings.



Picture Based Analysis

**E. In the table, arrange the following according to their breathing organs: pigeon, cow, horse, prawn, tadpole, bee, whale, human, cockroach, snake and grasshopper.**

Analogy/Comparison

Spiracles	Gills	Lungs	Body Surface
Coc K roach	prawn	Whale	
cross hopk	tadpole	Pigeon, cow, horse	
bee		Human	
		Snake	

Presumption

**F. Guess who I am.**

1. I live in water and breathe through gills, but when I become adult, I breathe through lungs.
2. I am an insect. I destroy crops and I migrate in the summer.
3. I live in Antarctic region. I use my forelimbs as flippers to swim in water.

Frog Frog  
 Locust   
 Penguin Penguin

Penguin

**G. Let's make an animal album.**

Collect pictures of different animals and paste them on separate drawing sheets. Write 3-5 lines about each animal.

**H. Draw a beautiful diagram of a butterfly and colour it. Show breathing organ of this animal.**

Creativity

Art Integration

**I. In the questions given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and choose the correct option.**

a. If both Assertion (A) and Reason (R) are correct and Reason (R) is the correct explanation of Assertion (A).

b. If both Assertion (A) and Reason (R) are correct but Reason (R) is NOT the correct explanation of Assertion (A).

c. Assertion (A) is true, but Reason (R) is false.

d. Assertion (A) is false, but Reason (R) is true.

**1. Assertion (A):** The feet of frogs and ducks are webbed.

**Reason (R):** Webbed feet help these animals to grab things tightly.

**2. Assertion (A):** Herbivores have sharp canines and incisors.

**Reason (R):** Herbivores cut the grass and chew it well.

**J. Answer the following questions.**

1. How do insects breathe?
2. Give three examples of animals that have scales on their body.
3. Define migration. Name a bird that migrates to India every year.
4. How do body coverings of birds and mammals differ?
5. What are the similarities between birds and insects?



**Life Skills and Subject Integration**

Mental Development

K. Wild animals are also useful to us like domestic animals. Write five points.

L. Which is your favourite animal? Write 5 sentences about this animal.

Integrated to Social Studies



**Think Green**



Like plants, animals are also important to us in many ways.  
 We should save them and their habitat.

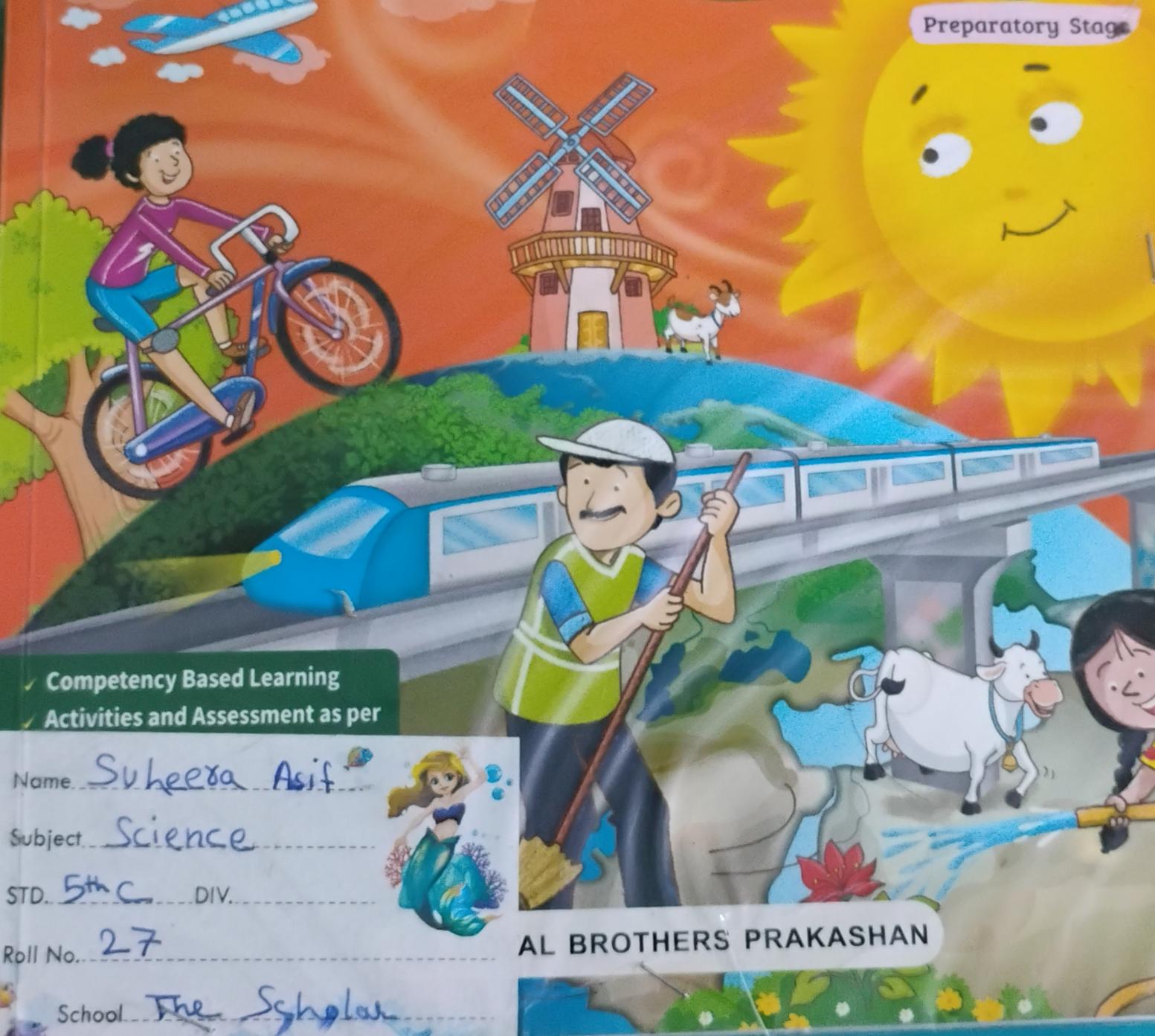


AS PER NEP 2020 & NCF 2023

# Science Success

5

Preparatory Stage



- ✓ Competency Based Learning
- ✓ Activities and Assessment as per

Name Suherra Asif



Subject Science

STD. 5th C DIV.

Roll No. 27

AL BROTHERS PRAKASHAN

School The Scholar