



Can you tell ?

25. Changes in our Surroundings



We can see things around us clearly during the day. Why can't we see them clearly at night?

During the day, we get sunlight. That is why we can see the things around us clearly. It grows dark after sunset. There is not enough light. We see the stars in the sky at night, but we don't see the things around us clearly.

Day and night affect living beings.



Can you tell ?

Observe and describe.

- How does the colour of the sky change before sunrise?
- How does the colour of the sky change after sunset?



Can you tell ?



How does the shadow lie?

- After sunrise in the morning, in which direction does the shadow lie?
Is it long or short?
- How does the shadow change when the sun is directly overhead?
- How does the shadow look in the evening before the sunset?

- **Long shadows, short shadows**

In the morning, the sun rises in the east. Before the sun rises, we can see various shades of colours in the sky to the east. When the sun rises, its light is soft. The shadows fall to the west and they are long.

The sun gradually begins moving higher in the sky. Shadows become shorter. When the sun is directly overhead, shadows are very short.

The sun slowly begins shifting to the west. The shadows begin moving to the east and become longer. After the sun sets, various shades of colours are seen in the sky to the west.

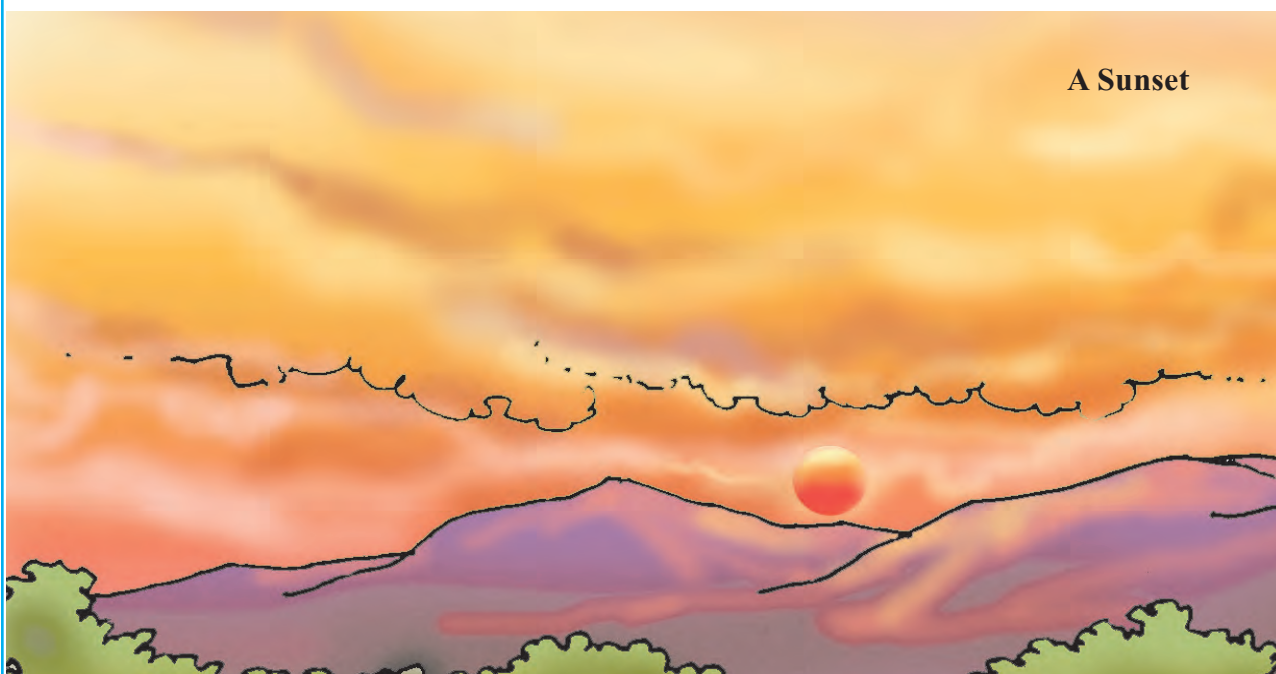
At other times the sky is blue.



Do you know ?

People specially go to see the sunset at scenic places. Mahabaleshwar in Satara district is a famous hill station. A spot in Mahabaleshwar is very well-known for its view of the sunset.

Tourists visiting Mahabaleshwar make it a point to visit to the Sunset Point in the evenings to experience the spectacular sunset.



A Sunset

- **From dawn to night-time**

Birds are the first to sense the end of the night. Their chirping begins from early dawn. If there is a rooster nearby, you can hear it crow.

The birds leave their nests. They start flying in flocks and begin to search for food.



Buds, too, begin to blossom gradually. Their petals start unfolding. The flowers have sweet nectar. Bees come to collect it. Butterflies, beetles and other insects start hovering around the flowers.

People around us set themselves to work too. We also get ready to go to school.



Cowherds take cows and buffaloes out to graze. Once their stomachs are full, they sit in a quiet place and ruminate. In the evening, the cattle return to their sheds. Flocks of birds return to their nests. We return home from school.

But, some nocturnal animals set out to search for food after the sun sets. Moths, crickets and glow-worms are some such animals. Tigers, bats and owls are also nocturnal animals. Raatrani (queen of the night) and rajanigandha (tuberose) are flowers that bloom at night.



New terms :

Rumination : Some animals graze until their stomachs are full. Later, they bring back the swallowed food into their mouth again, a little at a time, and chew it. Then they swallow the chewed food a second time. This is called rumination or chewing cud. Rumination helps them to digest their food properly. Cows and buffaloes are animals that ruminate.

Nocturnal : Some animals sleep during the day. They search for food at night. Such animals are called nocturnal animals.



Bat



Owl



Raatrani



Try this.

- Find an open space from where you can see the sky clearly.
- Go there at a fixed time every evening for a week.
- Do you see the moon in the same place every evening?
- Does the shape of the moon look the same every evening?

• Phases of the moon

The moon rises at different times every night. If you search for the moon at a fixed time every evening, you will see it in different places. The shape of the moon also changes every day.



Phases of the moon

The day the moon looks completely round is called the day of the full moon. For fifteen days after that, it appears to become smaller and smaller. On the fifteenth day, it cannot be seen at all. That is called the day of the new moon.

After the day of the new moon, the moon appears to grow bigger and bigger for fifteen days and is completely round again on the day of the next full moon.

The different shapes of the moon that we can see every day are called the phases of the moon.



What we have learnt –

- * When the sun rises, there is light. Then, it is day. When the sun sets, it becomes dark and it is night.
- * The sun rises in the east and sets in the west.
- * In the morning, shadows fall to the west and are long. When the sun is directly overhead, shadows become very short. In the evening, shadows become long and fall to the east.
- * The daily routine of all living things is connected to day and night.
- * The shape of the moon and the time at which it rises, change every day. The different shapes of the moon are called the phases of the moon.
- * The day on which the moon is completely round, is called the full moon day. The day on which the moon cannot be seen is called the new moon day.



Always remember –

All living things are connected to the cycle of day and night. Therefore, there must be regularity in your daily routine.



Exercises

A. What can be done?

- Slices of amla are to be kept to dry in a place that receives sunlight all day.

B. Think and tell.

- When your shadow is very short, where is the sun in the sky?
- What is meant by ‘crescent moon’ ?
- After how many days does a new moon follow another new moon?
- Make a list of flowers which bloom in the morning.

C. Observe and complete the table.

On a clear day, go to an open field near your school. Find a tall object like a pillar, a tree or a flagpole, or erect a pole in the courtyard of your school. Write your observations in the table.

Date: __/__/__

Time	8.30 am	10.30 am	12.00 pm	1.30 pm	3.30 pm
Length of the shadow					
Direction of the shadow					

What do you learn from these observations ? Write your conclusions under the table.

D. Fill in the blanks.

- (1) Bats are animals.
- (2) When their stomachs are full, cows and buffaloes sit in a peaceful place and
- (3) are the first to sense the end of the night.
- (4) When the sun rises, its light is

E. Answer the following questions :

- (1) When do shadows become long?
- (2) What are shadows like when the sun is directly overhead?
- (3) After the day of the new moon, for how many days does the moon grow bigger?
- (4) Why do bees hover around flowers?

F. True or false?

- (1) The moon cannot be seen on the day of the new moon.
- (2) Some living things set out to search for food after the sun has set.
- (3) The day when the moon looks triangular is the day of the full moon.
- (4) Birds start chirping at dawn.
- (5) The sun gradually shifts towards the east.

G. What are the following called ?

- (1) The different shapes of the moon seen every day.
- (2) Animals that rest during the day and search for food at night.
- (3) The day on which the moon is completely round.
- (4) The day on which the moon cannot be seen.



Activity

Make a list of animals that ruminate. Find their pictures and paste them neatly in your notebook.