



Get Set, Go!

Who are we? Solve the riddles and find out.

1. I have two discs in my name. m D D n
2. The first three letters of my name is a sense organ. e a s t h
3. I twinkle in the sky. s t a r

The earth is made up of land, water and air. About three-fourths of the earth's surface is water and one-fourth is land. The earth is surrounded by a layer of air.

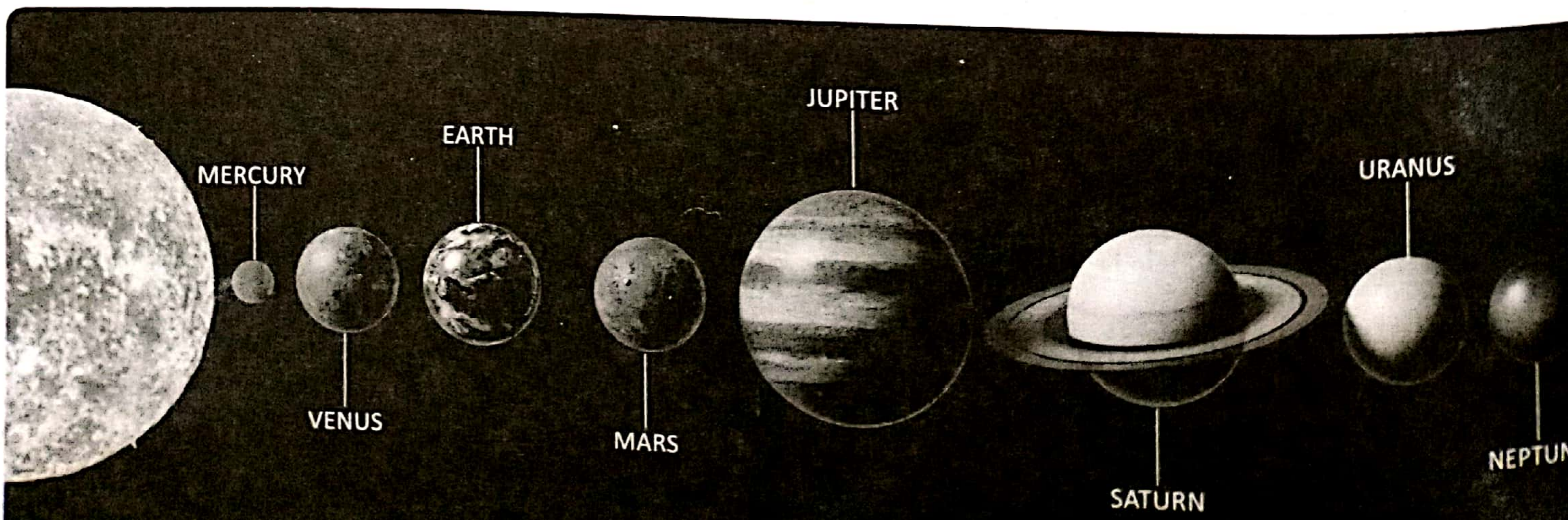
THE PLANETS

The earth is far, far away from the sun. It is one of the eight planets that go around the sun. The eight planets are

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. The sun and these eight planets together form our solar system.

Planets do not have light of their own. They reflect the sunlight that falls on them. This makes planets glow.

The earth appears to be a very big place to us. However, compared with the sun and some other stars, it is very



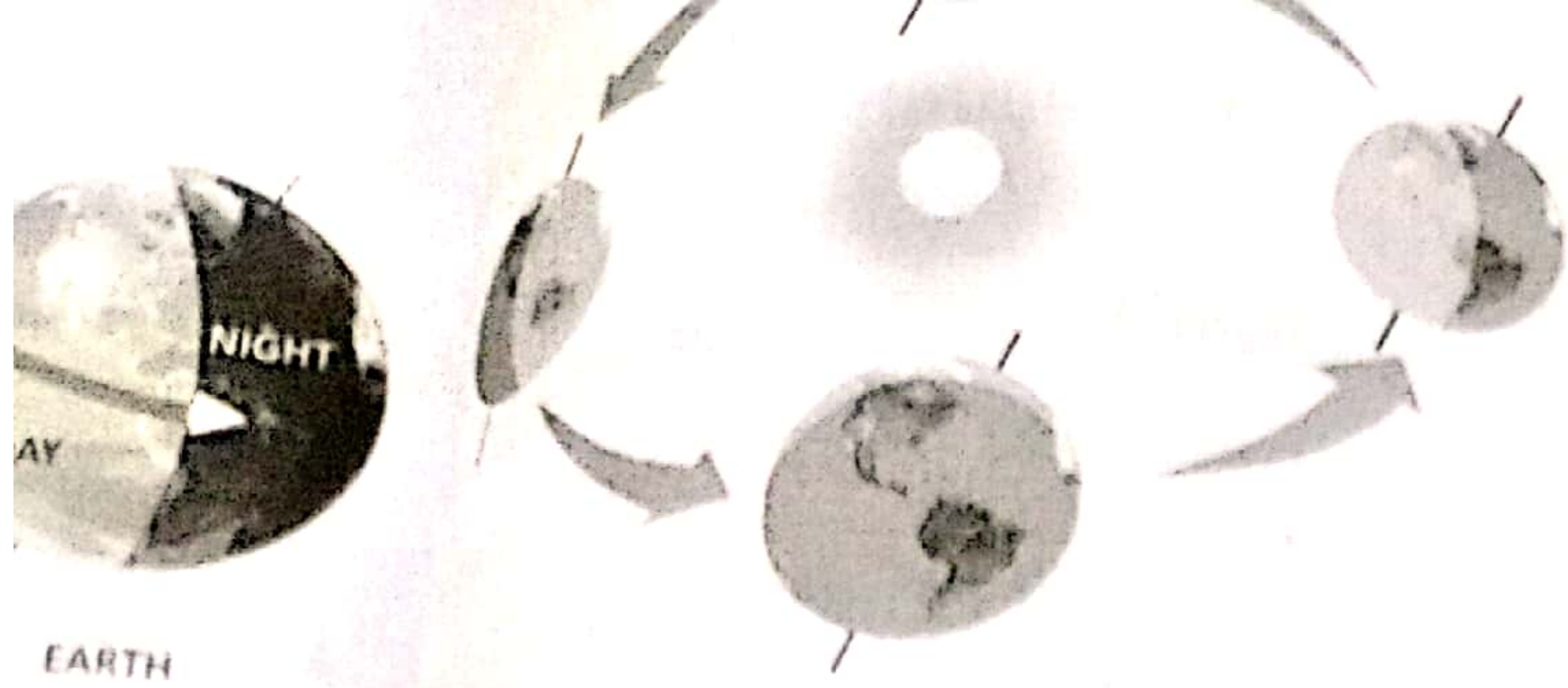


Fig. 4.9 The earth revolves around the sun.

THE SUN

The sun is a very big ball of hot gases. It is the star closest to the earth. It has its own light and heat. The earth and other planets revolve around the sun. We get some of the sun's heat and light. The temperature on the sun's surface is about 5400 degree centigrade! In comparison, on a very hot day, the temperature on the earth goes only up to 50 degree centigrade.

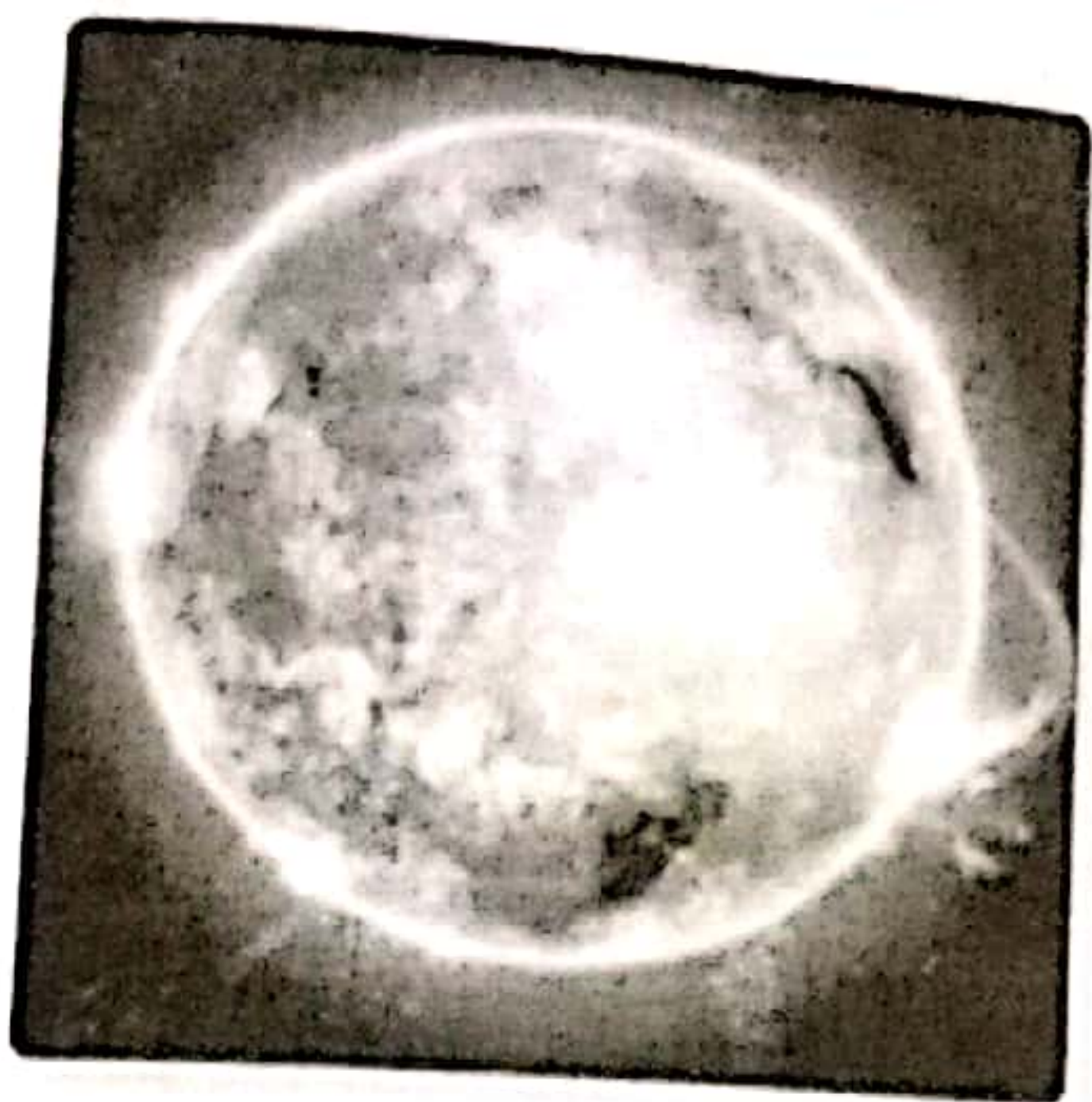


Fig. 4.10 The sun

Checkpoint

Write the correct answers.

- The sun and the (eight / nine / ten) planets together form our solar system.
- The earth rotates from (west to east / east to west / north to south).
- Day and night are caused due to (rotation / revolution / shape) of the earth.

THE MOON

The moon is a natural satellite of the earth because it moves around the earth. The moon completes one rotation on its axis in about 27 days and 8 hours. It takes about the same time to complete one revolution around the earth. It has no light of its own and shines only because it reflects the light of the sun.



Fig. 4.11 The moon

From the earth we see only those parts of the moon that are lit by the sun. Due to changes in the positions of the moon and the earth, the moon appears to change its shape on different days. In Fig. 4.12, the circle around the earth shows the shapes of the moon in different positions.

When the moon is between the earth and the sun, we do not see it at all.

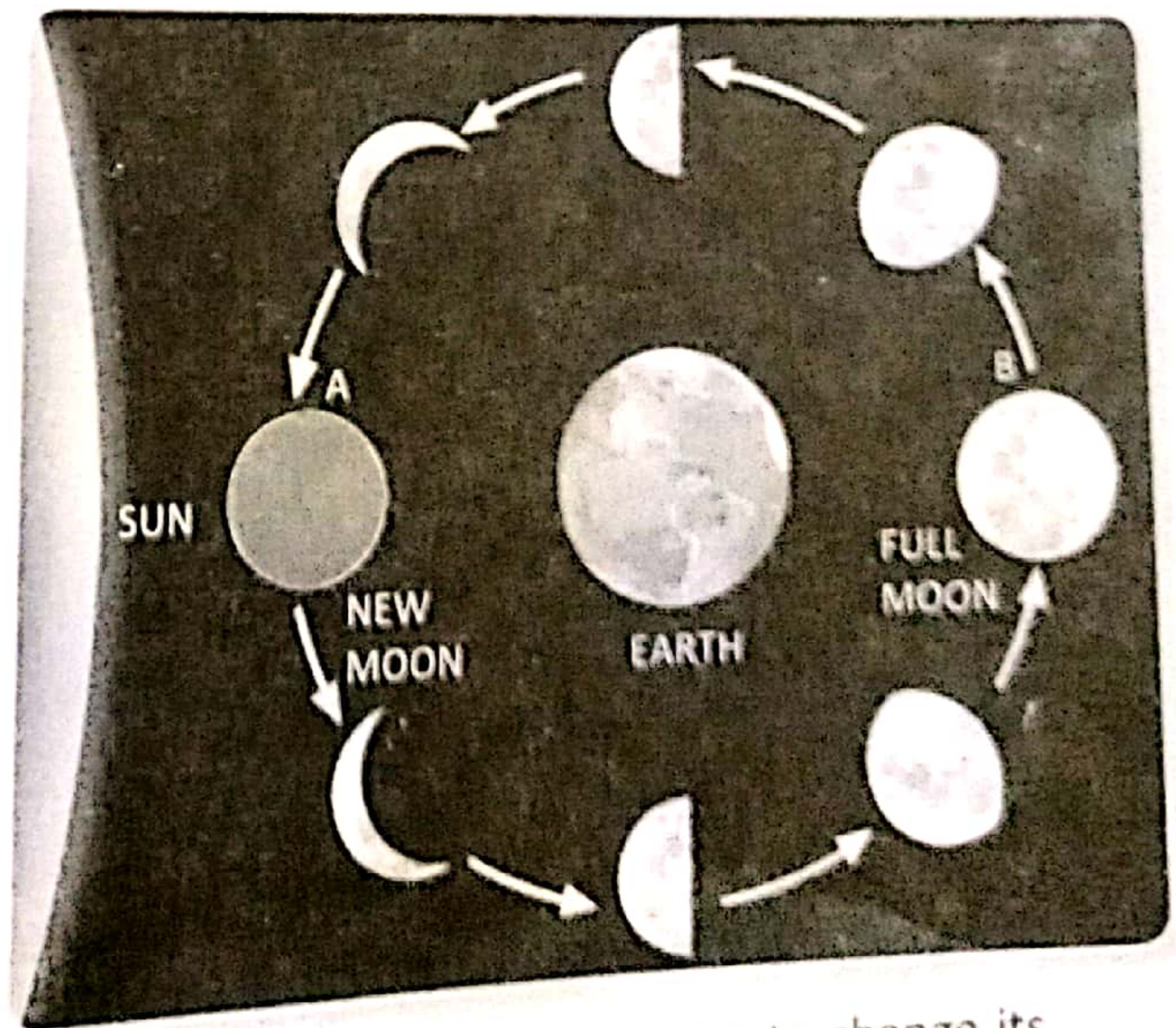


Fig. 4.12 The moon appears to change its shape when seen from the earth.

... astronomer. He lived about 900
 ... ago. He discovered a method to
 ... you seen the Jantar Mantar
 ... Delhi, Jaipur, Varanasi, Ujjain
 ...? Maharaja Sawai Jai

Singh of Amber (presently Jaipur) built
 the Jantar Mantars to study the stars
 and the planets. These structures, made
 of lime and plaster, are used to measure
 the time of day and to find out the
 position of the stars and planets.

Words to Know

- ... surface here, a round surface
- ... round
- ... path a path which does not change

Quick Recap

- The earth is one of the eight planets that goes around the sun.
- The earth has two movements – rotation and revolution.
- The sun is a star. It has its own heat and light.
- The moon is a natural satellite of the earth.
- Stars are heavenly bodies that give out their own light.
- Groups of stars appear to form patterns called constellations.
- Indian astronomers have contributed greatly to our knowledge about the stars and the planets.

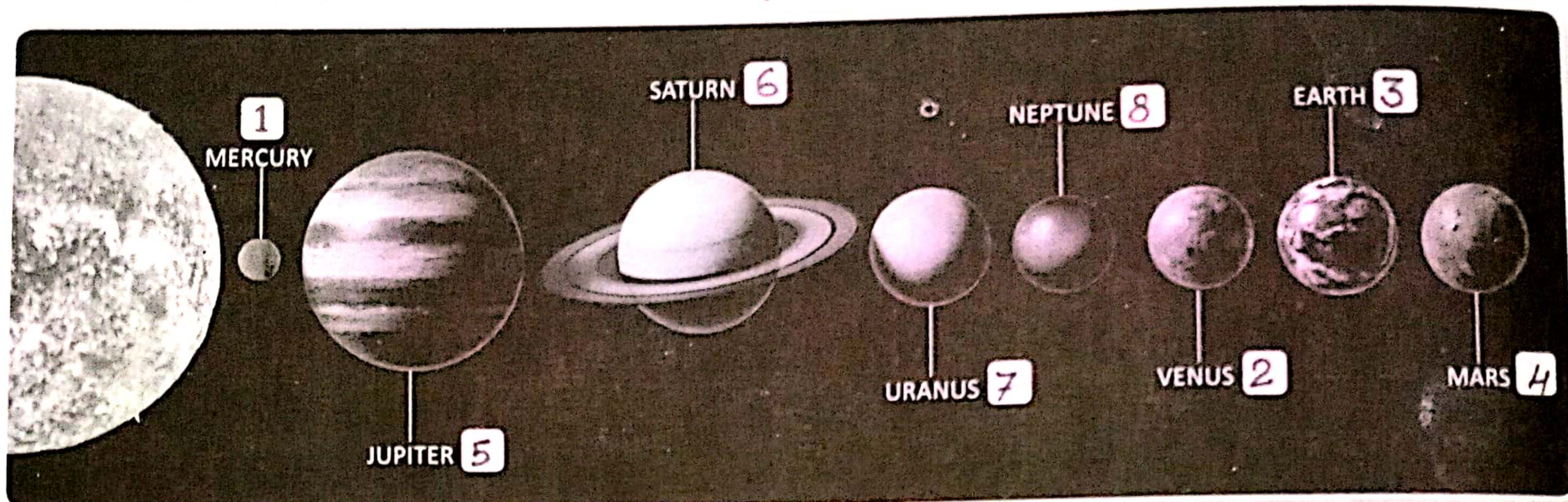
Read and Answer

- Tick (✓) the correct answers.
1. These do not have light of their own.
 - a. stars _____
 - b. planets ✓
 - c. stars and planets _____
 2. This has a shape similar to the earth.
 - a. a football ✓
 - b. a shoebox _____
 - c. a square table top _____
 3. The moon shines because it reflects the light of
 - a. the earth. _____
 - b. the sun. ✓
 - c. other stars. _____

SCIENCE

4. Constellations are the patterns formed by
 a. planets. _____ b. stars. c. moons. _____
5. He was the first astronomer to inform the world that the earth is round.
 a. Bhaskara _____ b. Varahamihira _____ c. Aryabhata

B The planets got mixed up. Number these planets in the increasing order of their distance from the Sun. Mercury is numbered 1.



C Write the time taken for one

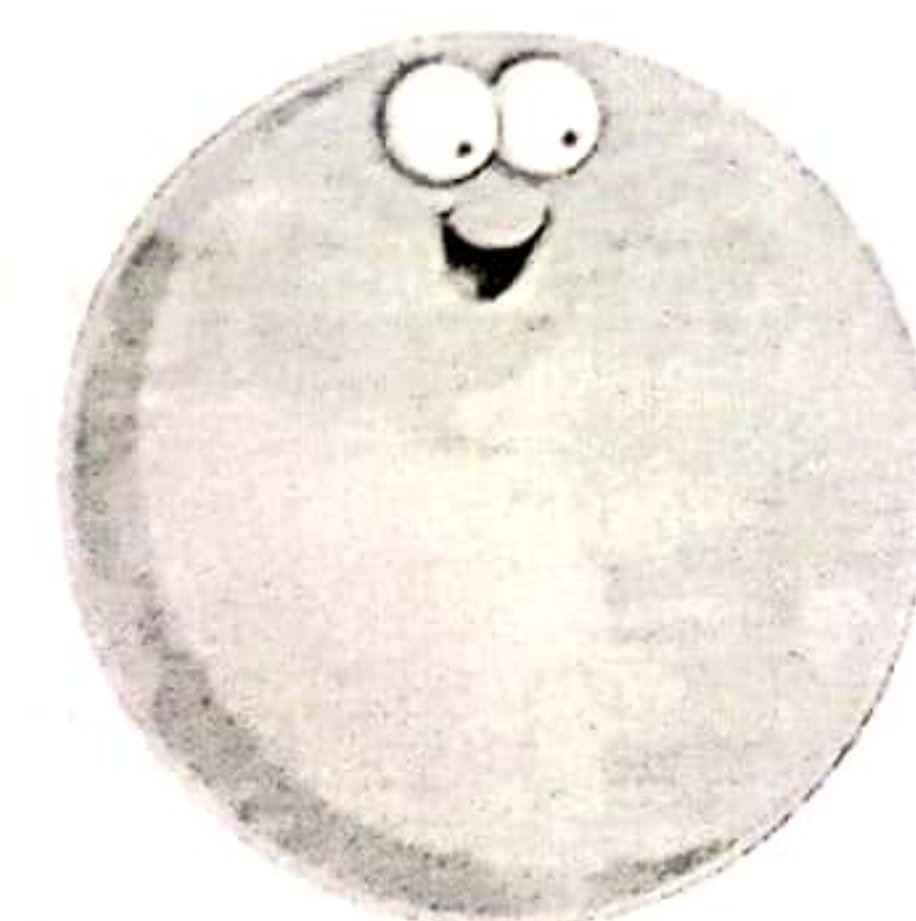
1. rotation of the earth on its axis.
2. revolution of the earth around the sun.
3. revolution of the moon around the earth.
4. rotation of the moon on its axis.

24 hours
365 days and 6 hours
27 days and 8 hours
27 days and 8 hours

D Answer these questions.

1. Why does the earth appear flat to us?
2. What does the rotation of the earth cause?
3. The moon is visible in the sky because of the sun. How?
4. What is gibbous moon?
5. Name any two constellations.
6. Who are astronomers?

Learning about space is fun!



HOTS

E Think and answer.

1. Out of Mercury, Earth and Neptune, which planet is the hottest and which is the coldest? Why?
2. The sun is a star and we get heat and light from it. Why don't we get heat and light from the other stars in the sky?