SNBP International & Senior Secondary School, Chikhali, Pune.
Affiliation No. 1130703
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NOTES (TERM-2)

CLASS: 5th
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SUBJECT: Science
LESSON- L-5: Earth, Sun & Moon

I. Key words:

1. celestial
2. asteroids
3. oblate spheroid
4. geologists
5. volcanic
6. eruption
7. hemisphere
8. penumbra
9. umbra
10. eclipse
11. continental
12. helium

II. Pre activity:

Name all the planets in the Solar system and draw and colour them.

III. Differentiate between the following:

1. Rotation and Revolution

Rotation	Revolution
1) Rotation is the movement of the Earth about its own axis in 24 hours.	1) Revolution is the movement of the Earth around the sun in an oval path called an orbit in 365 ¼ days.
2) It causes day and night.	2) It causes seasons.

2. Solar and lunar eclipse

Solar eclipse	Lunar eclipse
1) In a solar eclipse, the moon comes between the sun and the Earth blocking the sun rays from reaching the Earth. Causing a shadow to fall on certain parts of the Earth.	1) In a lunar eclipse, the Earth comes in between the sun and the moon blocking the sun rays from reaching the moon. As a result, the moon is not visible from the Earth.

3. Umbra and penumbra

Umbra	Penumbra
1) Umbra is the dark shadow formed due to an eclipse.	1) Penumbra is the outer region of the shadow formed during an eclipse.
2) The umbra gets smaller as it reaches the Earth.	2) The penumbra gets bigger as it reaches the Earth.

IV. Give reasons for each of these:

1. A planet is different from a star.
Ans: Planet is not a ball of fire and hot gases as stars.

2. We see different shapes of the moon on different days.
Ans: This is due to the reason that the moon revolves around the Earth.

3. We have a leap year every four years.
Ans: The Earth completes one revolution in 365 1/4 days. A normal year has only 365 days. The extra 1/4 th day makes one full day after every four years. Hence, there is a leap year every four years.

V. Answer the questions in brief:

1. What is a comet?
Ans: A comet is a lump of ice and dirt that moves in a large orbit around the sun.

2. Why is the Earth called the Blue Planet?
Ans: The Earth is called the Blue Planet because it appears blue from space.

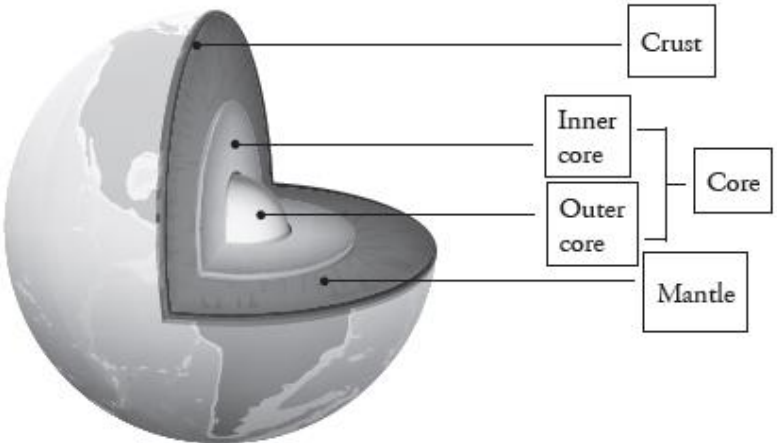
3. What is the difference between rotation and revolution?
Ans: The Earth spins on an invisible axis from west to east all the time. This movement is called rotation. The Earth completes one rotation on its axis every 24 hours. The rotation of the Earth causes day and night. The Earth also revolves around the sun. The movement of the Earth around the sun is called revolution. The Earth takes 365 ¼ days to complete one revolution.

4. Why is there no life on the moon?
Ans: There is no life on the moon because there is no air and water on the moon.

5. What causes seasons on the Earth?
Ans: The revolution of the Earth around the sun on its orbit causes seasons. The Earth takes 365 ¼ days to complete one revolution.

VI. Answer the questions in detail:

1. Describe the structure of the Earth with the help of a diagram.
Ans: Our Earth consists of three different layers, namely the crust, the mantle and the core (consisting of inner core and outer core)
1) Crust – It is the outermost layer of the Earth. We live on the crust. The crust varies from around 5 km thick (in the ocean floor) to around 70 km thick (on land where we live called the continental crust).
2) Core – It is the innermost layer of the Earth. It, in turn, has two layers: the outer core and the inner core. The outer core is made up of iron and nickel but all in liquid, molten state. It extends to about 3400 km. The inner core is also made up of iron and nickel but is different. The inner core is so deep within the Earth that it is under immense pressure. The pressure is so high that despite being so hot, it is solid. The inner core is the hottest part of the Earth.
3) Mantle – It lies between the crust and the core. The mantle is much thicker than the crust and is almost 3000 km deep. The outer region of the mantle consists of solid rocks and the inner region consists of molten rocks. During volcanic eruptions, molten magma flows out from this region to the surface of the Earth.



2. What do you understand by the phases of the moon? Draw a diagram to show the different phases.
Ans: We see different shapes of the moon on different days. As it goes around the Earth, sometimes it appears to be a bright round ball and the other times only a small part of the moon's side is lit. This is because the moon does not send out its own light. We only see the parts that are being lit by sunlight. These different stages are called phases of the moon.

3. How does a solar eclipse occur? Draw a diagram to show a solar eclipse.
Ans: During solar eclipse, the shadow of the moon falls on the Earth. Solar eclipse can be total or partial. A total solar eclipse occurs when the moon completely blocks out the sun. Only the people standing in the umbra (the darkest part) can experience total solar eclipse. The total solar eclipse makes the Earth very dark and it feels as if night has set in. This happens when the sun, moon and the Earth are in a perfect line. A partial solar eclipse occurs when the moon does not block out the entire sun. This happens when the sun, moon and the Earth are not in a perfect straight line. Solar eclipses last only for a few minutes.

4. Using a diagram, show how a lunar eclipse occurs.
Ans: Lunar eclipse happens when the Earth, while orbiting around the sun, moves between the sun and the moon, thereby blocking the sun's rays from falling on the moon. The shadow of the Earth can be seen on the moon as an eclipse.

VII. Out of the box:
1) According to you, which planet other than the Earth may have life? Why do you think so?
Ans: Mars is the planet other than moon that may have life as it has many similarities with the Earth. Traces of water are also found on it.

VIII. Post activity:
Write in short about all the eight planets and draw and colour them.

Subject Teacher H.O.D. Co-ordinator Principal