SNBP International & Senior Secondary School, Chikhali, Pune.
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NOTES (Term -2)

Class: 5 Subject: Science
Lesson-11- The Moon
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I. Key words:

1. Satellite
2. Moonlight
3. Craters
4. Celestial
5. Crescent
6. Gibbous
7. Eclipse
8. Lunar
9. Meteorologist
10. Artificial

II. Pre activity: Q1) Why is there no life on moon?
Q2) How is the atmosphere on moon different from that on Earth?

III. Name the following.

Q.1. Name the first artificial satellite, which was launched into space.
Ans- Sputnik 1

Q.2. When did the last visit by human beings to the moon take place?
Ans- 1972

Q.3. Name the first Indian artificial satellite.
Ans- Aryabhatta

Q.4. What is the distance between the moon and the Earth?
Ans- 3,86,000 kilometres

IV. Short answers questions.

Q. 1. State two features of the moon's surface.
Ans- The Moon has a rough surface. There are plains and mountains on the Moon. But a significant feature is the craters. Craters are big, deep and round hollows on the surface

Q. 2. Describe the total solar eclipse.
Ans- The Moon blocks the Sun's light when it comes between the Sun and the Earth, during its revolution around the Earth. If the Sun's light is completely blocked by the Moon, it is called a total solar eclipse.

Q. 3. Why do the sun and the moon appear to be of the same size?
Ans- In the sky, the Moon and the Sun appear to be of the same size. But the Sun is much bigger. As the Moon is closer to the Earth, it appears as big as the Sun

Q. 4. What is an opaque object?
Ans- An object that does not allow light to pass through it is known as an opaque object

Q. 5. What is a weather satellite? How is it useful to us?
Ans- Some satellites are sent to space to get reports on the weather. They take pictures of clouds and their movements are observed by meteorologists. These satellites are called weather satellites.
*They are used to forecast the weather. Dangerous storms and upcoming cyclones are caught by the weather satellites. They also forecast forest fires, floods and movement of glaciers.

V. Long answers questions.
Q.1. What is an artificial satellite? State its uses with examples of its types.
Ans- An artificial body placed in orbit round the earth or moon or another planet in order to collect information or for communication.
For example:
• Some satellites are sent to space to get reports on the weather. They take pictures of clouds and their movements are observed by meteorologists. They are used to forecast the weather. Dangerous storms and upcoming cyclones are caught by the weather satellites. They also forecast forest fires, floods and movement of glaciers.
• Some satellites map the Earth's crust to find useful natural resources like coal, petroleum and certain minerals.
• Satellites are also used to send messages from one country to another. They are called communication satellites. They are used to send TV programs from one country to another.
• Satellites also send information about the Earth, the Moon and certain celestial objects to the Earth's astronauts. This information is studied and shared with the world.

Q.2. Why is there no life on the Moon?
Ans- The atmosphere on the Moon is like a vacuum, The Sun's strong rays are especially harsh on the Moon's surface as it does not have a protective atmosphere. The side facing the Sun becomes very hot while the side facing away is very cold. The Moon does not have water or life-supporting air. So, we cannot breathe in air. We cannot hear any sound on the Moon, as there is no air to let the sound waves travel. There are no clouds to be seen above the Moon. The Moon does not have any form of life.

Q.3. What is the Moon's influence on the ocean water on the Earth?
Ans- 71% of the Earth's surface is covered with water. The pull of the Moon's gravity is not as strong as the Earth's gravity. But it has an effect on the water on the Earth's surface. Due to the Moon's gravity, it pulls the water on the Earth towards it. This causes

the up and down movement of water like waves and tides. When sea water rises and falls, it is called a tide. It occurs after every 12 ½ hours.

There are two kinds of tides:

• When the sea level rises because of the tide, it is called high tide.

• When the sea level falls because of the tide, it is called low tide.

If one part of the Earth is facing the Moon, the water in that part is pulled towards the Moon by its gravity. This causes high tides. On the opposite side there is low tide. Between two consecutive high tides, there will be one low tide. The Earth experiences two low tides every day. The strength of the tides is affected by the phases of the Moon, where the highest tides are seen during the full moon or new moon phases.

Q.4. What are eclipses? Describe the different types of eclipses observed on the Earth?

Ans- Eclipse takes place when the Sun, the Moon and the Earth come into a straight line. 'Eclipse' means 'hidden'. This causes the formation of a solar eclipse or a lunar eclipse.

*** Solar Eclipse:** The Moon blocks the Sun's light when it comes between the Sun and the Earth, during its revolution around the Earth. It might block the light completely or partially. It casts a shadow on the Earth as a result. So on the Earth, people might see only some part of the Sun or would not be able to see the Sun at all. Thus a solar eclipse takes place. If the Sun's light is completely blocked by the Moon, it is called a total solar eclipse. If the Sun's light is partially blocked by the Moon, it is called a partial solar eclipse.

***Lunar Eclipse:** During its revolution around the Sun, when the Earth comes between the Sun and the Moon, it blocks the Sun's light from reaching the Moon. It casts a shadow on the Moon. This causes a lunar eclipse. At this time, the Moon can be seen only partially or not at all. When we can see some part of the Moon, it is called a partial lunar eclipse. If we cannot see the Moon at all, as it is completely in the Earth's shadow, we call it a total lunar eclipse.

Q.5. What are the phases of the Moon? Describe each phase.

Ans- The different shapes of the Moon as we see them from the Earth, are called the phases of the Moon.

New Moon: We know that the Moon goes around the Earth in a fixed orbit. When the Moon is in the same line as the Sun, only half of it becomes illuminated. This half is facing the Sun. The half facing the Earth is completely dark. That is why it is not visible. On such a night when the Moon is not visible in the sky, we say it is a New Moon night.

Crescent Moon: When some parts of the Moon which are facing the Earth receive sunlight, these parts become visible from the Earth. This phase is called the Crescent Moon phase.

Half Moon: This phase is visible one week after the crescent moon phase. One week after the new moon, it completes a quarter turn around the Earth. During this time, half of the Moon becomes illuminated by the Sun's light. So, this phase of the Moon is called Half Moon.

Gibbous Moon: In this phase, the visible moon is more than half but less than complete.

Full Moon: One week after the half-moon phase, the Moon completes half a revolution. One half of it is illuminated by the Sun's light. This is called the Full Moon phase.

Post-activity-

Draw the pictures of different phases moon.

Subject Teacher H.O.D. Coordinator Principal