

## The Moon – Standards and Topics Covered

### Recommended for Grades K – 2

#### National Standards Covered:

- 1) Objects in the sky – The moon has properties, location, and movements that can be observed and described.
- 2) Changes in earth and sky – Objects in the sky have patterns of movement. The moon moves across the sky on a daily basis much like the sun. The observable shape of the moon changes from day to day in a cycle that lasts about a month.

#### Topics Covered :

##### *Properties of the moon that can be observed and described:*

- 1) The moon can be seen in the day or night sky.
- 2) The moon looks like it is the same apparent size as the sun.
- 3) When the moon is visible at night it is the largest and brightest object in the sky. This is because the moon is the closest natural object to the earth.
- 4) The moon has darker areas that can be observed called maria. Maria means “seas”. At one time people believed these areas were covered with water like the seas on earth. These areas formed from ancient lunar lava flows.
- 5) The moon has holes, called craters that can be observed. Craters are a result of the asteroid and meteorite impacts on the moon’s surface.
- 6) The moon has highlands or mountain ranges that can be observed.
- 7) The moon has no atmosphere. This allows the surface features of the moon to remain relatively the same over time.
- 8) The same side of the moon always faces the earth. This is called the near side of the moon.
- 9) The moon does not make its own light. The reason that we can see the moon is because it reflects sunlight.
- 10) The moon’s appearance will look the same for any one day.

***Location and movements (including patterns of movement) of the moon that can be observed and described:***

- 1) The moon rises and sets on a daily basis much like the sun.
- 2) The moon rises toward the East at various times each day and sets toward the West at various times each day.
- 3) The moon's daily apparent motion is not a real motion. It is caused by the earth's rotation.
- 4) When the moon is observed each day at the same time over the course of a month it will move its location in the sky a little bit each day from West to East. This motion is due to the fact that the moon is orbiting the earth throughout the month.

***The observable pattern of the moons appearance in the sky – moon phases:***

- 1) How the moon looks in the sky changes a little from day to day.
- 2) The amount of moon that can be seen from earth is a phase of the moon.
- 3) The moon phases have names: new moon, crescent moon, half moon, gibbous moon and full moon.
- 4) The moon's phase changes in a cyclic pattern over the course of 29 ½ days (about 1 month).
- 5) The observable pattern of the moon's appearance is predictable.