

**Lesson Topic: Unit 2 Part 2 Sun-Moon-Earth System and Seasons**

**Grade level: 6th**

**Length of lesson: 10 days 50-60 minute class periods**

**Content Standards**

**MS-ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons**

**Big Ideas:**

The tilt of the Earth and its axis as it rotates causes seasonal changes. Tides, solar eclipses, and lunar eclipses result from specific positions of the Earth, Sun and Moon.

**Essential Question(s):**

- How does Earth's moon phase affect tides on Earth?
- How would our lives be different if the Earth was not tilted on its axis?

**Student objectives (outcomes):**

Students will be able to:

- Demonstrate understanding of the cause and effect of the lunar phases on Earth.
- Describe how the tilt of the Earth affects the intensity of light from the sun, and how that causes seasons.

**Assessment Evidence**

**Performance Task(s):**

- Written Test
- Moon Model (use it, show it, explain it)
- Direct Heating Lab (Harcourt p.D92)

**Other Evidence:**

- Science Journal for collecting notes and demonstrating student understanding.

## Learning Plan

### Learning Activities:

- Teach Vocabulary Concepts: Seasons, axial tilt, lunar phases, 1<sup>st</sup> Quarter, 3<sup>rd</sup> Quarter, gravity, eclipse (solar and lunar), gibbous, waxing, waning, crescent, equinox, and solstice.
- Guided notes for science journal
- Discovery Ed. Lunar phases and tides
- Pinhole Camera to view a solar eclipse or view one online (You tube or Discovery Ed.)

### Resource:

<https://docs.google.com/a/g.kpbsd.org/file/d/0BzPxLTBI2on0aE1CN1VOUGxLcVE/edit?usp=drivesdk> Moon Flip Book, Anonymous

### Use resources from Unit 2, Part 1