

Myth Busters: Gardening by the Moon Phases

Grade: 6

GPS: S6E2. Students will understand the effects of the relative positions of the earth, moon and sun.

a. Demonstrate the phases of the moon by showing the alignment of the earth, moon, and sun.

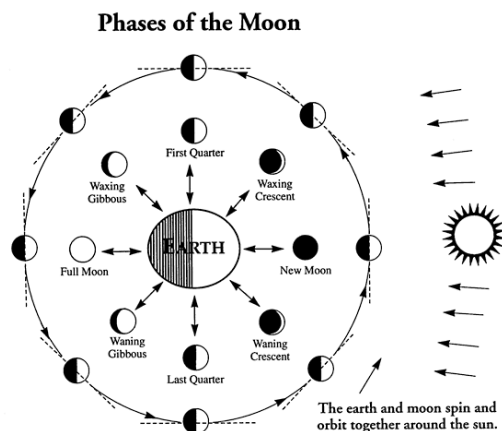
Essential Question: What are the phases of the moon and do they affect the garden?

Teacher Note: Completing various garden tasks according to the phases of the moon is a common old wives' tale. However, several studies have shown there may be truth to this old-fashioned way of planting. In a spin off Discovery Channels hit show *Mythbusters*, students in this lesson will conduct an experiment to “confirm,” “bust,” or find the myth “plausible.” This project will take place over several weeks. Below are a couple of articles about planting by moon phases. This lesson is meant to reinforce, rather than teach the phases of the moon.

- <http://www.gardeningknowhow.com/edible/vegetables/vgen/planting-by-moon-phase-fact-or-fiction.htm>
- <http://www.gardeningbythemoon.com/phases.html>
- http://www.moongrow.com/moon_phase_gardening.html

Interest Approach: Ask students if they have ever seen the show *Mythbusters*. Ask a couple of students to describe some of the experiments tested on the show. If time allows, watch a clip from a episode. Explain that many of the myths tested are urban legends and old wives tales. While some old wives tales are completely false (like hot water freezing before cold water), other have elements of truth. Let students know that over the course of the next few weeks they are going to conduct an experiment to bust or confirm a myth about planning gardening activities around moon phases.

Lesson: Students should create a chart that shows the position of the moon, earth, and sun during all phases of the moon (like the one below). Students can complete the chart without prompting to check for understanding of previous concepts. After the chart is completed, instruct students to divide the chart into quarters. Using the internet as a resource, students should search for what garden activities should take place during what quarter of the moon phases, and record that on their chart. Below are examples. Also, ask students to record information on *why* (or why not) moon gardening works.



1st Quarter

- Plant leafy greens

2nd Quarter

- Plant vegetables
- Mow lawn to make it grow

3rd Quarter

- Plant root crops
- Plant perennials
- prune

4th Quarter

- cultivate
- harvest
- transplant
- prune

Learning Activity: After students complete the internet research activity, review answers as a class. Make sure to stress that theories of moon gardening revolve around the fact that changes in the position of the moon affects gravitational pull on water. Begin discussion on how the class can test if completing garden tasks by the recommended phases of the moon is more effective than when it is not considered. Complete this activity as an individual, group, or class project. To help students develop their experiment, walk them through the worksheet below. Complete the experiments over the course of several weeks.

Check for Understanding: After the experiments are completed, allow students to present their findings. This can be as simple as writing a summary paragraph and reading it in front of the class, or as in-depth as creating and presenting using posters and PowerPoint's. Decide as a class if the myth of moon gardening is confirmed, plausible, or busted.

Mythbusters: Moon-gardening

Question: Does the moon's gravitational pull on water affect the best time to do garden chores such as planting, pruning, or harvesting?

Hypothesis: *What do think the results of your experiment will be? Why?*

Procedure: *Number and describe the steps you will take to conduct your experiment.*

Data: *What data will you use to measure the results? How will you record it – charts? Graphs?*

Do not complete until after your experiment.

Results: *What does your data say about gardening according to moon phases?*

Conclusion: *Is the gardening by moon phases “myth” confirmed, busted, or plausible?*

