

# THE PHASES OF THE MOON

## LESSON 24

*The most famous night sky object is, inarguably, the moon. What is the moon, how does it move, what does it look like in our sky, and how does it relate to other objects in the celestial sphere?*

### I. What is the moon?

- A. Earth's only \_\_\_\_\_.
- B. One of the largest moons in our solar system: over \_\_\_\_\_ the size of Earth.
- C. Maria: \_\_\_\_\_.
- D. Highlands: \_\_\_\_\_.
- E. The far side of the moon (the side facing away from us) is mostly highlands. Sometimes people call this the “\_\_\_\_\_” because it's the side we can't see, but there is no one side of the moon that is dark all the time.
- F. The features of the moon pretty much always stay the same. The only things that change the surface are impacts from a \_\_\_\_\_ or \_\_\_\_\_.

## II. Movement of the moon:

- A. The moon is \_\_\_\_\_ with the earth: the same side of the moon always faces Earth.
- B. The moon orbits around the earth at an angle, but stays close to the \_\_\_\_\_.
- C. Days and nights (sunlight and darkness) on the moon are about \_\_\_\_\_ each.

## III. What the moon looks like in the sky over time:

- A. We can see \_\_\_\_\_% of the moon throughout the course of a month.
- B. The moon sometimes appears larger when it is close to the horizon due to an \_\_\_\_\_. In reality, it is a little smaller when it's on the horizon compared to when it's high in the sky.
- C. Phases of the moon:
  - i. Waxing \_\_\_\_\_ (waxing means growing).
  - ii. First \_\_\_\_\_ moon (a quarter of the way through the phases).
  - iii. Waxing \_\_\_\_\_ (means hunchback).
  - iv. \_\_\_\_\_ moon (the entire visible surface is lit).
  - v. \_\_\_\_\_ gibbous (means decreasing).
  - vi. \_\_\_\_\_ quarter moon ( $\frac{3}{4}$  way through the phases).
  - vii. Waning \_\_\_\_\_ moon.
  - viii. \_\_\_\_\_ moon (no light reflected off the surface we can see).
  - ix. A waxing crescent is best visible on the \_\_\_\_\_ horizon just after sunset.

x. A first quarter moon will be visible at the \_\_\_\_\_ as the sun is setting.

xi. A full moon rises in the \_\_\_\_\_ as the sun sets in the \_\_\_\_\_.

xii. A third quarter moon will be at the \_\_\_\_\_ as the sun is rising.

## Notes