SESSION TWO: POPULAR MISCONCEPTIONS IN ASTRONOMY

Name _____ Date _____ Moravian University

PROJECT STAR ACTIVITY-Harvard University/revised Moravian University Astronomy
A Basic Test of Astronomical Facts and Concepts

1. One night we looked at the moon and saw:

A few days later, we looked again and saw this:

What do you think best describes the reason for this change?

a. Clouds block the moon.
b. The moon moves into the sun's shadow.
c. The moon moves around the Earth.
d. The moon passes the planets and goes in and out of their shadows.
e. The moon moves into the Earth's shadow.
f. The moon is black and white and rotates.
g. The Earth moves around the moon.

2. What causes night and day?

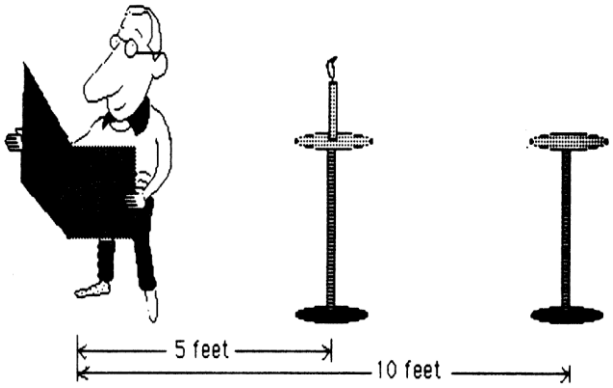
a. The Earth spins on its axis.
b. The moon blocks out the sun's light.
c. The sun goes around the Earth.
d. The Earth moves around the sun.
e. The Earth moves into the sun's shadow.

3. True Story: On October 17, 1604, Johannes Kepler went outside, looked up, and saw a bright new star in the foot of the constellation of Ophiuchus the Serpent Holder, what astronomers call a supernova. When do you think the star exploded?

a. Before October 17, 1604.
b. On October 17, 1604.
c. After October 17, 1604.

4. The man is reading a newspaper by the light of a single candle five feet away. Indicate the number of candles necessary to light up the paper to the same brightness, if the candleholder was moved to a distance of 10 feet from the newspaper.

a. 1 candle
b. 2 candles
c. 3 candles
d. 4 candles
e. 5 candles
f. more than 5 candles



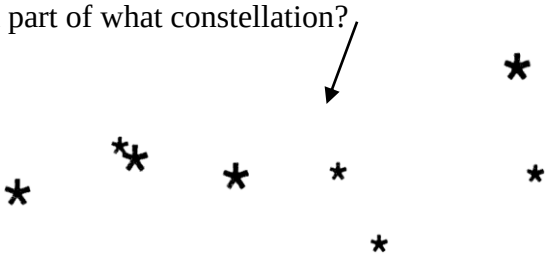
5. What causes the seasons?

a. The Earth's distance from the sun...
b The Earth's axis flipping back and forth as it travels around the sun…
c. The sun's motion around the Earth…
d. A tilted axis pointing in the same direction…
e. The shifting seasons on the Earth…
f. The change in the amount of daylight…

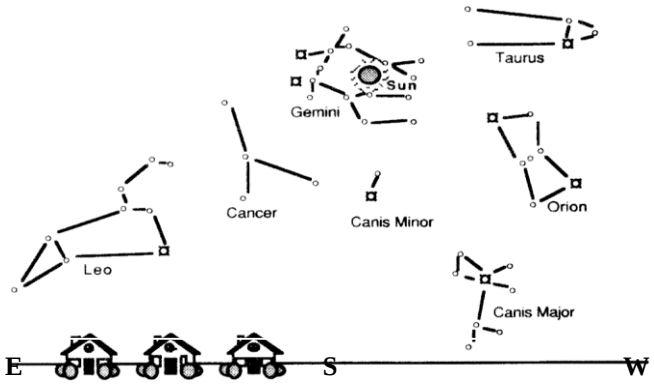
6. Which answer goes from smallest size to largest size?
   a. sun < Earth < moon
   b. Earth < moon <sun
   c. moon <sun < Earth
   d. sun < moon < Earth
   e. Earth < sun < moon
   f. moon < Earth <sun

7. What time could it be if you saw a thin crescent moon near the western horizon?
   a. sunrise
   b. noon
   c. anytime of the day or night
   d. sunset
   e. midnight
   f. not possible

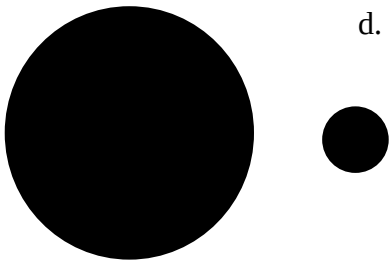
8. These stars are a part of what constellation?
   a. Orion
   b. Ursa Major
   c. North Star
   d. Pleiades
   e. Big Dipper



9. If you could see stars during the day, this is what the sky would look like at noon on a given day. The sun is in the constellation of Gemini. In what constellation would the sun be located at sunset?
   a. Leo
   b. Canis Major
   c. Gemini
   d. Cancer
   e. Taurus



10. Assume these circles represent two objects in the solar system with their diameters drawn to scale. Which objects could they represent?
    a. Earth and moon
    b. sun and Earth
    c. Jupiter and Earth
    d. sun and Jupiter



11. What is the brightest star of the nighttime sky?
    a. Venus
    b. Sirius
    c. North Star
    d. sun