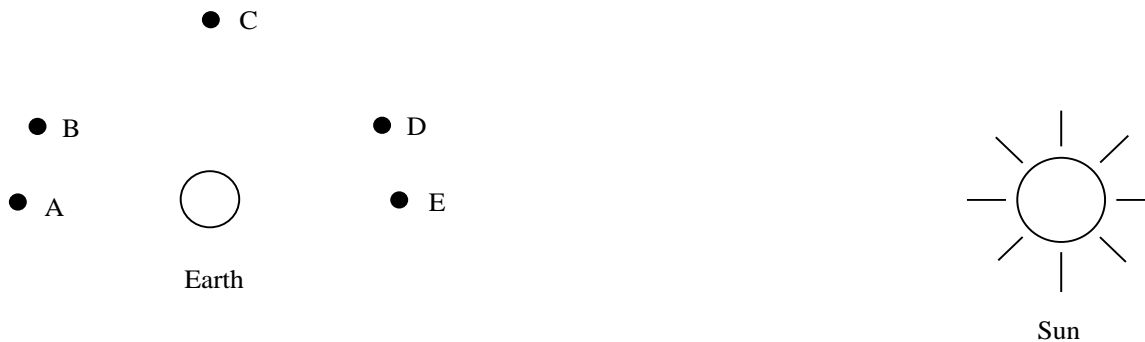


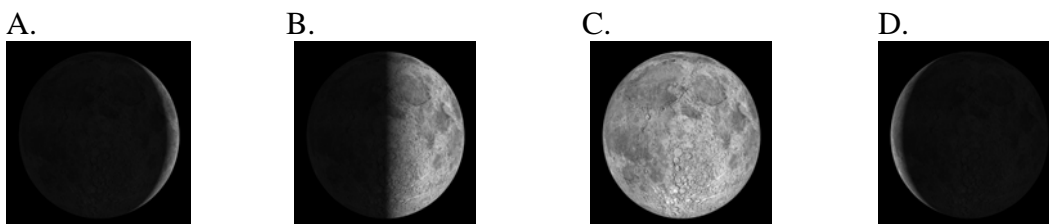
MOON PHASES – Standard I

1. Why can't you see the moon at the same time in the same place everyday?
2. The movement of the moon around earth is called _____.
3. The movement of the moon around earth is called _____.
4. The moon appears to go through _____ as it moves around Earth.
5. When we are seeing more and more of the lit side of the moon every night, we say the moon is _____.
6. When day after day we see less and less of the lit side of the moon, we say the moon is _____.
7. In which direction will the full moon rise?
8. How much of the moon is illuminated by the sun at any given time?
9. How much of Earth is illuminated by the sun right now?
10. When the Moon appears to cover the Sun (a solar eclipse), the Moon must be at which phase?
 - A. Full
 - B. New
 - C. First quarter
 - D. Last quarter
 - E. At no particular phase

11. The diagram below shows Earth and Sun as well as five different possible positions for the Moon. Which position of the Moon would cause it to appear like the picture at right when viewed from Earth?



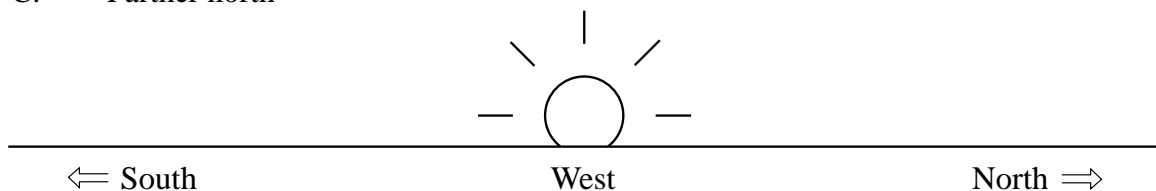
12. You observe a full Moon rising in the east. How will it appear in six hours?



SEASONS

– Standard II

1. The spin of earth on its axis is called _____.
2. If you went outside during the day or night, what could you observe that shows this motion?
3. Earth spins, not straight up and down, but on a _____ of _____ degrees.
4. The seasons are caused by the change in Earth's distance from the sun. T / F
5. When will an upright flagpole in Utah cast no shadow because the Sun is directly above the flagpole?
 - A. Every day at noon.
 - B. Only on the first day of summer.
 - C. Only on the first day of winter.
 - D. On both the first days of spring and fall.
 - E. Never from Utah.
6. If Earth's orbit were a perfect circle about the Sun so that the distance to the Sun never changed, how would this affect the seasons?
 - A. We would no longer experience a difference between the seasons.
 - B. We would still experience seasons, but the difference would be MUCH LESS noticeable.
 - C. We would still experience seasons, but the difference would be MUCH MORE noticeable.
 - D. We would continue to experience seasons in the same way we do now.
7. A student in Salt Lake City observes that on October 2, the Sun is halfway between the horizon and straight overhead when it is highest in the sky. One month later, the student will observe that the Sun is _____ when it is highest in the sky.
 - A. higher
 - B. at the same height
 - C. lower
8. On about September 22, the Sun sets directly to the west as shown on the diagram below. Where will the Sun appear to set two weeks later?
 - A. Farther south
 - B. In the same place
 - C. Farther north



9. About how many hours of daylight and darkness are there in Utah on June 21?
 - A. 12 hours of daylight, 12 hours of darkness.
 - B. 15 hours of daylight, 9 hours of darkness.
 - C. 13 hours of daylight, 11 hours of darkness.
 - D. 12 $\frac{1}{2}$ hours of daylight, 11 $\frac{1}{2}$ hours of darkness.
 - E. 10 hours of daylight, 14 hours of darkness.

SOLAR SYSTEM – Standard III

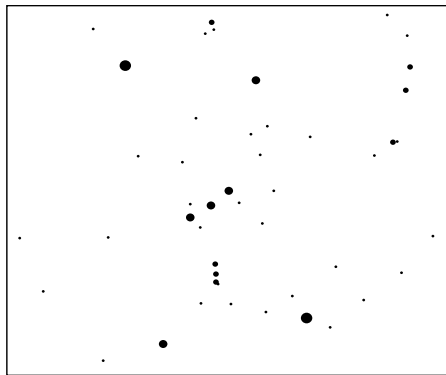
1. There is one _____ in our solar system that the planets orbit around.
2. The _____ is located between Mars and Jupiter.
3. Jupiter has the greatest gravity of any object in our solar system. T / F
4. In our solar system, we have one _____, nine _____, and over a hundred _____ orbiting around the planets.
5. Which planets are gas giants?

6. A _____ produces its own energy (light) through nuclear fusion.
7. List the planets in order from the sun.

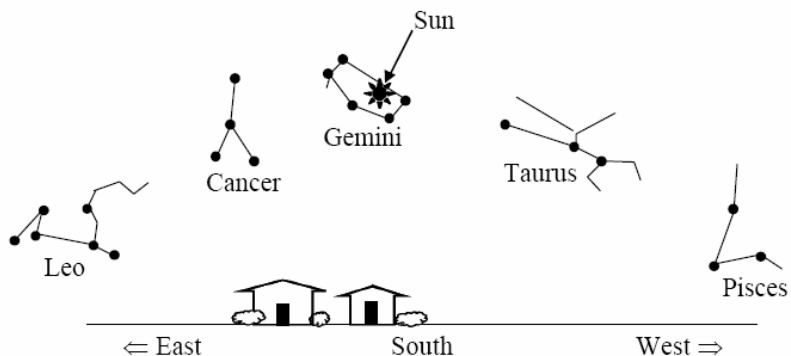
8. If Earth was the size of a 12-inch basketball and the Moon was the size of a 3-inch tennis ball, about how far apart would they be?
 - A. 4 inches (1/3 foot)
 - B. 6 inches (1/2 foot)
 - C. 36 inches (3 feet)
 - D. 30 feet
 - E. 300 feet
9. Compared to the distance to the Moon, how far away is the Space Shuttle (when in space) from Earth?
 - A. Very close to Earth
 - B. About half way to the Moon
 - C. Very close to the Moon
 - D. About twice as far as the Moon
 - E. About ten times as far as the Moon
10. How many stars are in the Solar System?
 - A. 0
 - B. 1
 - C. 2
 - D. 9
 - E. 100 billion

UNIVERSE – Standard IV

1. What is the name of our galaxy?
2. How many stars are in our galaxy?
3. A “dirty snowball” that orbits the sun is called a _____. Sometimes we can see them in our sky, too, when they are closer and brighter.
4. The stars we see in our night sky are all at the same distance from the earth. T / F
5. If you were at the North Pole, where would the North Star appear in the sky?
6. If the distance between Earth and Sun were 1 inch, what would be the distance between the Sun and the nearest star (Proxima Centauri)?
 - A. 4 feet
 - B. 16 feet
 - C. 40 feet
 - D. 420 feet
 - E. 4.4 miles
7. The illustration below shows stars in the constellation Orion. Where would you have to travel to first observe a considerable change in the pattern formed by these stars?
 - A. Across the country
 - B. A distant star
 - C. Europe
 - D. Moon
 - E. Pluto



8. 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 near the stars of the constellation Gemini. Near which constellation would you expect the Sun to be located at sunset?
 - A. Leo
 - B. Cancer
 - C. Gemini
 - D. Taurus
 - E. Pisces



9. What is the brightest star in the night sky?
 - A. Polaris
 - B. The North Star
 - C. The Sun
 - D. Proxima Centauri
 - E. Sirius