Eclipses and Seasons Test

1. What type of eclipse is occurring in the following diagram?
   - A. Lunar Eclipse
   - B. Solar Eclipse
   - C. Annular Eclipse

2. What type of eclipse is occurring in the following diagram?
   - A. Lunar Eclipse
   - B. Solar Eclipse
   - C. Penumbral Eclipse

3. During a solar eclipse what phase is the moon right before AND right after the eclipse?
   - A. Full Moon
   - B. Gibbous Moon
   - C. New Moon
   - D. Crescent Moon

4. During a lunar eclipse what phase is the moon right before AND right after the eclipse?
   - A. Full Moon
   - B. Gibbous Moon
   - C. New Moon
   - D. Crescent Moon

5. In order for a lunar or solar eclipse to occur what needs to happen?
   - A. The Sun and Earth need to be near each other
   - B. The Sun, Moon and Earth are in a straight line
   - C. The Sun, Moon and Earth form a triangle
   - D. The Sun and Moon are really far apart
6. Which of the following best describes why the Earth has the four seasons?
   A. The sun is closer to the Earth during summer and farther away during winter
   B. The sun shines directly onto the equator all year long
   C. The 23.5° tilt of the Earth is the primary reason for the seasons

7. Which statement below best describes the orbit of the Earth around the sun?
   A. The Earth orbits the sun with its axis always tilted away from the sun.
   B. The Earth orbits the sun with its axis always tilted towards the sun.
   C. The Earth orbits the sun with its axis perpendicular (90°) to Earths orbit.
   D. The Earth orbits the sun with its northern axis pointing toward the North Star.

8. Which of the statements below best describes the length of time it takes for the Earth to revolve once around the sun?
   A. About twenty eight and one half days, or one complete moon cycle.
   B. About ninety days, or one season consisting of three moon cycles.
   C. About one hundred and eighty days, or from one side of the sun to the other.
   D. About three hundred and sixty five days, or twelve moon cycles.

9. How long does it take for the Earth to go once around its axis?
   A. 12hrs
   B. 24hrs
   C. 1 week
   D. 1 year

10. Why is it summer in the Southern Hemisphere when it is winter in the Northern Hemisphere?
    A. The Southern Hemisphere is closest to the sun
    B. The Southern Hemisphere receiving the most direct rays from the sun
    C. The Southern Hemisphere has a path of warm winds from the North
    D. The Southern Hemisphere balances out the temperatures for Earth

11. What day would Utah have the least amount of daylight hours?
    A. Winter Solstice (December 21st)
    B. Summer Solstice (June 21st)
    C. Spring Equinox (March 20th)
    D. Fall Equinox (September 22nd)

12. Why does the air temperature rise in the summer?
    A. We are closer to the sun
    B. The sun's rays are more direct and days are longer
    C. The amount of daytime is reduced in the summer

13. On what two days would Park City, Anchorage, Melbourne and Baghdad have an equal amount of day and night?
    A. Winter Solstice and Summer Solstice
    B. Spring Equinox and Fall Equinox
    C. Winter Solstice and Spring Equinox
    D. Fall Equinox and Summer Solstice
Use this diagram to answer the following two questions

14. In the northern hemisphere what season is occurring in the above diagram?
   A. Winter
   B. Summer
   C. Spring
   D. Fall

15. In the northern hemisphere what season will occur in 6 months from the time of the above diagram?
   A. Winter
   B. Summer
   C. Spring
   D. Fall

16. How many seasons can occur at the same time on Earth?
   A. 1
   B. 2
   C. 3
   D. 4

17. If it is spring in the southern hemisphere what season is it in the northern hemisphere?
   A. Spring
   B. Summer
   C. Fall
   D. Winter

Use your knowledge about direct and indirect sunlight to answer the following three questions.
(Sunlight is shining on four metal plates with temperature probes installed on each)

18. Which of the metal plates would be the warmest?
    A. A
    B. B
    C. C
    D. D

19. Which of the metal plates would be the coolest?
    A. A
    B. B
    C. C
    D. D

20. Which of the two metal plates would be the same temperature?
    A. A and B
    B. B and C
    C. C and D
    D. D and A
On an index card draw what you see here:
Do not write on this!!!

This diagram is to represent what the Earth looks like for each of the four seasons.

- Label the sun - “SUN” (1 point)
- Use a line to represent the tilt on each of the four Earths (4 Points)
- On each Earth label the seasons that are occurring. (8 Points)
- Be sure to label the seasons in the correct locations
- Be sure to label the seasons in the correct hemisphere
- Draw in the orbit of the Earth (1 Point)
- WRITE YOUR NAME ON THE INDEX CARD!!!!

Bonus question:

A square house is built with four south facing sides. Where is it located?

Put your answer on the index card!!!