**Astronomy Ranking Task:**
The Seasons

**Exercise #3**

**Description:** In the figure below parallel beams of sunlight are projected through equal sized cutouts of a screen and then strike a spherical globe at locations A - D. Note that A and C are at the same “latitude” on the globe.

**Ranking Instructions:** Rank the size (from largest to smallest) of the illuminated areas (A – D) on the globe.

**Ranking Order:** Largest 1 _____ 2 _____ 3 _____ 4 _____ Smallest

Or, each of the illuminated areas are equal. ________ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

**B. Ranking Instructions:** Rank the brightness (from brightest to dimmest) of each illuminated area on the globe (A – D).

**Ranking Order:** Brightest 1 _____ 2 _____ 3 _____ 4 _____ Dimmest

Or, the areas are all the same brightness. ________ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
C. **Ranking Instructions:** Imagine that you placed very sensitive thermometers against each illuminated area on the globe and measured its temperature. Rank the temperature (from coolest to hottest) of each illuminated area (A – D).

**Ranking Order:** Coolest 1 _____ 2 _____ 3 _____ 4 _____ Hottest

Or, the temperatures of each illuminated area would all be the same. ________ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________