## Astronomy Ranking Task: <br> 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 ( $\mathrm{A}-\mathrm{D}$ ) on the globe.

Ranking Order: Largest 1 $\qquad$ 2 $\qquad$ 3 $\qquad$ 4 $\qquad$ Smallest

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

Carefully explain your reasoning for ranking this way:
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B. Ranking Instructions: Rank the brightness (from brightest to dimmest) of each illuminated area on the globe ( $\mathrm{A}-\mathrm{D}$ ).

Ranking Order: Brightest 1 $\qquad$ 2 $\qquad$ 3 $\qquad$ 4 $\qquad$ Dimmest

Or, the areas are all the same brightness. $\qquad$ (indicate with check mark).

Carefully explain your reasoning for ranking this way:
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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 $\qquad$ 2 $\qquad$ 3 $\qquad$ 4 $\qquad$ Hottest

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

Carefully explain your reasoning for ranking this way:

