Pre-/ Post-Assessment For D.A.S.L. Compact Disk

This is a sample of the some of the questions teachers may wish to use to help measure student understanding.

Topics:

1. Size
2. Apparent Motion
3. Composition and Structure
4. Activity
5. Behavior - Cycles
6. Solar Modeling

1. The **apparent size** of any object is directly related to the distance between it and an observer. Describe how you think the apparent size of the sun changes (if at all) over the course of a year. If it changes, explain by how much and when you think it is the greatest in size. If you think it does not change, explain why.

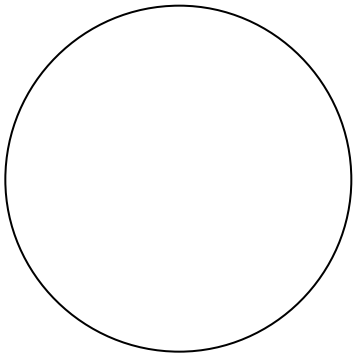
2. Describe, if you can, the **apparent motion** of the sun across the sky. Discuss how it moves from day to day and also over the course of an entire year. Describe a way you could possibly test your description below.

3. The sun is spherically shaped like the planets, but many orders of magnitude larger in mass. Draw if you can a diagram modeling the structure of the sun's layers similar to that of Earth's layers.

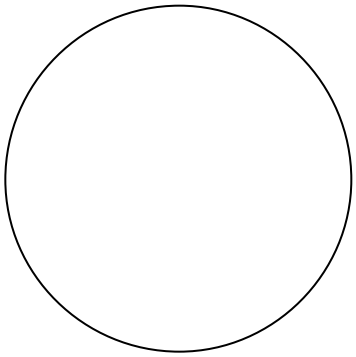
4. To the casual observer, the sun appears constant, but on more detailed analysis, scientists have observed that the sun is quite dynamic. Describe what scientists refer to as *solar activity* and how it affects the Earth.

5. Most of this solar activity is associated with an 11 year cycle, meaning the sun goes from periods of low activity to high activity and back again roughly every 11 years. What do most scientists feel is responsible for creating this change? Describe and / or draw a representative sample of the sun at low **and** high activity.

Low Activity



High Activity



6. How does studying the sun help us improve our understanding of other stars in the night sky? List some of the important areas of solar research that scientist are still trying to better understand.

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