

**Seasons**  
**Lesson Seven**  
**Tracking the Sun**

- Standard II: Students will understand how Earth's Tilt on its axis changes the length of daylight and creates the seasons.
- Objective 2: Explain how the relationship between the tilt of Earth's axis and its yearly orbit around the sun produces the seasons.
- Indicator b: Compare the hours of daylight and illustrate the angle that the sun's rays strike the surface of Earth during summer, fall, winter, and spring in the Northern Hemisphere.
- Indicator c: Use collected data to compare patterns relating to seasonal day light changes.
- Indicator d: Use a drawing and/or model to explain that changes in the angle at which light from the sun strikes Earth, and the length of daylight, determine seasonal differences in the amount of energy received.
- Supplies: -Clear dome  
-Permanent marker  
-Circle Chart  
-Compass

Overview

As the seasons change from summer to winter the sun's angle changes and it seems to be lower in the sky each month in the south. A second confirmation that the sun gets lower in the southern sky each month is that the shadows of flagpoles and other high structures get longer each month at noon.

The opposite happens when the seasons change from winter to summer. The sun's angle changes and it seems to be higher in the sky each month each month in the sky. Also flagpoles and other high structures get shorter each month at noon.

Directions:

1. Follow the directions of the dome as given in the direction's booklet.
2. Do this each month on about the same day in September, October, November, and December.
3. On another dome, do it again on the same day in January, February, March, and April.
4. Compare the two domes.