SEASON LESSON #1

Overview:
Graphing the earth's monthly distances from the sun will help students realize that the earth's distance from the sun does not determine the earth's seasons.

Supplies:
- earth's monthly distances from the sun (below)
- graph paper
- Astronomy Journal

Procedure:

1. Students graph the distance the earth is from the sun during each month of the year. (see data below)

2. Summarize their findings. Distance from the Sun varies little throughout the year. Infer that earth's orbit is more circular than elliptical. Extend this to understand that if the distance changes little, our seasons are not related to how close we are to the sun. In fact, the earth is slightly closer to the Sun during the winter.

3. Students glue their graphs in their Astronomy Journals and write up their findings.

Objective:
To correct the misunderstanding that the seasons are determined by how close or far the earth is from the sun.

Key Concepts:
- To understand that the earth's distance from the sun varies little throughout the year.
- The earth's orbit around the sun is more circular than elliptical.
- The earth is, in fact, closer to the sun in the winter than the summer.
- Seasons are NOT due to the distance the earth is from the sun.

Distance Between the Earth and the Sun in Kilometers

Jan 1	146,100,000
Feb 1	146,400,000
Mar 1	147,300,000
Apr 1	148,500,000
May 1	149,700,000
June 1	150,600,000
July 1	151,100,000
Aug 1	150,900,000
Sept 1	150,100,000
Oct 1	148,900,000
Nov 1	147,700,000
Dec 1	146,600,000