Solar System—Lesson Two

Learning about Scale

Standard III: Students will understand the relationship and attributes of objects in the solar system.

Objective I: Describe and compare the components of the solar system.

Indicator c: Use models and graphs that accurately depict scale to compare the size and distance between objects in the solar system.

Materials:
1. Calculator
2. Desk-sized map of the United States
3. Wall map of the United States
4. Worksheet: Finding Distances on a Map

Directions
1. Pass out a map of the United States with a scale ratio.
2. Tell the students that on every map, there is a scale that can help us find the actual distance is from place to place. The ratio is usually in inches to miles (ex. 1 inch = 100 miles).
3. Do this first exercise with the students on a big map in front of the class.
4. We want to find the true distance (as the crow flies) from Salt Lake City to New York.
5. Measure with a yardstick how far it is in inches.
6. Multiply the distance in inches with the number that the inch represents with your calculator.
7. The answer will be the true distance (as the crow flies) from Salt Lake City to New York.
8. Pass out a desk-sized map of the United States and the worksheet to every person.
9. Give out assignments for the students to find distances from one city to another city on their maps. Have them log the distances on the worksheet given.
10. Have a discussion by asking the following questions.
    a. Why do we have scales on maps?
    b. Why can't we just make the map the actual distance?
    c. How can scales help us solve the problem to questions 12?
    d. Why do we like to know distances?