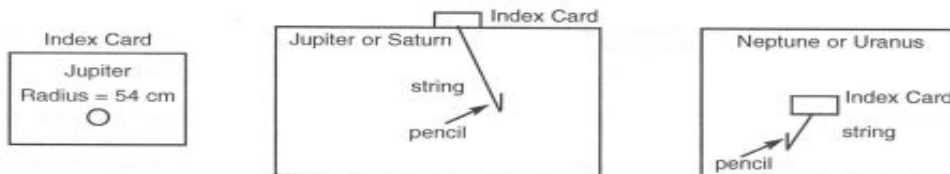


Making a Scale Model of the Planets *(cont.)*

Materials: colored paper for each planet, including butcher paper for 4 largest planets, 4 meter sticks, 15 yd. (13.5 m) of string, 4 index cards, hole punch, five pencil compasses, Diameters of the Planets (page 6), scissors, tape

Procedure: Use the pencil compass to draw the smaller planets on the colored paper. The four largest planets will need to be drawn according to the following directions.

- ◆ Cut pieces of string the length of the radius of the largest planets plus about 4 in. (10 cm).
- ◆ Write the names of the planets and the lengths of the radius (for this scale model) on the index cards. Punch a hole in the middle of one long edge of the card and tie a string to it.
- ◆ Tie a loop in the end of the string so a pencil can be placed in it. When the string is stretched to its full length it should equal the radius needed for this model.
- ◆ Pin the colored paper to a bulletin board or place it on the floor. Center the index card at the top of the long edge or center of the paper and hold it so it will not move. Place the pencil in the loop and stretch the string. Draw a semicircle for Jupiter and Saturn.
- ◆ When drawing Neptune or Uranus, place the card in the center of the paper and tack or hold it in place. Stretch the string with the pencil and draw a large circle.



Cut out the planet and then label it with its name and diameter in miles and kilometers. Tape the planets together so they can be compared, superimposing them as shown in the drawing below.

Guess how many Earths fit across the diameter of Jupiter *before* measuring. _____

Use the Earth model to measure how many will fit across Jupiter. _____

- (1) Earth
- (2) Venus
- (3) Mars
- (4) Mercury
- (5) Pluto

