


LESSON

- **Lesson: Refining the relationship between the circumference and the diameter of a circle**

Provide several large circular objects such as a hula hoop;  sign; table cloth or rug; laundry basket; garbage can lid. Also have string, rulers, scissors, and scotch tape available for students to use.

- A. Instruct students to work in pairs to do the following for each object:
- Place a piece of string around the circumference of the object. Cut it off.
 - Extend the string three times across a diameter of the object.
 - Measure the piece of leftover string to the nearest centimeter.
 - Measure the diameter of the object to the nearest centimeter.
 - Find $\frac{1}{7}$ of the diameter, and round the answer to a whole number of centimeters.
 - Notice that each piece of leftover string is very close to $\frac{1}{7}$ of the diameter of that circle.
- B. Emphasize that from now on, we will use this approximation to relate the diameter and circumference of a circle:

The circumference is very close to $3\frac{1}{7}$ times the diameter.

Make it clear to the class that this approximation is well within the limitations of ordinary measurements, and it is certainly precise enough for all practical purposes.