Scavenging Circles

This scavenger hunt will have students running around in circles—and learning about pi.

Grouping
Small groups

You'll Need
For each group:
- Cardboard tape measure
- Paper
- Pencils

Teaching Tip
If it's too difficult for students to do this activity as a scavenger hunt, have them gather a variety of circular objects and do the activity as a class.

Writing Connection
Ask students to explain how they could use the formula $C = \pi d$ to find either the circumference or diameter of a circle if they know the other.

PREPARATION
Prepare a list of circular items that students are to find on their scavenger hunt. Try to choose objects of different sizes, such as coins, coasters, jar lids, rolls of tape, hoolaws, bicycle tires, plates, and cooking pot lids.

DIRECTIONS
1. Divide the class into groups of four or five. Give each group the list of circular items and ask them to gather as many of the items as they can find. You can devote class time to the hunt, or have students divide the list among the group members and search for the items at home.
2. After students have gathered their items, have students measure the circumference and diameter of each one and record the results. Suggest that students make a chart such as this:

Object	Circumference	Diameter	Circumference ÷ Diameter (Decimal to Hundredths)

3. Ask students to study the measurements to see if they can find a relationship between the circumference and diameter of each circular object. If they express the ratio of circumference to diameter for each circle, what similarities do they see? Suggest that students try dividing each object's circumference by its diameter. They should see that the circumference is always about three times the diameter.
4. You may want to explain that a formula expresses the relationship between the circumference and diameter of any circle, where the circumference (C) is equal to about 3.14 times the diameter (d). The value of 3.14 is called pi (π) and the formula is expressed $C = \pi d$.

ASSESSMENT
Observe students' accuracy in measuring the circumference and diameter of each circular object. They will be more successful finding a relationship if they measure accurately.