



LESSON 1

suitable for all ages

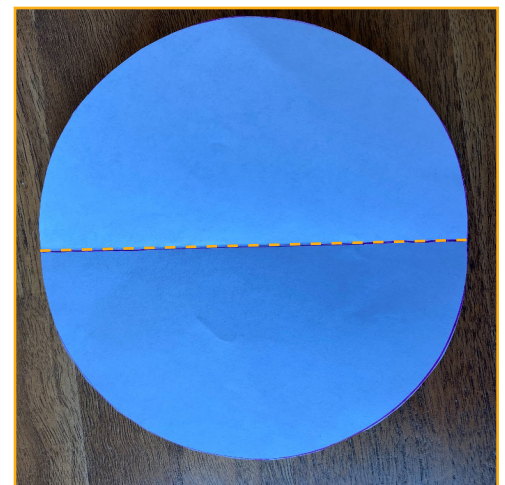
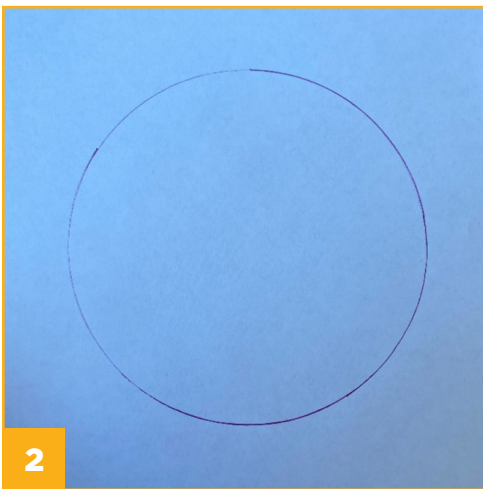
EXPLORING

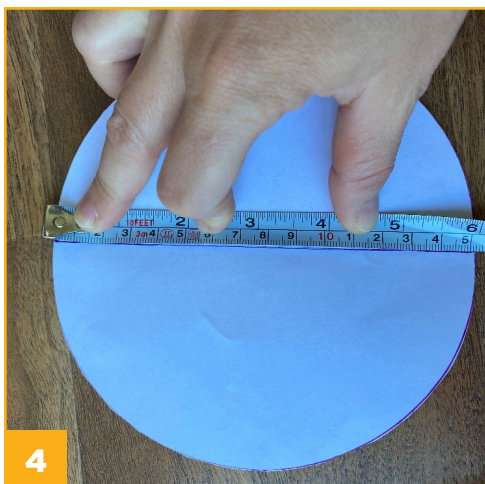
Materials Needed

- An object with circular top or bottom (cups, bowls, cookie jar, etc)
- Pencil or pen
- Piece of paper
- Tape measure
- String, yarn, etc
- Basic calculator

Collecting Data

1. Find all objects around the house with a circular cross-section (such as cups, bowls, candles, cookie jar, pie plate, pizza crust, etc)
2. Trace the outline of the part of the object that has the circular cross section (bottom of a cup for example)
3. Cut out the circle, fold it in half, and draw a line on the crease. What did you just draw?





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- Use tape measure (if you don't have a tape measure, use a string, thread, ribbon, twine, or yarn) and carefully measure the circumference and diameter
- To get the most accurate measurement of the circumference, wrap a piece of string, yarn, etc around the cut out circle. Then cut out the piece of yarn and line it up on the tape measure. If the material is a stretchy material, try your best not to stretch it.
- Record your data using the table below. The length going through the center of the circle and connecting 2 points on the circle is called the **diameter**. The distance around the perimeter of the circle is called the **circumference**.

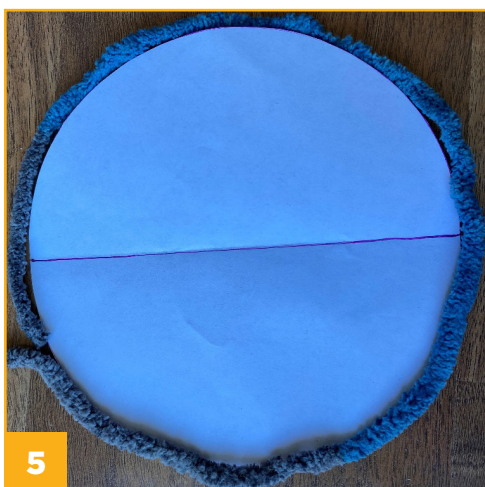
OBJECT NAME	CIRCUMFERENCE	DIAMETER	CIRCUMFERENCE ÷ DIAMETER
Top cross-section of a bowl	49 cm	15.2 cm	$49 \div 15.2 = 3.22$

Repeat the same process for 2 more objects.

Analyzing Data

- What do you notice about all the numbers in the third column?
- What conclusion can you make about the relationship between the circumference and diameter of the any circle, regardless of sizes?

MAKING CONCLUSION



5



6

EXTENSIONS

Apeeling Problem

(Looking at the digits of pi and recognize patterns, if any)

PI DAY CELEBRATION

- Pi Day at the Park
- Pie eating contest
- Pizza eating contest

HISTORY OF PI

RESOURCES

<https://www.piday.org/>

<https://www.pinterest.com/amp/SmithCurriculum/pi-day-activities-and-more/>

