Identifying Circles in Pottery

Standards Covered

Common Core:

7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

Guiding Questions

Why are circles measured? Why is it important to know what the circumference and the area of a circle are in an archaeology field?

Procedure

Video - Watch Adam explain why looking at the circumference of pottery rims is so important

Junior Archaeologist Assignment (Logbook)

Interactive Homework (Pottery Rim Size Chart)

Word Wall

Radius – The line length from the mid point of a circle to the outside edge
Diameter – The line length from one side of the circle to the other that goes through the mid point

Chord – The length of a line that goes from one edge of a circle to another but does not go through the mid point

Center – The very middle point of a circle-it is the same distance to all points on the outside of the circle

Circumference – Length of the outside of the circle

Open Vessel – Pottery object that has a wide rim, such as a bowl

Closed Vessel – Pottery object that has a narrow rim, such as a vase

Junior Archaeologist Assignment

On your logbook page, follow the instructions to find the radius, diameter, circumference, and one chord on the circle. As you go through the logbook, you will also be looking at patterns between diameter and circumference and work to see what their relationship is.

Interactive homework

At your house, look for different vases or bowls that have a rim. Look at the size of the rim compared to the rest of the object-is is bigger or smaller? Compare your object to what Adam talked about. Do things that have wider rims tend to be more decorated on both sides? What about objects with smaller rims (like flower vases)? What do your wide rimmed objects have in common with each other compared to your smaller rimmed objects?

After you are done, try to find the diameter, radius, and circumference of your rim. Do you see any patterns when you compare these things with other rims of objects? What you do you notice about the rim size compared to the rest of the object? Use the rim size chart attached to the main page of this lesson to see if your circles match up with those that archaeologists find in the field.