Name _____ Date _____ Period _____

WHAT IS THE SHAPE OF EARTH?

GOAL:

The purpose of this activity is for students to determine whether or not the Earth is a perfect sphere.

DIRECTIONS:

1. Obtain 7 meter sticks, 7 pieces of string, 6 different types of balls, and a globe.
2. Measure the equatorial circumference and polar circumference of each object.
3. Calculate the roundness ratio of each object. If the roundness ratio is exactly equal to 1, then the object is a perfect sphere.

FORMULA:

> ROUNDNESS RATIO = EQUATORIAL CIRCUMFERENCE / POLAR CIRCUMFERENCE

DATA TABLE:

Object	Equatorial Circumference	Polar Circumference	Roundness Ratio
1. basketball			
2. soccer ball			
3. football			
4.			
5.			
6.			
7. globe			

POST-LAB QUESTIONS:

1. What is the roundness ratio of the Earth as shown by the globe? Is the Earth a perfect sphere?

2. Is the Earth larger through the equator or through the poles? Explain how your observations support your answer.

3. Which of the balls is not a perfect sphere? How do you know?