**Title**: [Measuring the Earth](Title:%20(add%20a%20title%20here%20and%20link%20to%20actual%20lesson)Contributor:%20(add%20name%20here)Subject%20Matter:%20(specify%20content%20areas%20covered)Grade%20Level:%20add%20grade%20levels%20hereDescription:%20add%20a%20brief%20description%20of%20the%20lesson%20and%20explain%20why%20you%20think%20it%20is%20an%20exemplary)  
**Contributor**: Daniel Finger  
**Subject Matter**: Diameter, Circumference, Data Collection

**Grade Level:** 9-12  
**Description**: In this activity, students will work in small groups to take measurements of the Earth using a meter stick and a scientific calculator. They will research the distance between the school and a point directly north or south of the school in a different state, in order to help with the measurements. They will take the measurement of an object near the school, such as a flag pole and the shadow of that object and calculate the angle by dividing the height of the object by the length of the shadow. The students will then solve for the circumference of the Earth by cross multiplying and dividing. Angle of object/360 degrees = distance from school to other point/circumference of the Earth. They will then read about Eratosthenes and see how he measured the same thing while living in ancient Greece. This activity will get the students to use a calculator and computers in order to find their own calculation of the circumference and the accepted value. They can also put their procedure onto Power Point to show how they came to their conclusions and show where they found the accepted value on the internet.  
**Computer Environment/ Resources**: Each group will need a computer and a calculator. The teacher will need internet access and a connection to a large screen so he or she will be able to show a video about Eratosthenes.