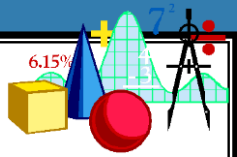
Mathematics, Geometry
Unit VIII: Lesson 1

Application: **Around the World**



Although the earth is not really a sphere, it can be treated as though it were spherical for many purposes. Derive the formula for the length of any parallel of latitude around the earth in terms of the equatorial distance around the earth and the latitude angle, if we assume a spherical shape for the world.

Use your formula for the length of a latitude parallel to find the distance around the earth at the Arctic Circle and the distance on the latitude parallel on which you live.

Make a paper Mache model or display to show your findings. Extend your formula to the surface of the moon. Could it be used to determine the size of craters and more on the moon?