Create a Tennis Ball Globe

You will create a scale model of Earth using a flat map of Earth and a tennis ball.

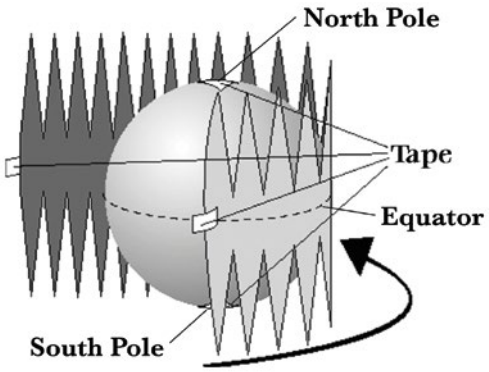
MATERIALS

For each student group:

- *Create a Tennis Ball Globe* Student Handout
- Scissors
- Tennis ball
- Tape
- Tape measure

Do the activity

1. Carefully cut out the Map Cutout on page 2 of this handout.
2. Wrap the cutout around the tennis ball so the equator (the latitude line that runs around the middle of Earth) goes around the middle of the ball.
3. Tape the map together at the equator.
4. Put a piece of two-sided or folded-over tape at each of the poles—the top and bottom of the ball.
5. Bring the points of the map together by pressing them onto the tape one by one.
6. Once all of the points are together, put a piece of tape on each of the poles to hold them in place.
7. You now have a spherical map of Earth on your tennis ball—a tennis ball globe.



Determine the scale of your globe

1. Measure the circumference in centimeters of your tennis ball globe.

   Record the measurement. _____

2. The circumference of Earth is about 40,000 kilometers. How many kilometers on Earth's surface does 1 centimeter on the tennis ball globe represent? Be sure to show your work.

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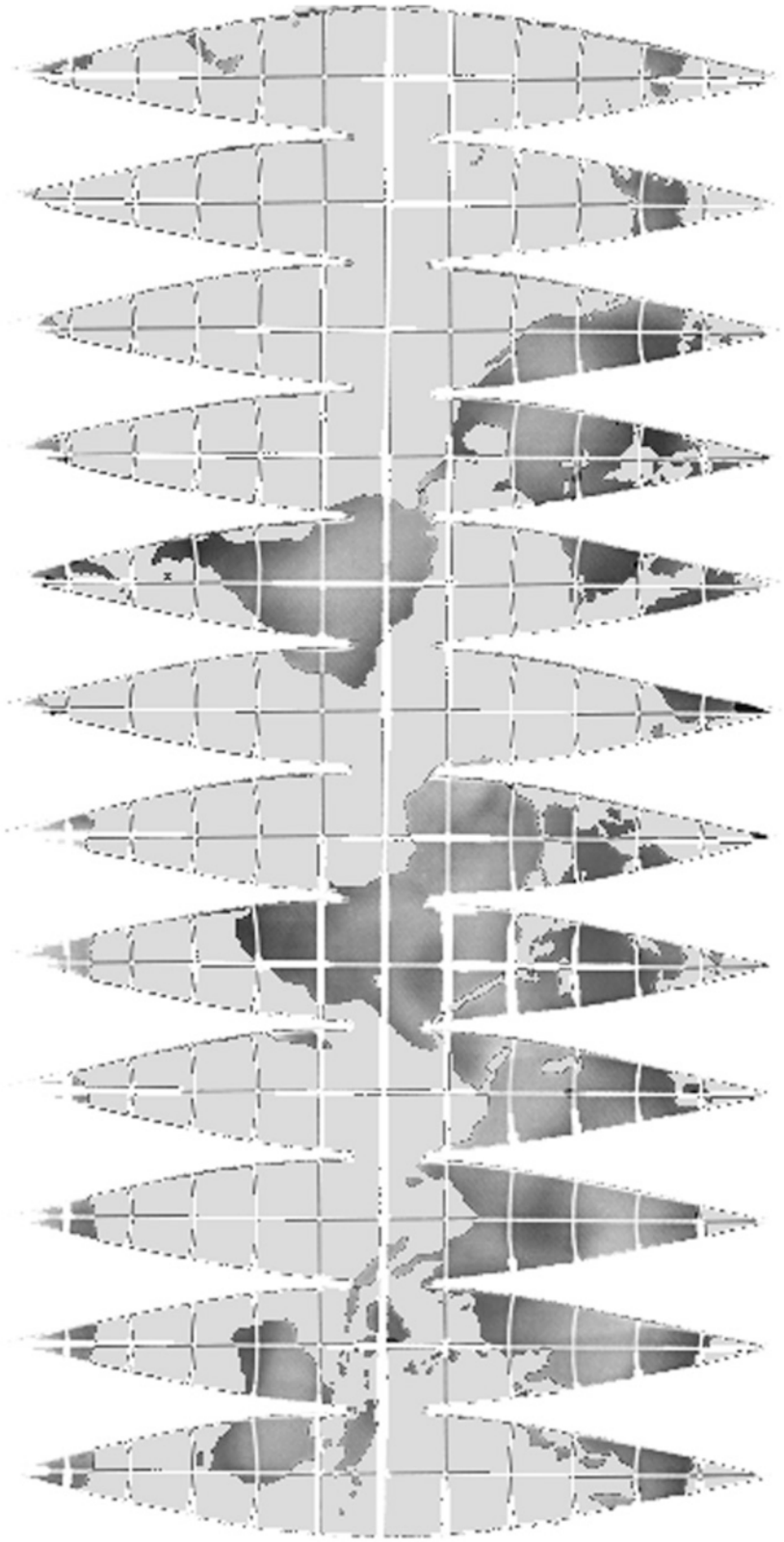
Map Cutout



Photocopy machines sometimes cause changes in scale. If the square below is 1 inch on each side, the Map Cutout should fit your tennis ball.

1 inch square