



THE WOBBLER

Use eggs to demonstrate how the composition of the Earth affects its motion.

Materials

- Marking pen or marker, like a Sharpie
- 1 raw egg
- 1 hard-boiled(cooked) egg



Note: Have an adult wash the raw egg and hard boil the other egg.

Always wash your hands after touching an uncooked egg, as it may contain harmful bacteria.

Procedure

- Allow the boiled and raw eggs to stand at room temperature for about 20 minutes
- Mark numbers on each egg: boiled #1, raw #2
- Place both eggs on a table
- Try to spin each egg on its side

Results

The hard-boiled egg spins easily and continues to spin for a few seconds. The raw egg wobbles and stops more quickly than the cooked egg.

Why?

The material inside each shell affects the way it spins. The cooked egg has a solid content that spins with the shell. The liquid inside the raw egg does not start spinning with the movement of its shell. The outer shell motion does cause the liquid to move, but slowly. The sluggish movement of the liquid causes the egg to wobble and stop moving more quickly.

Parts of the Earth's mantle and outer core are liquid. So the Earth, like the raw egg, wobbles during its rotations. However, unlike the egg's wobbling, the earth's wobbling is very slight and takes many years for a noticeable change.

