

HOW TO BE A SCIENTIST

More than likely, you've never bothered to question Earth's round shape. I'll bet you can't even remember a time when you didn't think the earth was round! We just *know*, don't we?

Knowing that the earth is a sphere (not a perfect sphere, mind you—it bulges a bit in the middle) helps us understand many scientific concepts. The seasons, for instance. Or eclipses. Or the cause of day and night. And don't forget gravitational force! And Earth's magnetic field! The shape of our planet is the key to unlocking SO MUCH SCIENCE.

But you don't need to travel around the globe or blast into outer space to understand Earth's shape.

TRY THIS!

What you'll need:

- a large ball
- a piece of cardboard
- a small figurine or toy



Remember the illustrations of ships that sailed on round and flat versions of the earth? You can model the same concept!

Hold the ball in front of you at eye level. Now hold your toy at the back of the ball, and slide it up over the top and toward you. You will notice that the first thing you see is the top of the toy. As it moves closer to you, more of it will appear, just like ships at sea. This proves that Earth is round!

Next, hold the piece of cardboard in front of you at eye level. Hold the toy at the far end of the cardboard. Then slide the toy closer to you. You will see the entire toy the entire time. It will just appear larger as it gets closer to your eyes. This is not how we see objects move on the surface of the earth, so this proves that Earth is not flat.

TRY THIS, TOO!

What you'll need:

- an area outside with a tall play structure



You can also demonstrate why a crow's nest helps sailors spot land, as shown in the illustrations. Find an area outside where you can see far into the distance at the horizon. First, look into the distance from the ground. Then climb a tall play structure and look in the same direction. You should be able to see farther from a higher position. If Earth were flat, you'd see the same view no matter how high you were.

Remember to have fun experimenting, and never stop questioning what you THINK you know!