About Foucault's Pendulum

To show that the earth rotates, you can repeat in an experiment performed in 1851 by the French physicist Jean Bernard Leon Foucault. He suspended a 200 foot (61 km) pendulum from the Pantheon, a huge public building in Paris. The weight traced the path of the earth on sand on the floor.

You can use your living room and trace the same path with a more modest pendulum. You don't need any sand.

**What to do:** Push the knitting needle into the ball and attach the end of the knitting needle to the length of string or wire. Tape this "pendulum" to the ceiling so it can swing freely. With the crayon draw a line on the index card and tape it to the floor directly under the knitting needle. Start the pendulum swinging back and forth following the line on the index card. Note what happens after 2 hours.

**What happens:** Although the pendulum is still swinging in its original path, it is no longer swinging over the crayon line you made.

**Why:** Its inertia keeps the pendulum swinging in the same plane. But it no longer swings over the chalk mark because the room has moved! It moved because of the earth's rotation.

A large pendulum demonstrating earth's rotation is kept swinging in the United Nations building in New York City.

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**YOU NEED**

- knitting needle
- ball
- 10 feet of nylon fishing line or thin strong wire
- tape
- large index card
- crayon