



## EARTHQUAKES and SEISMOLOGY (3-5)

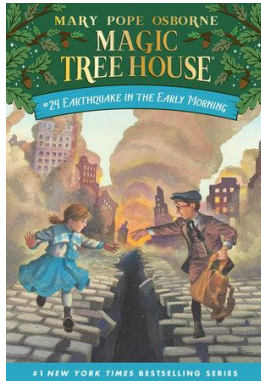
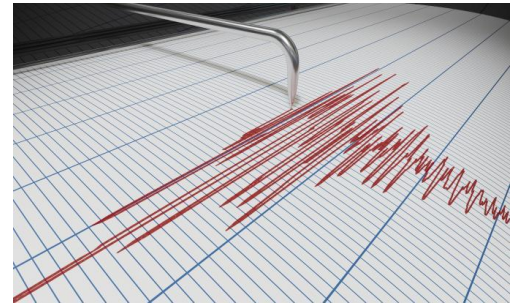
### The SCIENCE of EARTHQUAKES:

**Geologists** are scientists who study how the earth is made and how nature affects it.

The earth's surface is made up of huge blocks of rock called **tectonic plates**.

When the plates move, the ground shakes. It is called an **earthquake**.

**Seismology** is the study of earthquakes.



### LITERACY CONNECTION:

[Earthquake in the Early Morning](#) by Mary Pope Osborne takes you back on a magical adventure to the great [San Francisco earthquake of 1906](#).

### ACTIVITY: BUILD a SEISMOGRAPH

Materials: cardboard box, tape, scissors, cup, string, marker, paper, small weights (coins, etc.) or clay, and a partner

1. Place the box with the open side facing you. Punch two holes in the top.
2. Cut an 8-inch slot (sideways) in the back or 2 slits near the bottom (shown here →)

3. Punch one hole in each side of the cup, on opposite sides, and one hole in the bottom.

1. Tie a piece of string to each hole.
2. Pull the pieces of string through the box holes, and tie or tape them above the top of the box so the cup hangs down inside.

**TIP:** The bottom of the cup should be about an inch above the bottom of the box.

3. Push the marker through the hole until it touches the box and fill the cup with weights.
4. Slide the paper through the hole(s) in the box, with the marker touching it in the center.
5. Time to MAKE a QUAKE! Shake the box while your partner pulls the strip of paper through slowly. The marker will leave behind a seismographic reading!



**EXPLORE:** Check out this [movable model](#) that shows how the earth's crust moves to make mountains and trigger volcanoes.

For step-by-step instructions, watch the video at: [Seismograph STEM Activity](#)

*This at-home educational activity is from the Literacy Coalition of Palm Beach County's literacy-based Stories & STEM program. Stories & STEM is made possible with support from Prime Time Palm Beach County, Inc., which receives significant funding from the Children's Services Council of Palm Beach County, Inc.*

*Having fun? Send pictures or video links of you and your Stories & STEM projects to [csharkey@literacypbc.org](mailto:csharkey@literacypbc.org)*