Interested in learning more?

You can learn more with these fun extension activities!

Scan the QR code to learn more about earthquakes with this interactive resource!

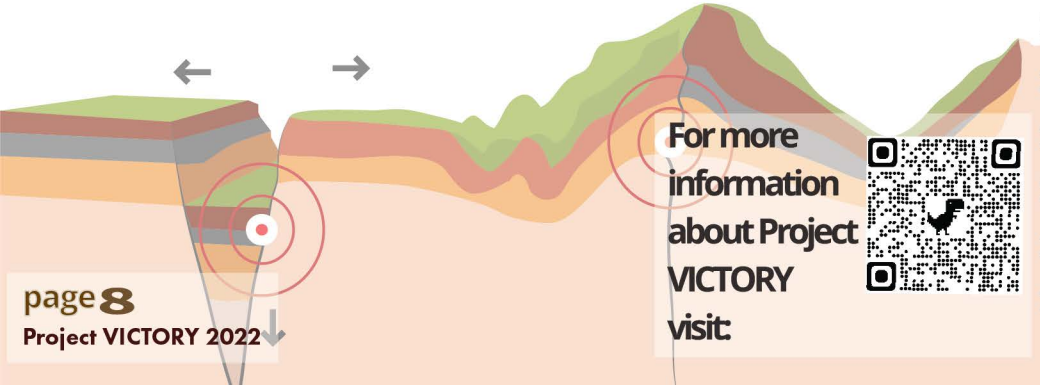
or go to: tx.ag/earthquakes

Take a closer look at earthquakes by watching this video:

or go to: tx.ag/seisms

COMING NEXT WEEK!

Rapid changes to Earth's surface: Landslides.



For more information about Project VICTORY visit:

TEXAS A&M UNIVERSITY
College of Education and Human Development

Project VICTORY
GEOLOGY EXPLORERS

Family Involvement in Science

Earthquakes

FIELD NOTEBOOK #3

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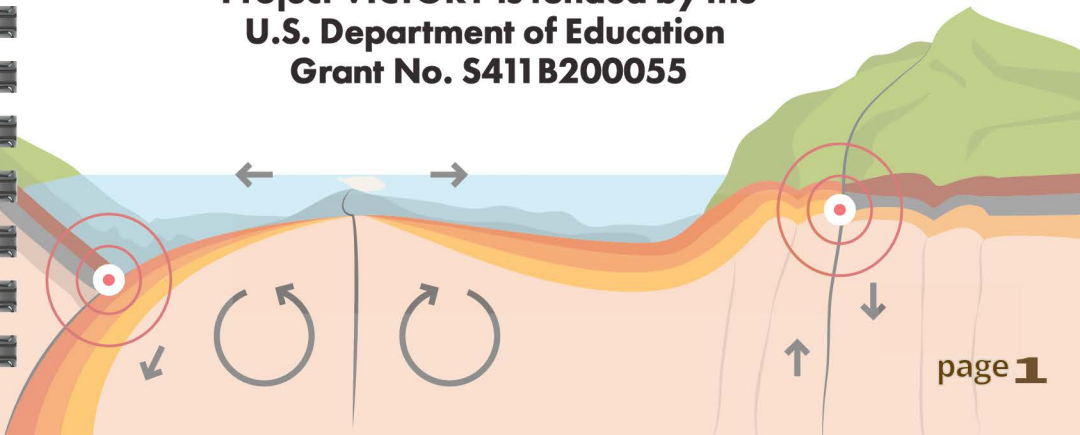


Dear Family,

We are glad you are participating in Geology Explorers. We hope you enjoy these ***Family Involvement in Science (FIS)*** activities with your child and family. Please try to work through the activities in the next week.

This week's topic:

Your child is exploring the rapid changes to Earth's surface. This week we are focusing on Earthquakes. We are learning science vocabulary that geologists use when describing this process.

Find ways to use these words in everyday conversations. This will help to build your child's science vocabulary.

Did you know?

Earthquakes are also called seisms, and seismologists are the scientists that study earthquakes or seisms.

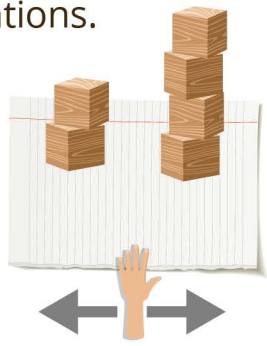
Family Science Activity

Now that you have made a prediction, complete the experiment and record your observations.

Materials:

Cookies, crackers, or wooden blocks

A piece of paper



Instructions

1. Form stacks of cookies, crackers, or wooden blocks of different heights on your piece of paper.
2. Hold the paper down with your fingers.
3. Move your fingers sideways to simulate the shaking from an earthquake.
4. Write down or illustrate and label what you observed in the box below.

Was your prediction correct? ☐ Yes ☐ No

This model helps explain how earthquakes can cause damage to houses and buildings. A limitation of this model is that the paper can model the shaking of Earth's crust, but does not model the cracking. Can you think of another limitation?

Family Science Activity

This week's family challenge is to explore earthquakes.

Materials:

Cookies, crackers, or wooden blocks

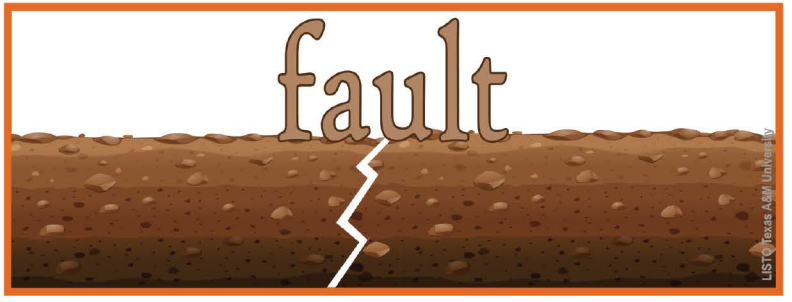
A piece of paper

For this exploration, we will use cookies, crackers, or wooden blocks (whichever you have available at home) to represent buildings and houses. We will use a piece of paper to represent Earth's crust. You will create the earthquake by shaking the paper.

Activity

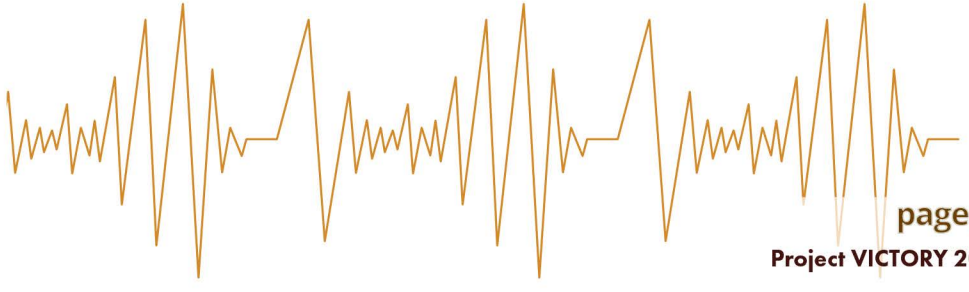
1. What do you think will happen if you stack some cookies, crackers, or wooden blocks on the piece of paper and then you shake the piece of paper?
2. Make your prediction in the box below. You can write down or illustrate your prediction.

Target Vocabulary



A **fault** is a deep crack in Earth's crust.

An **earthquake** is a sudden movement when rock along a fault suddenly slips causing Earth's crust to shake and crack.



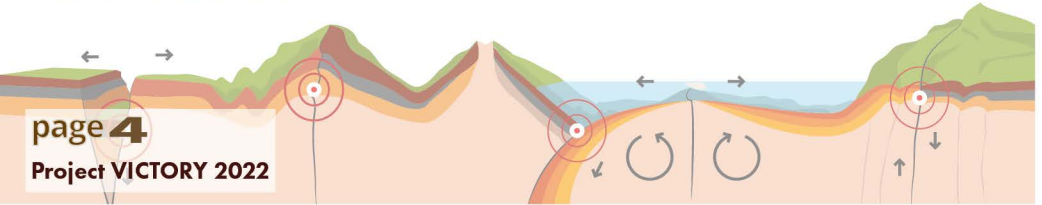
Rapid Changes to Earth's Surface

The surface of the Earth is always changing. It takes hundreds of years for new soil to form. Soil is made through decomposition and weathering. These processes take a very long time. But not all changes to Earth's surface are slow. Some changes happen quickly and sometimes, suddenly. Three examples of rapid changes to Earth's surface are earthquakes, landslides, and volcanic eruptions.

What Are Earthquakes?

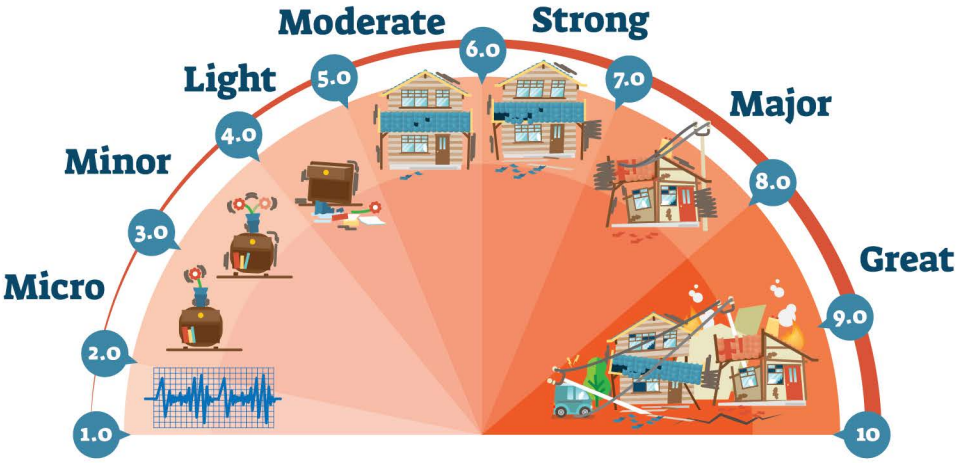
The part of Earth that we live on is called the Earth's crust. It is made of large plates, or huge chunks of rock that fit together like a puzzle. A **fault** is a deep crack in the Earth's crust. Most faults can be found around the boundaries, or edges of the plates. They are like the seams of a soccer ball.

Earthquakes can occur where there is a fault in the rock. The rock along the fault line suddenly slips. The fault moves quickly and releases energy. This rapid movement causes the crust to shake and crack, resulting in an earthquake. Strong earthquakes can cause a lot of damage. Sometimes houses and buildings shake so hard that they start to fall apart. An earthquake is an example of a rapid change to Earth's surface.



Earthquake Magnitude Scale

Look at the graph below.



Activity:

Answer the questions below.
Use the graph to answer the questions.

1. What magnitude causes a moderate earthquake?

2. Would a minor earthquake make objects fall?

3. Which magnitude earthquake causes the most destruction?

Answer key for parents:
1. Between 5.0 and 6.0
2. Probably not
3. Between 8.0 and 10