



Teacher's Notes: Earthquake in Mexico

Learning Objectives:

The students will be able to identify where Mexico is on a map.

The students will be able to define rubble.

The students will be able to explain the effects of an earthquake

The students will be able to answer WH questions about the earthquake in Mexico.

Activities

1. Edible plate tectonics using cake. <https://www.schoolingamonkey.com/hands-on-plate-tectonics/>
2. Simple experiment demonstrating what causes an earthquake. <http://www.learnplayimagine.com/2013/08/what-causes-earthquake.html>
3. Earthquake model using Jell-O. <https://sciencing.com/make-earthquake-model-kids-5347246.html>
4. Activity showing how buildings shake and fall using Jell-O. <https://www.bing.com/videos/search?q=earthquake+classroom+activity&view=detail&mid=7FF0AB206DF4BF97BC437FF0AB206DF4BF97BC43&FORM=VIRE>
5. An avalanche model. <https://www.bing.com/videos/search?q=how+to+make+avalanche+for+kids&docid=607995195721909405&mid=A830E256AB0809D663D4A830E256AB0809D663D4&view=detail&FORM=VIREHT>

General Tips: The goal is to build background knowledge while leading an engaging discussion on any and all information that can be talked about on a given page. The items that you choose to bring up or focus on can be modified for the students you are working with. For example, if you have a student who can point to something in the picture, answer yes/no questions be sure to incorporate a lot more of that as you go through the book. On the same token, be sure to ask a lot of comprehension questions and critical thinking questions at the level appropriate for students. There is something for everyone.

Page 1: There are layers of rocks in the Earth. There are large flat rocks inside Earth called plates. They are flat like a plate that you eat from. The plates move. When the plates bump into each other, it can cause an earthquake. There are three plates under the Earth in Mexico. Have students view the following video about Earth's plates. <https://www.youtube.com/watch?v=tcPghqnnTVk>

Pointing Questions: ground, plates

Short Answer: How many plates are under the ground in Mexico? What is under the ground in earthquakes?

Yes/No: Are there plates under the ground in Mexico? Is there one plate under the ground in Mexico? Are there 3 plates under the ground in Mexico? Does Mexico have a lot of earthquakes?

Sharing opinion/experiences: Have you ever been to Mexico? Do you know anyone who lives in Mexico?

Peer to Peer Interaction: After you read Page 1, ask students, “What is under the ground in Mexico?” The answer is the main idea card “plates.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about where the plates are in Mexico.

Page 2: The plates inside Earth are moving all the time. The plates move back and forth. The plates can move in different directions. The plates move very slowly. We cannot feel the plates moving most of the time.

Pointing Questions: trees, plates

Short Answer: How many earthquakes were in Mexico in 2017? Where were there earthquakes in 2017? When did Mexico have two earthquakes?

Yes/No: Did Mexico have earthquakes in 2017? Did Mexico have 10 earthquakes in 2017? Did Mexico have two earthquakes in 2017?

Sharing opinion/experiences: How do you think the people in Mexico felt when there was an earthquake?

Peer to Peer Interaction: After you read Page 2, ask students, “What were there two earthquakes in 2017?” The answer is the main idea card “Mexico.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about what happened in Mexico in 2017.

Page 3: Talking Points: One of the earthquakes was in Mexico City. Mexico City is the capital of Mexico. A lot of people live in Mexico City. The earthquake was big! It was a 7.1 on the Richter scale. Scales are used to measure things. We have scales that measure how much we weigh. There is a special scale that measures how big an earthquake is. It is called a Richter scale. A Richter scale goes from number one to number 10. Small numbers on a Richter scale mean a small earthquake. Big numbers on a Richter scale mean a big earthquake. A three on the Richter scale is a small earthquake. A nine on the Richter scale is a big earthquake. Have students view the following video of earthquake simulation from 3.0 to 7.5 on the Richter scale. Pause between each and discuss.

https://www.youtube.com/watch?v=nNFMtAuQo_w

Pointing Questions: Find 7 on the Richter scale. Find 10 on the Richter scale. Find one on the Richter scale.

Short Answer: What does a Richter scale measure? What measures earthquakes? What number did the earthquake in Mexico City measure on the Richter scale?

Yes/No: Does a Richter scale measure volcanoes? Does a Richter scale measure earthquakes? Did the earthquake in Mexico City measure a one? Did it measure a 7.1? Did it measure a ten?

Sharing opinion/experiences: Would you rather be in an earthquake that was a level one on the Richter scale or a number nine?

Peer to Peer Interaction: After you read Page 3, ask students, “What measures earthquakes?” The answer is the main idea card “Richter scale.” Students will find the main idea card and read it to their partner. Teacher will prompt them talk about what a Richter scale measures.

Page 4: Earthquakes make everything shake. Gas tanks can fall and break. Electric lines can also fall and break. That causes fires.

Pointing Questions: fire, fireman, hose, water

Short Answer: What started when the earthquake broke gas tanks? What happened when the earthquake broke electric wires?

Yes/No: Did the earthquake break electric wires? Did the earthquake break gas tanks? Did the earthquake make it start raining? Did the earthquake start fires?

Sharing opinion/experiences: Who puts out fires? Have you ever seen a fire?

Peer to Peer Interaction: After you read Page 4, ask students, “What started when the earthquake broke electric lines and gas tanks?” The answer is the main idea card “fires.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about fires

Page 5: An earthquake causes the earth to move and shake. Building and houses shake when there is an earthquake. Everything inside houses and buildings shake too! Have students demonstrate what an earthquake might feel like by shaking their desks. Talk about what people should do during an earthquake. Go somewhere where furniture, lights, ceiling fans won’t fall on you. Drop to your knees. Hold onto something that is sturdy.

Pointing Questions: orange building, white building, road, car

Short Answer: What happened to buildings and houses during the earthquake?

Yes/No: Did houses shake during the earthquake? Did buildings shake during the earthquake?

Sharing opinion/experiences: How would you think the people felt when everything in their house started to shake? What should people do when there is an earthquake?

Peer to Peer Interaction: After you read Page 5, ask students, “What can happen to houses and buildings during the earthquake?” The answer is the main idea card “shake.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about what happened to buildings and houses during the earthquake.

Page 6: Everything moves and shakes during an earthquake. Houses shake. Furniture shakes. Buildings shake. Sometimes houses and buildings shake so hard that they fall. Have the students view the following video of a building falling in Mexico. Put the video on mute as there are people speaking.

<https://www.youtube.com/watch?v=zhxCevJZcck>

Pointing Questions: broken building, broken windows

Short Answer: Where happened to some of the houses and buildings?

Yes/No: Did some buildings fall? Can buildings fall during an earthquake?

Sharing opinion/experiences: How do you think people felt when the buildings fell?

Peer to Peer Interaction: After you read Page 6, ask students, “What happened to buildings during the earthquake?” The answer is the main idea card “fell.” Students will find the main idea card and read it to their partner. Teacher will prompt students to talk about what happened to the buildings during the earthquake.

Page 7: Rubble is the broken parts of houses and buildings. A lot of rubble fell during the earthquake. The rubble fell on cars. The rubble fell on some people. These people got hurt. They had to go to the hospital. Some people died in the rubble.

Pointing Questions: car, rubble on car, rubble

Short Answer: What do we call broken pieces of houses and buildings? What is rubble? What fell on cars? What fell on some people? What happened to some people?

Yes/No: Is rubble broken pieces of houses? Are rubble broken pieces of buildings? Can people get hurt when rubble falls on them?

Sharing opinion/experiences: How do you think people felt when rubble fell on their cars? Some rubble fell on people. Have you ever gone to a hospital? When?

Peer to Peer Interaction: After you read Page 7, ask students, “What fell on people and cars?” The answer is the main idea card “rubble.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about rubble.

Page 8: Some people had a lot of rubble on top of them. They were buried underneath the rubble. People could not find them. Rescue dogs are good at finding people. They can smell people. Rescue dogs went to Mexico City to find people in the rubble. Have students view the following video of a rescue dog. <https://www.youtube.com/watch?v=WwaWaFhculU>

Point: rubble, dog, man

WH Questions: What animal tried to find people?

Yes/No: Did rescue cats try to find people buried under the rubble? Did rescue dogs try to find people buried in the rubble?

Sharing opinion/experiences: Do you like dogs? Do you have a dog? What is your dog’s name?

Peer to Peer Interaction: After you read Page 8, ask students, “What animal tried to find people underneath the rubble?” The answer is the main idea card “rescue dogs.” Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about rescue dogs.

Page 9: A lot of people went to Mexico City to help people after the earthquake. Firefighters helped stop the fires. Firefighters helped get hurt people to hospitals. Volunteers tried to find people buried in the rubble. Volunteers don't get paid to help. The military came and helped to find people buried in the rubble.

Pointing Questions: firefighter, people, rubble

Short Answer: Who helped people hurt from the earthquake?

Yes/No: Did firefighters help hurt people? Did volunteers help hurt people? Do volunteers get paid? Did the military help the hurt people?

Sharing opinion/experiences: Have you ever hurt someone who was hurt? Who? What did you do?

Peer to Peer Interaction: After you read Page 9, ask students, "Who helped people hurt in the earthquake?" The answer is the main idea card "military, firemen, volunteers." Students will find the main idea card and read it to their partner. Teacher will prompt them to talk about what the military, firemen and volunteers did.