Discussion Questions:
1. What do structures that have survived earthquakes have in common?
2. What would a structure that combined earthquake-resistance features look like?

Discussion Questions:
1. Why are scientists needed to study volcano and earthquake hazards?
2. How would you design an alert or warning system for a natural disaster?

Discussion Questions:
1. What things do scientists learn from studying Earth’s extremes?
2. How do you think the features of Earth in the story could change in your lifetime?

Smithsonian Science for the Classroom Module: What Is Our Evidence That We Live on a Changing Earth?
www.carolina.com/ssftc
Discussion Questions:
1. Where would you go to find evidence that Earth is changing?
2. Where have you seen rocks break and scatter where you live or where you have traveled?

Discussion Questions:
1. How many examples of weathering or erosion can you find on your street or block?
2. How could you keep your neighborhood clean and safe when changes happen?

Discussion Questions:
1. How does Earth give scientists clues to how it has changed over time?
2. How do scientists use rocks to know what Earth was like before their lifetime?

Discussion Questions:
1. What questions would you want to ask a paleontologist?
2. Where would you go if you wanted to look for fossils that are waiting to be discovered?
“Earth’s Extremes”
What things do scientists learn from studying Earth’s extremes? (They learn how Earth changes; they can experiment with radar at the tallest mountains. They can experiment with sound in the deepest parts of the ocean.)

How do you think the features of Earth in the story could change in your lifetime? (Mountains could get taller or change shape; tsunamis or volcano eruptions can damage more land.)

“Disaster Zones”
Why are scientists needed to study volcano and earthquake hazards? (Scientists can warn other people of what hazards are possible and what to prepare for.)

How would you design an alert or warning system for a natural disaster? (Make sure people could see or hear the warning. Get the warning to devices people always use, like mobile phones.)

“Earthquake Engineering”
What do structures that have survived earthquakes have in common? (They have ways of being flexible during an earthquake.)

What would a structure that combined earthquake-resistance features look like? (It could be tall like a pagoda with bracing features on the outside.)

“Crumble and Tumble”
Where would you go to find evidence that Earth is changing? (To places that are known for having water or wind to see how the water or wind change Earth.)

Where have you seen rocks break and scatter where you live or where you have traveled? (On the sidewalk, on a nature trail, by a waterfall, on a mountain road.)
“Changes in the City”

How many examples of weathering or erosion can you find on your street or block? (Sand by a storm drain, dirt on the sidewalk, a lawn or patio sculpture changing color, tree roots cracking a sidewalk)

How could you keep your neighborhood clean and safe when changes happen? (Clean up after rainstorms, sweep sidewalks)

“Clues to the Past”

How does Earth give scientists clues to how it has changed over time? (Fossils provide a record of Earth’s changes over time.)

How do scientists use rocks to know what Earth was like before their lifetime? (Materials rocks are made up of give clues to how the land looked in the past.)

“Discovering the Burgess Shale”

What questions would you want to ask a paleontologist? (Why do you study fossils of plant and animal remains? What is the best thing you’ve learned from them? What have you personally discovered? How can I study fossils? What can we learn from fossils? What questions do you have that you want to answer? Will we ever stop finding fossils?)

Where would you go if you wanted to look for fossils that are waiting to be discovered? (To a place that had lots of older rock. To a place where fossils have been found before.)