Lesson 18

Objective: Compare Earth events that change land to develop initial ideas about the time spans over which the events occur.

Agenda

Launch (10 minutes)

Learn (30 minutes)

- Brainstorm Changes to Land (10 minutes)
- Sort Earth Event Cards (10 minutes)
- Order Earth Event Cards (10 minutes)

Land (5 minutes)

Launch 10 minutes

Hold up a sharpened pencil that is noticeably short from repeated use.

▶ **Do you think this pencil has always looked the way it looks now?**

- *No, it looked different when it was new.*
- *I don't think so because it looks like it has been used a lot.*

Have students Stop and Jot on a sheet of paper or a whiteboard the ways in which they think the pencil has changed since it was new. Instruct students to compare ideas with a partner briefly. Then display an unused, unsharpened pencil next to the sharpened pencil for students to observe. Explain that the unsharpened pencil represents what the sharpened pencil looked like before it changed. Invite students to work with their partner to record additional changes they observe in the sharpened pencil now that they have compared the two pencils. Then ask students to think about how objects such as the pencils can change.

▶ **What are some ways in which objects can change?**

- *The size of an object can change. The used pencil is shorter than the one that hasn't been used.*
- *An object can change shape. The end of the sharpened pencil used to be flat, but now it's pointy.*

Differentiation

To support students who have writing difficulties, consider modifying this routine to a Stop and Draw. Allow students to draw what they think the pencil looked like when it was new and then circle the parts that have changed.

Spotlight on Knowledge and Skills

Students draw on their experiences from previous modules as they describe how objects can change depending on their observable properties (3.5A).

▶ **How can we tell that an object has changed?**

- *Sometimes we can see changes happen, like when a pencil breaks.*
- *We can tell because an object looks different after it has changed.*

Confirm that sometimes students can tell that an object has changed even when they did not directly observe the change. Help students realize that they recognize these changes when they compare an object's current properties with what they know about its original properties.

▶ **What do you think caused the sharpened pencil to change? Why do you think this?**

- *Someone probably wrote with it a lot. My pencils look like that after I use them for a while.*
- *It was sharpened with a pencil sharpener, and that made it shorter. My pencils get shorter every time I sharpen them.*

▶ **How do you think changes to Earth's land compare with changes to an object, such as a pencil?**

- *We change a pencil by using it, but land can change without people. We know that wind and water can change land.*
- *The changes to the pencil are really small compared to changes that happen to land.*

Inform students that they will now build on their understanding of how land changes by exploring what causes land to change and how long changes to land take.

Learn 30 minutes

Teacher Note

Students may have experienced or heard stories about Earth events that cause them to feel anxious or afraid. Through the rest of this lesson, provide opportunities for students to ask questions and share their feelings and experiences. If students are uncomfortable with certain topics, adjust or omit these topics as necessary.

Extension

Consider having students participate in a scavenger hunt to find additional classroom objects that show evidence of change. Ask students to share their findings with the class and to explain the evidence they used to determine whether the object had changed (3G).