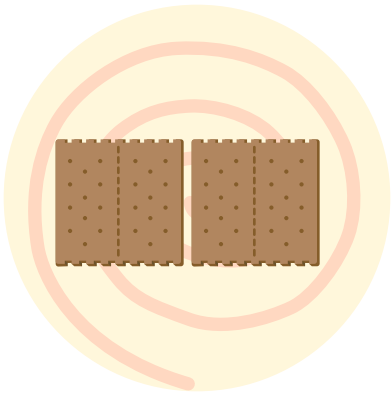
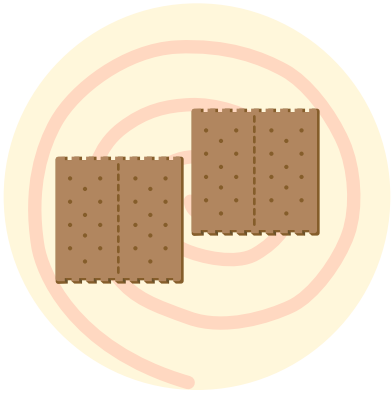
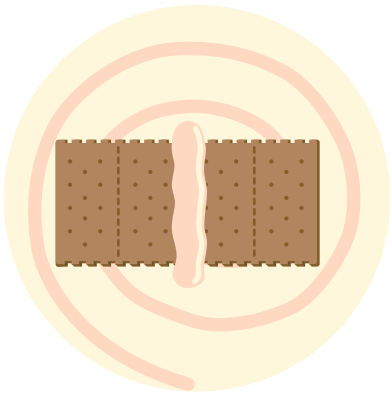
Graham Cracker Activity Instructions

Supplies needed:

- 2 graham crackers per student
- 1 plate per student
- 1 napkin per student
- About half a cup of frosting per student
- 1 cup of water per student

	Invite students to...	Ask or explain
	Put two graham cracker squares side by side on the frosting.	The frosting represents Earth's magma. Magma is extremely hot melted rock underneath Earth's crust. The graham crackers represent tectonic plates.
	Keep the graham crackers together. Move one away from you and one toward you so that the sides rub against each other.	• *What did you notice?* • *How does that feel on your fingers?* • *How does it sound?* Sometimes, tectonic plates scrape against each other as they move. This kind of fault is called a *transform fault*. Transform faults can cause earthquakes.
	Put the graham crackers back together. Press down on the crackers and then slowly move them apart.	• *What did you notice?* • *What happened to the magma?* • *What do you think happens when magma comes up to Earth's crust?* Tectonic plates can also move apart from each other. The magma that comes up to Earth's crust cools and hardens. This is called a *divergent fault*. Divergent faults create new land or ocean floor.

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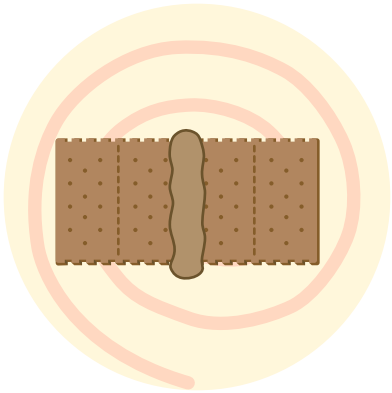
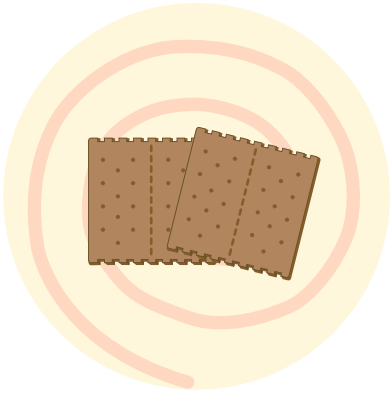
	Dip one edge of each of your crackers in the water. Hold them there for 3 seconds. Put the crackers back on the plate side by side so that the watery sides are next to each other. Slowly push the crackers into each other.	• *What did you notice?* • *What happened to Earth's crust?* • *If the graham crackers are Earth's crust, what do we call the pushed-up graham cracker?* When tectonic plates crash into each other, Earth's crust pushes up. This is called a *convergent fault*. Convergent faults can create mountains. Mount Everest, the tallest mountain in the world, was formed this way 60 million years ago.
	Move the crumpled-up graham crackers off your plate and onto the napkin. Put two new graham cracker squares next to each other on the frosting so that one is resting slightly on top of the other. Push the two graham crackers together so that they overlap more.	• *What did you notice?* • *What happened to Earth's crust?* • *How is this like the mountains in the last experiment? How is it different?* One of these tectonic plates is pushed up, forming a mountain. But this time, the magma is pushed up, too. • *What is a mountain that has magma near the surface, or coming out of it?* When tectonic plates overlap, they can form volcanoes. That's called a *subduction fault*.