Dear Families,

Second graders are going to experience the Project Lead The Way module *The Changing Earth* during their Weekly STEAM specials class. In this module, students explore how the surface of Earth is always changing. They are introduced to map models and explore how these maps convey different kinds of information about the world we live in, including where water is found on Earth. Students investigate how sudden events and forces shape the surface of Earth, and they design solutions to limit the impact of a landslide on a fictional community.

Activities You Can Do at Home

The module includes suggestions for extending learning, such as the following:

- **Work with a family member to draw a map of the area where you live.** Include your home, landforms, and other buildings in the area. Add a legend to your map.
- **Discuss events and forces that cause erosion in your community.** These can include floods, earthquakes, wildfires, and active volcanoes. Talk about ways you can reduce or help stop erosion in your community.

Thank you for your support in your child's learning. For more information about Project Lead The Way, please visit www.pltw.org.

Sincerely,

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STEAM Teacher

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Dealing With Misconceptions

Throughout *The Changing Earth* module, students might have misconceptions. Understanding these common misconceptions helps you address them if you notice them at home.

Misconception	Reality
Maps are always accurately colored.	Mapmakers choose bright colors to grab the viewer's attention. These colors also help differentiate the different features on the map.
Maps are photographs.	Maps are graphic representations of Earth's features. Mapmakers might start with photographs when creating a map. Then they add boundary lines and other features.
Maps are precise.	Mapping the world is expensive. In places where accuracy matters, more effort is put into this. However, maps from different sources do not always align.
Maps are always proportional.	Maps tell us where things are on a 2D plane. However, the world is not flat. Most maps are misleading. Some countries appear much larger than they really are.
Rocks do not change.	Students tend to view Earth as unchanging. They have a difficult time understanding that rocks can change or be worn down. Rocks break down through a process called weathering. In this process, rocks are broken down by wind, water, ice, or other agents.
Erosion is always bad for Earth.	Erosion can have negative consequences, such as soil loss, ecosystem destruction, and sediment buildup in water sources. However, erosion can also be constructive. River deltas are created by deposition of sediments carried down river. These areas often provide fertile farmland. Without erosion, this farmland would not exist.

References

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