



Level 4 • Module 3

Earth Systems

Lesson Overview

Your student is learning about sustainable rice farming to understand how water, air, life, and land interact and how humans can affect those interactions.

Classroom activities for this module include:

- Analyzing data on the distribution of fresh water and salt water on Earth
- Modeling the movement of water by evaporation, condensation, and precipitation
- Investigating how water interacts with gravel, sand, silt, and clay
- Constructing coastal models to investigate how oceans can shape land
- Modeling how humans disrupt and stabilize Earth's systems
- Designing and testing a sustainable irrigation system

Conversation Starters

Support your student's learning with these talking points:

- Talk about ways to conserve water around the house, such as watering the lawn at cool times of day to reduce evaporation.
- Discuss the impacts of the Dust Bowl and any family stories related to this era.
- Notice ways your community uses practices that stabilize Earth's systems to meet societal needs, such as growing food sustainably or converting waste into energy.
- Discuss ways humans have positively or negatively impacted your local environment, and brainstorm ways to solve the negative impacts.

Activities

Have fun with these related activities at home:

- Visit a local farm and discuss how their agricultural practices involve multiple Earth systems.
- Research your local water source and talk about what could affect its amount and quality.
- Gather a soil sample and try to identify the different components. Consider using a hand lens to magnify the particles.
- Take a trip to a beach or a virtual trip and search for a variety of coastal landforms (e.g., cliffs, sandbars, and sea arches). Discuss processes that could have created the land shapes you observe.



ADDITIONAL RESOURCES

Visit your local library or use an online library to explore topics related to the module, such as water, land, agriculture, the Dust Bowl, and sustainability.



Explore images and maps of Earth's systems at <https://earthobservatory.nasa.gov/>.

Learn about the oceans and coastal areas at <https://www.noaa.gov/ocean-coasts>.