

WATER WE GOING TO DO?

FLOODPLAINS AND WATERSHED MANAGEMENT (SCIENCE)



Link: <https://bit.ly/2CpaCT7>

Summary

In this lesson, students will explore how water behaves on various substrates (ground surfaces), what occurs during a flood, and the causes of flash floods. This lesson concluded with students designing and testing various floodplain models intended to mitigate the effects of flash floods.

Acknowledgement: This lesson was written through a partnership with the Oklahoma Floodplain Management Association division of the Oklahoma Water Resource Board.

Essential question

What can scientists do to understand the factors involved in flash floods and how can the effects from flash floods be mitigated?

Lesson Snapshot

Engage

Students will view an EAS (Emergency Alert System) flash flood warning and/or flash flood video clip. Students will utilize a KWL chart to organize what they know about flash floods.

Explore

Students will use clay models and graph paper to investigate watersheds and explore how water behaves in a general watershed. Students will also investigate how water behaves on various substrates.

Explain

Students will participate in collaborative group discussion to summarize the findings from the watershed and substrate experiment.

Extend

Students will investigate specific watersheds containing different substrates and how these would relate to flash floods.

Evaluate

Students will design and create a community watershed model to represent an “ideal” community design to mitigate flooding. Students will also create a presentation showcasing their model addressing flash flooding using the theme “Turn Around Don’t Drown.”