

Bringing Landforms to Life with AR

Who: 4th grade students at Genoa Elementary School; Teachers - Ashlee Fravel, Sydney Adkins, and Susie Gahler

Time Frame: 3-5 days

Big Question: What are some of the different types of landforms and what are their characteristics?

What: Students will explore, create, and explain an augmented reality experience that demonstrates a specific landform.

Science Standards:

Earth's Surface:

- Earth's surface has specific characteristics and landforms that can be identified.
- The surface of Earth changes due to weathering.
- The surface of the Earth changes due to erosion and deposition.

Technology Standards:

STRAND: Information and Communications Technology The understanding and application of digital learning tools for accessing, creating, evaluating, applying and communicating ideas and information.

Topic 1: Identify and use appropriate digital learning tools and resources to accomplish a defined task.

Topic 2: Use digital learning tools and resources to locate, evaluate and use information.

Topic 3: Use digital learning tools and resources to construct knowledge.

Topic 4: Use digital learning tools and resources to communicate and disseminate information to multiple audiences.

STRAND: Society and Technology The interconnectedness of technology, self, society and the natural world, specifically addressing the ethical, legal, political and global impact of technology.

Topic 2: Analyze the impact of communication and collaboration in both digital and physical environments.

English Language Arts Standards:

STRAND: Research to Build and Present Knowledge

W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

STRAND: Presentation of Knowledge and Ideas

SL.4.4 Report on a topic in an organized manner

SL.4.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

Assessment: [Rubric for Project](#)

Lesson Materials:

- Internet connection/devices - chromebooks or desktops
- ROAR www.theroar.io or Blippbuilder - <https://web.blippar.com/blipp-builder> - Teacher will set up one class account to manage.
- Research/Planning form for specific landforms and research sites - [INFOhio](#) and [PebbleGo Next](#)
- [Rubric](#) for presentation
- [Flipgrid](#) set up for student response and questions.

Communicating Ideas with Flipgrid:

Examples:

Ms. Fravel - <https://flipgrid.com/cdff19>

Ms. Adkins - <https://flipgrid.com/7cf7f9>

Mrs. Gahler - <https://flipgrid.com/a40840>

Lesson:

- Review Big Question about Landforms and what students have been studying. Have you been to or seen any of these types of landforms before? Show examples of different types of landforms and let students explore using [Google Earth](#).
- Give students time to research and explore their landform, take notes, etc.
- Talk about and discuss if students have ever experienced Augmented Reality.
- Demonstrate an Example Landform ROAR project so students can see how there is a trigger/marker that sets the app into motion to “see” other content.
- Walk students through some of the resources/tools on the site so they are comfortable with exploring and getting started on their own.
- Give students time to build and create their landform AR experience.
- Students will answer questions using Flipgrid and be able to respond to other classmates, share with the community and parents.
- Student triggers/markers will then be printed and displayed around the room for classmates, staff, students to rotate through with the ROAR app in order to learn more about each landform.
- Students will be able to write down, ask, or record questions about each landform while exploring during the “museum”. Sample questions: When was the Khait Landslide? Are

floodplains good for farming? What is the deadliest Volcano eruption? What do Oxbow lakes often become? Why are mountains formed? How were rift valleys formed? How are water arch's formed? What is the biggest Moraine?