

7th Grade Science STEAM Integration

Unit 2: Plate Tectonics

Topic: Digital Art and Design

Time: 3 Days

Standards:

MS-ESS2-2: Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS2-3: Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions

Scenario

You've been hired by the U.S. Geological Survey's Public Outreach Team to create a short video that teaches people about earthquake early warning systems. Your job is to explain how they work, why they're important, and how people can use them to stay safe during an earthquake. Your video will be part of a campaign to raise awareness and encourage communities to sign up for alerts.

Success Criteria

I can create a clear, engaging video that explains how earthquake early warning systems work and why they're important for public safety.

Lesson Outline

Day 1: Brainstorm, Research, and Scriptwriting

1. Hook + Intro (10 min):
 - Show a real PSA or news clip on ShakeAlert or MyShake app
 - Ask: *What does an early alert actually do? How does it help?*
2. Research + Note-taking (15 min):
 - Key questions:
 - What triggers an alert?
 - How does it reach people?
 - What actions should people take after getting an alert?
 - Use USGS or state emergency sites for facts
3. Script & Storyboard (20 min):
 - Students outline:
 - Hook (Why should I care?)
 - How it works (Sensors + alerts)
 - What to do (Drop, cover, hold on!)
 - Call to action (Download the app / sign up for alerts)
 - Assign team roles (narrator, video editor, fact-checker, actor)

Day 2: Record & Edit the Video

1. Production (30 min):
 - Record scenes: explainers, interviews, skits, voiceover, animation or models
 - Include visuals: phone alert, seismograph reading, evacuation maps
2. Editing (15 min):



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- Use Canva or Adobe Express to assemble clips
- Add titles, transitions, music, voiceover
- Make sure the video is under 2 minutes, clear and action-driven

Day 3: Premiere + Reflect

1. Video Showcase (25 min):
 - Watch each group's PSA in a class "Film Festival"
 - Give feedback using sticky notes or a checklist (Was the science clear? Is the message strong?)
2. Reflection (15 min):
 - Students write:
 - What did your video communicate?
 - How can early alerts save lives?
 - How can science and media work together to keep people safe?

Resources

