Lumination Learning Lab

Lesson Bytes
Teaching ideas for immersive learning

Natural Disasters

Learning Area(s)
Humanities

Year Level
Year 5-6

Introduction

Students will explore how natural disasters like earthquakes, bushfires, droughts, and cyclones impact communities and how people can prepare for and manage these events. Using immersive VR experiences, students will witness these disasters firsthand, reflect on their consequences, and consider ways to reduce risks. They will then choose a project to demonstrate their understanding—designing a disaster response plan, creating a 3D model, or making a digital presentation.

Application

Earthquake Simulator VR

Using Earthquake Simulator VR, students experience an earthquake and fire simulation while learning survival techniques in a safe, immersive environment.

Lesson Overview

Lesson Objectives

- Understand how different natural disasters affect the environment and communities.
- Identify strategies for managing and responding to severe weather events.

VR/AR Resources

- Virtual Reality Bushfire Experien...
- In the Eye of the Fire - 360° vid...
- Surviving the drought on a Karo...
- 360 video: On the ground in Cyc...
- "Sunburnt Country: The Drought"

Developed by Zeinab Jafari

Lesson Outline

Before the Immersive Learning Journey

- Make sure all devices are fully charged, updated, and that Android devices will view the 360° video.
- Create QR codes for VR videos and distribute to students.
- Decide how many stations the lesson will have and group students accordingly.
- Introduce students to key concepts: What causes earthquakes, bushfires, droughts, and cyclones? What are their effects?
- Discuss prior experiences or knowledge about natural disasters.
- Ensure students understand how to navigate the VR experiences safely.

During the Immersive Learning Journey

IMVR Station
Students take turns to experience an earthquake and learn safety techniques. They will reflect on how the scenario made them feel and how people in these real situations would feel. They will document what actions were taken and how effective they were.

HHVR Station
Students will use the HHVR headsets and devices to watch the 360° videos of various natural disasters. They will reflect on the challenges people face in these situations and take notes on the impact of such events. Teachers can find 360° videos on other related natural disasters to suit their teachings.

Research Station
Students will investigate real-world case studies of natural disasters management in Australia. Teachers can provide students with government emergency plans and community responses. It's encouraged to focus on issues your local community faces.

Creation Station
Students, or teachers, can choose one of the following creation projects for students to complete:

- **Design a Disaster Response Plan:** Create an emergency kit checklist, evacuation plan, or community action plan.
- **Create a 3D Model:** Build a bushfire-resistant house, flood

Developed by Zeinab Jafari

barriers, or drought-resistant farm using CoSpaces or Tinkercad.

- **Make a Digital Presentation:** Develop an infographic, video, or interactive map on disaster preparedness. Students can create an infographic merge cube on CoSpaces or build upon a 3D environment/360° image).

After the Immersive Learning Journey

Reflect and Discuss:

1. What emotions did you feel while experiencing these disasters in VR?
2. How does experiencing a disaster in VR change your understanding of it?
3. What are the most important things to do before, during, and after a disaster?
4. How can communities better prepare for future disasters?

Additional Activities:

1. Google Earth VR Exploration – Explore areas that have been affected by disasters and analyse recovery efforts and how the community has "rebuilt" since the natural disaster.
2. Current Events Connection – Research and report on a recent disaster and how people responded to it.
3. Complete one of the Creation Station projects as a whole class.

Developed by Zeinab Jafari