



Volcanic Ventures:

Discovering Earth's Explosive Forces

Learning Area

Science

Year Level

Year 8 – 9

Introduction

In this lesson, students embark on an immersive journey into the heart of volcanic activity using virtual reality technology. Through Google Earth VR and a selection of 360° videos, students explore various volcanoes around the world, gaining insights into their formation, impact on the environment, and relevance to plate tectonics.

Application

[Google Earth VR](#)

Google Earth VR lets you explore the world from totally new perspectives in virtual reality. Stroll the streets of Tokyo, soar over the Grand Canyon, or walk around the Eiffel Tower.



Lesson Overview

Lesson Objectives

- Investigate tectonic activity, including divergent, convergent and transform plate boundaries.
- Describe the formation of geological features associated with volcanic activity.

VR/AR Resources

- ▶ [Volcanos - An Immersive Experience \(Ext...](#)
- ▶ [360° Kamchatka Volcano Eruption | Natio...](#)
- ▶ [Insta360 VR: Flying Over Iceland Volcano ...](#)
- ▶ [How Volcanoes Affect Earth's Climate Ov...](#)



Lesson outline



Before the Immersive Learning Journey

- Teachers and students should familiarise themselves with the IMVR experience using the [Google Earth VR Essential Guide](#).
- Teachers should preview the VR videos and ensure they meet the needs of their students and context.
- Students should have a basic understanding of plate tectonics, including the structure of the Earth's crust and the concept of tectonic plates.
- Teachers are encouraged to provide reflective questions to accompany the VR videos in the HHVR station.



During the Immersive Learning Journey

IMVR Station: Students will use Google Earth VR to explore various famous volcanoes, such as Mount Vesuvius, Krakatoa, Mauna Loa, ect., identifying their locations, geological features, and nearby environments.

HHVR Stations: Students rotate between different 360° videos, recording characteristics and consequences of volcanic activity.

-  Volcanos - An Immersive Experience (Extended Version) - 360°/3D
-  360° Kamchatka Volcano Eruption | National Geographic
-  Insta360 VR: Flying Over Iceland Volcano - A Virtual Reality Experie...
-  How Volcanoes Affect Earth's Climate Over Millions of Years 360° I ...

Research Station: Students conduct additional research on how volcanoes contribute to climate change and their surrounding environment.

Creation Station: Students create multimedia presentations to showcase their understanding of volcanoes' formation or impact. This can be created using [CoSpaces](#), [Tinkercad](#), or [ThingLink](#).



After the Immersive Learning Journey

Facilitate a discussion with students on their findings using the following:

- How do volcanic eruptions contribute to the formation of new landforms?
- What were you surprised to see about the volcanoes you viewed?
- How can the impact of volcanic activity on climate change, or environmental damages, be reduced?
- What do you think of people who live nearby active volcanoes?