

LESSON PLAN:



VOLCANIC ERUPTIONS

WELCOME TO SIGMA LABS!

Learning Objectives:

- Learners will understand the factors that affect the strength of volcanic eruptions.
- Learners will learn the Volcanic Explosivity Index.
- Learners will understand the effects of volcanic eruptions on surrounding cities.
- Learners will make inferences based on data provided after the simulation.
- Learners will understand the difference between magma and lava.

LESSON HIGHLIGHTS

CREATE/SIMULATE

- The purpose of this lab simulation is to give the learner a better understanding of volcanic processes; Specifically, users will better understand the factors that contribute to the explosivity of volcanoes.
- Learners will discover the Volcanic Explosivity Index, which is used to measure the strength of a volcanic eruption.
- Learners can change the settings on a number of different dials and drag and drop elements in the simulation to determine which factors affect the strength of a volcanic eruption.

TELEPORT/LAUNCH

- Students will interact with a virtual volcano and witness a simulation of a volcanic eruption.
- Learners will observe the effects of a volcanic eruption on a simulated city.
- The outcome of the volcanic eruption will depend on the factors selected by the learner.
- Learners will observe the city prior to the eruption and after to display the effects of volcanic eruptions.

LESSON OVERVIEW

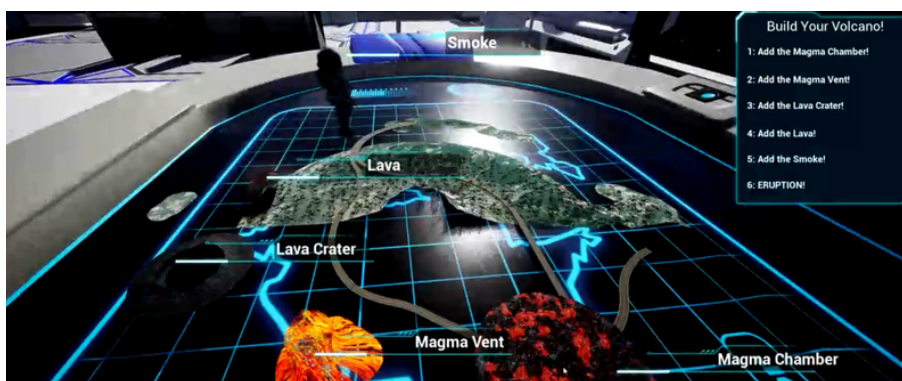
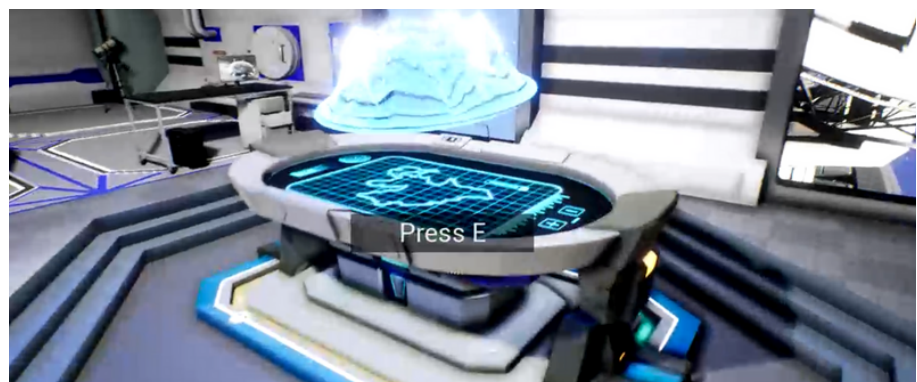


Step 1

Enter the Earth and Space Lab

Step 2

Press E to begin the lab



Step 3

Place the volcano parts correctly

LESSON OVERVIEW



Step 4

Mia will tell you when you place a part correctly

Step 5

Erupt your volcano



Step 6

View eruption data

LESSON REFLECTION

After conducting this experiment, learners should be able to explain why they observed the results. Use this reflection in addition to the quiz at the end of the simulation to assess your knowledge!

1. What is the difference between magma and lava?
2. What impact does a volcanic eruption have on the surrounding area?
3. Where is the magma chamber on a volcano?
4. What are the different types of volcanoes?
5. How many buildings were destroyed after your volcanic eruption?