

# Geothermal Energy

## LESSON PLAN

### NEXT GENERATION SCIENCE STANDARDS

4-PS3-4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.\*

4-ESS3-1 Earth and Human Activity Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

### OBJECTIVES

The student will be able to present Information about geothermal energy.  
The student will be able to conduct research on their own using a computer.

### ACTIVITIES

The students will watch this video:

<https://www.youtube.com/watch?v=j7q653ffQO4>

Teacher can lead a discussion on the similarities and differences between geothermal energy and wind energy.

Draw attention to the turbine and the Idea of converting thermal energy to mechanical energy and then electrical energy.

### OPPORTUNITIES FOR DIFFERENTIATION

#### YOUNGER STUDENTS

- Students can watch a demonstration done by the teacher of a baking soda/vinegar volcano
- The teacher will explain volcanoes and their connection to geothermal energy

#### OLDER STUDENTS

- Students can explore these websites:
  - <https://kids.britannica.com/kids/article/geothermal-energy/625239>
  - [https://www.ducksters.com/science/environment/geothermal\\_energy.php](https://www.ducksters.com/science/environment/geothermal_energy.php)
  - <https://www.alliantenergykids.com/RenewableEnergy/GeothermalEnergy>
  - <https://www.eia.gov/kids/energy-sources/geothermal/>
- The students will get into groups and create an "advertisement" for geothermal energy
- the advertisement should include data about geothermal energy usage, how it works, and the pros of using it.
- The students can then act out or film a video of their advertisement and show the class.