

# GEOHERMAL ENERGY

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On behalf of The World Association of Technology Teachers

## W.A.T.T.



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# GEOHERMAL ENERGY

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1. What is the origin of the term 'geothermal' ?

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2. Write a general description of geothermal energy. Your answer should make reference to the way in which the earth warms water and returns it to the surface for use in power production.

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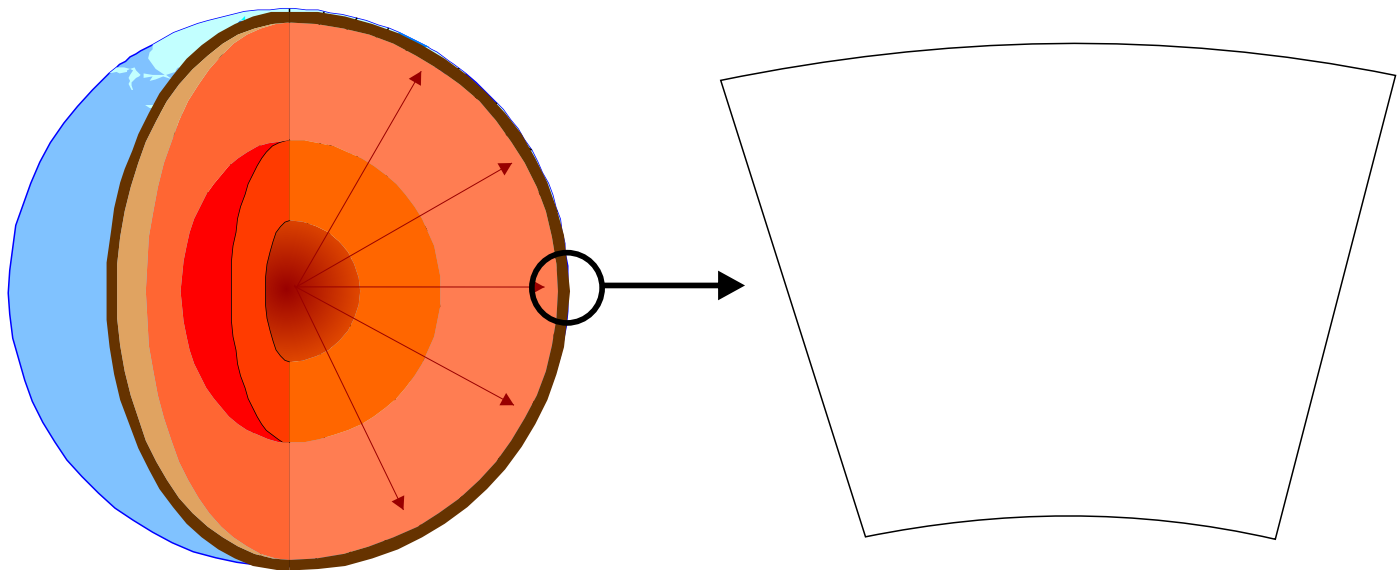
3. The incomplete diagram below represents the way water is heated below the earth's surface and then returns. Complete the diagram on the right and add the following terms / phrases:

EARTH'S CRUST

GEOHERMAL  
RESERVOIR

HOT WATER  
RETURNING TO  
SURFACE

SUPER HOT MANTLE



SECTION OF EARTH - TEMPERATURES  
REACH 5000 DEGREES CENTIGRADE AT  
THE CENTRE

RAIN FALLS ON THE EARTH'S SURFACE AND  
SEEPS DOWN TO THE HOT ROCKS BELOW. THE  
WATER HEATS AND RETURNS TO THE SURFACE

4. In simple terms, how can electricity be produced by geothermal energy ?

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5. Write four advantages of using geothermal energy over convention energy sources ?

A:

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B:

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C:

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D:

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6. Geothermal energy is usually converted to electricity through one of three types of geothermal electricity plants:

DRY STEAM POWER PLANT      BINARY CYCLE POWER PLANT      FLASH STEAM POWER PLANT

Select one of these plants. Draw a diagram that clearly shows how electricity is produced. Add labels to the important parts. Add notes that explain the conversion from hot water / steam to electricity.

TYPE OF GEOTHERMAL PLANT: \_\_\_\_\_

**DIAGRAM**

**NOTES:**

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