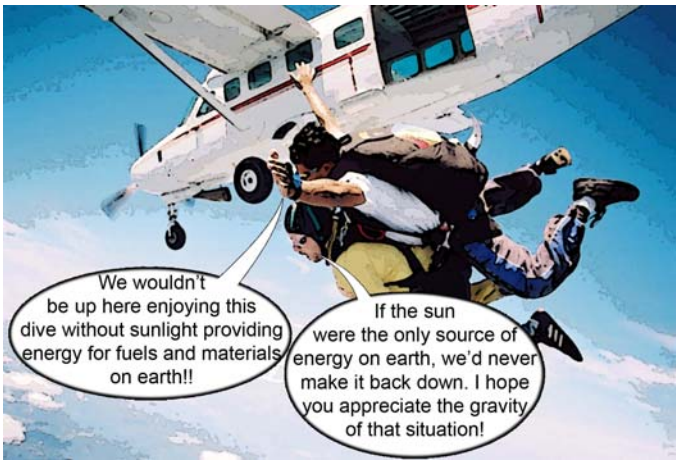
Energy on Earth

You are basking in the sun on a beach of a small tropical island. Suddenly there is a rumble and the sky is darkened by ash as a volcano not far from the beach erupts. You've witnessed two major sources for all the energy on earth: radioactivity and solar energy.

The energy that powers a volcano is called geothermal energy. Most of the geothermal energy comes from radioactivity in the Earth's core where temperatures can exceed 5,000°C.



Solar energy not only warms the earth, but plants capture sunlight energy and make food by photosynthesis. Animals get energy and raw materials for synthesis by eating plants. Living things die and decompose leaving their captured solar energy in fossils that form in the soil from the remains of ancient plants and animals. Plant oils and carbohydrates slowly turn to fossil fuels under the influence of heat and pressure over long periods of time. Fossil fuels are considered a nonrenewable resource because they are used much faster than they can be made. Also, burning fossil fuels causes pollution and contributes to global warming. Examples of fossil fuels include coal, oil, and natural gas.

Answer the questions below based on the reading above and on your knowledge of physics.

1. What are the two major sources of energy on earth? _____
2. According to the cartoon, what is a third source of energy on earth that was ignored in the paragraph above? _____

   _____
3. What is a fossil fuel? Give examples. _____

   _____
4. Where does the energy in fossil fuels come from? _____
5. Why are fossil fuels considered a nonrenewable resource? _____

   _____
6. What are some problems associated with the use of fossil fuels? Does this mean we shouldn't use them? Justify your response. _____

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7. What is the source of energy for a volcano? _____

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