Subtopic 9.3: Renewable Energy Sources

1. A(n) _____ is a resource that is replaced by natural processes nearly as quickly as it is used.

A. reserve

B. energy option

C. renewable resource

2. Which of the following is true of solar energy?

A. Producing electricity using solar cells is expensive

B. The Sun's rays strike the Earth continuously; therefore storing electricity generated by solar cells is not necessary

C. A technique for generating electricity using solar energy has not been developed

D. The quantity of solar energy available to produce electricity is not affected by location on Earth's surface

5. A solar panel converts _____ .

A. Radiant energy to electricity

B. Electrical energy to light

C. Chemical energy to electricity

D. Electricity to chemical energy

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7. Electricity produced by falling water is called ___.

A. tidal energy

B. hydroelectricity

C. thermodynamics

D. geothermal energy

8. Renewable organic matter, such as wood and rice hulls, are examples of ____.

A. biomass

B. nuclear fuels

C. fossil fuels

D. fission products

9. Which of the following is the source of almost all of Earth's energy resources ____.

A. plants

B. magma

C. the Sun

D. Fossil fuels

10. Why are alternative energy sources necessary?

A. There is no limit to the supply of fossil fuels

B. The supply of fossil fuels is diminishing

C. The energy needs of the world is decreasing

D. The population of the world is decreasing

11. Which forms of energy comes from the presence of magma in Earth's crust?

A. Fossil fuels

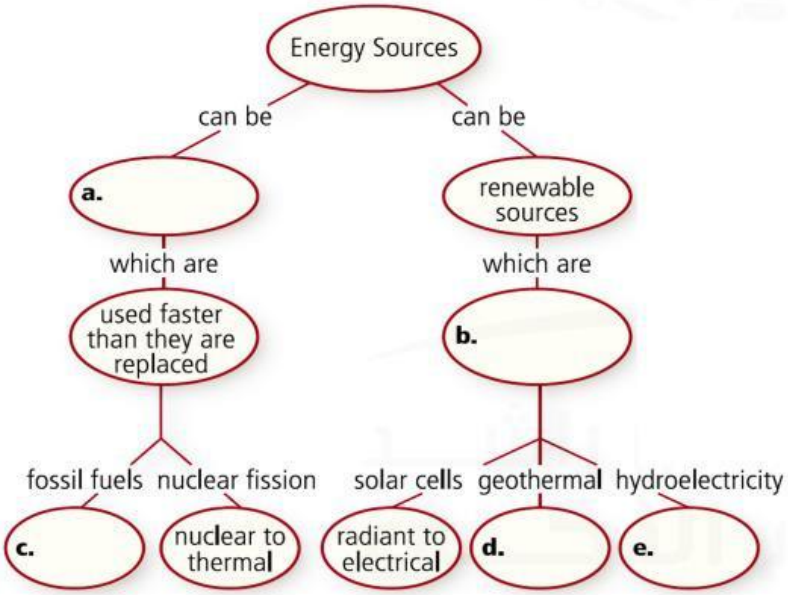
B. Geothermal energy

C. Wind energy

D. Biomass

Free Response:

1. Complete the concept map below by filling in the missing labels a to e.



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2. Choose whether the sentences represent advantages (A) or disadvantages (D) of each type of renewable energy.

Wind energy depends on naturally occurring kinetic energy	
Wave energy is weather dependent; it relies on water movement	
Hydroelectric energy can be switched on or off, according to the electricity demand	
Biomass causes air pollution	
Wave energy has a limited effect on the environment	
Biomass fuel is easily replaced	
Wind energy is noisy and visually intrusive for local inhabitants	
Hydroelectric energy depends on a constant supply of water	

3. List the advantages and disadvantages of each of the energy source in the table below.

Energy Source	**Advantages**	**Disadvantages**
Fossil fuels		
Hydroelectricity		
Wind turbines		
Nuclear fission		
Solar cells		
Geothermal energy		

4. Explain the need to develop and use alternative energy sources.

5. describe ways in which solar energy can be used.

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