CH 4 STUDY GUIDE - KEY

Student Objectives

		A	B	C	D	F
	List and define the main two forms of energy					
	Explain how we can measure and compare energy					
	List the top energy sources (in order) used to produce electricity in the U.S.					
	Distinguish between renewable and nonrenewable resources					
	Identify which energy resources are fossil fuels					
	Describe ways which would cause energy demands to lower.					
	Evaluate advantages and disadvantages to each energy source. (Coal, petroleum, natural gas, nuclear, propane, wind, solar, biomass, hydropower, geothermal, and tidal power)					
	Explain the correlation with population, consumption, and production of energy in the U.S.					
	Analyze charts, graphs, and maps to compare the costs and benefits of energy sources for generating electricity.					
	List and describe the energy sources in the U.S. that are produced and or consumed.					
	Identify and explain ways to conserve energy and reduce pollution					

Review Content

Choose the letter that best answers the question or completes the statement.

1. Nonrenewable resources are those that
   a. will never run out.
   b. take one or two decades to replace.
   c. have finite supplies.
   d. are contaminated by pollution.

2. Which of the following is a fossil fuel?
   a. uranium
   b. coal
   c. wood
   d. ozone

3. Petroleum and natural gas form from
   a. the remains of plants and animals buried in seas long ago.
   b. the decay of radioactive sediments underground.
   c. plant material that collected millions of years ago in swamps.
   d. heating and cooling of magma in underground chambers.

4. Hydroelectric power produces electricity using
   a. the sun's rays.
   b. wind.
   c. moving water.
   d. storms.

5. Which of the following substances is a fuel used in nuclear power plants?
   a. sulfur dioxide
   b. uranium
   c. petroleum
   d. carbon dioxide

6. The careful use of resources is
   a. conservation.
   b. recycling.
   c. composting.
   d. deposition.

7. The Clean Air Act
   a. makes all air pollution illegal.
   b. limits greenhouse gases in outdoor air.
   c. limits nonpoint source pollution.
   d. set limits on certain pollutants in outdoor air.

8. What type of pollution did the Clean Water Act succeed in limiting?
   a. carbon dioxide
   b. sewage
   c. solid waste
   d. acid precipitation

9. Recycling is an important way to reduce resource consumption because
   a. reducing waste is better than recycling it.
   b. it decreases the use of new resources to make products.
   c. recycling is not a new way to save resources.
   d. curbside pick-up makes recycling more convenient in many communities.

Understanding Content

10. What are the four major types of fossil fuels? ***Coal, Natural Gas, Petroleum, & Propane***

11. What is a major negative impact of the use of fossil fuels? ***Burning fossil fuels is a major source of air pollution.***

12. Explain why fresh water is a vital resource. ***People need fresh water for drinking, cooking, growing food, and bathing.***

13. How can farmers help protect land resources? ***Contour plowing, strip cropping, use natural fertilizers, and less pesticides.***

14. What are three things that you can do to prevent water pollution? ***Don't pour chemicals down the drain, or on the ground, and don't put hazardous materials in the trash.***

15. What are three things that you can do to save energy? ***Recycle, turn lights off when you leave, walk or ride a bike instead of a car.***

Critical Thinking

16. Some people predict that tar sands and oil shale will one day supply much of our energy needs. Are tar sands and oil shale a good long-term energy solution? Explain. ***No, Nonrenewable Resource, harmful wastes, uses a lot of energy, destroys the land.***

17. What effect can recycling paper have on the use of resources and the creation of pollution? ***Need less new paper, less trees cut down, use less energy.***

18. How might an increased use of alternate energy sources such as wind and solar radiation affect the lifetime of fossil fuel resources? ***Decrease use of fossil fuels, known resources would last longer, less pollution.***

19. What is the difference between how electricity is produced with tides and how it's produced in a nuclear power plant? ***Power source turns a turbine, which turns a generator that produces electricity. Tidal plant uses water to turn a turbine, nuclear power uses heat from fission to create steam that turns the turbine.***

20. The factors in favor of the use of solar power include the fact that the fuel it uses is free, it's renewable, and it doesn't create pollution. Identify drawbacks of the use of solar power. ***Takes up space, can't work at night, expensive to build.***