

Chapter 4.1 – Energy Resources (pages 132-139)

Match the vocabulary term to its definition:

nonrenewable resources 1. resources that are used faster than they can be replaced by natural processes

renewable resources 2. resources that can be replaced by natural processes in a relatively short amount of time

fossil fuels 3. fuels formed from the remains of prehistoric organisms

nuclear energy 4. energy released from atomic reactions

nuclear fission 5. the nuclear process of splitting atoms

reclamation 6. a process in which mined land must be recovered with soil and replanted with vegetation

fossil fuels 7. examples of this resource are coal, oil, and natural gas

nonrenewable resources 8. examples of this resource are coal, oil, natural gas, uranium

renewable resources 9. examples of this resource are solar, wind, water, geothermal, biomass energies

vampire energy 10. energy used by appliance and other electronic equipment that are plugged in 24 hours a day; even when turned off, they still consume energy

oil / natural gas 11. Which of the nonrenewable resources is most commonly found in Texas?

- B** 12. Why are fossil fuels considered nonrenewable resources?
- They are able to be replenished in a short amount of time.
 - They form over millions of years and aren't replenished in a short amount of time.
 - The resources needed for fossil fuels are readily available.

- A** 13. The type of fossil fuel that forms depends on all of these except:
- when it was formed
 - the type of organic matter
 - the temperature and pressure
 - the length of time that the matter was buried

- C** 14. Coal forms from prehistoric ____.
- plankton
 - bacteria
 - plants
 - dinosaurs

- A** 15. Oil and natural gas forms from prehistoric ____.
- plankton
 - bacteria
 - plants
 - dinosaurs

<u>Word Bank</u>
Fossil fuels
Fossil fuels
Nonrenewable resources
Nonrenewable resources
Nuclear energy
Nuclear fission
Reclamation
Renewable resources
Renewable resources
Vampire energy

Order

Order the steps of oil and natural gas formation.

Plankton die and fall to the ocean floor.

16. Layers of sediment buried the remains.

17. Bacteria decomposed the material; pressure and high temperature form oil.

Greater temperature and pressure form
18. natural gas.

Organize

Identify information about fossil fuels.

19. Circle the correct kind of resource:

Nonrenewable

or

Renewable

Fossil Fuels

20. Three types:

- oil
- coal
- natural gas

Formation depends on:

21.

type of organic matter

22.

temperature and pressure

23.

length of time buried

2-3

24. How many neutrons are released in a nuclear fission reaction?

chain reaction

25. In nuclear fission, the released neutrons hit other atoms creating a ____.

steam

26. The thermal energy released in this reaction heats water and changes it to ____.

turbine

27. The steam turns a ____ which is connected to a generator, which produces electricity.

92%

28. What percentage of US energy is from nonrenewable resources?

pollutants

29. The Clean Air Act limits the amounts of ____ that can be released into the air.

nuclear emissions

30. The US Atomic Energy Act and the Energy Policy Act regulates and protects people from ____.

List three appliances that use vampire energy.

microwaves, washing machines, TVs, computers, DVDs, printers

31.

32.

33.

Complete the chart on page 139 in your textbook, tear it out, and staple it to this paper to turn in.

Research the advantages and disadvantages of fossil fuels and nuclear energy.
Use the information you find to fill in the table below. **TEKS 6.7(A)**

	Advantages	Disadvantages
Fossil Fuels	<ul style="list-style-type: none">• fairly easy and direct to transform chemical energy• relatively inexpensive• relatively easy to transport	<ul style="list-style-type: none">• limited supply• habitat disruption• pollution from mining and burning
Nuclear Energy	<ul style="list-style-type: none">• A small amount of uranium produces large amount of energy.• A well-run plant does not pollute air, soil, or water.	<ul style="list-style-type: none">• Uranium is nonrenewable.• An out-of-control chain reaction can release harmful substances into the environment.• Nuclear waste is radioactive and dangerous for thousands of years.