Natural Gas

Fill in the blanks with the words in the word bank at the bottom of the page. Use each word only once.

1. Natural gas is called a _____ because it was made from marine plants and animals hundreds of millions of years ago.

2. We can't make natural gas in a short time, so we say it is a _____ energy source.

3. The energy in natural gas once came from the _____.

4. Natural gas is underground; we drill _____ to find it.

5. Decaying garbage makes a gas called _____.

6. We add a smell like _____ to natural gas so we know if there is a leak.

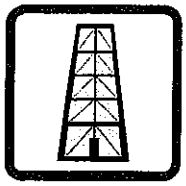
7. _____ use natural gas for heat.

8. _____ use natural gas to make products.

9. Power plants _____ natural gas to make electricity.

Word Bank

- burn
- factories
- fossil fuel
- homes
- methane
- nonrenewable
- rotten eggs
- sun
- wells



Petroleum

Fill in the blanks with the words in the word bank at the bottom of the page. Use each word only once.

1. Petroleum is called a _____ because it was made from marine plants and animals hundreds of millions of years ago.

2. Another name for petroleum is _____.

3. We can't make more petroleum in a short time, so we say it is a _____ energy source.

4. Some oil is underground; we drill _____ to find it.

5. Some oil is under the ocean; we use oil _____ to reach it and pump it to the surface.

6. We move petroleum by _____ and _____.

7. After we pump petroleum from the ground, we send it to a _____ where some is made into _____.

8. We _____ 48 percent of the oil we use from other countries.

9. Burning petroleum products causes air _____.

Word Bank

- wells
- fossil fuel
- gasoline
- import
- nonrenewable
- oil
- pipelines
- pollution
- refinery
- rigs
- ships

Coal

Fill in the blanks with the words in the word bank at the bottom of the page. Use each word only once.

1. Coal is called a _____ because it was made from plants millions to hundreds of millions of years ago.

2. Coal is _____; you can't make more in a short time.

3. When coal is near the surface, the Earth is scraped off the coal in a _____.

4. To reach coal buried far underground, _____ are dug. This is called _____ mining.

5. Making the mined land usable again is called _____.

6. Coal is burned in a power plant to make _____.

7. Most coal is moved by _____ and _____.

8. Coal _____ the air when it is burned.

9. Power plants use _____ to clean the emissions from burning the coal.

Word Bank

- barges
- deep
- electricity
- fossil fuel
- nonrenewable
- pollutes
- reclamation
- scrubbers
- shafts
- surface mine
- trains

U^{235} Uranium

Fill in the blanks with the words in the word bank at the bottom of the page. Use each word only once.

1. Everything in the world is made of _____.

2. At the center of an atom is the _____. It is made of _____ and _____.

3. Moving around the nucleus are _____.

4. The energy stored in atoms is _____.

5. Uranium is buried underground. We can't make more, so we call uranium a _____ energy source.

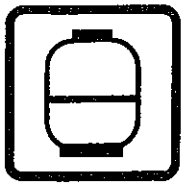
6. Uranium atoms can be split; we call this _____.

7. When uranium atoms are split, energy is released as _____ and _____.

8. In a nuclear power plant, we split uranium atoms and use the heat to make _____.

Word Bank

- atoms
- electricity
- electrons
- fission
- heat
- neutrons
- nonrenewable
- nuclear energy
- nucleus
- protons
- radiation



Propane

Fill in the blanks with the words in the word bank at the bottom of the page. Use each word only once.

1. Propane is called a _____ because it was formed from marine plants and animals hundreds of millions of years ago.

2. We can't make more propane in a short time, so we say it is a _____ energy source.

3. Propane is found underground, mixed with _____ and _____.

4. At home, we use propane to fuel barbecue _____.

5. When we put propane gas under _____, it turns into a _____.

6. We store liquid propane in _____ and move it from place to place with _____.

7. Propane is called a _____ fuel because it is easy to move as a liquid.

Word Bank

- fossil fuel
- grills
- liquid
- natural gas
- nonrenewable
- petroleum
- portable
- pressure
- tanks
- trucks

Propane Safety

Propane is used in gas grills and on farms for heat. Propane is stored in tanks. It can be dangerous. Never touch a propane tank. If you hear propane leaking from a tank or smell gas, tell an adult and stay away. Companies add the same rotten egg odor to propane that they do to natural gas.

Electrical Safety

Electricity is amazing. It gives us heat and light, and runs **appliances**—our TVs, computers, refrigerators, hair dryers, gaming systems, and washers. Electricity can also be dangerous. It can cause fires and injuries, even death.

Here are some rules for using electricity safely:

- Don't put anything into an outlet except a plug.
- Don't pull on the cord to unplug an appliance, hold the plug and pull.
- Dry your hands before you plug in or unplug a cord.
- If a plug is broken or a cord is cut or worn, don't use it.
- Don't plug too many cords into one outlet.
- Turn off a light or unplug it before changing a light bulb.
- Never touch the inside of an appliance while it's plugged in.

- Keep appliances away from water. Don't use a hair dryer if there's water in the sink nearby.
- If there's a big storm, turn off the TV and computer.
- Don't touch any power lines outside.
- Some power lines are buried underground. If you are digging and find a wire, don't touch it.
- Don't fly a kite or climb a tree near a power line.

Critical Thinking Questions

1. Energy does a lot for us. Which of its jobs do you think is the most important? Why?
2. Write a paragraph explaining all the ways you could use biomass in a day.
3. Do you think people mining for coal should have to use reclamation on the land? Why or why not?
4. Which layer of the Earth do you think is the most important? Why?
5. Two drops of water meet in a cloud. They start talking about their last trip to Earth. One went through a hydropower plant. The other helped provide water for wheat to grow. They got into an argument over who did a more important job. Write a dialogue between the two water drops.
6. What do you think some of the problems would be in capturing methane gas from rotting garbage?
7. Explain how you use petroleum in your life. Can you reduce the amount of petroleum you use? How?
8. Explain why we switch propane into a liquid. Draw a picture to illustrate your explanation.
9. Do you think the sun's light or heat is more important? Explain your answer.
10. The radiation from nuclear fuel can be dangerous if not taken care of properly. Describe at least two other things that can be dangerous if not taken care of properly.
11. Draw a picture of a wind farm. Include and label as many details as you can.
12. Add at least 5 more energy words to one of the crossword puzzles. Make sure they attach to a current letter. Write clues for your words.
13. Explain, with diagrams and words, what "opposite charges attract each other" means.
14. When we flip a switch, our lights go on. When we plug something in, and turn it on, it works. We don't think about where electricity comes from. Pretend you are a spark of electricity. Explain your journey from an energy resource to your game console or system.