

## COAL, OIL, & NATURAL GAS

**Coal, oil and natural gas** are some of the most important fuels.

A **fuel is a substance that is burned to release its stored energy**. They are also called **fossil fuels**.

- ❖ **Fossil-fuels** are made from decayed plants and animals that lived long ago.
- ❖ **Coal** was formed from the remains of plants. Coal is grouped as either hard or soft.
- ❖ **Soft coals** were formed most recently. They were under low pressures and low temperatures.
- ❖ **Hard coals** are the oldest coals and were formed under high temperatures and high pressures.
- ❖ **Oil and natural gas** formed the same way that coal was formed. However, they were formed from the remains of simple animals and plants. These tiny organisms lived on the earth many millions of years ago. Over time, high pressures and temperatures changed their remains to oil and natural gas. Many common products are made from oil. **Gasoline** and **diesel fuel** are both made from oil.

One of the main products made from natural gas is **methane**.

- ❖ **Methane** is the gas that is burned in most stoves.
- ❖ **Coal, oil and natural gas** are **nonrenewable resources**.



COAL



OIL



NATURAL GAS

**Petroleum** is a liquid that is found underground. It is sometimes called **oil**.

- ✚ Oil can be as thick and black as tar or as thin as water.
- ✚ Petroleum has a lot of energy. It is turned into different fuels – like gasoline, kerosene and heating oil.
- ✚ Most plastics and ink are made from petroleum.

*Prepared by: Mrs. C. Marguerite Forbes - Moree*

Long ago people did not dig for oil. The oil seeped from under the ground into ponds. It floated on the water. People gathered the oil from the top of the water. The energy in petroleum came from the energy in the plants and animals. It was formed long ago.

That energy came from the sun. Petroleum that is used today was formed millions of years ago. It is a **nonrenewable resource**.

✚ Petroleum has to be drilled from small pockets in rocks.



Oil wells are drilled into the rocks to reach the oil. A lot of oil is also under the oceans. Oil rigs that float are used to get this oil. After the oil is pumped, it is sent to refineries. At the refineries, it is separated into different kinds of fuels. Most of the oil is made into gasoline. **Oil is also used to make products such as plastics, paints, medicines and soap.** Burning fuels made from oil can pollute the environment. Natural gas is a gaseous fossil fuel consisting mainly of methane. Before a fuel, it must undergo extensive processes to have almost all other materials removed from it except methane. Compressed natural gas is a substitute for gasoline. It's environmentally "clean" and safer than other motor fuels in the event of an oil spill. Natural gas is lighter than air, so it disperses quickly. Natural gas is also cheaper and is being used more in vehicles.

- Resources are categorized as renewable and nonrenewable. Which of the following is the best definition for the term **renewable**?
- Choose the best definition for each of the following words.

WORD	DEFINITION
methane	
petroleum	
fuel	

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3. Why is petroleum considered a nonrenewable resource?

Petroleum is a nonrenewable resource because it was formed

4. Which of the following products were **NOT** made from petroleum?

medicine

oil

paint

soap

5. Complete the passage below. Fill in the missing words to show the benefits of using compressed natural gas.



Compressed \_\_\_\_\_ is a substitute

for \_\_\_\_\_. It is environmentally

“clean” and safer than other

\_\_\_\_\_ fuels in the event of an oil spill. Natural

gas is lighter than \_\_\_\_\_, so it disperses

quickly. Natural gas is also \_\_\_\_\_ and is

being used more in vehicles.



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