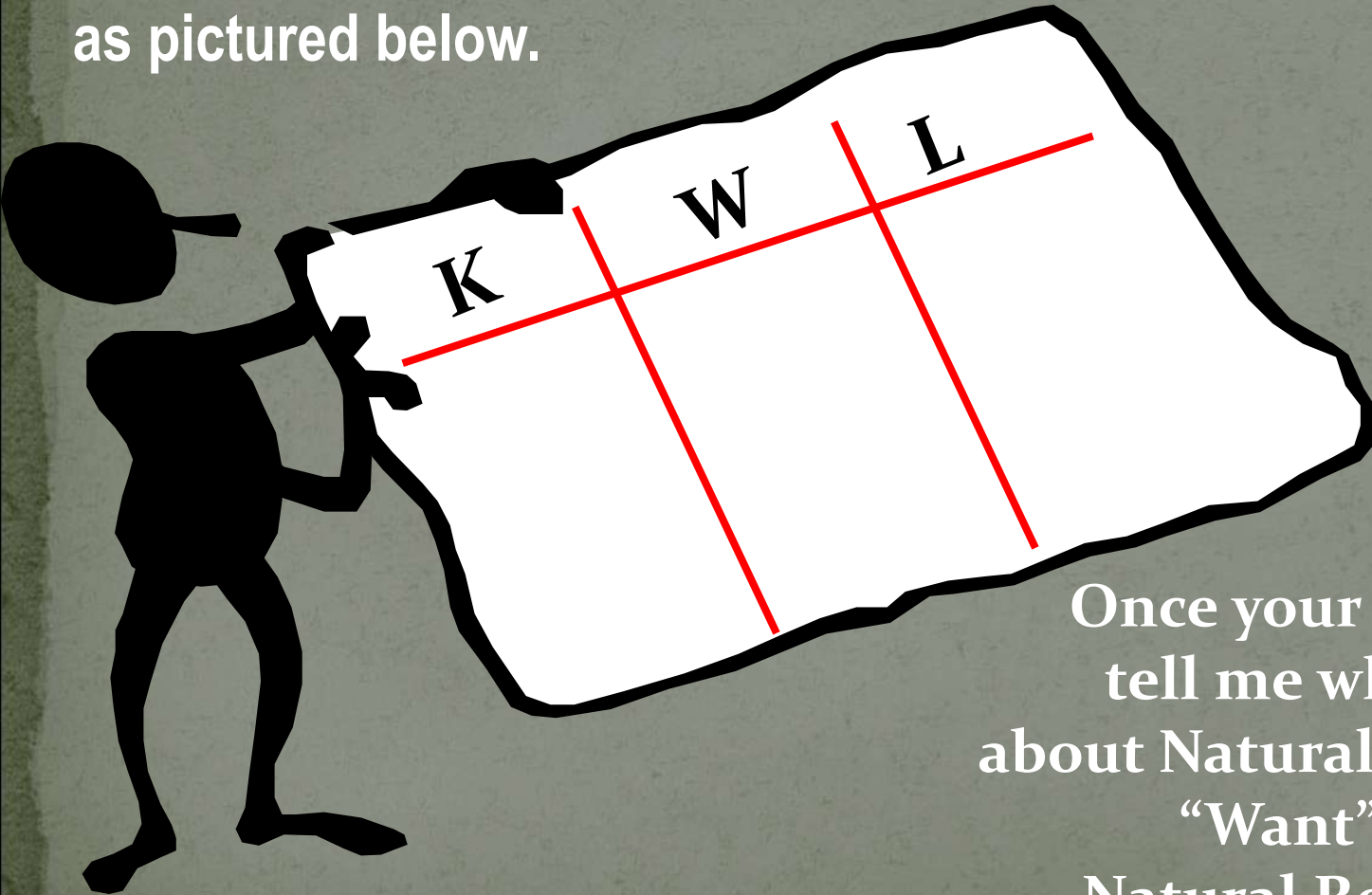


Warm-up

- On a Separate sheet of notebook paper (not in composition notebook) turn your paper on its side and set up your paper as pictured below.



Once your paper is set up, tell me what you “Know” about Natural Resources and “Want” to know about Natural Resources. These columns should be filled up!

Natural Resources

Essential Question:

How do you differentiate between renewable and nonrenewable resources?

Why are Natural Resources Important?

- The Earth provides almost everything we need to survive through its atmosphere, oceans, and soil.
- We use Earth's natural resources to help us survive
- A natural resource is any natural material that is used by humans or living things
- Examples include water, petroleum, minerals, forests, and animals.
- Most natural resources are made into products; very few natural resources are used in their natural state



What are Renewable Resources?

- A renewable resource is a natural resource that can be used and replaced over a relatively short time
- Although they can be replaced, we have often used them more quickly than they can be replaced
- Examples:

- Water
- Trees



What are Non-Renewable Resources?

- Not all of Earth's resources are renewable
- A non-renewable resource is a natural resource that cannot be replaced or that can be replaced **only** over *thousands* or *millions* of years
- The Earth only has a certain amount of nonrenewable resources at any given time
- Examples:
 - Oil
 - Natural Gas
 - Coal



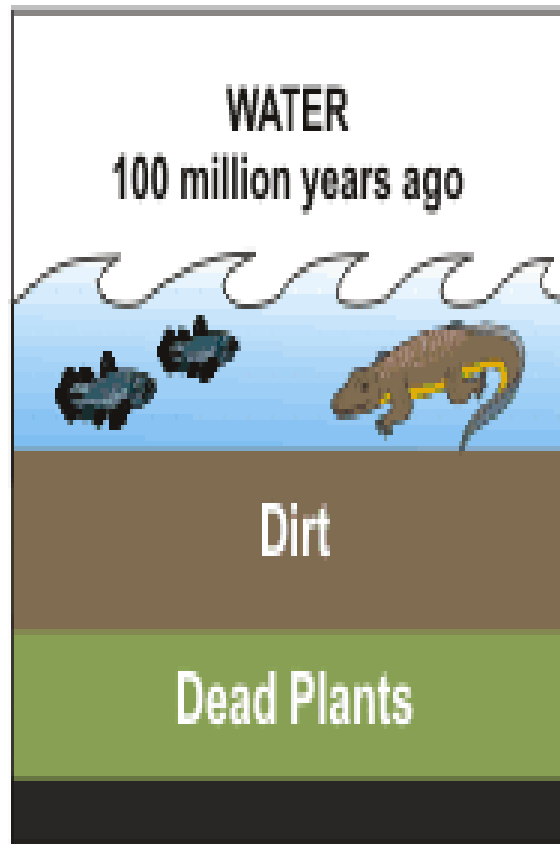
What are Fossil Fuels?

- Energy Resources are natural resources that humans use to generate energy
- Most of the energy we use comes from fossil fuels.
- A Fossil Fuel is a nonrenewable energy resource formed from the remains of plants and animals that lived long ago.
- Examples of fossil fuels include petroleum, coal, and natural gas.
- When these fossil fuels are burned they produce energy
- However, when these fossil fuels are burned and because they are non-renewable resources they are gone.
- Once they are used up and gone, new supplies won't be available for thousands or millions of years

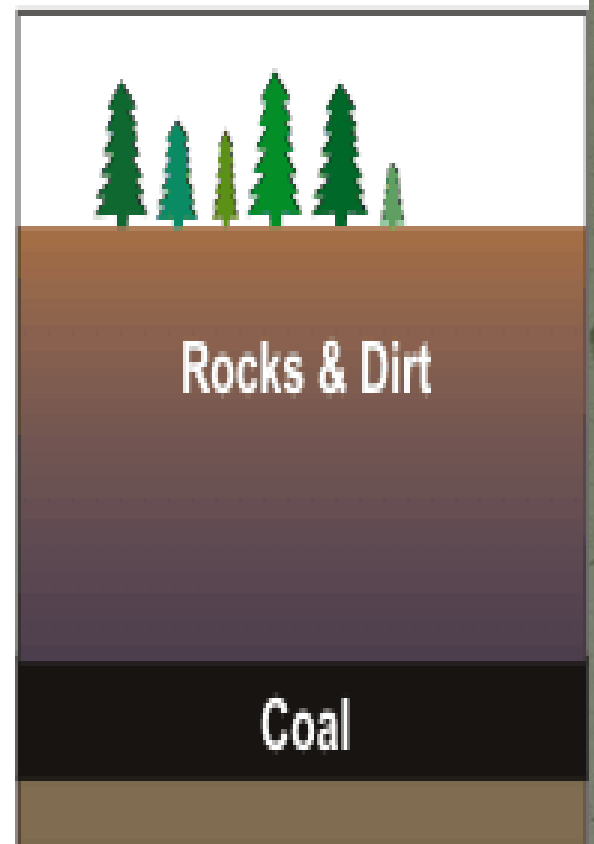
How is coal formed?



Before the dinosaurs, many giant plants died in swamps.



Over millions of years, the plants were buried under water and dirt.

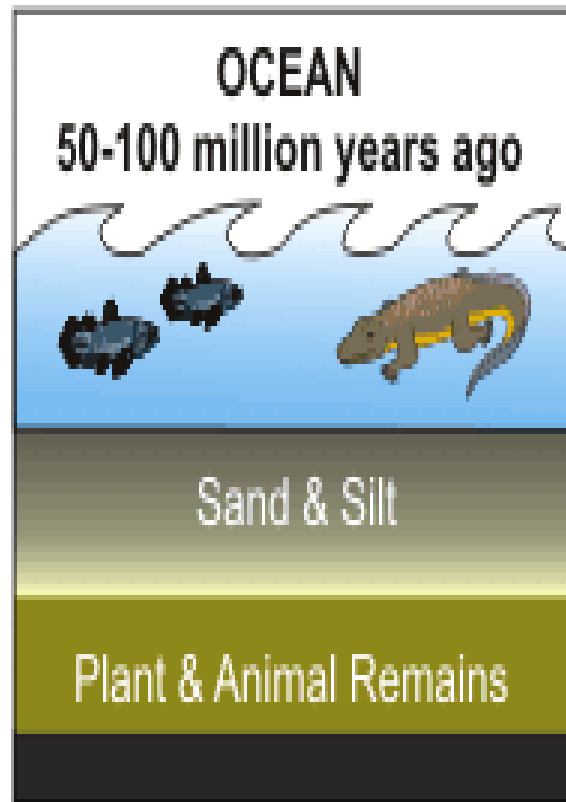


Heat and pressure turned the dead plants into coal.

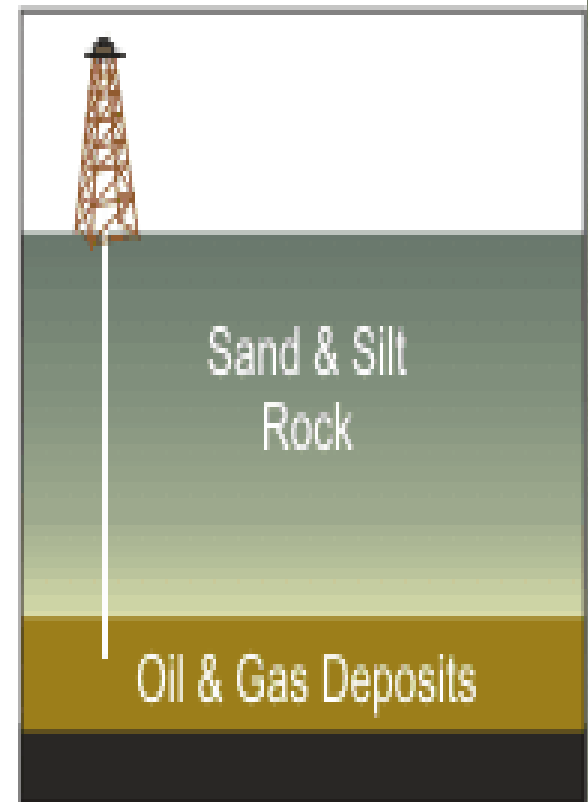
How is oil and natural gas formed?



Tiny sea plants and animals died and were buried on the ocean floor. Over time, they were covered by layers of silt and sand.



Over millions of years, the remains were buried deeper and deeper. The enormous heat and pressure turned them into oil and gas.



Today, we drill down through layers of sand, silt, and rock to reach the rock formations that contain oil and gas deposits.

What are Alternative Resources?

- Most of our energy needs comes from the use of fossil fuels, but there are two main problems with fossil fuels:
 - Availability is limited
 - Obtaining and using fossil fuels harms the environment
- To continue to have energy, but reduce pollution we must find alternative energy sources



What are some Alternative energy sources?

- Like all things, each alternative energy sources has pros and cons
 - Nuclear Energy- energy from fission or fusion reactions
 - Solar Energy- energy from the sun
 - Wind Energy- energy from the wind
 - Hydroelectricity- energy from the flow of water
 - Biomass- energy from burning organic or living matter
 - Geothermal- energy from the earth
- These energy sources are Inexhaustible meaning they are constant and will not run out



Why is it important to conserve our Natural Resources?

- We need to be careful on how we use our natural resources and use them only when necessary
- Conservation is the preservation and careful management of the environment and of natural resources
- Reduce, Reuse, and Recycle!!!
- One way is to limit their uses
 - Example: turn off the faucet, replant plants
- Recycling is the process by which used or discarded materials are treated for reuse



Standard check

- What is the difference between renewable and non-renewable resources?
- What is an example of a natural resource?
- What is an example of a renewable resource?
- Explain the difference between how coal and oil are formed.
- What is an example of a non-renewable resource?
- Are fossil fuels renewable or non-renewable? Explain
- Give three examples of fossil fuels.
- Name the 6 alternative resources.