

## Energy Study Guide

SOL 3.11



### *Vocabulary*

1. Nonrenewable resource- once the resources are used up, they are gone and cannot be replaced. (example: oil, coal, natural gas, and rocks and minerals)
2. Renewable resource- resources that can be replaced and conserved. (examples: wind, solar/(sun), hydropower/(water), plants, woods, and vegetables)
3. Fossil fuels- formed from decayed plants and animals. The formation of fossil fuels takes millions of years. (examples: coal, oil, and natural gas)
4. Natural resource- resources that we can get from nature (examples: sun, wood, wind, and water).
5. Conservation- protection of valuable resources
6. Resource- a material that is found in nature and that is used by living things.

### *Facts to Know*

- A wind turbine uses wind power to generate electricity.
- Solar panels are used to absorb the sun's energy which we use to heat water, power calculators, and power cars.
- Hydropower, or water power is a renewable resource that creates electricity through giant spinning turbines.
- To release the energy stored in fossil fuels, the fuels must be burned.
- When wood from trees burn, the stored energy is released as heat and light energy.
- Oil and natural gas are pumped from beneath the earth's surface by drilling into the ground.
- Sun, wind, and water are renewable energy sources.
- The sun is the major source of energy for the Earth. The sun produces light and heat energy.
- Coal is a black rock dug out from below the Earth's surface and burned to create electricity.

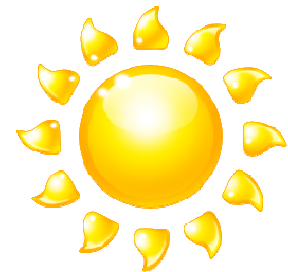


- **Oil** is a **fossil fuel** that is used to power vehicles.
- Natural gas is piped out from deep inside the **earth's core** and converted into electricity for our homes.
  - ✓ Be able to list examples of how natural gas is used. Example: water is heated by gas, food is cooked through the use of gas stoves, and clothes are dried in gas dryers.
  - ✓ Advantages of Renewable Resources: can be replaced, provide humans everything they need to survive, and do not cause pollution.
  - ✓ Disadvantages of Non-renewable resources: **CANNOT** be replaced, hard to get to and can cause pollution.
  - ✓ Name three ways that we can conserve, or save our natural resources: Reduce, reuse, and recycle.
  - ✓ Be able to label the different sources of energy below:

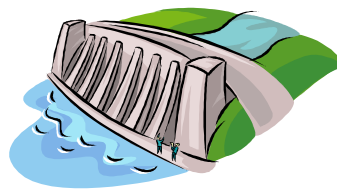
WIND ENERGY



SOLAR ENERGY



HYDROPOWER ENERGY



COAL



OIL

