



Science Virtual Learning
7th Grade Science
Alternative Energy Sources



May 7, 2020



7th Grade Science
Lesson: May 7, 2020



Objective/Learning Target:

I can describe alternative energy sources for producing electricity on planet Earth.

Next watch this Video Over: [Renewable Energy 101](#)

Bellwork -See how well you do on this Quizizz!

Renewable vs. Non-renewable Energy Quizizz





Some Key Points to Remember...(Write these down on a piece of paper to use for today's practice- you may shorten or paraphrase your notes.)

- Renewable energy is energy from sources that are naturally replenishing; renewable resources are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time.
- Generally expensive to initially install, but there are lots of resources available such as federal tax credits, grants and loan programs for qualifying projects.
- Sources include:
 - **Biomass** (wood and wood waste, municipal solid waste a.k.a. garbage, landfill gas and biogas, ethanol and biodiesel)
 - **Hydropower**
 - **Geothermal**
 - **Wind**
 - **Solar**

Credit: <https://www.eia.gov/energyexplained/renewable-sources/>



Key Points to Remember....

- **Biomass energy**—Biomass energy is produced from non fossilized plant materials. Wood and wood waste are the largest sources of biomass energy in the United States, followed by biofuels and municipal solid waste.
- **Hydropower**—Hydropower is electricity produced from flowing water. Most hydropower produced in the United States is from large facilities built by the federal government.
- **Geothermal energy**—Geothermal energy is heat from the hot interior of the earth or near the earth's surface.
- **Wind energy**—Wind turbines use blades to collect the wind's kinetic (moving) energy.
- **Solar energy**—Solar energy systems use radiation from the sun to produce heat and electricity.



Practice (Write this on your own piece of paper)

On your paper, Create the T-Chart to the right and label it with “Advantages of Renewable Energy” and “Disadvantages of Renewable Energy”. Then, go to the link below and do some research that will help you fill in your T-Chart.

[Advantages and Disadvantages of Renewable Energy](#)

Advantages	Disadvantages



Advantages	Disadvantages
<ul style="list-style-type: none">● Renewable Energy Won't Run Out● Maintenance Requirements are Lower● Save Money● Numerous Health and Environmental Benefits● Low Reliance on Foreign Energy Sources	<ul style="list-style-type: none">● Higher Upfront Cost● Not Available 24/7, year-round● Storage capabilities● Geographic Limitations



More Practice- Answer these questions on your own piece of paper (Answers will vary depending on student prediction)

1. Predict what type of energy people will be using in the future. Why?
2. Why do you think people don't use more renewable energy now?
3. Hypothesize the reasons to use more renewable energy resources now rather than wait until the nonrenewable energy sources run out.



More Practice-Do this to see how much you have learned

[Renewable vs. Non-renewable Energy Quizizz](#)

[Wonderville-Save the World](#) - click the Play button to begin