

Sample of our Nuclear Power

A Science Mini Unit Study



Teacher Instructions

This is a limited time sample of our Nuclear Power Mini Unit Study. If you would like to add all of the following activities to the unit study, [you may purchase the full study here for just \\$2.00.](#)

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Page	11:	Hands-on Activities: Build an atom, model nuclear fission, make a turbine, or even a generator!
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Note: All links included in this unit study were functional as of August 2023. If you find one that is no longer working, feel free to let us know at Randi@peanutbutterfishlessons.com.

Thank you!

Graphics used
in this unit study
were created by:



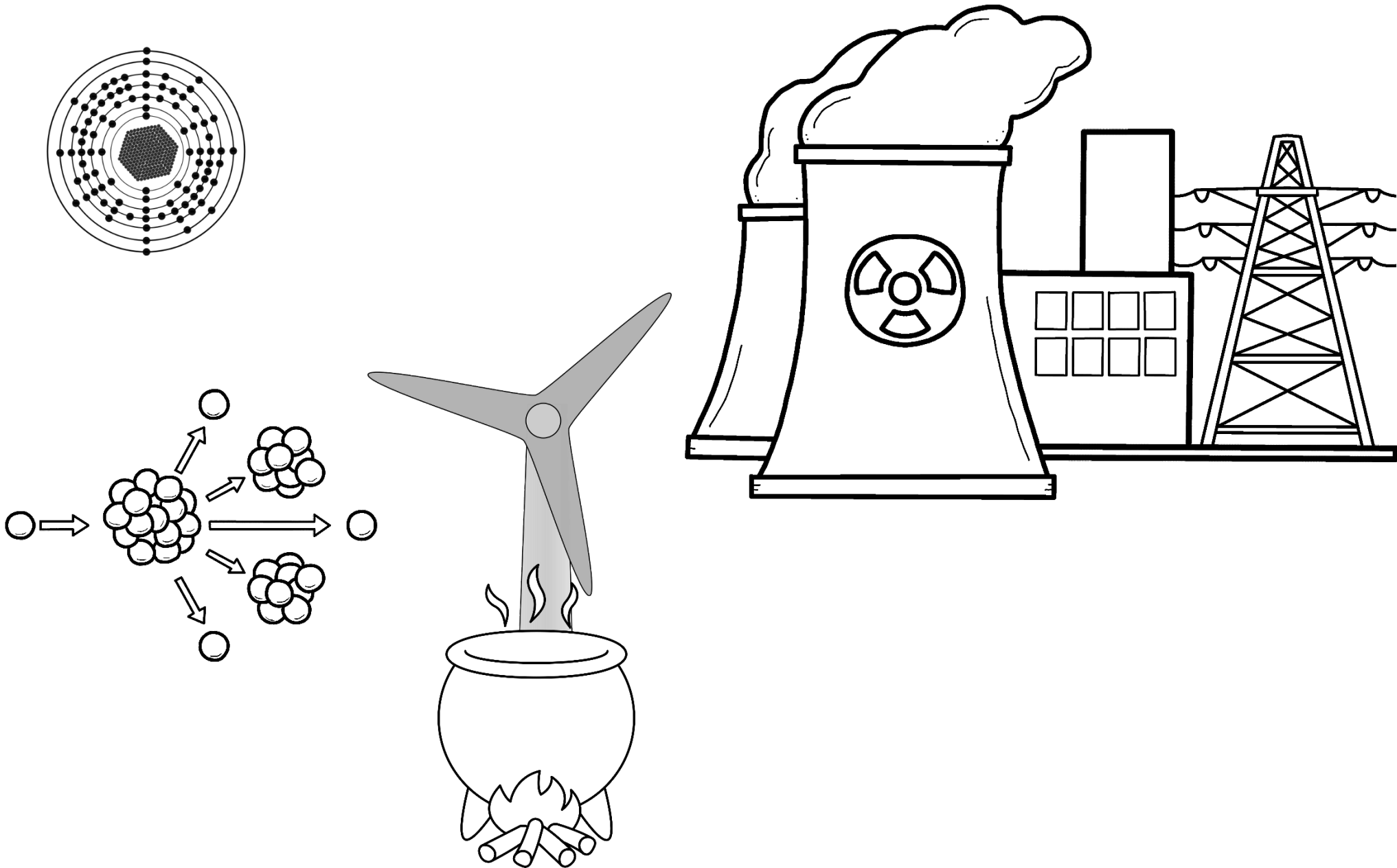
Listening to Learn: Nuclear Power

Learn about nuclear power while developing your children's language, listening, visualization, and beginning notetaking skills. Print the picture on the next page (one per child), read the directions to your children and help them as needed.

1. Have you ever thought about where your electricity comes from? Today, we are going to learn about nuclear power, which is how 20% of the power in the United States is created. Write "20% of electricity in the US" below the words *Nuclear Power*.
2. You many have seen a nuclear reactor when you have been traveling somewhere. This is where nuclear power is created. Color the two towers on your paper gray and the steam coming out very light gray.
3. Now let's learn some of the steps involved in making nuclear power. The word *nuclear* refers to the nucleus of atoms. The circle with all the dots in the upper left corner of the picture is a uranium atom. Write "atom" above it. Atoms are the simplest building blocks of which all matter in the world is made from.
4. In the center of the atom is the nucleus where the protons and neutrons of an atom live. Color the nucleus blue and red. A uranium atom has 92 protons and 143 neutrons.
5. Uranium is the element used most in creating nuclear energy. Write "uranium" below the atom.
6. Energy is created by splitting this nucleus into two or more smaller nuclei. This process is called nuclear fission. The picture in the bottom left corner shows this happening. Write "nuclear fission" below it.
7. The sphere on the left of this picture is a neutron. This collides with the nucleus and causes the nucleus to split. Color the sphere on the left green and write "neutron" below it.
8. The three spheres that are released during this collision are more neutrons and they will collide with other atoms. Color those three spheres green.
9. Each time a nucleus splits energy is created. Color the area around the arrows orange and write "energy" near them.
10. This energy creates heat. Color the fire below the pot orange and write "heat".
11. The heat is used to boil water and create steam. Color the pot black and write "steam" next to the wavy lines above it.
12. The steam is used to turn a turbine. Write "turbine" above the structure that looks like a fan with three blades.
13. The turbine is linked to a generator that uses this movement to create electricity. Write "generator" above the building to the right of the towers.
14. The electricity is then sent out through the electrical grid to homes, businesses and more. Trace the wires on the electric tower on the right side of your paper yellow and the tower silver.
15. It is important to note that radiation is also released during nuclear fission, and this can be harmful to people. So, it is captured inside of the nuclear reactor until it can be disposed of properly. The symbol on the nuclear reactor warns you that there is radiation inside. Color the circle yellow and the other four shapes black.

What did you learn that was interesting or surprising today?

Listening to Learn: Nuclear Power



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Thank you, Randi Smith