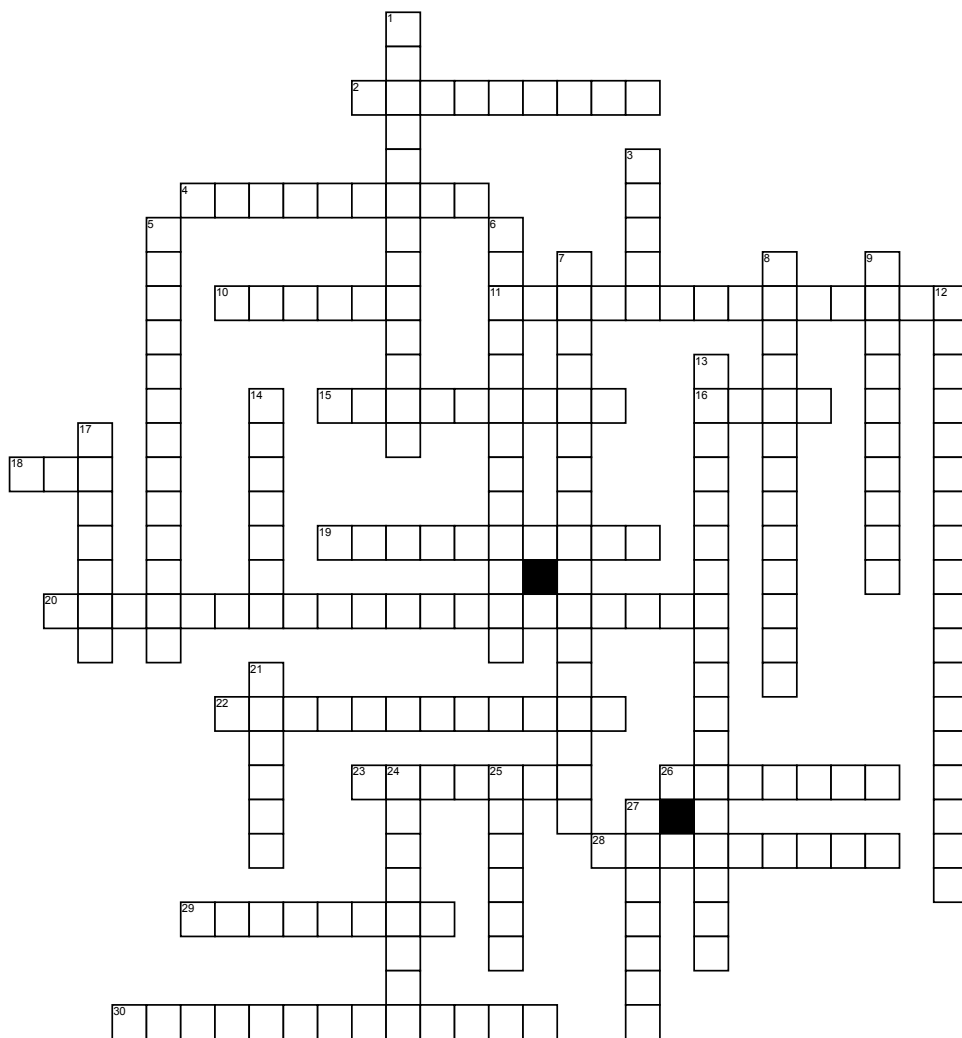


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# Nuclear Energy and Radioactivity



## Across

2. A person with advanced knowledge of empirical fields
4. A form of electromagnetic energy
10. positively charged subatomic particles; makes up part of the nucleus
11. The changing of one element into another by radioactive decay, or similar processes
15. A device for controlling flow, pressure, and temperature
16. The smallest particle of an element that can enter a chemical reaction
18. A pressurized water reactor; a type of reactor
19. A graph of the number of radioactive parent nuclei remaining in a sample as a function of time
20. a continuous series of nuclear fission reactions
22. Dangerous substances left after nuclear energy was produced

23. Neutrally charged subatomic particles; makes up part of the nucleus

26. The process by which a nucleus splits into two or more fragments and releases neutrons and energy

28. one nuclear material is \_\_\_\_\_.

29. Nuclear materials are \_\_\_\_\_.

30. Uses a fission reaction to create electricity.

## Down

1. Energy released by a nuclear reaction

3. If exposed to high levels of radiation without proper protective clothing, they can experience \_\_\_\_\_.

5. Positively charged particle, more massive than any other type of nuclear radiation, and made of 2 protons and 2 neutrons

6. fast moving negative electrons or positive positrons

7. Scientists use the knowledge of half-lives to date very old specimens, this process is called \_\_\_\_\_.

8. occurs when the nucleus of an unstable atom breaks down in a process called radioactive decay

9. An electrical generating station

12. The force that causes protons and neutrons in the nucleus to attract one another

13. nuclear radiation that arises naturally from cosmic rays and from radioactive isotopes in the soil, water, and plants

14. Machine to maintain and control a nuclear

17. one nuclear material is \_\_\_\_\_.

21. A star's energy source; the process in which light nuclei combine at extremely high temperatures, forming heavier nuclei and releasing energy

24. subatomic particle with a negative charge and relatively no mass

25. A radioactive substance found in nature

27. all isotopes of an atom with the same number of protons

## Word Bank

Electron	Plutonium	Uranium	Strong Nuclear Force	Nuclear energy
Fusion	Elements	Decay Curve	Alpha Particle	Burns
Radium	Nuclear Energy	Scientist	Proton	Gamma Rays
Transmutations	Nuclear Waste	Reactor	Element	Atom
Background Radiation	neutron	Radioactivity	Nuclear Chain Reaction	Powerplant
Radiometric Dating	Beta Particles	Regulator	PWR	Fission