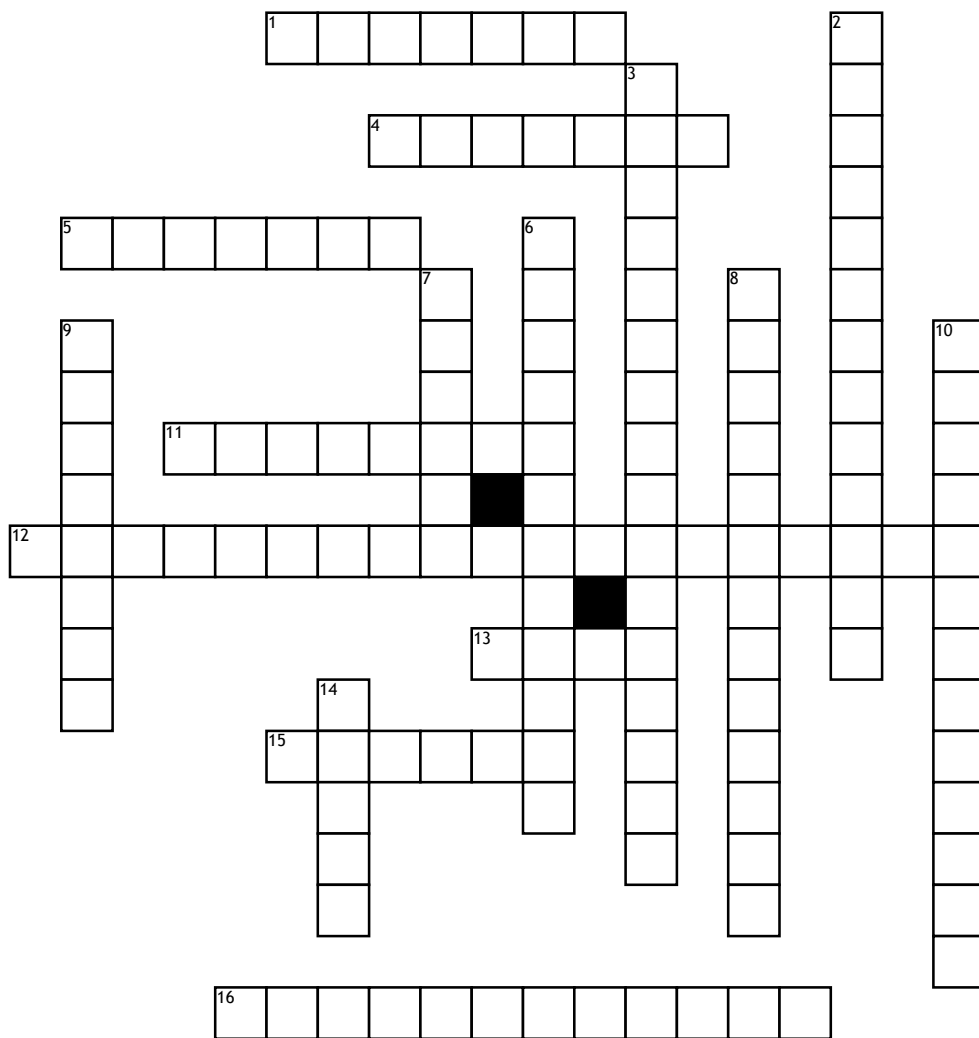


Name: \_\_\_\_\_

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# Radioactivity



## Across

1. The splitting of an atomic nucleus into two smaller parts  
 4. Contains protons and neutrons in an atom  
 5. A variation of an element with the same number of protons but a different number of neutrons  
 11. The time required for one half of a sample of radioactive sample of a radioisotope to decay  
 12. Nuclear radiation that occurs naturally in the environment

13. An electron emitted by an unstable nucleus

15. The fourth state of matter

16. Any atom containing an unstable nucleus

## Down

2. The conversion of atoms of one element to atoms of another  
 3. The charged particles and energy that are emitted (given off) from the nuclei of radioisotopes  
 6. Atoms of one element can change into atoms of a different element

7. A process in which the nuclei of two atoms combine to form a larger nucleus

8. The process in which an unstable atomic nucleus emits charged particles & energy

9. A penetrating ray of energy emitted by an unstable nucleus

10. A chain of fission reactions triggered by neutrons released during the initial fission of a nucleus

14. A positively charged particle made up of two protons & two neutrons

## Word Bank

Fusion

Radioactivity

Fission

Chain reaction

Alpha

Beta

Nucleus

Radioisotope

Half life

Background radiation

Nuclear radiation

Nuclear Decay

Isotope

Gamma ray

Plasma

Transmutation