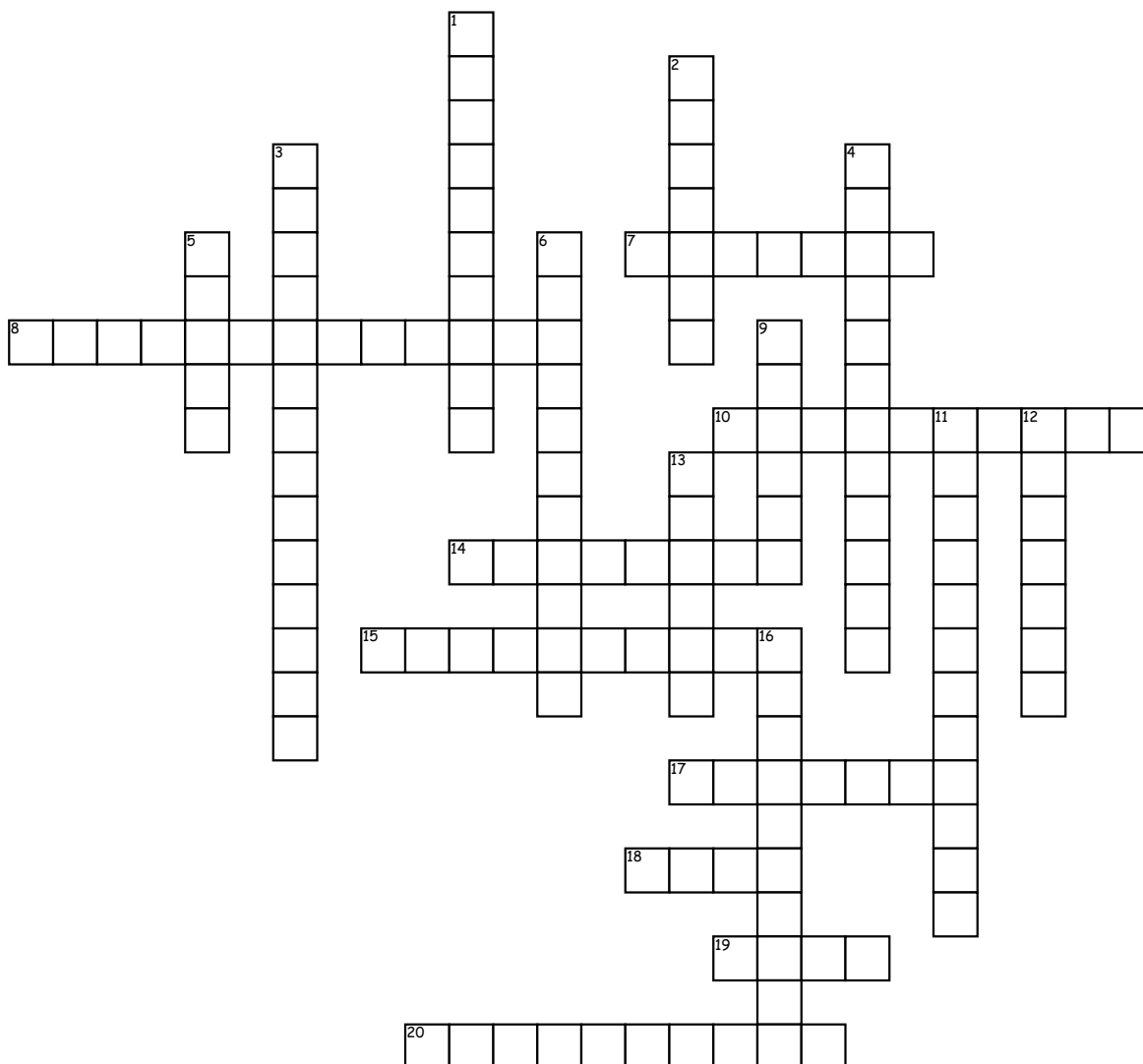


# Electrons and the Periodic Table



## Across

7. particle that has no electrical charge
8. an arrangement of the elements showing the repeating pattern of their properties
10. English chemist, inferred that atoms had certain characteristics
14. atomic particle that has a negative charge
15. suggested that the atoms is mostly empty space but has a positive charge at its center
17. an atom that has the same number of protons, and a different number of neutrons from other atoms of the same element

18. suggested that electrons are found only in specific orbits around the nucleus

19. basic particle of an element

20. the average of all the isotopes of an element

## Down

1. The sum of the protons and neutrons in the nucleus of an atom.
2. The central core of an atom which contains protons and neutrons
3. a one-or-two letter representation of an element
4. The number of protons in the nucleus of an atom

5. elements in the same vertical column of the periodic table

6. A region of an atom in which electrons of the same energy are likely to be found

9. atomic particle that has a positive charge

11. grew as a series of models that developed from experimental evidence

12. Discovered that atoms had negatively charged particles called electrons

13. a horizontal row of elements in the periodic table

16. proposed that matter was formed of small pieces that could not be cut into smaller parts