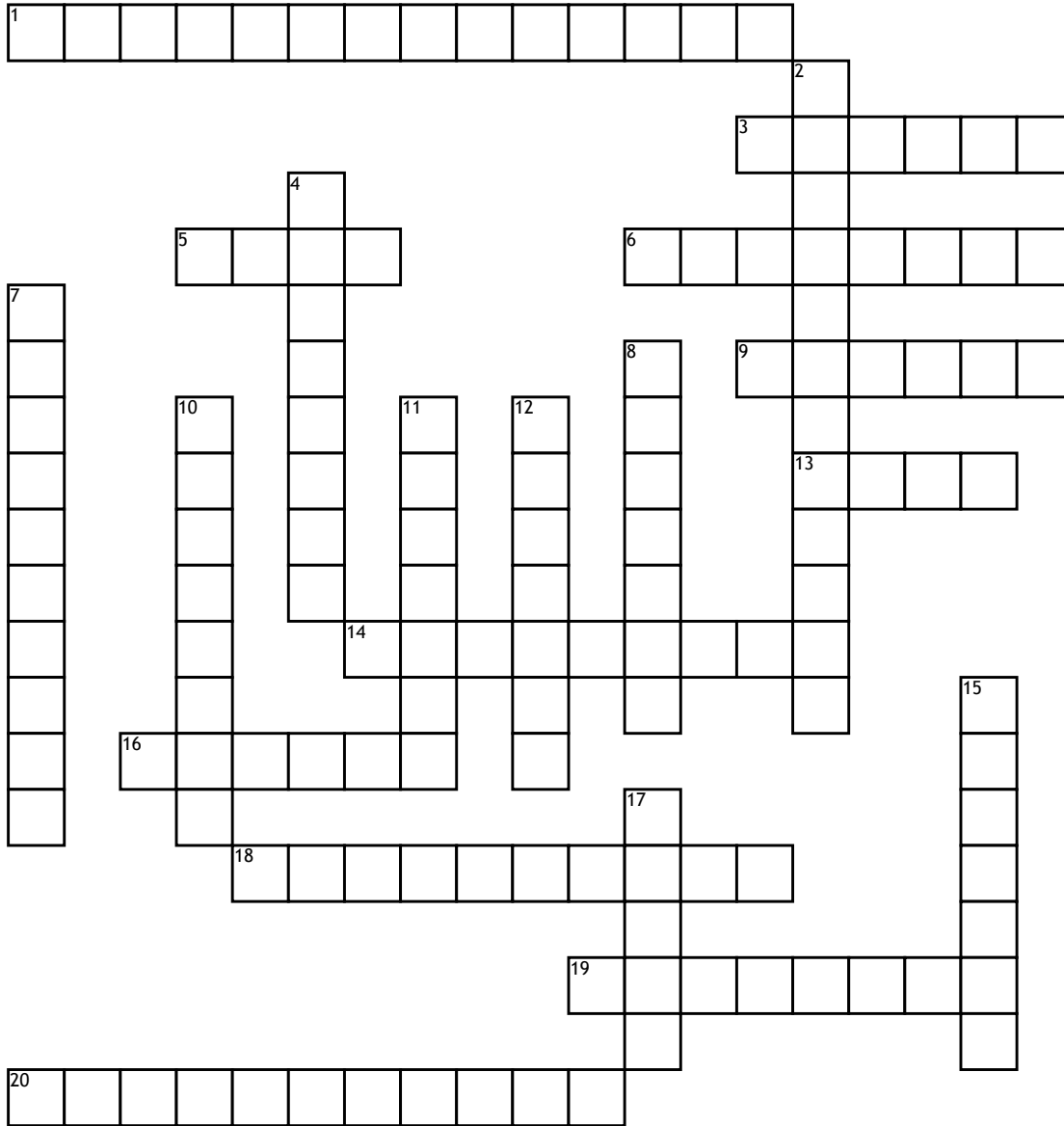


# History of the Atom



**Across**

- 1. High-vacuum \_\_\_\_\_ - \_\_\_\_\_ was a piece of equipment that Thomson used to study the nature of electric discharges
- 3. Atomic \_\_\_\_\_ is the number of protons in the nucleus
- 5. \_\_\_\_\_ model of the atom where electrons are orbiting the nucleus on different energy levels
- 6. Determined the size of the charge on an electron
- 9. Formed the Atomic Theory in 1808
- 13. Atomic \_\_\_\_\_ is the average mass of the atom

- 14. Discredited the ideas of Leucippus and Democritus
  - 16. Subatomic particle that has a positive charge
  - 18. Performed the Gold Foil Experiment
  - 19. Subatomic particle that are not located in the nucleus
  - 20. Came up with the "Quantum Mechanical Model" of the atom
- Down**
- 2. Rutherford's model of the atom
  - 4. Discovered neutrons
  - 7. His uncertainty principle states that we cannot measure the position and the momentum of a particle with absolute precision

- 8. Millikan used this experiment to discover the charge on an electron
- 10. \_\_\_\_\_ Ball Model showed atoms as solid, hard spheres
- 11. Subatomic particle that has no charge
- 12. J.J. who discovered electrons
- 15. Plum \_\_\_\_\_ Model showed that the atom was roughly the same consistency throughout with negatively-charged electrons scattered about in it
- 17. Defined an element as any substance that cannot be decomposed into a simpler substance