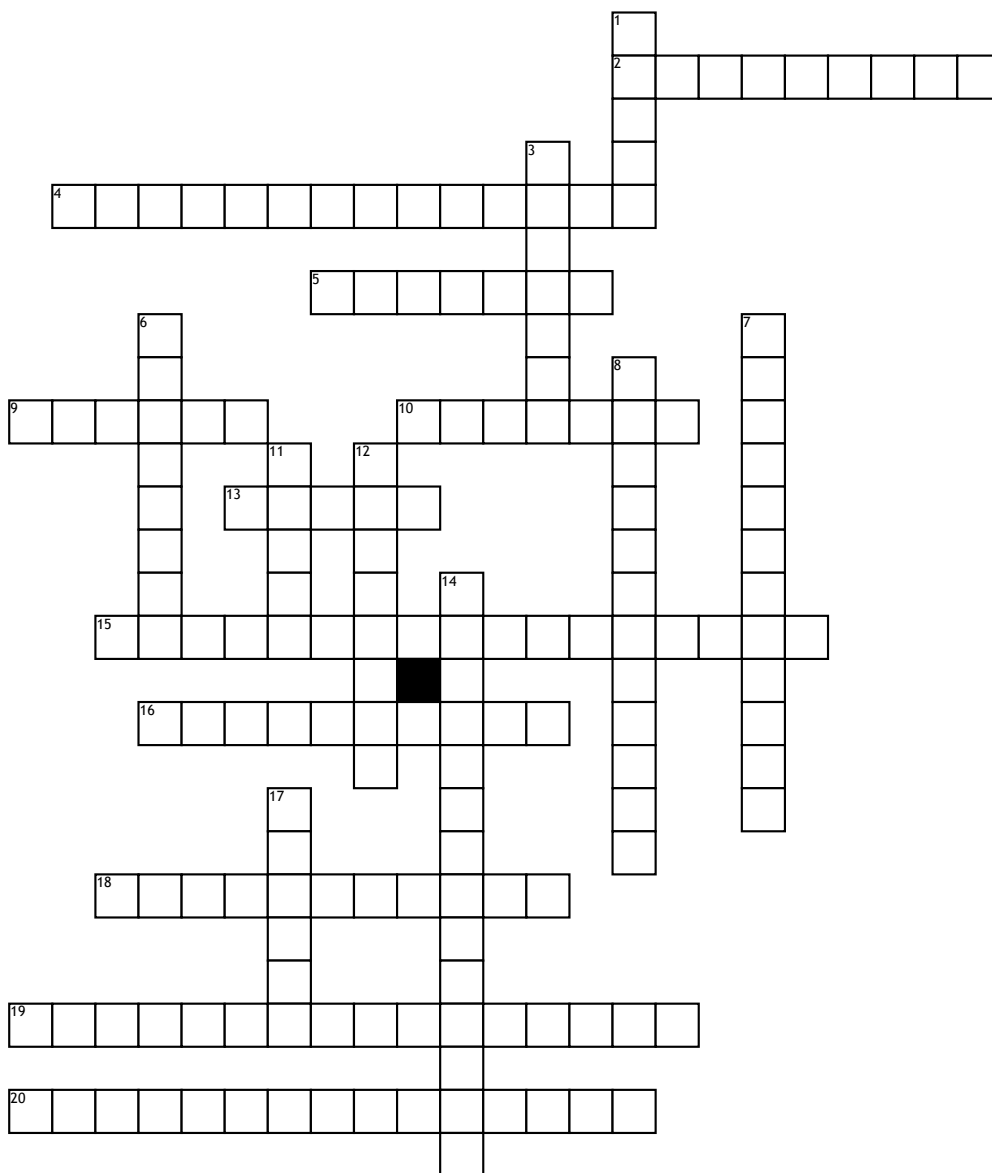


Name: _____

Date: _____

Chemistry chapters 1-9



Across

2. What principle states that elements react to achieve a noble gas electron configuration?

4. If a molecule like CH_2O has 3 bonding pairs around the central atom, what shape does it have?

5. The ? theory of light is EM waves traveling as "packets" of energy.

9. Heat of ----- is when a liquid substance is allowed to cool into a solid.

10. 2nd law of thermodynamics states ----- of the universe is always increasing.

13. The ? Law of thermodynamics relates heat and work?

15. What property is used to predict whether a bond is primarily ionic or covalent?

16. What type of bond results from the sharing of 4 electrons?

18. A ----- solid has regular, repeating, 3-dimensional patterns.

19. What term refers to very hard substances that contain covalent bonds but do not consist of discrete molecules?

20. What determines an atom's identity as an element?

Down

1. What is a covalent bond in which the bonding electron pair is pulled closer to the more electronegative element?

3. H_2Se , which has 2 bonding pairs and 2 nonbonded pair of electrons, has what type of geometry?

6. What is the simplest repeating unit in a crystal?

7. What arrangement of atoms in a crystal has the least empty space of any cubic arrangement?

8. What is the heat required to cause a unit rise in the temperature of a unit mass of a given substance?

11. $3.00 \times 10^8 \text{ m/s}$ is the speed of ----- in a vacuum.

12. Atoms of the same element but differ in the number of particles in the nucleus.

14. What term refers to a bond in which electrons are shared by more than 2 atoms?

17. Kinetic energy is associated with an object's -----.