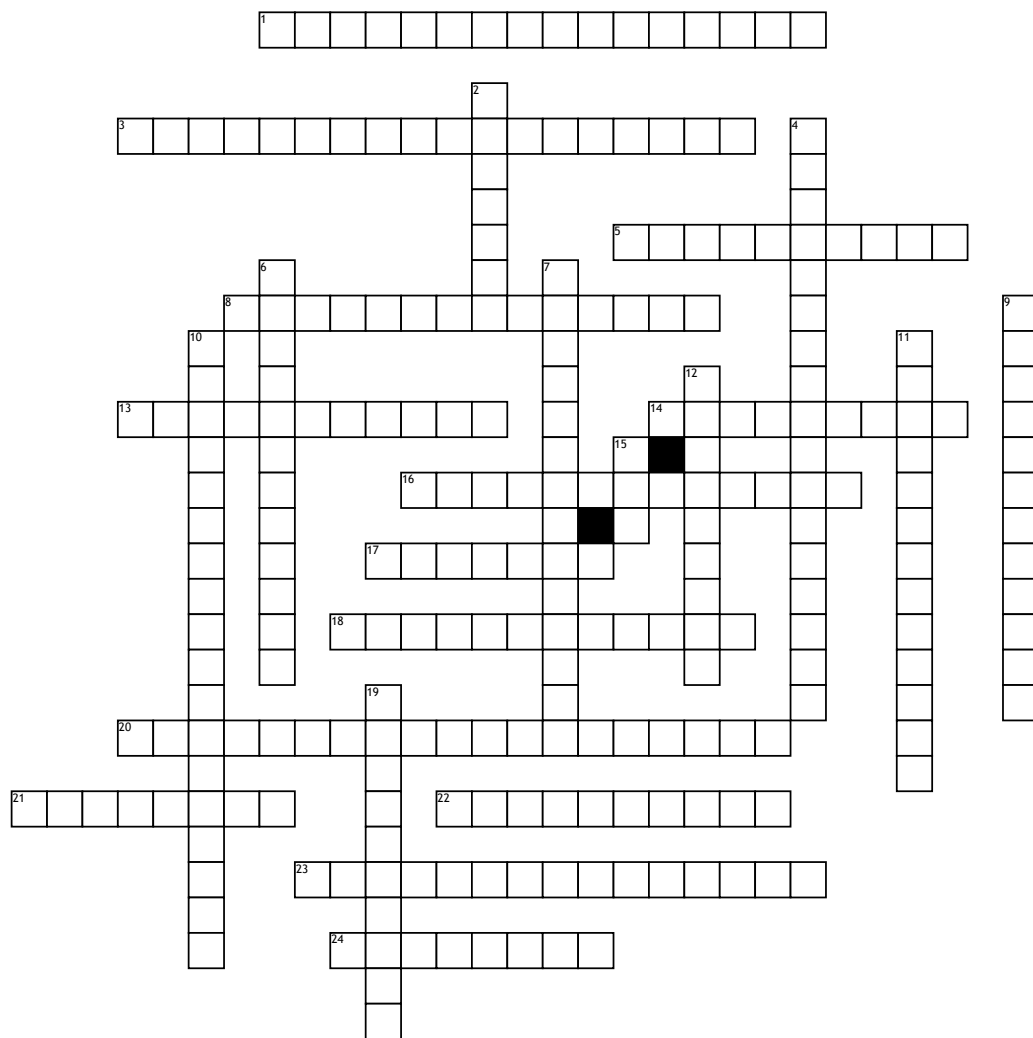


Name: _____

Date: _____

Science 8th Chapter 4



Across

1. electrons that have the highest energy
3. the energy released as the products form is greater than the energy required to break the bonds of the reactants
5. 2 atoms sharing 2 pairs of electrons
8. is any change that alters the form or appearance of a substance but does not change into another substance
13. solid that forms into a liquid during a chemical reaction
14. covalent bond in which electrons are not shared equally
16. ions that are made of 1 nitrogen atom
17. the new substances that form

18. a covalent bond in which electrons are shared equally

20. more energy is required to break the bonds of the reactants than is released by the formation of the products
21. substances that undergo chemical changes

22. tell the ratio of elements in a compound

23. a group of symbols that show the ratio of elements in a compound

24. a neutral group of atoms joined by covalent bonds

Down

2. the ions that form an orderly three-dimensional arrangement

4. a compound made up of molecules
6. is the force of attraction that holds atoms together as a result of the rearrangement of electrons between them
7. a change in matter that produces one or more new substances
9. the chemical bond formed when 2 atoms share electrons
10. includes the symbol for the element surrounded by dots
11. compound made of ions
12. is the attraction between two oppositely charged ions
15. an atom or group of atoms that has an electric charge
19. 3 atoms sharing 3 pairs of electrons

Word Bank

valence electrons
chemical formula
covalent bond
crystal
polyatomic ion

nonpolar bond
endothermic reaction
polar bond
molecule
chemical change

ionic compound
physical change
molecular compound
exothermic reaction
chemical bond

subscripts
ionic bond
electron dot diagram
reactant
triple bond

precipitate
ion
double bond
product