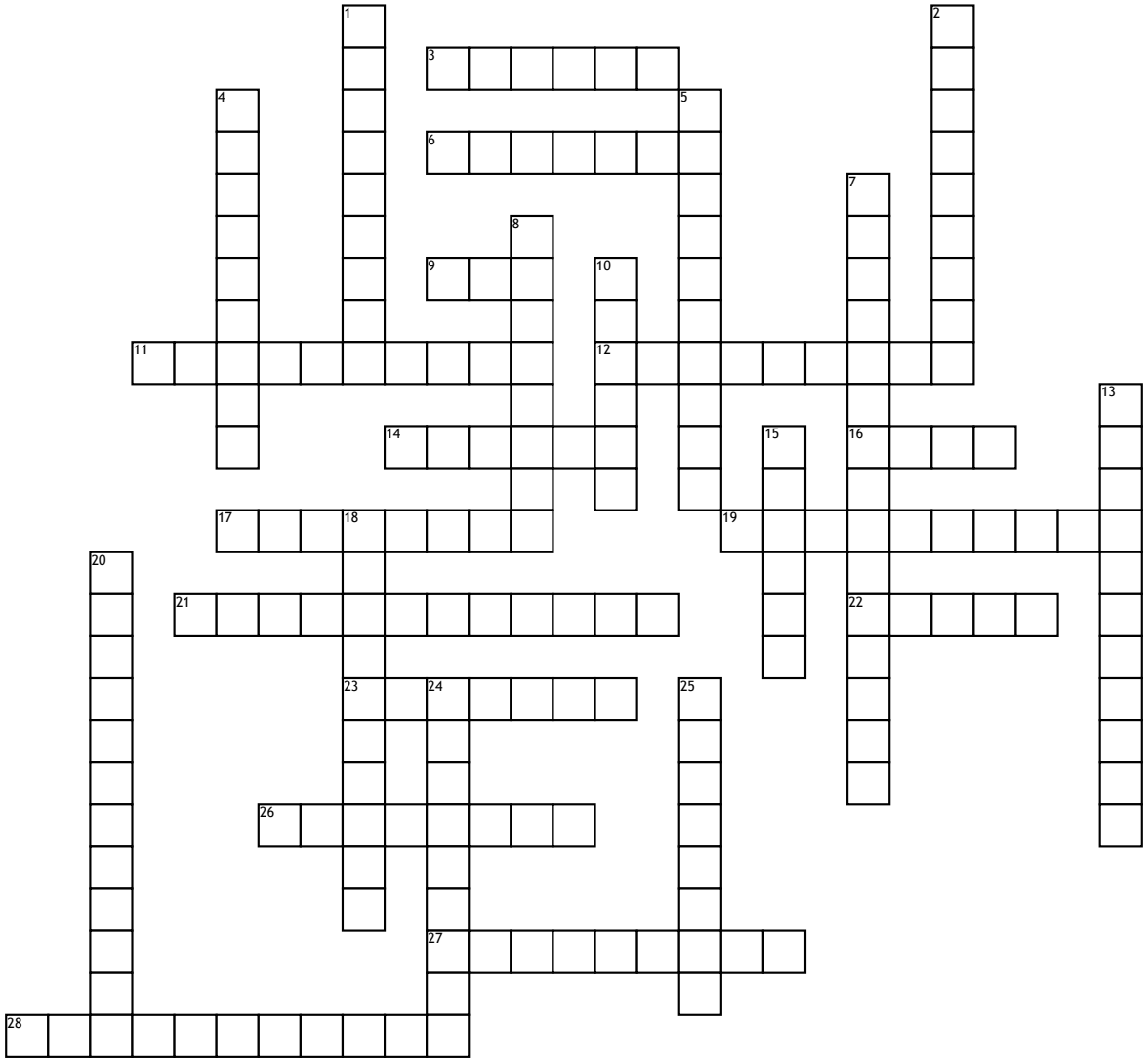
Name: _____ Date: _____

Physical Chemistry Definitions



Across

3. a fluid that conforms to the shape of its container and is roughly confined to a given volume

6. any combination of substances in which each substance remains its own unique identity and can be separated by physical means

9. a compressible fluid that conforms to the shape of its container and will expand infinitely to fill the volume of that container

11. change that takes place at constant temperature

12. change that takes place with no heat flow

14. consists of the part of the universe that is under study using the approach of the thermodynamics and separated from the rest of the universe by some kind of boundary

16. a system in which both matter and energy are free to flow between the system and the surroundings

17. a substance compromised of molecules and it can be decomposed by chemical means into simpler substances

19. a mixture that is uniform throughout and is often called a solution

21. consists of everything that is outside the system and not part of the current study; it is made up of the rest of the universe

22. a state of matter that has both a fixed volume and a fixed shape, does not conform to the shape of its container and is almost impossible to compress farther

23. a substance that cannot be broken down into simpler substances by any chemical means

26. everything that exists and consists of both the system being studied and its surroundings

27. property that does not depend upon the amount of material present

28. the instantaneous picture of a system giving all properties that describe that system at any given instant of time

Down

1. a collection of matter that cannot be broken down or separated by any physical means

2. change that takes place at constant volume

4. solid or gas is a solid in which only very local order and slow motions prevail

5. change that takes place so slowly that the system is always in equilibrium with the surroundings at each step

7. gives the functional dependence of properties by relating them mathematically to the required number of independent variables

8. a system in which neither the matter nor energy are allowed to pass through the boundary between them

10. like a gas in that it does not have a definite shape of volume; consists of a collection of positively charged nuclei floating in a sea of dissociated electrons

13. solid that has particles that appear to follow an assembly plan and exhibit a long-range order in which different areas of the crystal still show the same arrangement of particles with no random variation

15. a system in which matter is not allowed to pass between the system and its surroundings, but energy is free to move between them

18. the quantities whose measurement depends only upon the instant of their measurement and is independent of the systems history

20. a mixture that is not uniform throughout and one can often see the individual substances that compromise it

24. property that depends upon the amount of material present

25. change that takes place at constant pressure