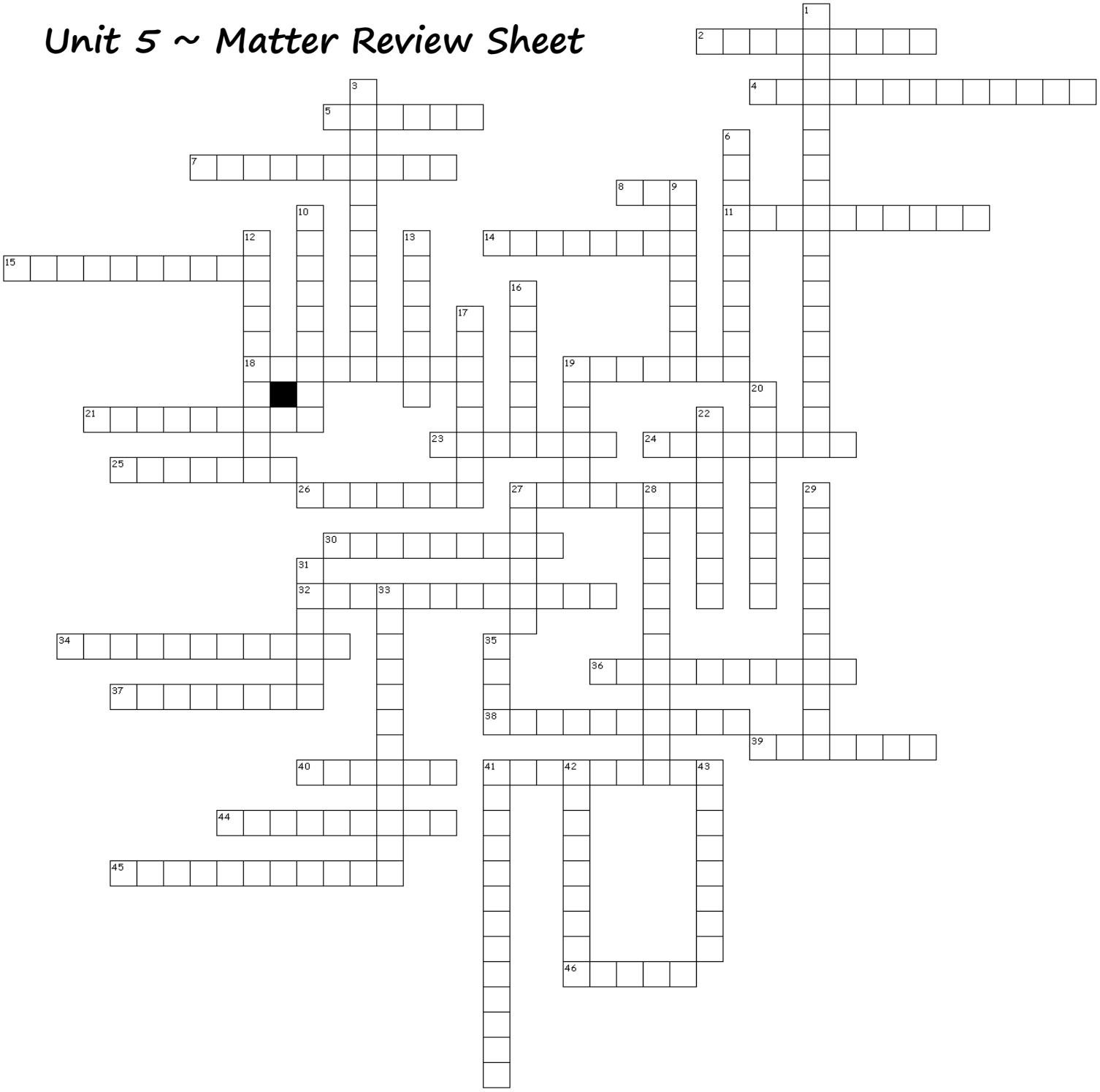
Unit 5 ~ Matter Review Sheet



B. Answer the following questions on loose-leaf in complete sentences:

1. Explain the motion of the three common states of matter using the kinetic molecular theory.
2. How is the fourth state of matter different from the other three?
3. Explain why Italian Dressing for salads has instructions to shake before using. Use key terms.
4. Explain the difference between intensive and extensive properties. Provide examples of each.

Name _____ Date _____Mod _____ Exam Date _____

A. Crossword Puzzle

Across

2. crystal structure with 3 axes, all the same length, all 90° angles
4. a type of mixture where the substances are not evenly spread throughout
5. anything which has mass and occupies space
7. crystal structure with 3 axes, 2 are the same length, all 90° angles
8. state of matter with indefinite shape and indefinite volume
11. a mixture that looks uniform when stirred or shaken, but separates into different layers when it is no longer agitated
14. a property of matter which describes the way a substance reacts with others to form new substances with different properties
15. two or more liquids which are not able to dissolve into one another
18. properties of matter that do not depend on the amount of matter present
19. most matter _____ as it gets hotter
21. resistance to flow due to particle attraction
23. a combination of more than one pure substance
24. a substance made of atoms of more than one element bonded together chemically
25. matter consisting of only one type of atom; a substance that cannot be broken down into simpler substances
26. a phase change from a solid to a liquid in which energy is absorbed
27. a property of matter which can be observed or measured without changing the composition of the substance
30. crystal structure with 4 axes, 3 in the same plane
32. crystal structure with 3 axes, all different lengths, all 90° angles
34. a type of mixture where the substances are evenly mixed throughout
36. the ability of a substance to combine chemically with another substance
37. two or more liquids which are able to dissolve into one another
38. crystal structure with 3 axes, different lengths, 2 have 90° angles
39. theory stating that all matter is made up of tiny particles in constant motion
40. state of matter with an indefinite shape and a definite volume
41. crystal structure with 3 axes, all different lengths, all different angles
44. properties of matter that do depend on the amount of matter present
45. a phase change from solid directly to gas in which energy is absorbed
46. state of matter with a definite shape and a definite volume

Down

1. the amount of energy needed to change a material from a liquid to a gas
3. a phase change from liquid to gas at the boiling point in which energy is absorbed
6. matter that has a fixed composition and definite properties
9. two or more substances uniformly spread throughout a single phase
10. the study of the composition, structure, and properties of matter and the changes it undergoes
12. a phase change directly from gas to solid where energy is released
13. a heterogeneous mixture consisting of tiny particles in a medium which do not settle out and can scatter light
16. a substance which does the dissolving
17. a phase change from liquid to solid where energy is released
19. state changes occur with changes in _____
20. type of solid with no crystal structure
22. a mixture of immiscible liquids spread throughout one another
27. a gas like mixture of positively and negatively charged particles
28. a phase change from gas to liquid where energy is released
29. a phase change from liquid to gas below the boiling point in which energy is absorbed
31. a substance which is dissolved
33. the amount of energy needed to change a material from the solid state to a liquid
35. the smallest particle of an element which still has the characteristics of the element
41. the scattering of light by colloidal particles
42. most matter _____ when it cools
43. repeating geometric patterns

C. On loose-leaf, list the change of state **AND** whether energy is being absorbed or released in the process:

1. Ice cream dripping from a cone in the summer
2. Wet laundry drying on a clothesline on a warm July day
3. Dew forming on the grass on a cool spring morning
4. A tea kettle whistling on the stove
5. Solid carbon dioxide (dry ice) turning directly into carbon dioxide vapor

Also for the exam:

- Be able to identify extensive vs. intensive properties, physical vs. chemical properties, and physical vs chemical changes
- Be able to classify materials as: elements, compounds, homogeneous mixtures (solutions), or heterogeneous mixtures (colloids, suspensions, emulsions)
- Be able to identify/explain the states of matter and changes in state (as well as whether energy is absorbed or released in the process)