Bonding, Structure and the Properties of Matter – Quick fire questions

This worksheet is fully supported by a video tutorial; https://youtu.be/9bbCFUyluWg

1. Draw the arrangement of particles in a solid.
2. Draw the arrangement of particles in a liquid.
3. Draw the arrangement of particles in a gas.
4. What is it called when a solid turn to liquid?
5. What is it called when a liquid turns to a gas?
6. What is it called when a gas turns to liquid?
7. What is it called when a liquid turns to a solid?
8. What is the boiling point?
9. What is the condensing point?
10. What does this state symbol mean (s)?
11. What does this state symbol mean (l)?
12. What does this state symbol mean (g)?
13. What does this state symbol mean (aq)?
14. What is ionic bonding?
15. How are ions formed?
16. What type of ions with a metal form?
17. What type of ions will a non-metal form?
18. Where are metals on the periodic table
19. Where are non-metals on the periodic table?
20. What is an ionic bond?
21. Draw a dot and cross diagram to show the bonding in sodium chloride.
22. Draw a dot and cross diagram to show the bonding in magnesium chloride.
23. Draw a dot and cross diagram to show the bonding in magnesium oxide.
24. What is covalent bonding?
25. List six simple covalent compounds.
26. Give the formula of oxygen gas.
27. Give the formula of nitrogen gas.
28. Give the formula of hydrogen chloride.
29. Give the formula of ammonia.
30. Give the formula of methane.
31. Give the formula of hydrogen gas.
32. Give the formula of water.
33. Give the formula of carbon dioxide.
34. Draw the bonding in water.

35. Draw the bonding in carbon dioxide.
36. Draw the bonding in chlorine gas.
37. Draw the bonding in nitrogen gas.
38. Draw the bonding in oxygen gas.
39. Draw the bonding in hydrochloric acid.
40. Draw the bonding in ammonia.
41. Draw the bonding in methane.
42. In a covalent bonding diagram what does each line represent?
43. Give two examples of giant covalent compounds.
44. How does metallic bonding arise?
45. Why do metals have high boiling and melting points?
46. How are atoms in a pure metal arranged?
47. How are atoms in an alloy arranged?
48. Why do people use alloys and not pure metals?
49. How do metals conduct electricity?
50. Describe the structure of an ionic compound.
51. Describe the properties of an ionic compound.
52. Describe the structure of a simple covalent compound.
53. Describe the properties of a simple covalent compound.
54. Describe the structure of giant covalent compound.
55. Describe the properties of a giant covalent compound.
56. What is a monomer?
57. What is a polymer?
58. Describe the structure of a polymer.
59. Which element is both diamond and graphite made from?
60. Describe the bonding in diamond.
61. Describe the difference between the bonding in diamonds and the bonding in graphite?
62. What are the properties of graphite?
63. What are the uses of graphene?
64. What are the uses of fullerenes?
65. Describe the structure of fullerenes.
66. Describe the structure of carbon nanotubes.

Chemistry only

67. What is the size of a nanoparticle?
68. Why do nanoparticles have different properties?
69. What can nanoparticle be used for?

70. What are the advantages and disadvantages of nanoparticles?