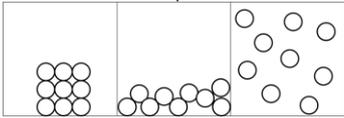
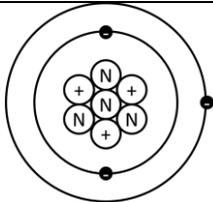


Knowledge Organiser Questions – Can be found at <https://bit.ly/3dtqLXe>

KQ.1. The characteristics or traits of a substance are called?	Properties
KQ.2. The three states of matter?	Solid, liquid and gas
KQ.3. The amount of mass in a certain volume?	Density
KQ.4. The opposite to a conductor	Insulator
KQ.5. A substance that allows current or heat to pass through it easily?	Conductor
KQ.6. Describe the particle arrangement in a solid?	very close; repeating pattern, cannot flow
KQ.7. Describe the particle arrangement in a liquid?	Very close; random pattern; can flow
KQ.8. Describe the particle arrangement in a gas?	Far apart; random pattern; can flow
KQ.9. Particles in a fluid (liquid or gas) spreading out is called?	Diffusion
KQ.10. States of matter which have particles which can spread out (diffuse)?	Liquids and gases (fluids)
KQ.11. Draw the particle diagram for a solid, liquid and gas? (9 particles in each)	<p style="text-align: center;">Solid Liquid Gas</p>  <p style="text-align: center;">Same number of particles. All particles same size. Solid and liquid on base of container.</p>
KQ.12. What do we call a region where there are no particles at all?	Vacuum
KQ.13. Where is the largest vacuum in the Universe?	Space
KQ.14. What happens to particles when the substance gets hotter?	They move faster
KQ.15. What normally happens to the volume of substances when it gets hotter?	It expands (gets larger)
KQ.16. What happens to particles when the substance gets colder?	They move slower
KQ.17. What normally happens to the volume of substances when it gets colder?	It contracts (gets smaller)
KQ.18. Change of state from solid → liquid?	Melting
KQ.19. Change of state from liquid → gas?	Boiling (or evaporation)
KQ.20. Change of state from gas → liquid?	Condensing
KQ.21. Change of state from liquid → solid	Freezing
KQ.22. Change of state from solid → gas	Sublimation
KQ.23. Change of state from liquid → gas at any temperature?	Evaporation
KQ.24. Particles inside the nucleus of an atom?	Neutrons and protons
KQ.25. Particles that orbit an atom?	Electron

KQ.26. A nucleon with mass of 1 and a charge of 0?	Neutron
KQ.27. A nucleon with mass of 1 and a charge of +1?	Proton
KQ.28. A particle with mass of almost 0 (negligible) and a charge of -1?	Electron
KQ.29. How many electrons can atoms have in each of the first three shells?	1 st shell = 2; 2 nd shell = 8; 3 rd shell = 8
KQ.30. Draw an atom of Lithium (${}^7_3\text{Li}$)	 <p>4 neutrons and 3 protons in nucleus. 3 electrons orbiting (2 on inner shell, 1 on outer shell)</p>
KQ.31. A list of all the elements known to human kind?	Periodic table
KQ.32. A chemical with only one type of atom?	Element
KQ.33. More than one type of element chemically bonded together?	Compound
KQ.34. More than one atom chemically bonded together?	Molecule
KQ.35. Different substances not chemically bonded together?	Mixture
KQ.36. What is a compound?	More than one type of element chemically bonded
KQ.37. What is the difference between a compound and a mixture?	Compounds are chemically bonded, mixtures are not
KQ.38. How many capital letters does each symbol for an element have?	One. The first letter only is always a capital
KQ.39. How many protons does an atom of Beryllium (${}^9_4\text{Be}$) have?	4
KQ.40. How many neutrons does an atom of Beryllium (${}^9_4\text{Be}$) have?	5 (9 nucleons – 4 protons)
KQ.41. How many electrons does an atom of Beryllium (${}^9_4\text{Be}$) have?	4 – same as number of protons
KQ.42. What is the mass of a proton?	1
KQ.43. What is the mass of a neutron	1
KQ.44. What is the mass of an electron?	Almost 0 (negligible)
KQ.45. How are elements arranged in the periodic table?	By atomic number (proton number)
KQ.46. What is the element Fe?	Iron
KQ.47. How many atoms are there in a molecule of CH ₄ ?	5 (one carbon, four hydrogen)
KQ.48. How many atoms are there in a molecule of H ₂ O?	3 (two hydrogen, one oxygen)
KQ.49. How many elements are there in a molecule of H ₂ O?	2 (hydrogen and oxygen)
KQ.50. What is the chemical formula for carbon dioxide?	CO ₂ (not CO ₂ or CO ²)