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# **YEAR 8 SCIENCE LEARNING OBJECTIVES TERM 3 2022**

### CHEMISTRY

Text: Oxford Science 8 – Chapter 4

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| **TOPIC** | **OBJECTIVE** | | ✓ |
| **Matter** |  | State that all matter is made up of **particles** |  |
|  | Identify that there are three **states of matter**   * Solids * Liquids * Gases |  |
|  | Explain the following properties of each state of matter using the **Particle Model** **Theory:**   * Kinetic Energy * Arrangement * Attraction of Particles * Movement |  |
|  | Compare and contrast the physical properties of the three states of matter |  |
|  | Define the following properties of matter:   * Strength * Hardness * Viscosity * Compressibility * Density |  |
|  | Calculate the mass and volume of an object and then use the following formula to calculate density: |  |
|  | Explain how materials with the same volume can have different masses and relate this to particle spacing and density. |  |
|  | Explain how adding or removing heat(energy) can cause a change in the state of matter. |  |
|  | Use diagrams to represent changing states of matter using the following terms (with examples):   * Melting (melting point) * Freezing * Evaporation (boiling point) * Condensation * Sublimation |  |
|  | Use the **particle model theory** to explain the changes of state between solids, liquids and gases. |  |
|  | Use the particle model theory to explain **expansion** and **contraction** in solids, liquids and gases. |  |