**Curriculum Overview for Science**

**Year 7**

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| **Half Term 1: How to Science**  **Substantive Knowledge:**  Parts of the Bunsen burner  Safety symbols  Variables  **Disciplinary Knowledge:**  Identifying hazards  Identifying variables  How to draw a table  Writing methods  Recording time  Measuring mass  Measuring volume  How to use a Bunsen burner  Measuring temperature  How to create revision resources (flash cards, revision cards and mind maps) | Books | Article homework – reading for meaning, Model reading and highlighting to pick out key details, reading of data, Skim reading, |
| Speech | Safety, Hazard, Independent, dependent variable, control variable, Table, variable, Method, Hypothesis, Accurate, Resolution, Volume, Meniscus, mass, Safety flame, Roaring flame, Scale, thermometer, Double- blind, trial |
| Checklist RTL | Recall quiz x 1 |
| Home | Article Homework to promote reading like a scientist  Recall quiz x 1 |
| **Half Term 2: Fundamentals**  **Substantive Knowledge:**  Organelles of plant and animal cells  Structure and function of plant cells  Parts of a microscope  Hierarchy of cells, tissues, organs, organ systems, organisms  Structure of an atom  What elements, compound, mixture and molecules are  Diagrams of state of matter  Changes of state  Acids and alkalis on pH scale  Stores and transfers of energy.  Contact and non contact forces  Names of simple forces.  How forces affect the motion of an object  **Disciplinary Knowledge:**  How to safely use a microscope  How to observe cells using a light microscope  Comparison of structures of cells  Linking structure to function  Observations of a chemical reaction  Colours of pH scale – acids and alkalis  Word equation  Drawing a transfer chain.  Drawing force diagrams.  Calculating a resultant force. | Books | Article homework – reading for meaning, Model reading and highlighting to pick out key details, reading of data, Skim reading |
| Speech | Kinetic, gravitational potential, chemical, thermal, elastic, Nuclear  Light, Sound, Heat, Forces, Electricity, Conservation of energy, transfer chains, Contact and non-contact forces, Balanced and un balanced, resultant, Acceleration, deceleration, constant speed, Atom, subatomic particle,  Element, Compound, mixture and molecules, Solid, liquid, gas  Observation, Particles, Acid, Alkali  Cell, organelle, chloroplast, vacuole, cell wall, magnify, microscope, eukaryotic, prokaryotic, specialised, differentiation, unicellular, organisation, organism |
| Checklist RTL | Recall quiz x3  End of unit assessment |
| Home | Article Homework to promote reading like a scientist  Recall quiz x3  Revision for end of unit assessment |