Swanwick Hall School Long Term Planning

Year 8 Science

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| Learning cycle | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 |
| 1  5/9/22 – 21/10/22  8LC1 – Energy and Energy Resources | **Energy transfers and efficiency**  Energy stores and transfers, energy pathways and transfers, conservation of energy and efficiency | **Power and cost of electricity**  Sankey diagrams and efficiency, power and domestic supply, paying for electricity | **Thermal energy transfers**  Conduction, convection, radiation and reducing unwanted energy transfers | **Energy resources**  Non-renewable, renewable, choosing appropriate resources for a location (linking to COP26 targets) | **Energy and Energy Resources review**  Power and efficiency calculations consolidation, revision using 100% sheets | ***checkpoint week***  Checkpoint  Investigating thermal energy transfers | ***gap week***  Address and reteach concepts in response to checkpoint |  |
| 2  31/10/22- 22/12/22  8LC 2  Ecosystems and Adaptations | **Ecosystems**  Photosynthesis  Structure of a leaf  Testing for Starch | **Ecosystems**  Aerobic Respiration  Anaerobic respiration  Food chains and food webs | **Ecosystems**  Bioaccumulation  Pollination and food security  Biodiversity and Extinction. | **Adaptations**  Sampling Techniques  Genetic and Environmental variation  Continuous and discontinuous | **Adaptations**  Discovery of DNA  Natural Selection  Adapting to change | **Revision**  Ecosystems Revision  Adaptations Revision | ***checkpoint week*** | ***gap week*** |
| 3  9/1/23 – 3/3/23  8LC3 – Current electricity | **Circuits and Current**  Circuit symbols and drawing circuits, building circuits, calculating charge and measuring current | **Types of circuit**  Types of circuits, circuit rules, circuit models | **Potential difference and Resistance**  Potential difference, resistance (including resistance calculations) and Ohm’s Law practical for nichrome wire (Ohmic conductor) | **Ohmic and non-Ohmic conductors**  I/V graph for nichrome wire (Ohmic conductor), I/V graph and practical for a filament lamp (non-Ohmic conductor) | **Current Electricity review**  Q=It and V=IR calculations consolidation, revision using 100% sheets | ***checkpoint week***  Checkpoint | ***gap week***  Address and reteach concepts in response to checkpoint |  |
| 4  6/3/23 – 12/5/23  8LC4 – Reactivity of metals and the periodic table | **The periodic table**  Introduction to the periodic table, metals and non-metals | **Groups of the periodic table**  Group 1 metals, Halogens, noble gases | **Reactions of metals**  Metals reacting with acids  Metals reacting with oxygen  Practicals | **Reactivity of metals**  The reactivity series  Extraction of metals  Recycling | **Displacement reactions**  Metal displacement reactions | **Types of reaction**  Thermal decomposition of limestone  Writing equations and formulae | ***checkpoint week***  **Revision using 100% sheets**  **Checkpoint** | ***gap week***  Address and reteach concepts in response to checkpoint |
| 5  15/5/23 – 3/7/23  8LC 5  Health, Lifestyle and Microbes | **Health and Lifestyle**  Nutrient groups  Energy calculations and food labels  Food tests | **Health and Lifestyle**  Energy content of food  Unhealthy diets and lifestyle  Alcohol | **Health and Lifestyle**  Smoking  Recreational Drugs  Types of microbes | **Microbes**  Harmful microbes – human diseases  Harmful microbes – Plant diseases.  Vaccines | **Microbes**  Antibiotics  Antibiotic resistance | ***checkpoint week*** | ***gap week*** |  |
| mini unit  10/7/23 – 21/7/23  8LC6 - Earth | **The Earth**  The structure of the Earth  Igneous, sedimentary and metamorphic rocks | **Earth’s atmosphere**  The rock cycle  Composition of the atmosphere  The carbon cycle |  |  |  |  |  |  |