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  |
| 15/9/22 – 21/10/228LC1 – 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***CheckpointInvestigating thermal energy transfers | ***gap week***Address and reteach concepts in response to checkpoint |  |
| 231/10/22- 22/12/228LC 2Ecosystems and Adaptations | **Ecosystems** PhotosynthesisStructure of a leafTesting for Starch | **Ecosystems**Aerobic RespirationAnaerobic respirationFood chains and food webs | **Ecosystems**  BioaccumulationPollination and food securityBiodiversity and Extinction. | **Adaptations**Sampling TechniquesGenetic and Environmental variation Continuous and discontinuous | **Adaptations**Discovery of DNANatural SelectionAdapting to change | **Revision**Ecosystems RevisionAdaptations Revision  | ***checkpoint week*** | ***gap week*** |
| 39/1/23 – 3/3/238LC3 – 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 |  |
| 46/3/23 – 12/5/238LC4 – 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 acidsMetals reacting with oxygenPracticals | **Reactivity of metals**The reactivity seriesExtraction of metalsRecycling | **Displacement reactions**Metal displacement reactions | **Types of reaction**Thermal decomposition of limestoneWriting equations and formulae | ***checkpoint week*****Revision using 100% sheets****Checkpoint** | ***gap week***Address and reteach concepts in response to checkpoint |
| 515/5/23 – 3/7/238LC 5Health, Lifestyle and Microbes  | **Health and Lifestyle**Nutrient groupsEnergy calculations and food labels Food tests  | **Health and Lifestyle**Energy content of foodUnhealthy diets and lifestyleAlcohol |  **Health and Lifestyle**SmokingRecreational DrugsTypes of microbes  | **Microbes**Harmful microbes – human diseases Harmful microbes – Plant diseases.Vaccines | **Microbes**AntibioticsAntibiotic resistance | ***checkpoint week*** | ***gap week*** |  |
| mini unit10/7/23 – 21/7/238LC6 - Earth | **The Earth** The structure of the EarthIgneous, sedimentary and metamorphic rocks | **Earth’s atmosphere**The rock cycle Composition of the atmosphereThe carbon cycle |  |  |  |  |  |  |