Swanwick Hall School Long Term Planning

Year 7 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 – 21/10/227LC 1 Cells and Body Systems  | **Cells**L1 Animal and plant cells. L2 MicroscopesL3 Looking at animal and plant cells.  | **Cells**L4 Specialised cellsL5 Movement of substancesL6 Levels of organisation  | **Body systems**L7 Circulatory system, L8 Nervous SystemL9 Respiratory System  | **Body Systems** L10 Investigating Breathing L11 Skeletal system L12 Muscular System | **Body systems** L13 Cells RevisionL14 Body systems revision  | ***checkpoint week*** | ***gap week*** |  |
| 231/10/22- 22/12/227LC2 - Particles, atoms, elements and compounds | **States of matter**Particle modelStates of matter Modelling the states of matter | **Changing state**Changing state Melting, freezing and boiling.Boiling practical | **Diffusion**Diffusion, Brownian motion and changes in arrangement of particles and changes in shape and density | **Atoms, elements, compounds and mixtures**Differences between atoms, elements and compounds, concept of pure substances, mixtures including dissolving. | **Chemical formulae, reactions and word equations**What does a formula show?Writing word equationsChemical and physical change | **Particles, atoms, elements and compounds consolidation**Revision using 100% sheet | ***checkpoint week***Check pointStearic acid investigation – plan an investigation to find the melting point, write a RA and carry out.  | ***gap week***Reteach areas for improvement identified from the checkpoint |
| 39/1/23 – 3/3/237LC 3Reproduction and Fertilisation  | **Reproduction**AdolescenceReproduction systems and fertilisation Pregnancy and Birth  | **Reproduction** Menstruation and contraceptionReproduction in PlantsDispersal mechanisms in plants  | **Genetics**Genetic termsPunnet squaresFamily pedigrees | **Genetics** Inherited disorders – Huntington's and Polydactyl Inherited disorders – Cystic fibrosis and Sickle cell anaemia Linking Genetics to reproduction. | **Genetics**Selective breedingGenetic engineering  | ***checkpoint week*** | ***gap week*** |  |
| 46/3/23 – 12/5/237LC4 - Forces and Motion | **Forces**Types of forces, measuring forces, balanced and unbalanced (including free body diagrams), Resultant forces and link to motion | **Motion**Speed calculations, distance-time graphs, speed practical | **Effects of Forces**Hooke’s Law practical and linear relationship, forces in equilibrium | **Moments and Pressure**Turning moments, pressure (link to force and area), pressure in fluids with changing depth | **Floating and Sinking**Density incl. measuring density (practical), density calculations, floating and sinking (practical) | **Forces and Motion consolidation**F&M calculations consolidation, revision using 100% sheet | ***checkpoint week***CheckpointF&M investigation(cupcake drop – find the average speed from different heights) | ***gap week***Reteach areas for improvement identified from the checkpoint |
| 515/5/23 – 3/7/237LC5 – Earth Science and Reactions | **Chemical reactions**Difference between chemical and physical reactions, practical looking at types of reaction |  **More chemical reactions**conservation of mass, exothermic and endothermic reactions | **Combustion**Burning fuels, complete and incomplete combustion, investigation fuels | **Alternative fuels**Biofuels, hybrid and electric cars | **Climate change**The effects of fuels on climate change, ways to mitigate including catalytic converters | **Check point week**Revision with 100% sheetsCheck point | ***gap week***Reteach areas for improvement identified from the checkpoint |  |
| mini unit10/7/23 – 21/7/23Space | **The Earth in Space**Gravity, weight vs. Mass, Day, night and seasons | **The Solar System and Beyond**Composition of solar system, beyond the solar system, origins of the universe |  |  |  |  |  |  |