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 |
| 1  5/9/22 – 21/10/22  7LC 1 Cells and Body Systems | **Cells**  L1 Animal and plant cells.  L2 Microscopes  L3 Looking at animal and plant cells. | **Cells**  L4 Specialised cells  L5 Movement of substances  L6 Levels of organisation | **Body systems**  L7 Circulatory system,  L8 Nervous System  L9 Respiratory System | **Body Systems**  L10 Investigating Breathing  L11 Skeletal system  L12 Muscular System | **Body systems**  L13 Cells Revision  L14 Body systems revision | ***checkpoint week*** | ***gap week*** |  |
| 2  31/10/22- 22/12/22  7LC2 - Particles, atoms, elements and compounds | **States of matter**  Particle model  States 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 equations  Chemical and physical change | **Particles, atoms, elements and compounds consolidation**  Revision using 100% sheet | ***checkpoint week***  Check point  Stearic 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 |
| 3  9/1/23 – 3/3/23  7LC 3  Reproduction and Fertilisation | **Reproduction**  Adolescence  Reproduction systems and fertilisation  Pregnancy and Birth | **Reproduction**  Menstruation and contraception  Reproduction in Plants  Dispersal mechanisms in plants | **Genetics**  Genetic terms  Punnet squares  Family pedigrees | **Genetics**  Inherited disorders – Huntington's and Polydactyl  Inherited disorders – Cystic fibrosis and Sickle cell anaemia  Linking Genetics to reproduction. | **Genetics**  Selective breeding  Genetic engineering | ***checkpoint week*** | ***gap week*** |  |
| 4  6/3/23 – 12/5/23  7LC4 - 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***  Checkpoint  F&M investigation  (cupcake drop – find the average speed from different heights) | ***gap week***  Reteach areas for improvement identified from the checkpoint |
| 5  15/5/23 – 3/7/23  7LC5 – 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% sheets  Check point | ***gap week***  Reteach areas for improvement identified from the checkpoint |  |
| mini unit  10/7/23 – 21/7/23  Space | **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 |  |  |  |  |  |  |