RD HOMESCHOOL

# Year 10 Curriculum Plan 2024 - 2025

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Topics** | **Cells and organisation** | | | | **Matter** | | | | **Energy resources** | | **Conservation and dissipation of energy** | |
| **Autumn** | Animal and plant cells, specialised cells, Microscopes | Diffusion, Osmosis, Active Transport | Exchange of materials | Cell Division | Atoms, States of Matter | Seperating Mixtures | Ions, Atoms and Isotopes | Electronic Structures | The demand for energy, renewable and non renewable energy types | Energy and the Environment, Energy issues, supply vs demand | Energy Stores, Conservation of Energy, Work Done, GPE, KE | Dissipation and Efficiency, Energy and Power |
| **Topics** | **Structures and bonding** | | | **The Periodic table** | **Electric Circuits and electricity to your home** | | | | **Organisation - Digestive System and circulatory** | | **Non - Communicable** | **Communicable diseases** |
| **Spring** | Ionic bonding and giant ionic structures | Covalent Bonding, giant covalent structures | Metallic bonding and nano science | Periodic table, group 1 and 7 | Electric fields, Current and Charge, Potential difference and resistance, electrical components, series and parallel circuits, | | | | Human Digestive System, Chemistry of food, Enzymes | Blood and Blood vessels, The Heart, Breathing | Cancer, smoking, Diet, Exercise and Alcohols | Pathogens and disease. Human defence systems |
| **Topics** | **Molecules and matter** | | **Energy transfer by heating** | **Bioenergetics** | | **Adaptations, interdependence and competition** | | **Chemical changes** | **Energy Changes** | **Rates and Equilibrium** | | |
| **Summer** | Density, States of Matter, changes of state | Specific latent heat, Gas Pressure and temperature | Conduction, Specific Heat Capacity | Photosynthesis and Plant transpt systems | Respiration, aerobic and anaerobic | The importance of communities, organisms and their environments | Competition, Adapt and survive | The reactivity series, extractions of metals and making salts. Acids | Exo and endothermic reactions, Bond energy + calculations. Fuel cells | Rates of reaction - effect of Surface area, temperature, concentration, pressure and catalysts. Reversible reactions and equilibria | | |