**Curriculum Overview for Science**

**Year 7**

|  |  |  |
| --- | --- | --- |
| **Half Term 5: Land vs Sea**  **Substantive Knowledge:**   * Discuss some of the pollution that human release. * Describe how genetics are passed from parent to child * Describe how animals and plants are adapted. * Describe how objects can have different densities * Explain why some objects float and other sink. * Describe how tectonics plates move. * Describe how sedimentary, igneous and metamorphic rocks are made. * Describe how rocks are weathered and eroded. * Describe the rock cycle.   **Disciplinary Knowledge:**  Use of quadrats  Draw a punnet square.  **Can we Live on Mars?**  **Substantive Knowledge:**   * Describe mass and weight   **Disciplinary Knowledge:**   * Safe use of practical equipment. * Use appropriate techniques, apparatus and materials during lab work/practical. * Ask questions and develop a line of enquiry based on observations of the real world. * Make and record observations. | Books | Model reading and highlighting to pick out key details, reading of data, Skim reading |
| Speech | Photosynthesis  Respiration  Genes  Haploid  Adaptation  Natural selection  Extinction  Extremophile  Sampling  Quadrat  Convection  Igneous rock  Sedimentary rock  Metamorphic rock  Weathering  Erosion  Deposition  Cementation  Rock cycle |
| Checklist RTL | End of unit assessment  Recall Test |
| Home | Article Homework to promote reading like a scientist  Revision for end of unit assessment |
| **Half Term 6: Can we Live on Mars?**  **Substantive Knowledge:**   * Describe mass and weight * Describe content of a healthy human balanced diet. * Explain consequences of unbalanced diet. * Describe photosynthesis and explain how to maximise it. * Describe how to create pure substances (e.g potable water). * Describe and explain simple techniques of separation. * Describe the Earth and atmosphere (structure and composition). * Explain which of the Earth’s resources we use most. * Describe motion and forces using diagrams and graphs. * Recognise when forces are balanced and unbalanced. * Explain how resultant forces impact motion. * Describe the Earth’s tilt, gravity and other features. * Explain how the Earth’s features impact things like seasons, year length and day length.   **Disciplinary Knowledge:**   * Safe use of practical equipment. * Use appropriate techniques, apparatus and materials during lab work/practical. * Ask questions and develop a line of enquiry based on observations of the real world. * Make and record observations. * Carry out food tests. * Use separation techniques.   . | Books | Model reading and highlighting to pick out key details, reading of data, Skim reading |
| Speech | Mass  Weight  Force diagram  Resultant force  Drag  Solar System  Extra-terrestrial  Atmosphere  Living  Resource  Respiration  Food group  Diet  Deficiency  Inhale  Exhale  Glucose  Photosynthesis  Fertiliser  Yield  Rate  Pure  Food miles  Sustainable  Population  Overuse |
| Checklist RTL | End of unit assessment  Recall Test |
| Home | Article Homework to promote reading like a scientist  Revision for end of unit assessment |