MILESTONE ACADEMY

Key Stage 3 and 4

Science

Programme of Study

Science Programme of Study

Ethos and Planning

This scheme is based on the STRATA (Science To Raise And Track Achievement) schemes, developed by The Cambridgeshire SEN Science Project.

The schemes of work provide a comprehensive range of activities that are both age appropriate and sufficient to meet the needs of the students. The units together cover the National Curriculum for Science at Key Stage 1, Key Stage 2 and Key Stage 3.

The units of work contribute to the scheme and are separated by those working up to Level 1, which will be used at Key Stages 1 and 2, and those working from Level 1 to Level 4, which will be used at Key Stages 3 and 4. Although the units to be used at Key Stages 3 and 4 are titled as those from Level 1 to Level 4, the topics and activities are suitable for pupils working on the P Levels and are more age appropriate then the units of work working up to Level 1. Each unit of work includes learning objectives, ICT/cross curricular links, key vocabulary, resources required, points to note, possible visits, possible investigations and an outcomes recording sheet to the appropriate level. Each unit of work has activities suitable for pupils working at level: P1 (i) to P3 (ii) P4 to P7 and P8 and above.

For pupils working up to Level 1, the units demonstrate effective application of the P Levels.

For pupils working on the units from Level 1 to Level 4, many activities are included that tackle the issue of age appropriateness, and the fact that pupils may revisit topics.

Key Stage 3 will work from units in a three year cycle.

Key Stage 4 will work from units in a two year cycle.

This will ensure that all pupils receive a broad and balanced curriculum from the National Curriculum for Science and will be reviewed every three years.

Year	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
KS3 (2014-15)	Health & Safety Sc2 2.1 Sc2 2.3	Living Organisms Cells & Organisation, Nutrition & Digestion Sc2 4.6 Sc2 1.1 Sc2 2.1	The Particulate nature of matter & Pure and Impure Substances Sc3 1.1 Sc3 1.3	Motion & Forces - Describing motion & forces Sc4 1.2	Electricity & Electromagnetism – Current electricity, static electricity & magnetism Sc4 1.1	Earth & atmosphere Sc3 1.5
KS3 (2015-16)	Physical Changes, Particle Model & Energy in Matter Sc3 1.1 Sc3 1.2	Living Organisms – Muscular and Skeletal Systems & Reproduction Sc2 1.2 Sc2 1.3 Sc2 3.1	Energy - Calculation of fuel costs & energy changes and transfers & Changes in systems Sc4 1.1 Sc4 1.1 Sc4 1.2	Chemical Reactions & Energetics Sc3 1.2 Sc3 1.4	Genetics & Evolution Sc2 4.2 Sc2 4.1	Space Physics Sc4 1.5
KS3 (2016-17)	Interactions & Interdependencies Sc2 4.2 Sc2 4.5	Waves – observed & sound Sc4 1.3 Sc4 1.4	Waves – light & energy Sc4 1.3 Sc4 1.4	The Periodic Table & Atoms, elements & Compounds & Materials Sc3 1.2 Sc3 1.1	Pressure in fluids, Balanced Forces & Forces & motion Sc4 1.2	Material Cycles & Energy – Photosynthesis and cellular respiration, gas exchange systems Sc2 2.2 Sc2 4.4

						Sc2 4.3
KS4 (2014-15 & 2016-17)	Keeping Healthy Sc2 2.1 Sc2 2.3	Keeping Healthy Sc2 2.1 Sc2 2.3	Oils, Earth & Atmosphere Sc3 1.1 Sc3 1.5	Oils, Earth & Atmosphere Sc3 1.1 Sc3 1.5	Energy Transfer & Efficiency Sc4 1.1 Sc4 1.2	Energy Transfer & Efficiency Sc4 1.1 Sc4 1.2
KS4 (2015-16)	Electricity & Waves Sc4 1.1 Sc4 1.3 Sc4 1.4	Electricity & Waves Sc4 1.1 Sc4 1.3 Sc4 1.4	Inheritance, Evolution & Environment Sc2 4.2 Sc2 4.1 Sc2 4.5	Inheritance, Evolution & Environment Sc2 4.2 Sc2 4.1 Sc2 4.5	Materials from the Earth Sc3 1.1 Sc3 1.2 Sc3 1.3 Sc3 1.4 Sc3 1.5	Materials from the Earth Sc3 1.1 Sc3 1.2 Sc3 1.3 Sc3 1.4 Sc3 1.5

This will then continue on a three year cycle until the Scheme of Work is reviewed which will be no later than July 2017.