Year 5	**Autumn Term**
First half term	**<u>Safety in Science and working scientifically</u>** Students are taught the safety rues for a science lab. They are introduced to the hazard symbols and taught how to identify them, what they mean, how to handle and dispose of the relevant chemicals How to identify scientific equipment and draw the relevant scientific diagram How to identify the variables in an investigation How to take measurements using the appropriate measuring equipment and units How to plot and interpret graphs How to plan, carry out and record investigations.
Second half term	**<u>Human Lifecycles</u>** Students will learn to describe the changes as humans develop to old age . Research gestation periods and plot a bar graph.. Create a human timeline. Learn about the changes that occur during puberty. Look at the changes of the embryo in the womb. Investigate changes in old age.

Year 5	**Spring Term**
First half term	**Space** Students will learn to describe the movement of the Earth and other planets relative to the sun in the solar system Describe the movement of the moon relative to the Earth Describe the sun, Earth and moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky Pupils will learn that the sun is a star at the centre of our solar system and that it has 8 planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet .
Second half term	**Animal Lifecycles** Pupils will be taught to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals. Students will observe frogspawn hatching into tadpoles and going through metamorphosis to become frogs. They will learn about and compare the lifecycles of birds, mammals, amphibians and insects. They will grow plants from seed and observe their stages of development.

Year 5	**Summer Term**
First half term	**Properties and changes of materials** Pupils will be taught to compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda
Second half term	**Forces** Pupils will be taught to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect. The students will build boats to investigate streamlining and upthrust. They will use parachutes to investigate air resistance, and ramps with different surface to investigate friction. They will learn about Isaac Newton and will use Newton meters to measure forces