	Mid-Year Expectations	End of Year Expectations
Higher Prior Attainer	**Biology** • Students can explain how organs of the digestive system are adapted for efficient absorption of nutrients. • Students can explain the role of enzymes in digestion and consequences of unbalanced diet, including obesity, starvation, and deficiency diseases. • Students can describe photosynthesis and explain how the leaves are adapted to carry out this process. • Students can write a word and symbol equation for photosynthesis. • Students can explain the role of plants in maintaining the levels of gases in the atmosphere . **Chemistry** • Students can describe structure of an atom. • Students can explain the difference between elements compounds and mixtures. • Students can represent chemical reactions using formulae and equations. • Students can describe and write word equations for a range of chemical reactions. • Students can describe exothermic and endothermic reactions, label energy profiles. • Students can explain how a catalyst affects the rate of reaction. • Students can explain real life exothermic and endothermic reactions and write and explain word equations for examples of each.	**Biology** • Students can explain the blood flow through the heart and the structure and function of lungs. • Students can explain how lung adaptations enable efficient gas exchange. • Students can compare and contrast aerobic and anaerobic respiration. • Students can write a word and symbol equation for aerobic and anaerobic respiration. • Students can explain industrial applications of the fermentation reaction. **Chemistry** • Students can explain how crude oil and metals are extracted from the earth and explain the environmental impacts of this. • Students can compare the advantages and disadvantages of recycling to reduce the use of finite resources.

	Mid-Year Expectations	End of Year Expectations
Higher Prior Attainer	**Physics** • Students can compare how sound travels in different materials. • Students can identify sounds of different frequencies and amplitude. • Students can explain how ultrasound is used and evaluate the use and dangers of electromagnetic waves. • Students can explain how the human ear works and how we hear.	**Physics** • Students can identify the energy stores in a given system. • Students can describe examples of energy transfers in complex systems. • Students can calculate useful and wasted energy in energy transfers and relate this to the idea of efficiency. • Students can calculate energy, work done, and power using equations. • Students can compare different energy resources and justify the use of them in difference situations. • Students can explain static electricity. • Students can compare permanent magnets and electromagnets. • Students can suggest how to make an electromagnet and explain use of magnets, • Students can suggest how to vary the strength of an electromagnet. • Use and rearrange the equation for pressure.

	Mid-Year Expectations	End of Year Expectations
Middle Prior Attainer	**Biology** • Students can describe the roles of organs of the digestive system. • Students can describe the role of enzymes in digestion and consequences of unbalanced diet, including obesity, starvation, and deficiency diseases. • Students can describe photosynthesis and describe how the leaves are adapted to carry out this process. • Students can write the word and symbol equation for photosynthesis. • Students can describe the impact of deforestation on levels of gas in the atmosphere. **Chemistry** • Students can describe the structure of an atom. • Students can define and describe the difference between elements compounds and mixtures. • Students can represent various chemical reactions using word equations. • Students can label energy profiles and describe exothermic and endothermic reactions. • Students can state examples of and write word equations for each type of reaction. • Students can describe how a catalyst affects the rate of reaction.	**Biology** • Students can identify main structures in the heart. describe the structure of the circulatory and breathing systems. • Students can describe the adaptations of the lungs. • Students can describe aerobic and anaerobic respiration, explaining the differences between them. • Students can write word and symbol equations for aerobic and anaerobic respiration. • Students can describe why yeast is used to make bread and/or beer. **Chemistry** • Students can describe how crude oil and metals are formulated and extracted from the earth and define the environmental impacts of this. • Students can describe the advantages and disadvantages of recycling to reduce the use of finite resources.

	Mid-Year Expectations	End of Year Expectations
Middle Prior Attainer	**Physics** • Students can describe how sound travels in materials. • Students can identify sounds of different frequencies and amplitude. • Students can describe uses of ultrasound. • Students can explain some uses and dangers of electromagnetic waves. • Students can describe the human ear and explain how we hear.	**Physics** • Students can identify the energy stores in each system. • Students can describe examples of energy transfers. • Students can calculate useful and wasted energy in energy transfers. • Students can calculate energy, work done and power using equation. • Students can compare different energy resources. • Students can describe static electricity. • Students can describe uses of magnets and electromagnets. • Students can identify magnetic materials. • Students can describe what is meant by attract and repel. • Students can describe the effect of pressure and calculate pressure.

	Mid-Year Expectations	End of Year Expectations
Lower Prior Attainer	**Biology** • Students can identify the main organs in the digestive system. • Students can state the role of enzymes ibn chemical digestion. • Students can give some examples the consequences of unbalanced diet, including obesity, starvation and deficiency diseases. • Students can identify reactants and products of photosynthesis. • Students can state some features of the leaves which make them adapted to carry out photosynthesis. **Chemistry** • Students can label the diagram an atom. • Students can identify and give examples of elements compounds and mixtures. • Students can write word equations for simple chemical reactions. • Students can identify energy profiles for endothermic and exothermic reactions. • Students can state how a catalyst affects the rate of reaction. • Students can recognise some everyday examples of exothermic and endothermic reactions.	**Biology** • Students can name three types of blood vessels in the circulatory system. • Students can name the four chambers in the human heart. • Students can label a diagram of the lungs and say how air moves in and out. • Students can define diffusion. • Students can describe the difference between aerobic and anaerobic respiration. • Students can state industrial applications of the fermentation reaction. **Chemistry** • Students can say how crude oil and metals are extracted from the earth. • Students can state the environmental impacts of crude oil. • Students can state the advantages and disadvantages of recycling to reduce the use of finite resources.

Mid-Year Expectations		End of Year Expectations
Lower Prior Attainer	**Physics** • Students can state that sound travels in solids, liquids, and gases. • Students can identify sounds of different frequencies and amplitude. • Students can name some uses of ultrasound and uses and dangers of electromagnetic waves. • Students can describe the anatomy of the human ear and how we hear.	**Physics** • Students can state the ways in which energy is stored. • Students can describe examples of simple energy transfers. • Students can identify useful and wasted energy in energy transfers. • Students can calculate energy, work done and power using equation. • Students can give some advantages and disadvantages of different energy resources. • Students can state uses of magnets. • Students can name the magnetic materials and state whether magnet poles will attract or repel. • Students can recognise the effect of pressure and give examples