

Year 8	Biology	Chemistry	Physics	Working scientifically
<b>Emerging</b>	I can: describe some of the changes that happen at puberty. Say what the lungs and heart are used for. Describe in simple terms the parts and basic functions of the organ systems in the body.	I can recognise the key areas of the periodic table such as the metals and non-metals.	I can: construct a simple circuit using the correct components and am able to identify conductors and insulators. Compare the speed of sound and light. Name the 2 types of wave, describe how sound travels. Name the parts of the ear and describe how a shadow is formed.	I can: carry out a fair test and say which factors need to be kept constant. Draw conclusions based on evidence. Suggest how ideas can be investigated and make predictions.
<b>Developing</b>	I can: identify the main organs of the reproductive systems. Name the main organs of the breathing and circulatory systems. Recall the names of some illegal recreational drugs.	I can: use the terms mixture and compound correctly. Describe some methods for separating mixtures. Match the element to the correct symbol. Describe the layers of the Earth.	I can: recall the properties of magnets and magnetic field patterns produced by a bar magnet. Describe the effect of changing current in a circuit. Understand the difference between a series and parallel circuit. Know the difference between reflection and scattering. Say what a transverse and longitudinal wave are Explain the relationship between loudness, amplitude, pitch and frequency of sound. describe an echo,	I can: use a range of apparatus with appropriate precision and safely. Use my knowledge to make predictions. Draw conclusions and relate them to my knowledge.
<b>Securing</b>	I can: name the main organs in the digestive system. Describe sexual reproduction and fertilisation. Describe gas exchange in the alveoli. Understand that respiration is a chemical reaction. Know the word equation for aerobic respiration	I can: describe some methods of separating mixtures. Describe changes in the rock cycle. Describe the composition of the atmosphere.	I can: say what we use electromagnet for. Understand how light is reflected from a plane surfaces and that white light can be dispersed to give a spectrum. Compare the speed of sound with that of light. Understand how light is reflected. Say what ultrasound is and how our ears can be damaged.	I can: apply my knowledge from other investigations to plan an investigation. Explain my conclusions using the evidence collected. Interpret my data and begin to explain this using science.
<b>Advancing</b>	I can: describe how food is digested and absorbed. Describe the functions of the organs in the digestive system. Describe the changes from fertilisation to birth. Describe the menstrual cycle. Relate a model of the lungs to breathing. Name some substances that move in and out of cells.	I can describe some methods of separating mixtures to obtain pure substances.	I can: describe simple applications of electromagnets. Compare the human hearing range with other animals. Give uses of ultrasound. Compare specular and diffuse scattering. Explain why objects appear coloured. Describe the relationship between the angle of incidence and reflection.	I can: plan (with a little guidance) investigations in identifying key factors that need to be considered. Present my data clearly and concisely using graphs with lines of best fit. Apply my knowledge and understanding to a range of contexts.
<b>Mastering</b>	I can: describe (in detail) the changes from fertilisation to birth. Describe (in detail) the menstrual cycle. Relate the structure of the lungs to efficient gas exchange. Explain the changes that happen during breathing. Describe diffusion. Recall the word equation for aerobic respiration.	I can: apply my knowledge of particles to explain changes of state, diffusion and dissolving. Recognise the periodic table and can describe the physical and chemical properties of elements in terms of their position. Explain the differences between mixture and compounds in terms of their chemical and physical properties. Explain the trends and patterns in the periodic table.	I can; describe what happens when waves superpose. Compare the eye with a camera. Understand how the ear works.	I can: apply my knowledge and understanding to a range of contexts including unfamiliar situations. Produce (unaided) precise plans for my investigation. Use apparatus with precision and skill. Evaluate my investigation. Decide the number of observations and measurements to make