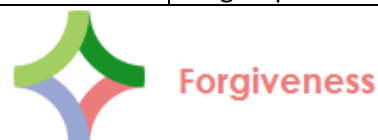
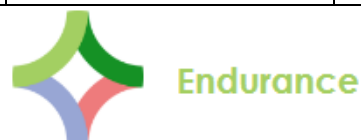




Year 9 DC1 Science

Learning Focus	Emerging	Developing	Securing	Mastering	Beyond
Cell structure & division	<p>I can...</p> <ul style="list-style-type: none"> Identify and name structures in cells. Identify types of cell. State the function of stem cells 	<p>I can...</p> <ul style="list-style-type: none"> State the function of parts of cells and specialised cells. Name and describe types of stem cell. 	<p>I can...</p> <ul style="list-style-type: none"> Compare prokaryotic and eukaryotic cells. Compare types of stem cell. Describe mitosis. 	<p>I can...</p> <ul style="list-style-type: none"> Explain the adaptations of specialised cells. Evaluate the use of stem cell therapies. 	<p>I can...</p> <ul style="list-style-type: none"> Evaluate medical and moral arguments for and against the use of stems cells. Interpret information on mitosis in different contexts.
Microscopy	<p>I can...</p> <ul style="list-style-type: none"> Name parts of a light microscope. 	<p>I can...</p> <ul style="list-style-type: none"> Describe the function of parts of a microscope. Describe how to use a microscope to visualise cells. 	<p>I can...</p> <ul style="list-style-type: none"> Compare light and electron microscopes. Calculate magnification and real length of cells. 	<p>I can...</p> <ul style="list-style-type: none"> Calculate magnification and real length of cells from images. Identify errors and suggest improvements to methods. 	<p>I can...</p> <ul style="list-style-type: none"> Perform multi step calculations. Evaluate the benefits and drawbacks of light and electron microscopes.
Transport in cells	<p>I can...</p> <ul style="list-style-type: none"> Define diffusion, osmosis and active transport. 	<p>I can...</p> <ul style="list-style-type: none"> Give examples of diffusion, osmosis and active transport. 	<p>I can...</p> <ul style="list-style-type: none"> Calculate surface to volume ratio. State factors that affect rate of diffusion. Describe a method for osmosis. 	<p>I can...</p> <ul style="list-style-type: none"> Explain the differences in surface to volume ration for different animals. Explain factors that affect rate of diffusion. 	<p>I can...</p> <ul style="list-style-type: none"> Explain results from osmosis in terms of concentration. Interpret information on diffusion, osmosis and active transport in different contexts.
Atomic structure	<p>I can...</p> <ul style="list-style-type: none"> Define an element, compound and mixture. Identify mass and atomic numbers. 	<p>I can...</p> <ul style="list-style-type: none"> Describe the structure of an atom. Draw electronic structures. 	<p>I can...</p> <ul style="list-style-type: none"> Describe properties and trend of group 1, 7 & 0 elements. Describe the formation of ions including diagrams. 	<p>I can...</p> <ul style="list-style-type: none"> Evaluate models used to show atomic structure over time. Explain the trends in group 1 & 7 elements. 	<p>I can...</p> <ul style="list-style-type: none"> Explain how experimentation led to the current understanding of the atoms structure.





	<ul style="list-style-type: none"> Use word equations. 		<ul style="list-style-type: none"> Describe changes to atomic models over time. Calculate numbers of protons, neutrons and electrons. 	<ul style="list-style-type: none"> Calculate isotopic abundance. 	<ul style="list-style-type: none"> Interpret information on atoms in different contexts.
Periodic table & separation techniques	<p>I can...</p> <ul style="list-style-type: none"> Identify elements as and their location. State the properties of metals and non-metals. Describe simple techniques to separate mixtures. 	<p>I can...</p> <ul style="list-style-type: none"> Describe trends and properties in the periodic table. Define an ion. Describe how different separation techniques work. Describe methods for simple separation techniques. 	<p>I can...</p> <ul style="list-style-type: none"> Construct word equations. Describe the changes to the periodic table over time. Define an isotope. 	<p>I can...</p> <ul style="list-style-type: none"> Explain the formation of ions relative to stability. Explain the contribution of key scientists in the development of the periodic table. Explain the reactivity of elements in terms of electronic structure. Construct and balance symbol equations. 	<p>I can...</p> <ul style="list-style-type: none"> Apply understanding of separation techniques to a multi-step procedure. Explain the formation of compounds from ions given their charge.

