



## Green Zone - Science

Mapping to show evidence of Diversity, Careers, British Values, SMSC (Spiritual, Moral, Social & Culture development), Literacy, Numeracy and Reading in our curriculum area.

Key Stage	Diversity	Careers	British Values	SMSC	Literacy	Numeracy	Reading
<p><b>KS3</b> Year 7 Autumn <b>CELLS</b></p> <p><b>Year 9</b> Summer <b>ECO-SYSTEM</b></p>	<p><b>Animal and plant cells/Classifying materials.</b> We will cover the enormous variation of plants and animals and how they have adapted to living in the environment they do. This shows how species meet their needs and adapt to overcome and survive.</p>	<p>The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.</p>	<p><b>Animal and plant cells/Classifying materials.</b> Have an insight into why we classify living and non-living things. Understand the positive relationship between the living worlds.</p>	<p><b>Animal and plant cells/Classifying materials.</b> Consider the importance of science discoveries and how they affect our daily lives. What could be the effect of losing types of plants and animals due to human interference?</p>	<p><b>Animal and plant cells/Classifying materials.</b> Word banks are provided for some worksheets. Key words for topic and lessons highlighted. Miss spelling of scientific words corrected, but a maximum of 2 words (to start with) are written out as corrections.</p>	<p><b>Animal and plant cells/Classifying materials.</b> Prefix terms for size of an object varies from atomic level to universal size. Magnification when using microscopes. Graph work using appropriate scales.</p>	<p><b>Animal and plant cells/Classifying materials.</b> Comprehension style worksheets making the pupil read a piece of information. Pupils read out aloud information from a power point on the white board.</p>
<p><b>KS3</b> Year 9 Summer <b>EARTH</b></p> <p><b>Year 8</b> Spring <b>ENERGY</b></p>	<p><b>Energy and matter/ The earth and beyond</b> Look at the need to use more than one source of energy to allow access to all. Appreciate the diverse conditions, and the problems they come with on a planet of ever-increasing population- do we</p>	<p>The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.</p>	<p><b>Energy and matter/ The earth and beyond</b> Space travel is now a joint venture and not a race, sharing scientific knowledge for the greater good of all.</p>	<p><b>Energy and matter/ The earth and beyond</b> Each unit allows pupils to think, and then apply previous knowledge to explain observations.</p>	<p><b>Energy and matter/ The earth and beyond.</b></p>	<p><b>Energy and matter/ The earth and beyond.</b> Understand the term "light year" so the size of our universe can be put into perspective.</p> <p>Understand the quantity of energy needed to keep the world running.</p>	<p><b>Energy and matter/ The earth and beyond.</b> Comprehension style worksheets making the pupil read a piece of information. Pupils read out aloud information from a power point on the white board.</p>



	need to look to the stars?						
<b>KS3</b> <b>Year 8</b> Spring GENES	<b>Humans as organisms</b> From our outward appearance to the coding of DNA we are all unique. We will explain how we are so alike yet so diverse.	The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.	<b>Humans as organisms</b> Working in groups, discussing, and hypothesising how the body works to make each individual the best they can be.	<b>Humans as organisms</b> Inspire awe and wonder in the complex way our bodies work. Let pupils interact and experiment as individuals and as a group, to follow instructions to remain safe.	<b>Humans as organisms</b> Opportunities to label and produce posters. Using key words to describe the function and adaptation of cells to the system they work in.	<b>Humans as organisms</b> Using microscopes to enlarge specimens.	<b>Humans as organisms</b> Text is chosen not to reinforce stereotypes. Topic content is aimed at creating interest and fascination.
<b>KS3</b> <b>Year 7</b> Autumn WAVES  Year 9 Summer HABITAT	<b>Waves /Ecosystems</b> Describe the relationship between animals and plants, how they interact with each other and how they all depend on one another.	The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.	<b>Waves /Ecosystems</b> Covering ethical issues around business and economic use of land, teach respect for all living things and there right to live.	<b>Waves /Ecosystems</b> Respecting all living things and their environment. Importance of looking after yourself. Having discussions that may not have an answer.	<b>Waves /Ecosystems</b> Be able to use word equations for photosynthesis. Use of descriptive key words to pose questions with an enquiring mind.	<b>Waves /Ecosystems</b> Understand how to estimate-microorganisms, they are so vast you may not be able to physically count them. Interpret data from statistics/graphs/practical investigation.	<b>Waves /Ecosystems</b> The ability to follow instructions, provide reliable, repeatable results. Must be able to extract information from a variety of different source.



<p><b>KS3</b> Year 8 Spring CHEMICAL REACTION</p> <p><b>Year 7</b> Summer VARIATION</p>	<p><b>Chemical reactions/variation</b> Understand that chemical reactions can be observed to change colour, heat up, give off stinky gases and even explode.</p>	<p>The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.</p>	<p><b>Chemical reactions/variation</b> The use of simple genetics to show how we derive our characteristics. The unit variation covers genetic modification and the implications that brings to different cultures.</p>	<p><b>Chemical reactions/variation</b> The ability to work collaboratively with others to solve worldwide problems, as in charting the human genome.</p>	<p><b>Chemical reactions/variation</b> The ability to use correctly and accurately notifications for chemical symbols. Taking great care when using upper- and lower-case letters.</p>	<p><b>Chemical reactions/variation</b> Ensuring chemical equations balance. The total mass before a reaction is always the same before and after.</p>	<p><b>Chemical reactions/variation</b> The ability to read and interpret data is very important when using statistics in gene sequencing.</p>
<p><b>KS3</b> Year 7 Autumn FORCES</p>	<p><b>Forces and motion</b> Science defines theories to make sense of the world we live in. We must not just believe because we are told to but be able to find out for ourselves. Using all the available information we can refine and collaborate to find results.</p>	<p>The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.</p>	<p><b>Forces and motion</b> Using standard notation worldwide creates conformity and a set of rules to work by.</p>	<p><b>Forces and motion</b> Apply previous knowledge to explain observations. Some of these scientific studies were done many years ago and still stand the test of time. Even with our greater computer development the basics are still the foundations science is built on.</p>	<p><b>Forces and motion</b> Notation, indices, and units must be coherent and correctly followed. The ability to read information correctly is very important.</p>	<p><b>Forces and motion</b> The use of equations is a foundation in science and maths. to be able to rearrange them and ensure correct units are used</p>	<p><b>Forces and motion</b> Correct information gathering facts /figures. The ability to see a result and be able to know to question it just from reading the results or data is invaluable.</p>