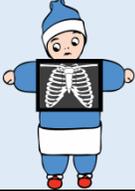
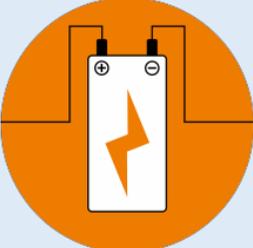
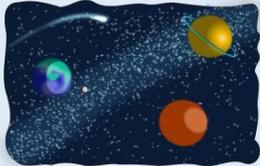
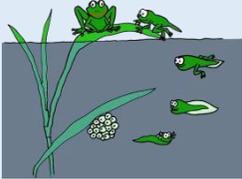


SCIENCE at THE VINEYARD – CURRICULUM MAP

At The Vineyard, we are scientists.							
	WORKING SCIENTIFICALLY (ONGOING)	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 1	asking simple questions and recognising that they can be answered in different ways	<p><u>ANIMALS INC HUMANS</u></p> 	<p><u>SEASONAL CHANGE</u></p> 	<p><u>PLANTS</u></p> 	<p><u>SEASONAL CHANGE</u></p> 	<p><u>EVERYDAY MATERIALS</u></p> 	<p><u>SEASONAL CHANGE</u></p> 
	observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions	<p>KQ: Why are animals different?</p> <ul style="list-style-type: none"> -Name and identify animals - Omnivores, carnivores, herbivores -Name and label basic body parts and senses 	<p>KQ: Why is it cold in the winter?</p> <ul style="list-style-type: none"> -Observe changes across the 4 seasons -Observe and describe weather across the seasons -Describe how day length varies 	<p>KQ: How does your garden grow?</p> <ul style="list-style-type: none"> -Identify and name a variety of plants, (inc. deciduous and evergreen trees) -Label parts of trees and flowers 	<p>KQ: How do the trees change during spring?</p> <ul style="list-style-type: none"> -Observe changes across the 4 seasons -Observe and describe weather across the seasons -Describe how day length varies 	<p>KQ: Why did the third little pig build his house out of bricks?</p> <ul style="list-style-type: none"> -Identify, describe, group and name different materials and their properties 	<p>KQ: Why is it warm in the summer?</p> <ul style="list-style-type: none"> -Observe changes across the 4 seasons -Observe and describe weather across the seasons -Describe how day length varies
YEAR 2	gathering and recording data to help in answering questions.	<p><u>ANIMALS INC HUMANS</u></p> 	<p><u>USES OF EVERYDAY MATERIALS</u></p> 		<p><u>PLANTS</u></p> 	<p><u>LIVING THINGS & THEIR HABITATS</u></p> 	
		<p>KQ: How do animals survive?</p> <ul style="list-style-type: none"> -Compare animals over time and basic needs (offspring become adults) -How humans stay healthy 	<p>KQ: Which material would make the best new diving suit for Traction Man?</p> <ul style="list-style-type: none"> -Identify and compare suitability of everyday materials -How shape of materials can be changed -Choose suitable materials for purpose 		<p>KQ: What would a plant put on its wish list?</p> <ul style="list-style-type: none"> -How seeds and bulbs grow into mature plants and reproduce -What plants need -Compare plants and habitats -Label parts of plant 	<p>KQ: Who lives where?</p> <ul style="list-style-type: none"> - Understand living, dead, and never been alive - habitats provide needs - interdependence -microhabitat -simple food chains 	

<p>YEAR 3</p> <p>ask relevant questions and use different types of scientific enquiries to answer them</p> <p>set up simple practical enquiries, comparative and fair tests</p> <p>make systematic and careful observations and, take accurate measurements using standard units, use a range of equipment, inc. thermometers and data loggers</p> <p>gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>report on findings from enquiries, inc. oral and written explanations, displays or presentations of results and conclusions</p>	<p>ANIMALS INC HUMANS</p>  <p>KQ: Why are our bodies so special?</p> <ul style="list-style-type: none"> -Understand that nutrition comes from food -skeletons and muscles -Classify foods into groups 	<p>LIGHT</p>  <p>KQ: Why can we see in the dark?</p> <ul style="list-style-type: none"> -The need for light when seeing -Reflection -Dangers of looking at the sun -Shadows -How we see 	<p>ROCKS</p>  <p>KQ: Why did the wise man build his house upon the rock?</p> <ul style="list-style-type: none"> -Compare and group rocks -Describe how rocks and fossils are formed -Recognise that soils are made from rocks and organic matter 	<p>PLANTS</p>  <p>KQ: How does your garden grow?</p> <ul style="list-style-type: none"> -Roots, stem/trunk, leaves and flowers -Plants' requirements -Water transportation -Pollination, seed formation and seed dispersal. 	<p>FORCES & MAGNETS</p>  <p>KQ: Do all forces involve contact?</p> <ul style="list-style-type: none"> -Friction -Magnets operate at a distance -Attract & repel -Poles -Compare how things move on different surfaces 	
<p>YEAR 4</p> <p>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>using straightforward scientific evidence to answer questions or to support their findings</p>	<p>STATES OF MATTER</p>  <p>KQ: Why do materials change state?</p> <ul style="list-style-type: none"> -Observe changes of state -Understand evaporation and condensation -Describe the stages in the water cycle 	<p>SOUND</p>  <p>KQ: Why do objects make different sounds</p> <ul style="list-style-type: none"> -Understand that sound is created by vibrations -Understand how sound travels to the ear -Recognise the relationship between sound and distance -Pitch and volume 	<p>ELECTRICITY</p>  <p>KQ: What do we need to create power?</p> <ul style="list-style-type: none"> -Identify appliances that run off electricity -Construct a simple circuit and switch -Identify conductors and Appliances -Conductors & insulators 	<p>LIVING THINGS AND THEIR HABITATS</p>  <p>KQ: How can we tell the difference between living things?</p> <ul style="list-style-type: none"> -Grouping & classification -Use classification keys -Impact of environmental change 	<p>ANIMALS INCLUDING HUMANS</p>  <p>KQ: Do we just need our teeth to eat?</p> <ul style="list-style-type: none"> -Human digestive system -Teeth and their functions -Food chains 	

<p>YEAR 5</p>	<p>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p>	<p>EARTH & SPACE</p> 	<p>FORCES</p> 	<p>MATERIALS – PROPERTIES & CHANGE</p> 	<p>ANIMALS INCLUDING HUMANS</p> 	<p>LIVING THINGS & THEIR HABITATS</p> 	
		<p>KQ: Would you ever want to live in space?</p> <ul style="list-style-type: none"> -Describe the planets in the Solar system -Describe the movement of the Moon -Earth's rotation -Explain night/day 		<p>KQ: How could forces keep us safe?</p> <ul style="list-style-type: none"> -Gravity and on water -Friction & air resistance -Levers, pulleys & gears 	<p>KQ: What would you need to be a CSI investigator?</p> <ul style="list-style-type: none"> -Dissolving -Separating -Reversible irreversible change -Grouping 	<p>KQ: How different will you be when you are as old as the Queen?</p> <ul style="list-style-type: none"> -Physical changes over time (explain & predict) -Human life stages -Puberty 	<p>KQ: Do all species start as an egg?</p> <ul style="list-style-type: none"> -Life cycles -Describe the process of animal and plant reproduction
<p>YEAR 6</p>	<p>using test results to make predictions to set up further comparative and fair tests</p> <p>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>ELECTRICITY</p> 	<p>LIGHT</p> 	<p>ANIMALS INCLUDING HUMANS</p> 	<p>EVOLUTION & INHERITANCE</p> 		<p>LIVING THINGS AND THEIR HABITATS</p> 
		<p>KQ: Circuit breaker or circuit fixer?</p> <ul style="list-style-type: none"> -Impact of voltage on circuits -Changing components -Diagrams of simple circuits 	<p>KQ: Why can't I see round corners?</p> <ul style="list-style-type: none"> -Travels in straight lines -How objects are seen -Light sources Shadows -Reflection 	<p>KQ: Which bits of my body could I live without?</p> <ul style="list-style-type: none"> -Circulatory system -Healthy lifestyle -Transportation of nutrients and water 	<p>KO: Why aren't there any dinosaurs in Richmond?</p> <ul style="list-style-type: none"> -Changes over time -Variation -Offspring vary -Adaptation and evolution 	<p>Revision of previous units</p>	<p>KQ: How do we know a camel is a mammal?</p> <ul style="list-style-type: none"> -Classification