	The Vineyard Science Curriculum Overview: Years Reception to 6					
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	**Biology** **All About Me** (senses, human life-cycle) The children will describe the human life cycle.	**Physics** **Celebrations and Festivals** (sources of light) The children will learn to describe using their 5 senses.	**Physics** **Our Town, Our universe** (changing states of matter) The children will name solids, liquids and describe changes.	**Biology** **Superheroes** (materials, healthy body) The children will name some materials and some basic properties.	**Biology** **Growth and Change** (planting and growing, life cycles, minibeasts & plants, habitats) The children will begin to describe a life cycle and what plants need.	**Chemistry** **Dinosaurs** (fossils, volcanoes) Describe volcanoes and dinosaur-making connections to the past.
Year 1	**Humans** *What are the five senses and what are they used for?* The children will build on knowledge of human body parts and make connections to the use of senses.	**Understanding animals** *Why and how are animals different?* The children will classify and sort animals into groups whilst observing and identifying features.	**Plants** *What are the different types of plants and how do plants change?* Identifying different common plants and trees the children will observe changes over time.	Living things and their habitats *How do different habitats provide for different animals?* The children will ask questions about animals' suitability to their habitats and how their habitat can provide their basic needs.	Materials *What are the everyday materials and properties of them?* Distinguishing objects from materials, the children will be introduced to properties used to describe different materials.	Seasons *What season are we in? What is the weather like in this season?* The children will have observed seasons during the year and conclude by comparing all seasons and basic weather conditions.
Year 2	**Animals and offspring** *How do animals grow?* The children will explore how animals grow and the steps of different life cycles.	**Electricity** *How does electricity work?* The children will investigate what electricity is and how electricity impacts our environment.	**Materials** *What materials are suitable for a specific purpose?* The children will test some properties of materials and identify suitability for different purposes.	**Earth & Space** *What is in our solar system?* Naming and ordering planets in our solar system and sorting planets into gas or rock.	**Plants** *What would a plant put in its wishlist?* *How do plants grow?* The children will compare favourable and unfavourable conditions that impact the growth of bulbs and seeds.	**Humans basic needs for survival** *How do humans and animals survive?* The importance of hygiene, food and exercise and how these factor in avoiding illnesses, disease and spread of germs.

Year 3	**Animals including humans** *What do we need to make our bodies work?* The children will investigate the different food groups and functions of the body.	**Light** *Can we see in the dark?* The children will explore why light is needed and how it can change depending on the position of the light source.	**Rocks** *What does it mean to be "solid as a rock?"* The children will be able to answer what makes a rock and use methods to investigate the different properties of different rocks.	**Plants** *How does your garden grow?* The life cycle of plants will be explored by identifying the role of different parts of a plant and the requirements for growth.	**Forces & Magnets** *Do all forces involve contact?* *Investigating how* things move on different surfaces, will allow children to test and observe how friction works.	**Evolution** *How are we similar?* The children will explore what DNA is and how we are similar/not similar due to genetics.
Year 4	**States of Matter/ The Water Cycle** *Why do materials change state?* The children will identify that materials can change states and investigate how they can be measured.	**Living things and their habitats** *How can we tell the difference between living things?* *Living things in o0ur local area and the impact of change overtime in the environment can affect living things.*	**Sound** *Why do objects make different sounds?* *The patterns between pitch volume and distance will be explored by the children, allowing them to investigate how sounds work.*	**Electricity** *What do we need to create power?* *The children will build confidence and awareness in electrical safety and what electricity is dependent on to allow brightness.*	**Understanding nature and the environment** *How do humans impact their environment?* The children will discuss the positive and negative human impact on the environment and identify key factors such as pollution.	**Animals including humans** *Do we just need our teeth to eat?* The children will explore how things break down when we eat and the importance of looking after our digestive system including our teeth.
Year 5	**Earth, Sun and Moon** *What is the relationship between the sun, moon and earth?* The children will research time zones and report findings on changes of shadows using sundials.	**Forces** *How could forces keep us safe?* Investigating the effect of friction and forces that make things move, the children will test using levers, pulleys and gears and ask questions about the effects of air resistance.	**Properties of materials** *What materials should we use?* While experimenting with different materials, the children will observe and explore the uses of different materials such as the best insulators, best used for cleanliness and their durability.	**Changes of materials** *Would you want to be a CSI investigator?* As investigators the children will look at separating mixtures and choosing the most suitable method and equipment , while carrying out comparative and fair tests.	**Animals including humans** *How different will you be when you are old?* The children will develop their learning on life cycles and timelines by comparing and finding patterns in development in size,dependency after birth and expected life span.	**Living things and their habitats** *Do all species start as an egg?* *Focusing on how plants reproduce, the children will compare and contrast the differences in life cycles of different animal groups, in connection to their habitats.*
Year 6	**Evolution and inheritance** *How have living things changed overtime?* The children will recognise that fossils provide information and how adaptation has evolved allowing suitability in environments.	**Animals including humans: Circulatory System** *Which bits of my body could I live without?* Developing knowledge of healthy bodies, the children will look closely at the functions of the heart, blood vessels and blood.	**Light** *Why can't we see around corners?* *Making a periscope, the children will discuss light traveling in a straight line and how shadows have the same shape as objects.*	**Electricity** *Circuit breaker or circuit fixer?* *The variation in how components function are explored by creating circuits and conductors that allow charge to flow through materials.*	**Living things and their habitat** *How can we tell a camel is a mammal?* *The children will interpret and communicate findings of unknown animals and their characteristics, using classification and secondary sources.*	