

# Science at The Vineyard School

## Curriculum Overview: Reception - Year 6



**Autumn** →

**Spring** →

**Summer**

### Reception

**Seasons and weather**

In this unit, children learn about seasonal weather changes, the four seasons, and how weather affects clothing, plants, and daily life.

**Animals**

In this unit, children learn about different animal habitats, the difference between wild animals and pets, and how to care for and protect wildlife.

**Materials**

In this unit, children learn to describe material properties, explore floating and sinking, and investigate how materials change when interacting with water.

**Humans**

In this unit, children learn about the five senses, the body parts linked to them, and how people experience the world in different ways.

**Dinosaurs**

In this unit, children learn that dinosaurs were extinct animals studied through fossils and that they included both plant-eaters and meat-eaters.

**Growth**

In this unit, children learn how plants grow from seeds, the conditions they need, and the basic stages of plant growth and development.

### Year 1

**Plants**

In this unit, children learn to identify plant parts, explore different types of plants and trees, and understand how plants grow and change over time.

**Animals**

In this unit, children learn to classify animals into groups, identify their features, explore diets and pets, and understand how to care for animals responsibly.

**Humans**

In this unit, children learn to name parts of the human body and understand the five senses and how they help us experience the world.

**Everyday materials**

In this unit, children learn to identify common materials, describe their properties, and investigate how materials are suited to different uses.

**Seasonal changes**

In this unit, children learn about the four seasons and how changes in weather, temperature, and daylight affect the environment and living things.

### Year 2

**Living things and their habitats**

In this unit, children learn to distinguish between living, dead, and never alive things, and explore habitats, food chains, and how living things depend on each other.

**Plants**

In this unit, children learn how seeds and bulbs grow into plants, what they need to survive, and how flowering plants reproduce.

**Animals including humans**

In this unit, children learn about animal offspring, basic needs, health, hygiene, and how animals grow and change through different life cycles.

**Uses of everyday materials**

In this unit, children learn how materials are chosen for their properties, how they can be changed, and the difference between natural and man-made materials.

**Seasonal changes**

In this unit, children build on their knowledge of the seasons by observing and describing changes in weather, daylight, temperature, and their effects on the environment.

### Year 3

**Plants**

In this unit, children learn the structure and function of flowering plants, how they make

**Animals including humans**

In this unit, children learn about nutrition, the roles of nutrients, and how the skeleton and

**Rocks**

In this unit, children learn about different rock types, their properties, how fossils are formed,

**Light**

In this unit, children learn that light helps us see, how it travels and reflects, how shadows are formed,

**Forces and magnets**

In this unit, children learn that forces are pushes and pulls, including magnetism, and how

food through photosynthesis, and how they reproduce through pollination, seed formation, and dispersal.	muscles work together to support movement in humans and other animals.	how soil is made, and the contributions of Mary Anning.	and how materials interact with light.	magnets attract, repel, and act on different materials.
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## Year 4

<p><b><u>Living things and their habitats</u></b> In this unit, children learn how living things are grouped using classification keys, the differences between vertebrates and invertebrates, and how human activity and environmental change threaten and impact living things.</p>	<p><b><u>Animals including humans</u></b> In this unit, children learn how the digestive system works, the roles of different types of teeth, how diet affects teeth, and how energy flows through food chains in ecosystems.</p>	<p><b><u>States of matter</u></b> In this unit, children learn that materials can be solids, liquids, or gases, how particles behave in each state, how materials change state, and how water moves through the water cycle.</p>	<p><b><u>Sound</u></b> In this unit, children learn that sound is made by vibrations that travel through different materials, how sound is described by pitch and volume, and how it can be affected by distance and materials.</p>	<p><b><u>Electricity</u></b> In this unit, children learn that electricity comes from sources like batteries, flows through complete circuits, and is affected by conductors and insulators, as well as learning about Thomas Edison's work.</p>
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## Year 5

<p><b><u>Living things and their habitats</u></b> In this unit, children learn about plant and animal reproduction and life cycles, including sexual and asexual reproduction in plants and the life cycles of mammals, birds, amphibians, and insects.</p>	<p><b><u>Animals including humans</u></b> In this unit, children learn about the human circulatory system, its main parts and functions, and how lifestyle choices affect health and the transport of nutrients and water in the body.</p>	<p><b><u>Properties and changes of materials</u></b> In this unit, children learn about material properties, mixtures, and reversible and irreversible changes, including processes such as dissolving, filtering, evaporation, burning, and rusting.</p>	<p><b><u>Earth and space</u></b> In this unit, children learn about the solar system, including the movement of planets, moons, and stars, how day and night occur, and how scientific ideas about space have developed over time.</p>	<p><b><u>Forces</u></b> In this unit, children learn about forces such as gravity, friction, air and water resistance, and how simple machines can reduce the force needed to move objects.</p>
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## Year 6

<p><b><u>Living things and their habitats</u></b> In this unit, children learn how living things are classified into groups, including the five kingdoms, and explore microorganisms, Carl Linnaeus's classification system, and how scientific understanding of living things develops over time.</p>	<p><b><u>Evolution and inheritance</u></b> In this unit, children learn how living things evolve over time through adaptation and variation, using fossils and scientific evidence to understand inheritance and the development of evolutionary theory.</p>	<p><b><u>Light</u></b> In this unit, children learn that light travels in straight lines, how we see objects through reflected or emitted light, and how this explains the formation of shadows.</p>	<p><b><u>Electricity</u></b> In this unit, children learn how circuit components are affected by voltage and cell number, how to compare circuit functions, and how to represent circuits using scientific symbols.</p>	<p><b><u>Sound</u></b> In this unit, children build on prior knowledge of sound to investigate how it is produced, travels, and changes, exploring pitch, volume, and how different variables affect sound through practical enquiry.</p>
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