



















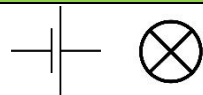








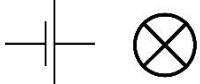

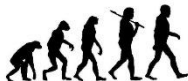





SJC SCIENCE LONG TERM PLANNING

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Nursery	Investigate explorative areas of provision Explore and investigate texture and space using sand, water, mud and dough. Children begin to understand simple concepts such as dry sand can slip through your fingers; water flows down.	All about Owls Would you like to learn about owls? What do they look like? What do they eat? Where do they live? Wow fact.	All about Bears Would you like to learn about bears (edit for a different animal)? What do they look like? What do they eat? Where do they live? Wow fact.	Mini beasts Discuss and investigate how caterpillars grown and change into butterflies. Extend vocabulary by naming parts of plants and mini-beasts. Investigate concept of growth and change by looking at ourselves as babies.	Wild animals Name, describe and categorise wild animals. Investigate monkeys further by using the 'All About Monkeys' fact file.	Farm animals Compare farm animals to the wild animals that we learned about in our last unit of work.
Reception  Forest School	States of Matter Baking – explore the effects of heat on ingredients. FS: Comparing leaves. How can we group the leaves?	Healthy Eating Which foods are healthy and which ones are not? How can we sort these foods? FS: How can we help our local wildlife?	Forces Investigate ramps and distance travelled by cars. FS: Signs of winter, why can we see ice on the ground?	Animals including Humans Life cycle of a hen. What happens during its growth? FS: Explore simple life cycles by asking questions.	Animals Including humans Categorise animals and their babies. FS: How do we know it's summer?	Materials Use our superpowers to save the frozen peas! How can we stop the ice from melting/make it melt? FS: Explore mini habitats.
YEAR 1  Forest School	Animals Including <u>Humans</u>  Scientific enquiry: Identifying, classifying and grouping Identify and name a variety of animals (incl. humans) and their parts. Understand different diets. Which body parts can you name? Link scientist: Chris Packham (Animal Conservationist)	Everyday Materials  Scientific enquiry: Comparative and fair testing / Research using secondary sources What is the object made from? Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. What are their properties? Link scientist: Charles Mackintosh (Waterproof coat)	Animals Including Humans  Scientific enquiry: Pattern seeking Identify and name a variety of animals (incl. humans) and their parts. How can you sort common animals? Describe and compare structures of animals. Link scientist: Charity spokesperson - Guide Dog Charity	Plants  Scientific enquiry: Observation over time / Identifying, classifying and grouping Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Link scientist: Beatrix Potter (author and botanist)	Plants  Scientific enquiry: Observation over time / Identifying, classifying and grouping Identify and describe the basic structure of variety of common flowering plants, including trees. Link scientist: Agnes Arber (Botanist)	Seasonal Changes  Scientific enquiry: Pattern seeking What changes over the four seasons? What weather is associated with the seasons and how does day length vary? Link scientist: Dr Steve Lyons (Extreme Weather)

YEAR 2	Uses of Everyday Materials	Living Things and their Habitats	Uses of Everyday Materials	Animals Including Humans	Plants	Animals Including Humans
	 <p>Scientific enquiry: Identifying, classifying and grouping The suitability of different materials for different uses. Link to inventions.</p> <p>Changing the shape of solid materials.</p> <p>What materials are used for toys and why?</p> <p>Link scientist: William Addis (Toothbrush Inventor)</p>	 <p>Scientific enquiry: Research using secondary sources Things that are living, dead or have never been alive. How do plants and animals depend on each other and their habitats? Food chains and food sources. How does a food chain work?</p> <p>Link scientist: Liz Bonnin (Conservationist)</p>	 <p>Scientific enquiry: Identifying, classifying and grouping The suitability of different materials for different uses. Link to toys.</p> <p>Changing the shape of solid materials.</p> <p>What materials are used for toys and why?</p> <p>Link scientist: Charles Rolls and Henry Royce</p>	 <p>Scientific enquiry: Comparative and fair testing What does a healthy human look like? Why is exercise and eating so important? What does good hygiene look like?</p> <p>Link scientist: Robert Winston (Human Scientist)</p>	 <p>Scientific enquiry: Observation over time How seeds and bulbs grow. Conditions for healthy growth.</p> <p>What happens after you plant a seed? What do you need?</p> <p>Link scientist: Alan Titchmarsh/Agnes Arber (Botanist)</p>	 <p>Scientific enquiry: Pattern seeking What happens when offspring grow into adults? Basic animal lifecycles and requirements for life, including healthy living for humans.</p> <p>Link scientist: Chester zoo/Zoo keeper</p>
YEAR 3	Animals Including Humans	Forces and Magnets	Rocks		Plants	Light
	 <p>Scientific enquiry: Research using secondary sources What do animals and humans need? Where do they get nutrition? What are skeletons and muscles for?</p> <p>Link scientist: Adelle Davis (20th Century Nutritionist)</p>	 <p>Scientific enquiry: Comparative and fair testing Magnets. Movement across different surfaces. How does a surface impact on magnetic property?</p> <p>Link scientist: William Gilbert (Theories on Magnetism)</p>	 <p>Scientific enquiry: Identifying, classifying and grouping Compare and group rocks. Simply describe how fossils are formed. What is soil?</p> <p>Link scientist: Mary Anning (Discovery of Fossils)</p>		 <p>Scientific enquiry: Pattern seeking Identify and describe the functions of parts of a plant. What do plants need to grow? How does water travel through a plant? The lifecycle of the flowering plant.</p> <p>Link scientist: Joseph Banks (Botanist)</p>	 <p>Scientific enquiry: Observation over time Light and dark. Reflection from surfaces. How are shadows formed? How do shadows change?</p> <p>Link scientist: James Clerk Maxwell (Visible and Invisible Waves of Light)</p>

YEAR 4	Animals Including Humans	Electricity	Sound		States of Matter	Living Things and their Habitats
	<div></div> <p>Scientific enquiry: Identifying, classifying and grouping</p> <p>What are the simple functions of the basic parts of the digestive system in humans? What types of teeth do we have? Their jobs? How do food chains identify producers, predators and prey?</p> <p>Link scientist: Ivan Pavlov (Digestive System Mechanisms)</p>	<div></div> <p>Scientific enquiry: Comparative and fair testing</p> <p>Simple circuits. Conductors and insulators. How do you set up a working circuit?</p> <p>Link scientist: Thomas Edison (First Working Lightbulb)</p>	<div></div> <p>Scientific enquiry: Pattern seeking</p> <p>How are sounds made? How does sound travel? Pitch and volume Simple circuits. Conductors and insulators. How does sound travel? Why can I hear my echo in a cave?</p> <p>Link scientist: Alexander Graham Bell (Invented the Telephone)</p>		<div></div> <p>Scientific enquiry: Observation over time</p> <p>Solids, liquids and gases. What is the effect of temperature on states of matter? What is the water cycle? How can I change states of matter?</p> <p>Link scientist: Daniel Fahrenheit (Fahrenheit Temperature Scale / Invention of the Thermometer)</p>	<div></div> <p>Scientific enquiry: Research using secondary sources and classifying</p> <p>How can you group living things? How can you use classification keys to help group, identify and name a variety of living things? How can environments change?</p> <p>Link scientist: Jaques Cousteau (Marine Biologist)</p>
YEAR 5	Forces	Animals Including Humans	Living Things and their Habitats	Earth and Space	Earth and Space	Properties and Changes of Materials
	<div></div> <p>Scientific enquiry: Comparative and fair testing</p> <p>Why do unsupported objects fall to the Earth? How do some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect? How does a parachute work? How does the size of a parachute and mass of object affect parachute movement?</p>	<div></div> <p>Scientific enquiry: Observation over time</p> <p>Human changes – from birth to old age.</p> <p>Link scientist: Sir Robert Winston</p>	<div></div> <p>Scientific enquiry: Pattern seeking</p> <p>Lifecycles of mammals, amphibians, insects and birds. Life processes and reproduction of plants and animals</p> <p>Compare life cycles.</p> <p>Link scientist: David Attenborough (Naturalist and</p>	<div></div> <p>Scientific enquiry: Research using secondary sources</p> <p>The solar system. Relative movement of the Earth, Sun and Moon. Day and night.</p> <p>Can you prove that the Earth is travelling around the sun? E.g. create a sundial, use shadow sticks, torches.</p> <p>Link scientist: Tim Peake (First British ESA astronaut)</p>		<div></div> <p>Scientific enquiry: Identifying, classifying and grouping</p> <p>Solids, liquids and gases. Reversible and irreversible changes. The properties of materials and their uses.</p> <p>What effect do various materials have on the efficiency of a circuit as measured by heat source and brightness of bulb?</p>

	Link scientist: Isaac Newton (Gravitation)		Nature Documentary Broadcaster)			Link scientist: Spencer Silver, Arthur Fry and Alan Amron (Post-It Notes)
YEAR 6	Electricity	Living Things and their Habitats	Evolution	Animals Including Humans	Living Things and their Habitats	Light
	 <p>Scientific enquiry: Comparative and fair testing Drawing circuits. Effects of voltage. What is the effect of changing one component at a time in a circuit?</p> <p>Link scientist: Alessandro Volta (Electrical Battery)</p>	 <p>Scientific enquiry: Identifying, classifying and grouping Classification of plants and animals. Describe how living things are classified into broad groups. What do you need to include in a classification key for an unfamiliar animal?</p> <p>Link scientist: Carl Linnaeus (Identifying, Naming and Classifying Organisms)</p>	 <p>Scientific enquiry: Research using secondary sources Fossils as evidence. Individual differences and inheritance. – How are animals adapted to their environments? What are the advantages and disadvantages of specific evolutionary traits?</p> <p>Link scientists: Charles Darwin</p>	 <p>Scientific enquiry: Pattern seeking What are the main parts of the human circulatory system? Healthy lifestyles How does the heart work within the body? How is this different when we exercise?</p> <p>Link scientist: Sir Richard Doll (Linking Smoking and Health Problems)</p>	 <p>Scientific enquiry: Observation over time Microorganisms. How do microorganisms have an impact on our food if left out?</p> <p>Link scientist: David Henriques Valentine</p>	 <p>Scientific enquiry: Comparative and fair testing Light and sight (eyes). Light travels in straight lines. What device could help you see around the corner?</p> <p>Link scientist: Ibn al-Haytham (Alhazen) (Light and our Eyes)</p>