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| **SJC SCIENCE LONG TERM PLANNING** |
|  | **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| **Nursery** | **Investigate explorative areas of provision** | **All about Owls** | **All about Bears** | **Mini beasts** | **Wild animals** | **Farm animals** |
| 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. | Would you like to learn about owls? What do they look like? What do they eat? Where do they live? Wow fact. | 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. | 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. | Name, describe and categorise wild animals. Investigate monkeys further by using the ‘All About Monkeys’ fact file. | Compare farm animals to the wild animals that we learned about in our last unit of work. |
| **Reception**Oak tree tree clip art free clipart images clipart image 2 | Tree ... | **Investigate explorative areas of provision**  | **Introduction to Healthy eating** | **Freezing, Melting & Forces** | **Exploring Life Cycles** | **Naming and describing wild animals** | **Explore Materials** |
| Explore and investigate texture and space using sand, water, mud and dough. Wednesday cooking session – State of Matter.Investigate seasonal changes in Forest area.**FS: Comparing leaves. How can we group the leaves?** | Which foods are healthy?How can we sort these foods?-Looks like-Feel-Type-taste (taste different foods)Explore healthy, active lifestyles.Mile a Day challenge.**FS: How can we help our local wildlife?****Plant bulbs for Spring.** | Explore freezing and melting.Explore and experimenting with forces (i.e. rolling objects on different gradients to affect speed) Does the red car travel the furthest/fastest?**FS: Signs of winter, why can we see ice on the ground?****Look for growing bulbs.** | Discuss and investigate how chicks hatch and change into hens. Extend vocabulary by naming parts of plants and mini-beasts.Mathematical links – measures.**FS: Explore simple life cycles by asking questions.****Signs of Spring – observing closely. Draw and label.** | Name, describe and categorise wild animals.Investigate elephants further by using the ‘All About Elephants’ fact file.**FS: How do we know it’s Summer?** **Plants – weather- wildlife changes.** | What material will make the best cape?Use our superpowers to save the frozen peas! How can we stop the ice from melting/make it melt?**FS: Explore mini habitats and creating bug hotels**.**Sorting bugs into groups.** |
| Oak tree tree clip art free clipart images clipart image 2 | Tree ...**YEAR 1** | **Animals Including** Humans**/****Seasonal Changes** | **Everyday Materials/ Seasonal Changes** | *Animals* **Including Humans/****Seasonal Changes** | **Plants/ Seasonal Changes** | **Plants/ Seasonal Changes** | **Seasonal Changes** |
| Zoo animals , Cartoon Safari , orangutan transparent background ...**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: David Attenborough and Steve Backshall** | Free Plastic Bottle Cliparts, Download Free Clip Art, Free Clip ...**Scientific enquiry: Comparative and fair testing** 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) and Charlotte McCurdy** | Zoo animals , Cartoon Safari , orangutan transparent background ...**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: David Attenborough and Steve Backshall** | Free Free Plant Pictures, Download Free Clip Art, Free Clip Art on ...**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)** | Free Free Plant Pictures, Download Free Clip Art, Free Clip Art on ...**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: David Douglas and Alan Titchmarch** | Autumn Leaf Color Clip Art, PNG, 3969x1910px, Leaf, Autumn, Autumn ...**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: Robert Fitzroy and Carol Kirkwood** |
| **YEAR 2** | **Uses of Everyday Materials** | **Plants (plant bulbs)/****Living Things and their Habitats** | **Uses of Everyday Materials** | ***Plants****/ Animals* **Including Humans** | **Plants** | **Animals Including** *Humans* |
| Free Plastic Bottle Cliparts, Download Free Clip Art, Free Clip ...**Scientific enquiry: Research using secondary sources**Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper andcardboard for particular usesFind out how the shapes of solid objects made from some materials can be changed by squashing, bending, twistingand stretching.**Link scientist:Carol Haslett** | Minden Pictures stock photos - Woodland habitat surrounding ...**Scientific enquiry: Identifying, classifying and grouping** Explore and compare the differences between things that are living, dead, and things that have never been aliveIdentify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needsof different kinds of animals and plants, and how they depend on each otherIdentify and name a variety of plants and animals in their habitats, including microhabitatsDescribe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identifyand name different sources of food**Link scientist: Jacques Cousteau and** **David Attenborough** | Free Plastic Bottle Cliparts, Download Free Clip Art, Free Clip ...**Scientific enquiry: Identifying, classifying and grouping**The suitability of different materials for different uses. Link to toys. Changing the shape of solid materials.What materials are used for toys and why?**Link scientist: Stella McCartney** | Zoo animals , Cartoon Safari , orangutan transparent background ...**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? **Link scientist: Florence Nightingale**  | Free Free Plant Pictures, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Observation over time**How seeds and bulbs grow. Conditions for healthy growth.What happens after you plant a seed? What do you need? **Link scientist: Jane Colden** | Zoo animals , Cartoon Safari , orangutan transparent background ...**Scientific enquiry: Pattern seeking**What happens when offspring grow into adults?Basic animal lifecycles and requirements for life, including healthy living for humans.**Link scientist: Edward ‘Bear’ Grylls** |
| **YEAR 3** | **Animals Including Humans** | **Forces and Magnet** | **Rocks** | **Plants**  | **light** |
| Zoo animals , Cartoon Safari , orangutan transparent background ...**Scientific enquiry: Research using secondary sources**What do animals and humans need? Where do they get nutrition? What are skeletons and muscles for? **Link scientist: Louis Pasteur and Charlotte Armah** | Apple Clipart GravityScience Clipart Force - Magnet Clipart - Free Transparent PNG ...**Scientific enquiry: Comparative and fair testing**Magnets.Movement across different surfaces.How does a surface impact on magnetic property?**Link scientists: Leonardo Da Vinci and Masato Sagawa** | Free Rocks Cliparts, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Identifying, classifying and grouping**Compare and group rocks. Simply describe how fossils are formed.What is soil? **Link scientist: Mary Anning (Discovery of Fossils) and Sanjeev Gupta** | Free Free Plant Pictures, Download Free Clip Art, Free Clip Art on ...**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. **Link scientist: George W Carver and Luciano Scandain** | Free Torch Cliparts, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Observation over time**Light and dark. Reflection from surfaces.How are shadows formed? How do shadows change? **Link scientist: Thomas Edison and Isamu Akasaki** |
| **YEAR 4** | **Living things in their habitats** | **Electricity** | **States of Matter** | **Sound** |  **Animals including humans** |
| Science | Dichotomous key, Science, Learning**Scientific enquiry:** **Research using secondary sources and classifying**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? **Link scientist: Carl Linnaeus and Vanessa Nakate** | Electrical Symbols | Circuit Symbols For Kids | DK Find OutFile:Symbol primary or secondary cell.svg - Wikimedia Commons**Scientific enquiry: Comparative and fair testing**Simple circuits. Conductors and insulators.How do you set up a working circuit?**Link scientist: Benjamin Franklin and Erik Bystrup** | Free Ice Cliparts, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Observation over time**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?**Link scientist: Anders Celsius and Heston Blumentahal** | Free Sound Cliparts, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Pattern seeking**How are sounds made? How does sound travel? Pitch and volumeSimple circuits. Conductors and insulators.How does sound travel?Why can I hear my echo in a cave?**Link scientist: Alexander Graham Bell (Invented the Telephone) and Jaap Haartsen** | Zoo animals , Cartoon Safari , orangutan transparent background ...**Scientific enquiry: Identifying, classifying and grouping**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? **Link scientist: Pierre Fauchard and Zhaoming Liu** |
| **YEAR 5** | **Properties and Changes of Materials** | **Forces** | **Living Things and their Habitats** | **Earth and Space** | **Animals Including Humans** |
| Free Plastic Bottle Cliparts, Download Free Clip Art, Free Clip ...**Scientific enquiry: Identifying, classifying and grouping**Solids, liquids and gases. Reversible and irreversible changes. The properties of materials and their uses.What effect do various materials have on the efficiency of a circuit as measured by heat source and brightness of bulb?**Link scientist: Albert Einstein and Hugh Bradner** | Apple Clipart Gravity**Scientific enquiry: Comparative and fair testing**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?**Link scientist: Isaac Newton and Elon Musk** | Minden Pictures stock photos - Woodland habitat surrounding ...**Scientific enquiry: Pattern seeking**Lifecycles of mammals, amphibians, insects and birds. Life processes and reproduction of plants and animalsCompare life cycles. **Link scientist: Gregor Mendal and Jane Goodall** | Solar System Planet Clip Art - Solar System Planets Clipart ...**Scientific enquiry: Research using secondary sources**The solar system. Relative movement of the Earth, Sun and Moon. Day and night.Can you prove that the Earth is travelling around the sun? E.g. create a sundial, use shadow sticks, torches.**Link scientist: Tim Peake (First British ESA astronaut) and Nicolaus Copernicus** | Zoo animals , Cartoon Safari , orangutan transparent background ...**Scientific enquiry: Observation over time**Human changes – from birth to old age.**Link scientist:**  **Alexander Fleming and Roasalind Franklin** |
| **YEAR 6** | **Living Things and their Habitats** | **Electricity** | **Animals Including Humans** | **Evolution** | **Scientific enquiry** | **Light** |
| Minden Pictures stock photos - Woodland habitat surrounding ...**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?Microorganisms.How do microorganisms have an impact on our food if left out?**Link scientist: Carl Linnaeus**  | File:Symbol primary or secondary cell.svg - Wikimedia CommonsElectrical Symbols | Circuit Symbols For Kids | DK Find Out**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?**Link scientist: Nikola Tesla and M.Stanley whittingham** | Zoo animals , Cartoon Safari , orangutan transparent background ...**Scientific enquiry: Pattern seeking**What are the main parts of the human circulatory system? Healthy lifestylesHow does the heart work within the body? How is this different when we exercise? **Link scientist: William Harvey and Donald Palmer** | Evolution Clip Art Images | Clipart Panda - Free Clipart Images**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? **Link scientists: Charles Darwin and Sylvia Earle** | Minden Pictures stock photos - Woodland habitat surrounding ...**Scientific enquiry:**Celebrating scientistsuse the scientists work as an investigation!Investigations-spread out the skills over time-model the skill and then children choose their question and practise the skill over three weeks-evidence in books-Can do full experiment write up if they wish too-grammar such as comparatives adjectives etc.Cross-curricular writingFree Torch Cliparts, Download Free Clip Art, Free Clip Art on ...**Scientific enquiry: Comparative and fair testing**Light and sight (eyes). Light travels in straight lines.What device could help you see around the corner? **Link scientist: Ibn al-Haytham (Alhazen) (Light and our Eyes) and Jo Shein Ng****Links with summer 2 biographies** |