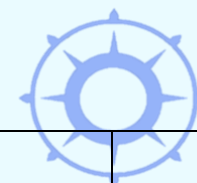
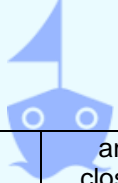




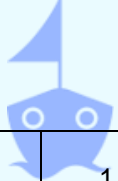
# Navigating our way through Science



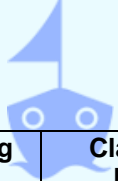
Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>N</b>	<p>The season of Autumn, leaves changing colour and falling from trees. Animals begin to prepare for colder weather and hibernation e.g. squirrels bury nuts in the ground. Temperatures getting colder as winter approaches.</p>	<p>Plan a journey to the local park, or around the school grounds what would we see? What grows in our school, what grows in the park? People journey around the world to see different places and environments; Ernest Shackleton and his journey to the South Pole. Contrasting environments; journeys to cold places, what would we need to take with us? Look at some recent memorable journeys, e.g. Perseverance landing on Mars.</p>	<p>We know about dinosaurs because people have found fossils in the ground. Rocks can sometimes contain fossils that palaeontologists can study.</p>	<p>Plants need water and light to grow (this will be built upon throughout the curriculum) Grow plants in nursery and observe plants growing e.g. sunflowers, cress etc. Talk about how the plants change as they grow. Make observations of the world around them, describe things they have seen e.g. plants, animals, natural objects and manmade objects. Recognise the season of Spring and notice new plants growing. Animals grow and change in many different ways.</p>	<p>All animals have babies, some look like their parents, but some do not. Recognise and use animals names e.g. cow/calf, chicken/chick. Polar habitats are under threat as climate changes.</p>	<p>Ice investigation-(link to South Pole – Shackleton). Ice changes from a solid to a liquid when it melts. Boats in water – explore floating and sinking. How many pennies can my boat hold? Contrasting landscapes; what does a lunar landscape look like? What might we see if we walked on the moon?</p>
<b>R</b>	<p>The human body: Facial features, body parts, the senses Seasons of the year; Autumn. Deciduous and evergreen trees. Observing leaves using magnifying glasses, leaves changing colour.</p>	<p>Forces: push, pull, twist Air transport Water transport Seasons of the year: Winter. Animal hibernation, why do some animals hibernate? How do other animals survive winter? Transport in the winter; snow ploughs, gritting roads, snow tyres. Changing state of matter; frost</p>	<p>Our planet Earth, land and sea, plants and animals, weather, gravity. The moon, the sun, the planets in our solar system, space travel, astronauts. Seasons of the year: Spring. The first signs of spring; snowdrops, cherry blossom, buds and flowers, birds nesting, bees, lighter evenings.</p>	<p>Growing and changing; how people change as they grow, how animals change as they grow. Life cycles of a butterfly and/or frog. Identify and draw the following animals and their babies including but not limited to: Sheep and Lamb Cows and Calf Horse and foal Butterfly and Caterpillar Frog and tadpole Dog and puppy Cat and kitten Plants; how they grow from</p>	<p>Seasons of the Year: Summer. Signs of summer; flowers, warmer days, light evenings, butterflies, bees, birds. Design a garden for the Queen; what could we grow? What would we include? Sketch some ideas and write about the design.</p>	<p>Seasons of the Year: Summer. How we stay safe in the sun; sunscreen, hats, sunglasses. Safety around water. Changing state of matter; Why do our ice lollies melt?</p>



		and ice- looking closely at ice, what happens when it warms? Why can we see our breath when it is cold?		seeds and bulbs. What plants need to grow. Identify parts of plants including roots, stem and leaves. Identify trees and plants growing locally on the school grounds or in local parks. Draw pictures of local plants.		
1	<b>Animals including humans</b> 1. Introduction to Our Body and Our Senses 2. Eyes and Sight 3. Ears and Hearing 4. Touch, taste and smell 5. Understanding Sensory Impairment 6. Assessment	<b>Materials and Magnets</b> 1. Everyday Materials 2. Properties of Materials 3. Uses of Materials 4. Magnets 5. Investigation 6. Assessment	<b>Seasons and Weather</b> 1. The four seasons 2. Tools to record the weather 3. Using a graph to show information about the weather 4. Clouds and what they tell us: cirrus, cumulus and stratus 5. Weather forecasting 6. Extra lesson: Dangerous weather around the world 7. Assessment task: Identifying and describing weather	<b>Plants</b> 1. What plants need 2. Parts of plants 3. Seeds 4. Deciduous and evergreen plants 5. Plants we eat 6. Assessment	<b>Taking Care of the Earth</b> 1. Taking Care of the Earth 2. Earth's Natural Resources 3. Logging 4. Pollution 5. Recycling 6. Assessment	<b>Animals and their needs</b> 1. Amazing Animals (Introduction to Animals) 2. Grouping animals: Fish, amphibians, reptiles, birds and mammals 3. Grouping animals: carnivores, herbivores and omnivores 4. Animals as pets 5. Describing animals 6. Assessment
2	<b>Animals including humans</b> 1. Animals, including humans, survival and offspring 2. The Skeletal System, The Muscular System and Exercise 3. The Digestive system and Healthy Eating 4. The Circulatory system 5. Germs, diseases and preventing illness 6. Assessment lesson	<b>Living Things and Their Environment</b> 1. Dead or Alive 2. What is a habitat? 3. Rainforest and Desert habitats 4. Meadow habitats 5. Underground habitats 6. Assessment 7. Additional optional lessons	<b>Electricity</b> 1. Introduction to Electricity 2. Safety 3. Exploring Circuits (A) 4. Exploring Circuits (B) 5. Investigating Conductive and non-conductive materials 6. Assessment	<b>Plants</b> 1. Plants around us 2. Seeds and bulbs 3. Comparative test 1 4. Comparative test 2 5. Food and Farming 6. Assessment—How does a seed work?	<b>Materials and Matter</b> 1. Materials and their uses 2. George de Mestral and Velcro 3. Matter under the microscope 4. Changing Solid Objects 5. Liquids and their properties 6. Assessment	<b>Astronomy</b> 1. Introduction to Astronomy 2. Model the Solar System 3. Orbit and Rotation 4. The Moon and its Phases 5. Constellations 6. Assessment



3	<b>Forces and Magnets</b> <ol style="list-style-type: none"><li>1. Forces (Gravity)</li><li>2. Friction</li><li>3. Magnet</li><li>4. Magnetic Poles and Fields</li><li>5. Investigating the strength of magnets</li><li>6. Assessment</li></ol>	<b>Rocks</b> <ol style="list-style-type: none"><li>1. Sorting rocks</li><li>2. How Rocks are Formed</li><li>3. Permeability</li><li>4. Fossils</li><li>5. Soil</li><li>6. Assessment</li></ol>	<b>Cycles in Nature</b> <ol style="list-style-type: none"><li>1. The Four Seasons (prior learning)</li><li>2. Seasonal Cycles in Plants</li><li>3. Life Cycle of a Plant</li><li>4. Animal Migration</li><li>5. Life Cycle of a Frog</li><li>6. Assessment</li></ol>	<b>Plants</b> <ol style="list-style-type: none"><li>1. Botany and Flowering Plants</li><li>2. Requirements for Life and Growth</li><li>3. Water Transportation in Plants</li><li>4. Pollination in Flowering Plants</li><li>5. Seed Dispersal</li><li>6. Assessment</li><li>7. George Washington Carver</li></ol>	<b>Light</b> <ol style="list-style-type: none"><li>1. Light and Dark</li><li>2. Transparent and Opaque Surfaces</li><li>3. Mirrors and Reflection</li><li>4. Part 1—Shadows</li><li>5. Part 2—Finding Patterns in Changing Shadows</li><li>6. Assessment</li></ol>	<b>Animals including humans</b> <ol style="list-style-type: none"><li>1. The Muscular System</li><li>2. The Skeletal System</li><li>3. The Nervous System</li><li>4. Preparing to Eat</li><li>5. The Digestive System</li><li>6. Assessment</li></ol>
4	<b>Animals including humans</b> <ol style="list-style-type: none"><li>1. Cells and Nutrients</li><li>2. Teeth and Senses</li><li>3. Digestion</li><li>4. A Healthy Diet</li><li>5. Vitamins and Minerals</li><li>6. Assessment</li></ol>	<b>Sound</b> <ol style="list-style-type: none"><li>1. What is sound?</li><li>2. Speed of sound</li><li>3. Qualities of sound—Pitch and Volume</li><li>4. Human Voice</li><li>5. Ears—How we Hear</li><li>6. Assessment</li></ol>	<b>Ecology</b> <ol style="list-style-type: none"><li>1. Living Things and Habitats</li><li>2. Natural Cycles</li><li>3. Web of Living Things</li><li>4. Air Pollution—A Human Threat to the Environment</li><li>5. Ecology in our Local Areas</li><li>6. Assessment</li></ol>	<b>Classification of Plants and Animals</b> <ol style="list-style-type: none"><li>1. Introduction to classification</li><li>2. Classes of vertebrates: Fish and Amphibians</li><li>3. Classes of vertebrates: Reptiles, Birds and Mammals</li><li>4. Classes of invertebrates: Insects, Arachnids and Molluscs</li><li>5. Classification of plants</li><li>6. Assessment</li></ol>	<b>The Water Cycle</b> <ol style="list-style-type: none"><li>1. States of Matter</li><li>2. Evaporation</li><li>3. Condensation</li><li>4. Precipitation</li><li>5. The Water Cycle</li><li>6. Assessment: The Water Cycle</li></ol>	<b>Electricity</b> <ol style="list-style-type: none"><li>1. Electrical Safety</li><li>2. Parts of a circuit</li><li>3. Switches</li><li>4. Thomas Edison and Lewis Latimer</li><li>5. Investigating conductive and non-conductive materials</li><li>6. Assessment</li></ol>
5	<b>Animals including humans</b> <ol style="list-style-type: none"><li>1. Gestation and Infancy</li><li>2. Adolescence and Puberty</li><li>3. Slowing Down</li><li>4. Growth in Humans and Animals</li><li>5. Preparation for Assessment (research and scientific drawing)</li><li>6. Assessment</li></ol>	<b>Materials</b> <ol style="list-style-type: none"><li>1. Properties of materials</li><li>2. Which material is best?</li><li>3. Solubility- which materials are most soluble/what solubility means</li><li>4. Separating mixtures- sieving, filtering, evaporating</li><li>5. Reversible changes- dissolving, mixing, change of state</li><li>6. Assessment</li></ol>	<b>Living things and Their Habitats</b> <ol style="list-style-type: none"><li>1. Life Cycles of Plants and Animals in our Local Area</li><li>2. Reproduction in Plants</li><li>3. Life Cycles of Mammals and Amphibians</li><li>4. Life Cycles of Insects and Bats</li><li>5. The Work of David Attenborough and Jane Goodall</li><li>6. Assessment</li></ol>	<b>Forces</b> <ol style="list-style-type: none"><li>1. Forces Including Gravity</li><li>2. Air Resistance, Water Resistance and Friction</li><li>3/4. Guided Investigation: Paper Drop</li><li>5. Pulleys, Gears and Levers</li><li>6. Assessment</li></ol>	<b>Astronomy</b> <ol style="list-style-type: none"><li>1. The Big Bang and the expanding universe</li><li>2. Gravity</li><li>3. Our Solar System</li><li>4. The Moon</li><li>5. Our Galactic neighbourhood</li><li>6. Assessment</li></ol>	<b>Meteorology</b> <ol style="list-style-type: none"><li>1. Meteorology and the Atmosphere</li><li>2. The Ozone Layer</li><li>3. Air Movement</li><li>4. Cold and Warm Fronts</li><li>5. Thunder and Lightning</li><li>6. Assessment</li></ol>



<b>6</b>	<b>Animals including humans</b> <ol style="list-style-type: none"><li>1. The Heart: Circulation of the Blood</li><li>2. Blood Vessels and Transport</li><li>3. Blood Pressure and Heart Rate</li><li>4. Heart Rate- an Investigation</li><li>5. Heart Rate– an Investigation continued</li><li>6. Assessment</li><li>7. Optional extra lesson: components of blood</li></ol>	<b>Classification of living things</b> <ol style="list-style-type: none"><li>1. Classifying organisms</li><li>2. Cells: Plant and Animal cells</li><li>3. Taxonomy</li><li>4. Vertebrates</li><li>5. Invertebrates</li><li>6. Assessment</li></ol>	<b>Electricity</b> <ol style="list-style-type: none"><li>1. Simple Series Circuits</li><li>2. Voltage</li><li>3. Switches</li><li>4. Planning an Investigation</li><li>5. Investigation</li><li>6. Assessment</li></ol>	<b>Light</b> <ol style="list-style-type: none"><li>1. How Light Travels</li><li>2. How We See</li><li>3. Shadows and Their Shapes</li><li>4. The Colour of Light</li><li>5. Making a Periscope</li><li>6. Assessment</li></ol>	<b>Reproduction</b> <ol style="list-style-type: none"><li>1. Asexual reproduction</li><li>2. Sexual reproduction in non-flowering plants</li><li>3. Sexual reproduction in flowering plants</li><li>4. Reproduction in animals</li><li>5. Growth stages</li><li>6. Assessment</li></ol>	<b>Evolution</b> <ol style="list-style-type: none"><li>1. Fossils and Mary Anning</li><li>2. Inheritance</li><li>3. Adaptation</li><li>4. Charles Darwin</li><li>5. Alfred Wallace</li><li>6. Assessment</li></ol>
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