

## Year 1 Programme of Study for Science

<b>Who am I?</b>			
NC Statutory Learning Objectives	<ul style="list-style-type: none"> <li>To identify, name, draw and label the basic parts of the human body.</li> <li>Say which part of the body is associated with each sense.</li> </ul>	Working Scientifically NC Statutory Learning Objectives	<ul style="list-style-type: none"> <li>To observe things using simple equipment.</li> <li>To identify and sort different things.</li> <li>To collect and record data to help answer questions.</li> </ul>
<b>Scientific language</b>	Backbone, Ear lobe, Elbow, Eye socket, Hips, Joints, Ribs, Thigh, Tongue, Vertebrae, Nails.		
<b>My body</b> page 10/11	Assessment activity	Using a body outline ask the children to label different parts of the body and then any bones or other features they already know such as the heart.	
<b>Activities</b>	<ol style="list-style-type: none"> <li>1. Children draw body parts on disposable aprons as they learn new ones.</li> <li>2. Children research skeletons and then make a skeleton out of bone-shaped dog biscuits.</li> <li>3. Children study different parts of the body under a microscope and record interesting things they could not observe using eyes only.</li> <li>4. Children compare themselves to the tallest man in England and each other, answer questions</li> </ol>		
<b>My senses</b> page 12-18	Assessment activity	Children list the 5 senses and which part of the body is associated with each sense.	
<b>Activities</b>	<ol style="list-style-type: none"> <li>1. Children identify when they can smell perfume.</li> <li>2. Identify smells in pots and make their own smell pot.</li> <li>3. Smell different herbs and vote on their favourite to produce a pictogram of results.</li> <li>4. Taste new foods and use words to describe them.</li> <li>5. Make a tally chart of favourite tastes.</li> <li>6. Taste food without one of the senses e.g blindfolded/holding nose and identify what it is.</li> <li>7. Write what they would miss most if they couldn't see.</li> <li>8. Identify what things are without being able to see them.</li> <li>9. Make a class pictogram of eye colour by observing the eyes closely with a mirror and labelling each part.</li> <li>10. Practical activity trying to touch two pencils with one eye and then two.</li> <li>11. Match animals to their eyes.</li> <li>12. Children draw round their hands and write what they like to touch and something good they can do with their hands.</li> <li>13. Draw or take pictures of all the things you do with your hands all day.</li> <li>14. Children sort objects into different groups according to how they feel.</li> </ol>		

<p>15. Feely pictures</p> <p>16. Making stress balls</p> <p>17. Favourite sounds</p> <p>18. How good is my hearing?</p> <p>19. Where is the sound?</p> <p>20. Match the sound</p> <p>21. Sign language</p> <p>22. Action songs and stories</p> <p>23. Using our senses outdoors</p> <p>24. Investigation Comparing skills at skittles and understand they can work to change some things.</p>	<p>15. Children choose appropriate textures to represent the different things in their picture.</p> <p>16. Children experiment with different materials to see which would be best to make a stress ball.</p> <p>17. Make a pictogram of favourite sounds.</p> <p>18. Measure the distance you can hear sounds from.</p> <p>19. Play different circle games where children are blindfolded and have to listen for sounds.</p> <p>20. Children pair up containers with the same sound in.</p> <p>21. Watch a TV clip of someone signing and discuss this way of communicating.</p> <p>22. Children create own actions to songs/stories/poems.</p> <p>23. Make trails using maps and photographs for children to follow.</p> <p>24. Compare humans and discuss the similarities and differences, things that can/cannot be changed and carry out skittles investigation to highlight how we can work to change things.</p>
<p><b>End of topic assessment</b></p>	<p>Children to all complete the interactive activity 'Who am I?' on the CD-Rom to assess knowledge of body parts.</p>

<h2 style="text-align: center; background-color: #FFC0CB; padding: 5px;">Celebrations</h2>			
<p>NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>• To distinguish between an object and the material from which it is made.</li> <li>• To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li> <li>• To describe the simple physical properties of a variety of everyday materials.</li> <li>• To identify and describe the basic structure of a variety of common plants, including roots, stems/trunk, leaves and flowers.</li> </ul>	<p>Working Scientifically NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>• To observe things using simple equipment.</li> <li>• To perform simple tests.</li> <li>• To identify and classify.</li> <li>• To use observations and ideas to suggest answers to questions.</li> <li>• To gather and record data to help in answering questions.</li> </ul>
<p><b>Scientific language</b></p>		<p>Illuminate, light source, opaque, reflect, translucent, transparent, shadow, sound, source of sound, vibration.</p>	
<p><b>Light and Shadow</b> page 24-26</p>		<p>Assessment activity</p>	<p>Ask the children to name all the celebrations they know and what they associate with them e.g. lights, music, food etc. Record on mind-map.</p>
<p><b>Activities</b></p> <p>5. Introducing candles</p> <p>6. Observing a candle</p> <p>7. Sources of light</p>		<p>5. Children look at a variety of candles - tall, short, thin, thick, birthday, night lights etc and answer questions.</p> <p>6. In small groups, children observe a candle burning closely and answer questions.</p> <p>7. Children find out about different light sources around school.</p> <p>8. Children order light sources next to the headings, bright, brighter, brightest.</p>	

<p>8. Bright, brighter, brightest  9. In the dark, dark cave  10. Shadow shapes  11. Do all materials make shadows?  12. Hand shadows  13. Plastic tower  14. Make a shadow puppet play</p>	<p>9. Children make a dark cave and explore it using torches.  10. Children build using constructions and then use a torch to make shadows.  11. Children explore shining light through a variety of materials - opaque, transparent, translucent and sort them according to the shadow made.  12. Children make hand shadows to tell a story.  13. Children compare towers made with translucent glasses and opaque building bricks.  14. Children make puppets and scenery to tell one of the stories from the celebration topic.</p>	
<p><b>Our celebrations page 27-28</b></p>	<p>Assessment activity</p>	<p>Discuss what materials are used for different celebrations. Record on mind-map.</p>
<p><b>Activities</b>  25. Bottle top clacker  26. Kazoo  27. Ice cube tray xylophone  28. Tin can drums  29. Tissue shaker  30. Emotion faces  31. Which part of the plant?</p>	<p>25. Children make bottle top clackers and discuss why the material is useful for making sounds.  26. Children explore making a kazoo and experiment with materials which vibrate.  27. Children explore making different sounds.   28. Children investigate different tins and the sounds they make and explore sounds made with different materials.  29. Children investigate which material is best to make a shaker.  30. Children explore how different sounds and music make them feel.  31. Children make Charoset, Chinese spring rolls, Stuff dates and a Christingle tasting the different ingredients and discussing which part of the plant they come from and which celebrations they are connected to.</p>	
<p><b>End of topic assessment</b></p>	<p>Children to all complete the interactive activity 'Celebrations' on the CD-Rom to assess knowledge of which part of the plant food comes from.</p>	

<h2 style="text-align: center;">Polar Adventures</h2>			
<p>NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>• To name animals that are birds, fish and mammals..</li> <li>• To name common animals that are carnivores, herbivores and omnivores.</li> <li>• To describe and compare different common animals.</li> <li>• To describe the properties of everyday materials that are transparent, translucent, opaque, waterproof, flexible.</li> <li>• To compare and group materials that are transparent, translucent, opaque, waterproof, flexible.</li> </ul>	<p>Working Scientifically NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>• To ask simple questions and recognise that they can be answered in different ways observing closely.</li> <li>• To perform simple tests.</li> <li>• To identify and classify different materials and animals.</li> <li>• To use their observations and ideas to suggest answers to questions.</li> </ul>

<b>Scientific language</b>	Arctic, Antarctic, carnivore, herbivore, omnivore, flexible, waterproof, habitat	
<b>The expedition</b> page 34/35	<b>Assessment activity</b>	Arrange for the class to receive a letter from the fictitious National Polar adventurer's society inviting them to become polar adventurers and go on an expedition to the polar regions. Mind-map what they already know about the Arctic and Antarctic regions
<b>Activities</b> <ul style="list-style-type: none"> <li>15. Destination</li> <li>16. Polar adventurer's diary</li> <li>17. Visitors</li> <li>18. Home research</li> <li>19. Famous explorers</li> <li>20. What to wear</li> <li>21. Which material?</li> <li>22. Investigating gloves</li> </ul>	<ul style="list-style-type: none"> <li>15. Children write questions about what they would like to find out and display them.</li> <li>16. Children set up a diary to record what they find out throughout the topic.</li> <li>17. Staff dress up as Scott of the Antarctic having research him and children write questions to ask him.</li> <li>18. Children find out about this region at home and share what they have found out with the class.</li> <li>19. Children research famous polar explorers and discuss why they need to keep warm and what happens when we get cold.</li> <li>20. Children choose which clothes to wear when going on their polar expedition.</li> <li>21. Children sort different fabrics into those which will keep a polar adventurer warm and those which won't.</li> <li>22. Children perform a variety of tests of different gloves and decide which would be best to take.</li> </ul>	
<b>Polar animals</b> page 36-38	<b>Assessment activity</b>	Discuss what animals might live in the Arctic and Antarctic and any special features which help them survive in the cold. Record on mind-map.
<b>Activities</b> <ul style="list-style-type: none"> <li>32. Adopt an animal</li> <li>33. Tigtag Adaptation film</li> <li>34. Herbivore, carnivore, omnivore</li> <li>35. The big freeze</li> <li>36. Polar documentary</li> <li>37. Warm me up</li> <li>38. Soup</li> <li>39. Porridge</li> <li>40. Iceburgs</li> <li>41. Ice baubles</li> </ul>	<ul style="list-style-type: none"> <li>32. Each group of children adopt a polar animal and research habitat, food, special features, life cycle, young, how it moves, structure of the animal, which group it belongs to (carnivore, herbivore, omnivore) and (fish, bird, mammal).</li> <li>33. Children watch the film and then share what they have found out in their diaries.</li> <li>34. Children sort animals into the different groups.</li> <li>35. Children create an Arctic frieze and polar animals to show how they are camouflaged.</li> <li>36. Children make a video about their polar animal using soft toys etc.</li> <li>37. Children write instructions of how to make hot chocolate.</li> <li>38. Children explore packet soup, by classifying the different vegetables in the soup, pour warm water over them and observe how they change.</li> <li>39. Children make porridge and investigate adding different dried fruit.</li> <li>40. Children observe what happens to homemade iceburgs (ice cubes) answering questions about what happens to it.</li> <li>41. Children make ice baubles to hang around school and then write instructions of how to make them for another class,</li> </ul>	
<b>End of topic assessment</b>	Children to all complete the interactive activity 'Polar adventurers' on the CD-Rom to assess knowledge of Arctic and Antarctic animals.	

## Treasure Island

<p>NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>To identify and name a variety of plants.</li> <li>To identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals.</li> <li>To describe and compare the structure of a fish with humans and some other animals.</li> <li>To describe the simple physical properties of a variety of everyday materials,</li> </ul>	<p>Working Scientifically NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>To ask simple questions and recognise that they can be answered in different ways.</li> <li>To observe things using simple equipment.</li> <li>To perform simple tests.</li> <li>To identify and classify.</li> <li>To use their observations and ideas to suggest answers to questions.</li> <li>To gather and record data to help in answering questions.</li> </ul>
<p><b>Scientific language</b></p>		<p>Float, Island, Sink, Waterproof, Windproof</p>	
<p><u>Staying Alive</u> page 44/45</p>	<p>Assessment activity</p>	<p>Message in a bottle stimulus to encourage children to think of what would be on a desert island and how they would survive using materials. Record on mind-map.</p>	
<p><b>Activities</b></p> <p>23. What should we do first 24. Construct a shelter 25. Test the shelter 26. Outdoor shelters</p>	<p>23. Children look at activity cards of what you could do on the island. They consider which order they should do them in order to survive, 24. Children consider important features of a shelter and explore materials to make it from. They design and build shelter. 25. Children test shelters for waterproof, windproof and strength. 26. Children build a shelter for a doll using natural materials and evaluate each other's.</p>		
<p><u>On the island</u> page 46-48</p>	<p>Assessment activity</p>	<p>Discuss what the weather might be like and how they would get food. Discuss the problems of living in very hot weather. Record on mind-map.</p>	
<p><b>Activities</b></p> <p>42. Design, make and test a sun shade 43. Escape from the island 44. Making a lifejacket 45. Finding food 46. Hard Tack biscuits 47. Fish 48. Fresh water</p>	<p>42. Children use a computer drawing package to plan and label a sunshade after studying different sun hats. 43. Children design, make and test a raft. Create a class Boat and Raft Big Book showing plans, photographs and comments about the process. 44. Children look at lifejackets and make a lifejacket for their doll. They test it and record results. 45. Children taste different tropical foods and write about the taste/texture, smell/looks and likes/dislikes. They also look at which part of the plant each is from. 46. Children make biscuits and comment on how the mixture changes, how it feels and what they think it will taste like. 47. The children study a real fish, to feel it and observe its parts closely. They need to name the different parts and compare similarities and differences between humans and other animals. 48. Children consider why we can't drink sea water and how we would collect fresh rain water.</p>		
<p><b>End of topic assessment</b></p>	<p>Children to all complete the interactive activity 'Treasure island' on the CD-Rom to assess knowledge of properties of materials.</p>		

## On Safari

<p>NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>To identify and name a variety of common invertebrates.</li> <li>To identify and name a variety of animals that are carnivores, herbivores and omnivores.</li> <li>To describe and compare the structure of common invertebrates.</li> <li>To describe the simple physical properties of a variety of everyday materials.</li> </ul>	<p>Working Scientifically NC Statutory Learning Objectives</p>	<ul style="list-style-type: none"> <li>To ask simple questions and recognise that they can be answered in different ways.</li> <li>To observe closely.</li> <li>To perform simple tests.</li> <li>To identify and classify.</li> <li>To gather and record data to help in answering questions.</li> </ul>
<p><b>Scientific language</b></p>		<p>Abdomen, antennae, detritivore, exoskeleton, food chain, habitat, head, insect, invertebrate, thorax, vertebrate.</p>	
<p><u>Minibeasts, bugs or invertebrate?</u> page 54/58</p>		<p>Assessment activity</p>	<p>Mind-map what invertebrate the children already know and any information they know about them.</p>
<p><b>Activities</b></p> <p>27. Organising safari back packs                  28. Safari rules                  29. We are going on safari                  30. Observing invertebrate                  31. Asking questions                  32. Answering questions                  33. Do woodlice like dark places?</p>		<p>27. As a group the children pack back packs discussing what each piece of equipment is for ready to go bug hunting.                  28. Children consider what will be important when on safari and write a list of rules to follow.                  29. In groups children explore the local park for invertebrate, observing closely, using keys to identify and answer questions about them from the adult.                  30. Children compare how invertebrate are different to humans.                  31. Children write questions about a chosen invertebrate.                  32. Children find the answers by either thinking, using senses, using a book/computer, performing a simple test.                  33. Children set up a choice box with half dark and half light and observe how many woodlice move to each side.</p>	
<p><u>Food chains</u> page 59-60</p>		<p>Assessment activity</p>	<p>Discuss what animals eat each other. Record on mind-map.</p>
<p><b>Activities</b></p> <p>49. Predator and prey                  50. Add plants                  51. Make your own food chain                  52. My teacher shrunk the class                  53. Habitats</p>		<p>49. Children use animal cards and arrows to make simple food chains.                  50. Children make food chains including plants and the sun.                  51. Children investigate making different food chains using pictures, playdough etc.                  52. Children role-play being different invertebrate and predators.                  53. Children design and make a invertebrate home, making labels, signposts, video films etc and take photos of how they have changed the school grounds.</p>	
<p><b>End of topic assessment</b></p>		<p>Children to all complete the interactive activity 'On Safari' on the CD-Rom to assess knowledge of invertebrates.</p>	

## Holidays

<p style="text-align: center;"><b>NC Statutory Learning Objectives</b></p>	<ul style="list-style-type: none"> <li>To identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals.</li> <li>To identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>To describe and compare the structure of common animals.</li> <li>To describe and compare the structure of a fish with humans and some other animals.</li> <li>To distinguish between an object and the material from which it is made.</li> <li>To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li> <li>To describe the simple physical properties of a variety of everyday materials,</li> </ul>	<p style="text-align: center;"><b>Working Scientifically NC Statutory Learning Objectives</b></p>	<ul style="list-style-type: none"> <li>To ask simple questions and recognise that they can be answered in different ways.</li> <li>To observe things using simple equipment.</li> <li>To perform simple tests.</li> <li>To identify and classify.</li> <li>To use their observations and ideas to suggest answers to questions.</li> <li>To gather and record data to help in answering questions.</li> </ul>
<b>Scientific language</b>	Habitat, sunburn, marine biologist, pollution		
<b>Get packed!</b> page 66/67	Assessment activity	Dress up in your best holiday clothes pulling a suitcase. Give the children 10 questions to find out where you are going. Explain that you know very little about the seaside and see what the children can tell you.	
<p><b>Activities</b></p> <p>34. Packing a case</p> <p>35. Slip. Slop, slap</p> <p>36. Keeping cool</p> <p>37. Sunglasses</p>	<p>34. Children consider what clothes they would need for the seaside.</p> <p>35. Children investigate what happens to card when it is left in the sun.</p> <p>36. Children carry out a simple test to investigate the best way to keep bottles of water cold on a hot day.</p> <p>37. Children investigate a variety of sunglasses then design and make their own.</p>		
<b>By the seaside</b> page 68-69	Assessment activity	Discuss what animals you might find at the seaside and what job a marine biologist does. Record on mind-map.	
<p><b>Activities</b></p> <p>54. Marine biologist</p> <p>55. Seashore animals</p> <p>56. Sorting animals</p> <p>57. Classroom rock pool</p> <p>58. Sea shells</p>	<p>54. Children research what job a marine biologist does.</p> <p>55. In groups children find out about different animals and report back to the class.</p> <p>56. Children sort pictures of animals into animal groups.</p> <p>57. Children visit the rock pool and role play being a marine biologist finding out about the animals.</p> <p>58. Children investigate the animals that the shells once belonged to and compare them to snails.</p>		

59. Messy humans 60. Sea turtles	59. The children study how much rubbish humans leave at the beach and discuss the problems of this pollution. 60. Children consider the impact of the rubbish on sea turtles and design posters to warn people about the dangers.
<b>End of topic assessment</b>	Children to all complete the interactive activity 'Holiday' on the CD-Rom to assess knowledge of items needed for different holidays.