

# YEAR 1: TUCANA - SCIENCE CURRICULUM FRAMEWORK

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos.

AUTUMN TERM 1	AUTUMN TERM 2	SPRING TERM 3
<b>SUPERHEROES</b>	<b>BEAT BAND BOOGIE</b>	<b>DINOSAUR PLANET</b>
<ul style="list-style-type: none"> <li>• <b>SC WS5 Use their observations and ideas to suggest answers to questions</b></li> </ul> <p>Investigate their amazing senses and how they help them in everyday life. Explore numbered mystery boxes positioned around the classroom containing objects, food items or sound sources. Label the boxes, 'Smell me', 'Touch me', 'Listen to me', 'Taste me' or 'Look at me'. Discuss their results and how they used their senses to discover what was in the box</p> <p>Investigate how our senses rely upon each other. For example, can they tell what they are eating if they can't smell (soft peg on the nose), can't see (blindfold or blacked out goggles) or can't hear (ear defenders)? Discover whether they can order objects according to size or texture without being able to see them, or walk towards their friend if they can hear but not see them. Experiment to see if closing their eyes helps them hear quiet sounds.</p>	<ul style="list-style-type: none"> <li>• <b>SC WS5 Use their observations and ideas to suggest answers to questions.</b></li> </ul> <p>Investigate how the level of water in a glass bottle or jar affects the sound made when either tapping the glass with a pencil, blowing across the top of the bottle or running a wet finger around the rim. Find out how full the bottle or jar must be to make a high-pitched sound or a low-pitched sound? Record their results and identify any patterns found</p> <ul style="list-style-type: none"> <li>• <b>SC WS3 Perform simple tests.</b></li> </ul> <p>Investigate their sense of hearing. Cup their hands over their ears and explore whether this changes the sounds they can hear and whether they can hear more or less. Make 'ears' of different sizes from thick cardboard. Predict what will happen when they listen to sounds when wearing the different sized ears. Test the cardboard ears and record their findings. Find out whether bigger ears</p>	<ul style="list-style-type: none"> <li>• <b>SC A1 Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</b></li> </ul> <p>Visit the Natural history Museum. Find out about the creatures' care needs and how they move, eat and behave. Draw and label some common reptiles based on their observations, non-fiction books and information on the web. Find out and locate on a world map where they come from</p> <ul style="list-style-type: none"> <li>• <b>SC A2 Identify and name a variety of common animals that are carnivores, herbivores and omnivores</b></li> </ul> <p>Be a dinosaur dentist! Look at images of different dinosaur teeth. Sort them into groups of meat eaters and plant eaters. Have a go at making either a herbivore or carnivore dinosaur tooth using clay. When it's dry, paint it, then arrange with similar teeth to make an enormous dinosaur jaw! Find out about the teeth of modern day carnivores,</p>

<ul style="list-style-type: none"> <li><b>SC A4 Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</b></li> </ul> <p>Investigate who in the class has superhero skills... Find out who is super-stretchy or super-bendy and who has super sight, super hearing, super memory, super taste or a super singing voice? Record by drawing and labelling parts of the human body and their associated 'super skill'</p>	<p>can hear quieter sounds.</p> <p>Work in pairs to investigate how sounds can be heard at a distance. Select from a range of sound sources such as a dropped coin, a plucked rubber band, torn or scrunched paper and a blown whistle. Working in a large space, nominate one partner to walk away from the sound source until they can no longer hear it. Discuss in their pairs which objects could be heard over the shortest and longest distances and why this might be</p> <ul style="list-style-type: none"> <li><b>SC WS6 Gather and record data to help in answering questions.</b></li> </ul> <p>Plot a range of different sounds heard indoors and out on a sound map, indicating the location of each sound. Sit in a quiet area to listen carefully and mark the sounds they hear with a cross on their maps, labelling each cross with the name or source of the sound</p> <ul style="list-style-type: none"> <li><b>SC WS4 Identify and classify</b></li> </ul> <p>Take part in a 'Guess the sound' quiz. Record their guesses on mini dry wipe boards, marking their own answers as the sounds are revealed. Sort sounds into those that were difficult to recognise and those that were easy</p>	<p>herbivores and omnivores</p> <ul style="list-style-type: none"> <li><b>SC A3 Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</b></li> </ul> <p>Label the parts of a dinosaur's body on a large scale diagram or picture. Look at images of dinosaur skeletons, identifying the main features. Compare with the parts of a lizard's body, discussing any differences</p> <ul style="list-style-type: none"> <li><b>SC P1 Identify and name a variety of common plants, including deciduous and evergreen trees</b></li> </ul> <p>Search for examples of plants that lived in the age of the dinosaurs!</p>
<b>SPRING TERM 4</b>	<b>SUMMER TERM 5</b>	<b>SUMMER TERM 6</b>
<b>TOWERS, TUNNELS AND TURRETS</b>	<b>WRIGGLE AND CRAWL</b>	<b>LAND AHOY</b>
<p><b>Sc WS 3 Perform simple tests. Sc WS 1, 2, 5</b></p> <p>As a class children investigate and look at why bridges are shaped in different ways.</p> <p><b>Sc: LT &amp; H 3 Identify and name a variety of plants and</b></p>	<p><b>Sc A 2 Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</b></p> <p>Children take part in a 'Minibeast Hunt' to see what minibeasts they can find and recording where they find</p>	<p><b>Sc EM 1 Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Sc WS 2, 3, 4, 5, 6</b></p> <p>Children look at images of different boats identifying</p>

<p><b>animals in their habitats, including micro habitats</b></p> <p><b>Sc LT 2 Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</b></p> <p>Children learn about tunnelling animals such as moles, rabbits and badgers. They choose an animal on which to focus, discovering key facts about their lifecycles and how they are adapted for life underground.</p> <p>In addition, children construct paper chain food chains to discover where each burrowing animal is in the food chain and how different kinds of animals and plants depend on each other.</p>	<p>them. Children look carefully at the creatures collected using magnifying glasses.</p> <p><b>Sc WS 1 Ask simple questions and recognise that they can be answered in different ways. Sc A 2; Sc WS 2, 4, 5</b></p> <p>We create a class minibeast home to enable us to keep, observe and care for a range of minibeasts. As a class, children devise a range of questions that can be arranged into the following categories: those that can be answered by immediate observation, those that need further observation or research and those that may require a test.</p> <p><b>Sc A 1 Notice that animals, including humans, have offspring which grow into adults. Sc WS 4</b></p> <p>Children learn about the life cycle of a honey bee, including their egg, larval, pupal, and adult stages. They draw the bee's life cycle in a diagrammatic form and label accordingly, adding short captions to explain each stage.</p> <p><b>Sc WS 5 Use their observations and ideas to suggest answers to questions. Sc WS 2, 4; Sc A 2</b></p> <p>Children find out how a minibeast's appearance can help it avoid being eaten. Looking at a range of camouflaged creatures, such as the peppered moth, stick insect and shield bug and contrasting these to brighter minibeasts such as butterflies.</p>	<p>and naming the materials from which they are made. They explore the properties of materials such as wood, plastic, metal, glass, brick, paper and card to see which materials float and which sink.</p> <p><b>Sc EM 2 Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Sc WS 1, 2, 3, 5, 6</b></p> <p>Children explore which shapes float best by moulding and reshaping lumps of plasticine. First testing whether the lump floats, then squashing, squeezing and bending the plasticine, to form a variety of shapes to see if they can make their plasticine float.</p>
<p><b>Ongoing unit of work: Seasonal Change</b></p> <p>In this unit of work, pupils will:</p> <ul style="list-style-type: none"> <li>• observe changes across the four seasons</li> <li>• observe and describe weather associated with the seasons and how day length varies</li> </ul>		
<p><b>Working scientifically</b></p> <p>Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> <li>• asking simple questions and recognising that they can be answered in different ways</li> </ul>		

- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions