

# Dallam Community Primary School – Subject Progression – Science



		Science Progression						
		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Working Scientifically	<p>THE NATURAL WORLD</p> <p><b>Seedlings</b></p> <ul style="list-style-type: none"> <li>Explore both indoor and outdoor environments.</li> <li>Notice changes within the environment.</li> <li>Use a variety of senses to explore the natural world.</li> </ul> <p><b>Acorns</b></p> <ul style="list-style-type: none"> <li>Use all their senses in hands-on exploration of natural materials</li> <li>Explore collections of materials with similar/ and or different properties</li> <li>Talk about what they see, using a wide vocabulary.</li> <li>Plant seeds and care for growing plants</li> <li>Begin to understand the need to respect and care for the natural environment and all living things</li> <li>Talk about the difference between materials and the changes they notice.</li> </ul>	<ul style="list-style-type: none"> <li>Ask questions</li> <li>Use a microscope /magnifying glass</li> <li>Perform experiments.</li> <li>Group things together by their features</li> <li>Find the answer to questions by looking carefully at things</li> <li>Collect results and write them down</li> </ul>	<ul style="list-style-type: none"> <li>Ask questions and understand that they can be answered in different ways</li> <li>Use a microscope /magnifying glass</li> <li>Perform experiments</li> <li>Group things together by their features</li> <li>Suggest the answer to a question by making observations</li> <li>Collect my results and write them down to help me answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Ask questions and conduct experiments to answer them</li> <li>Set up a fair practical experiment</li> <li>Take accurate measurements using thermometers, data loggers, rulers</li> <li>Write a report to explain my findings using scientific vocabulary</li> <li>Present findings to the class</li> <li>Use results to draw conclusions</li> <li>Describe what has stayed the same and what has changed in an experiment</li> <li>Use the evidence from my own and other people's experiments to support my conclusions</li> </ul>	<ul style="list-style-type: none"> <li>Ask relevant questions</li> <li>Use different types of experiments to answer questions</li> <li>Make careful observations and take accurate measurements using: thermometers, rulers, own equipment</li> <li>Classify results and present data</li> <li>Record experiment in a report using: graphs, diagrams, charts</li> <li>Deliver an oral report on findings</li> <li>Use the evidence from results to draw a conclusion</li> <li>Evaluate the experiment and suggest improvements</li> </ul>	<ul style="list-style-type: none"> <li>Plan different kinds of fair experiments</li> <li>Describe how variables are controlled in experiments</li> <li>Take accurate measurements using a variety of scientific equipment</li> <li>Explain why it's important to take repeated measurements</li> <li>Record data using: Labelled scientific diagrams, classification keys, tables, bar charts, line graphs</li> <li>Make predictions about how other tests will work using my results</li> <li>Present findings in a written report with an introduction, results and conclusion</li> <li>Present findings in an oral presentation with an introduction, conclusion and results</li> <li>Describe other experiments that have been done to support or disprove ideas</li> </ul>	<ul style="list-style-type: none"> <li>Plan different kinds of fair experiments</li> <li>Recognise why controlling variables is important and explain how to do this in experiments</li> <li>Take accurate measurements using scientific equipment</li> <li>Take repeated measurements when appropriate</li> <li>Record data using: Labelled scientific diagrams, classification keys, tables, bar charts, line graphs</li> <li>Draw conclusions from results and describe causal relationships in results</li> <li>Present findings in a written report with an introduction, conclusion and results</li> <li>Present my findings in an oral presentation</li> <li>Identify scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	
	Biology	<p><b>Ash</b></p> <ul style="list-style-type: none"> <li>Can describe what they see, hear and feel whilst outside.</li> <li>Understand the effect of changing seasons on the natural world around them.</li> <li>Explore the natural world around them.</li> <li>Recognise some environments that are different to the one in which they live.</li> <li>Can explore the natural world around them, making observations and drawing pictures of animals and plants.</li> <li>Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</li> <li>Understand some important processes and changes in the natural world around them,</li> </ul>	<ul style="list-style-type: none"> <li>Identify some annual plants</li> <li>Identify some evergreen plants</li> <li>Identify some common fish, amphibians, reptiles, birds and mammals</li> <li>Identify some common meat eating animals (carnivores)</li> <li>Identify some common plant eating animals (herbivores)</li> <li>Identify some common animals that eat both plants and meat (omnivores)</li> <li>Describe the differences between some common fish, amphibians, reptiles, birds and mammals</li> <li>Identify what kinds of animals are kept as pets</li> <li>Label the human body using the right words</li> </ul>	<ul style="list-style-type: none"> <li>Identify the differences between something that is living, things that are no longer alive and things that have never been alive</li> <li>Describe how different habitats provide for different animals and plants</li> <li>Identify how different animals and plants depend on each other</li> <li>Describe micro-habitats</li> <li>Describe different plants and animals in their habitats</li> <li>Describe how a food chain works</li> <li>Name different food sources of different animals</li> <li>Describe how seeds and bulbs grow into plants</li> <li>Describe why plants need water, light and heat to grow and stay healthy</li> <li>Identify what happens to animals over time as they grow from young to adult</li> <li>Know the names of familiar animals' young</li> <li>Describe what animals and humans need to survive</li> <li>Explain why exercise is important</li> <li>Explain why a healthy diet is important</li> <li>Explain why it is important to make sure you are clean</li> </ul>	<ul style="list-style-type: none"> <li>Describe the function of the roots, stem or trunk, leaves and flowers of a plant</li> <li>Explain what plants need to grow and stay healthy</li> <li>Describe how water is transported inside plants</li> <li>Describe the lifecycle of a flowering plant</li> <li>Describe how nutrients, water and oxygen are transported within animals and humans</li> <li>Describe how the muscular and skeletal systems work together to create movement</li> </ul>	<ul style="list-style-type: none"> <li>Describe how different living things can be grouped together</li> <li>Describe how environmental changes can affect living things</li> <li>Demonstrate how to use a classification key</li> <li>Explain the lifecycle of a flowering plant</li> <li>Describe the different parts of the human digestive system</li> <li>Describe the different types of teeth I have in my mouth</li> <li>Draw a food chain</li> </ul>	<ul style="list-style-type: none"> <li>Describe the differences between the life cycles of: a mammal, a bird, an insect, an amphibian</li> <li>Describe the reproductive cycle of a plant</li> <li>Describe the reproductive cycle of an animal</li> </ul>	<ul style="list-style-type: none"> <li>Describe how living things are classified into broad groups according to common observable characteristics</li> <li>Classify plants and animals into groups</li> <li>Explain why living things have been classified into groups</li> <li>Identify and name the main parts of the human circulatory system</li> <li>Describe the functions of the heart, blood vessels and blood</li> <li>Describe the impact of diet, exercise, drugs and lifestyle on the function of the human body</li> <li>Describe the ways in which nutrients and water are transported within animals including humans</li> <li>Explain how fossils provide information about living things that lived on Earth millions of years ago</li> <li>Explain why the offspring of living things are similar but not identical to their parents</li> <li>Describe how animals and plants adapt to suit their environment</li> <li>Explain how evolution is caused by the ability to adapt to environment</li> </ul>



## Dallam Community Primary School – Subject Progression – Science

<b>Chemistry</b>	including the seasons and changing states of matter.	<ul style="list-style-type: none"> <li>Identify the difference between an object and what it is made from</li> <li>Identify the names of some common materials</li> <li>Describe the properties of some everyday materials</li> <li>Group together materials by their features</li> </ul>	<ul style="list-style-type: none"> <li>Identify what different materials are used for</li> <li>Describe why some objects cannot be made from other materials</li> <li>Explain how you can change the shape of solid objects.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and group different kinds of rocks based on their appearance and physical properties</li> <li>Describe how fossils are formed</li> <li>Explain what soil is made from</li> </ul>	<ul style="list-style-type: none"> <li>Group materials by state (solid, liquid, gas)</li> <li>Describe what happens to water as it is heated and cooled</li> <li>Measure temperature in degrees Celsius</li> <li>Describe the water cycle</li> </ul>	<ul style="list-style-type: none"> <li>Classify materials by: Transparency, hardness, solubility, electrical conductivity, thermal conductivity, response to magnets</li> <li>Describe how some materials dissolve to form a solution</li> <li>Explain how to separate materials in a solution</li> <li>Decide how best to separate mixtures</li> <li>Explain, using evidence, why some materials are best suited to different uses</li> <li>Explain why some state changes are reversible, and some state changes aren't</li> </ul>	
<b>Physics</b>		<ul style="list-style-type: none"> <li>Describe what is different about each season</li> <li>Describe the kind of weather we get in each season</li> <li>Describe how the length of the day changes in each season</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Explain why we need light to see things</li> <li>Explain that dark is the absence of light</li> <li>Explain the sun is dangerous to the eyes</li> <li>Describe how shadows are formed</li> <li>Describe that light can be reflected and give examples</li> <li>Explain why shadows are sometimes long and sometimes short</li> <li>Describe how things move on different surfaces</li> <li>Describe how magnets attract and repel each other</li> <li>Identify some magnetic and non-magnetic materials</li> <li>Sort materials based on magnetic properties.</li> <li>Label the poles of a magnet</li> <li>Predict whether two magnets will attract or repel each other by observing the poles</li> </ul>	<ul style="list-style-type: none"> <li>Explain how sounds are made</li> <li>Explain how sound travels to your ear</li> <li>Describe the pitch of a sound changes depending on what has produced it</li> <li>Describe volume in terms of vibrations</li> <li>Describe what happens to a sound when you get further away from it</li> <li>Identify some appliances that run on electricity</li> <li>Build a series electrical circuit and identify each element</li> <li>Predict, by looking, whether a light will switch on in a circuit</li> <li>Explain how switches work in a circuit</li> <li>Identify common electrical conductors and insulators</li> </ul>	<p>Describe how the planets in our solar system move in relation to the Sun.</p> <p>Describe how the Moon moves relative to the Earth.</p> <p>Describe the shape of the Moon, Sun and Earth.</p> <p>Explain how day turns into night.</p> <p>Explain why objects fall to Earth.</p> <p>Explain the effects of air resistance, water resistance and friction</p>	<ul style="list-style-type: none"> <li>Describe how light appears to travel</li> <li>Describe how objects need to reflect light to be visible</li> <li>Explain how we are able to see things because of light travelling</li> <li>Explain why shadows are the same shape as the objects that cast them</li> <li>Explain how the brightness of a lamp, or volume of a buzzer, is associated with the number and voltage of cells used in a circuit</li> <li>Compare and give reasons for variations in how components function in circuits</li> <li>Use recognised symbols to represent a simple circuit in a diagram</li> </ul>