

Year 2

Science

Block	Key NC Science Objectives	Key Science Activities and Extended Writing Opportunities
<p style="text-align: center;">Autumn 1 – Animal Life Cycles Healthy Animals</p> <p>Hatch eggs and study the life cycle of chickens. Build understanding that exercise makes the heart work harder and that it is an essential part of a healthy lifestyle. Find out about healthy lunch box foods before designing and sharing your own snack.</p>	<p>Animals, including humans (2AH)</p> <p>i) notice that animals, including humans, have offspring which grow into adults</p> <p>ii) find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>iii) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</p> <p>Working Scientifically (KS1 WS)</p> <p>i) asking simple questions and recognising that they can be answered in different ways</p> <p>ii) observing closely, using simple equipment</p> <p>iii) performing simple tests</p> <p>iv) identifying and classifying</p> <p>v) using their observations and ideas to suggest answers to questions</p> <p>vi) gathering and recording data to help in answering questions</p>	<ul style="list-style-type: none"> • Observe what happens when chicks hatch. (Exploring over time) • Plan questions for visitors thinking carefully about what information they want to gather and how to phrase the question accordingly. • Interact and observe the visitors, recording their answers to questions and gathering information. (Exploring) • Discuss and draw up a list of essential items for basic survival. (Problem solving) • Explore the idea of warming up muscles by investigating what happens when cold elastic bands are stretched without being warmed up. • Warm up and then carousel around different physical activities, counting rate of heartbeat. (Exploring, Observing over time) • Design a balanced lunch box on paper to serve as a reminder of how much of each food group is required for a balanced lunch. By drawing on previous knowledge of healthy food, select healthy sandwiches to pack in the picnic. Record the healthy picnic in photographs and talk about their learning with their guests. (Problem solving) <p>Extended writing opportunity Letters: Write a letter, to go in a bottle, asking for essential provisions for surviving on a desert island. Information text: Make an information leaflet, for your parents/carers, about what makes a well-balanced lunch box.</p>

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Hamilton Science; Types of Investigations

'Working Scientifically' is the continuous area of study in the National Curriculum for Science in England. This aims to ensure that children have greater exposure to a range of enquiry types and that they recognize when the various forms of enquiry are taking place. This is to enable them to decide for themselves which type to use in order to tackle the question they are investigating. The following types of enquiry are included in Hamilton Science planning.

Exploring:

Discovering what happens through play and exploration, e.g. What happens when you add water to fabric?

Observing over time:

Often linked to exploring but with a time variable included, e.g. Using a thermometer to observe temperature changes of water.

Sorting, classifying and identifying:

Putting things into groups based on their characteristics, e.g. In how many ways can you sort these materials?

Fair test:

Used when we can control all the variables except the one we are changing, e.g. Which 'towel' material will absorb the most water?

Pattern seeking:

Used when there are too many variables to control and so a true fair test is not possible, e.g. Do some people have stronger muscles because they use them more?

Problem solving:

Using the science we know to solve a problem, e.g. Using what you have learned about how sounds are made and the loudness of sounds made by different materials, design an effective bird scarer that uses wind chimes or similar.

Researching and analysing secondary sources

Using secondary sources to help answer scientific questions that cannot be answered through practical investigations, e.g. Which materials are biodegradable?