

# Knowledge and Skills Map – Science at Estcots School

<b>Year 2 – Animals including humans</b>	<b>Main Outcomes:</b> <ul style="list-style-type: none"> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>	<b>Focus: Science - biology</b>
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<b>What should I already know?</b>
<ul style="list-style-type: none"> <li>The names and structures of a variety of the five types of vertebrates (mammals, fish, reptiles, amphibians, birds).</li> <li>Vertebrates are animals that have a backbone.</li> <li>Some animals are suitable to be kept as pets but others are not.</li> <li>Some animals give birth to live young but others lay eggs.</li> <li>The names of a variety of carnivores, herbivores and omnivores.</li> <li>The basic parts of the human body.</li> <li>Which part of the body is associated with each sense.</li> </ul>
<b>What I will do</b>
<p>I will have weekly or blocked science lessons. In lessons, I will be taught a skill and I will gain knowledge and understanding through the process of scientific enquiry (observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources).</p> <p><u>Possible lines of enquiry</u></p> <ul style="list-style-type: none"> <li>Observe, through video or first-hand observation and measurement, how different animals, including humans, grow.</li> <li>Ask questions about what things animals need for survival and what humans need to stay healthy.</li> <li>Suggest ways to find answers to their questions.</li> </ul>

Vocabulary	Meaning
backbone	the column of small linked <b>bones</b> down the middle of your back
balanced diet	a variety of food that you regularly eat
bar chart	a chart which uses bars to represent the value of something and comparing it to a different group
bones	the hard parts inside your body which form your <b>skeleton</b>
compare	to note similarities and differences
describe	to use spoken or written words to explain something
disease	an illness which affects people, animals, or plants
environment	all the circumstances, people, things, and events around them that influence their life
exercise	when you <b>exercise</b> , you move your body energetically in order to get fit and to remain <b>healthy</b>
farm	an area of land used to produce crops or to breed animals and livestock
healthy	well and not suffering from any illness
hygiene	keeping yourself and your surroundings clean, especially in order to prevent illness or the spread of diseases
identify	to recognise something
life cycle	the series of changes that an animal or plant passes through from the beginning of its life until its death
medicine	the treatment of illness and injuries by doctors and nurses
muscles	something inside your body which connects two bones and which you use when you make a movement
observe	to see, view, watch or note something
offspring	a person's children or an animal's young
pet	a tame animal kept in a household
pictogram	a simple drawing that represents something
skeleton	the framework of <b>bones</b> in your body
survive	continue to exist

<b>Resources</b>
<p>Hamilton Science planning: animals including humans (all planning also saved on SharePoint).  <a href="https://www.hamilton-trust.org.uk/science/year-2-science/animals-including-humans-healthy-animals/">https://www.hamilton-trust.org.uk/science/year-2-science/animals-including-humans-healthy-animals/</a></p>

Knowledge to understand		Skills to learn (working scientifically)	
<p>What is a <b>life cycle</b>?</p>	<p>A <b>life cycle</b> is the series of changes that an animal or plant passes through from the beginning of its life until its death.</p> <p>Animals, including humans, have <b>offspring</b> which grow into adults.</p>	<ul style="list-style-type: none"> <li>➤ asking simple questions and recognising that they can be answered in different ways</li> <li>➤ observing closely, using simple equipment</li> <li>➤ performing simple tests</li> <li>➤ identifying and classifying</li> <li>➤ using their observations and ideas to suggest answers to questions</li> <li>➤ gathering and recording data to help in answering questions</li> </ul> <p>Cross-curricular (maths)</p> <ul style="list-style-type: none"> <li>➤ recording data in a simple table, bar chart or pictogram</li> <li>➤ comparing, describing and solving practical problems for lengths and heights (including using hoops as Venn diagrams for sorting)</li> <li>➤ measuring and beginning to record lengths and heights</li> </ul>	
<p>What do all animals need to <b>survive</b>?</p>	<p>All animals need water, air and food to <b>survive</b>.</p>		
<p>What do humans need to be <b>healthy</b>?</p>	<p>To keep <b>healthy</b>, humans need:</p> <ul style="list-style-type: none"> <li>• to eat a <b>balanced diet</b> and <b>healthy food</b></li> <li>• some <b>exercise</b> to keep their <b>muscles</b> and <b>bones healthy</b></li> <li>• to take <b>medicines</b> that are given by doctors and nurses when feeling poorly</li> <li>• to keep good <b>hygiene</b> by washing regularly, having clean clothes, brushing teeth and hair.</li> </ul>	<p><b>Equipment to become familiar with</b></p> <p>Magnifying glasses</p> <p>Cameras</p> <p>Digital timers (stopwatches)</p> <p>Pulse oximeters (optional – for measuring heart rates)</p> <p>Rulers/tape measures for measuring in cm and mm (with support)</p>	

Evidence of Learning	How will I know what I've learnt?
<p>Science books</p> <p>Photos</p> <p>Videos</p> <p>Pupil conferencing</p> <p>Teaching and learning observations</p> <p>Learning walks</p> <p>Data analysis</p>	<p>See KS1 teacher assessment exemplification for science</p> <p><a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/763062/2018_key_stage_1_teacher_assessment_exemplification_science.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/763062/2018_key_stage_1_teacher_assessment_exemplification_science.pdf</a></p> <p>See also Hamilton Science_Assessment_Y2 (saved in planning folder on Sharepoint).</p> <p>KS1 science quizzes:</p> <p><a href="https://gcequiz.com/quiz/ks1-science-quizzes">https://gcequiz.com/quiz/ks1-science-quizzes</a></p> <p><a href="https://www.woodendprimaryschool.com/year-2/">https://www.woodendprimaryschool.com/year-2/</a></p>