

## Year 3 Science Curriculum

Working scientifically links   Rubric/PCMD opp.   Key Vocabulary

### Animals including humans

**What's the big picture?** Recap knowledge and vocabulary from year 2 - knowledge and retrieval. Chto generate their own questions at start of topic “*I know how to ask simple scientific questions*”

#### Prior learning:

Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals, including humans)

Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals, including humans)

Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 - Animals, including humans)

Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). (Y2 - Animals, including humans)

Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y2 - Animals, including humans)

National Curriculum Principles	Objectives	Knowledge and key Vocabulary	Reading opportunities	Technology
to identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food, they get nutrition from what they eat	<p>I know the importance of a nutritious balanced diet</p> <p>I know how nutrients, water and oxygen are transported within animals and humans</p>	<p><b>Balanced diet</b> - know the different food groups proportions on the eat well plate - <b>carbohydrates, protein, fats, sugar, water, dairy, fibre, fruit and veg, vitamins and minerals,</b></p> <p>Children to design their own meal using the eat well plate.</p> <p>Create a healthy food survey - present as a bar chart - <b>Gather record and present data - bar charts</b></p> <p>Use food labels to <b>investigate</b> the nutritional content of different foods</p> <p>Use secondary sources to find out about the types of food that contain different nutrients.</p> <p><b>Create a double page spread</b></p> <p>Label where <b>stomach, lungs, heart</b> are. Talk how <b>nutrients</b> from food goes into the <b>bloodstream</b> and around the body. Water from food into bloodstream, <b>oxygen</b> from breathing into lungs and then blood, blood goes around the whole body and gives you what you need to stay healthy</p>	<p>The Story of Frog Belly Rat Bone (Timothy Basil Ering)</p> <p>Funnybones (Janet and Allan Ahlberg)</p> <p>I Will Never Not Ever Eat a Tomato (Lauren Child)</p>	

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<p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p>I know about the skeletal system of a human</p> <p>I know about the muscular system of a human</p> <p>I know about the purpose of the skeleton in humans and animals</p>	<p>What is the <b>skeleton</b>? What is the function of a Skeleton? - talk about protection and support.</p> <p><b>Make a skeleton out of dog biscuits - what can the children label?</b> How is it different to a picture of a skeleton?</p> <p>Name and label parts of a skeleton: <b>skull, spine, ribs, femur</b> (label on a friend with post it notes) Presentation of findings.</p> <p>Name bones on different animals - skeleton of a horse... compare to humans</p> <p>What are <b>muscles</b>? What is the function of muscles? - movement. Make an elbow joint - show muscle <b>contraction</b> bones can't move on their own. Muscles are connected to bones by <b>tendons</b></p> <p><b>Investigation - Comparative test (gather, record data, report findings and draw conclusion) Do children who do more exercise have stronger muscles? How much exercise do you do per week, how many star jumps can you do? Pattern seeking - can people with longer legs jump further, can people with bigger hands catch a ball better. Use scientific evidence to answer questions</b></p> <p>What is a <b>vertebrate</b>? What is an <b>invertebrate</b>? Classify animals as vertebrates or invertebrates.</p> <p>Look at similarities and differences in how vertebrates and invertebrates moves - worm and snake, jelly fish and squid - move by jet propulsion, beetles nad cockroaches - exoskeleton attached to muscles.</p>		
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### Famous scientists

Marie Curie - radiation and x-rays

### Common misconceptions

Some children may think:

- certain whole food groups like fats are 'bad' for you
- certain specific foods, like cheese are also 'bad' for you
- diet and fruit drinks are 'good' for you
- snakes are similar to worms, so they must also be invertebrates
- invertebrates have no form of skeleton.

### Enquiry ideas

<u>Comparative tests</u>	<u>Identify and classify</u>	<u>Observations over time</u>	<u>Pattern seeking</u>	<u>Research</u>
Do you people with longer legs jump further?	How did the skeletons of different animals compare?	How does a skeleton change over time?	Do male humans have larger skulls than female humans	Why do different types of vitamins keep us healthy and which foods can we find them in?
Can people with bigger hands pick up more objects?				