

Animals including humans : YEAR 3 SCIENCE MEDIUM TERM PLAN (5 weeks work)

<p><b>Year 3 NC objectives:</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• identify that humans and some other animals have skeletons and muscles for support, protection and movement</li> </ul>	<p><b>Year 6 NC objectives:</b></p> <ul style="list-style-type: none"> <li>• recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>• describe the ways in which nutrients and water are transported within animals, including human</li> </ul>
---	--

**At the end of this science unit of work pupils will**

**Know:** that animals, including humans, cannot survive without eating because food provides them with energy for survival and growth in the form of nutrients. Animals need a balanced diet of nutrients and therefore of foods containing those nutrients, animals have skeletons and muscles and understand that these are used for movement, support and protection, Recognise that different types of animals may have different types of skeleton or no skeleton at all.

**Can do:** tables, charts, diagrams, classify information, hypothesise and test hypotheses

**Understand the vocabulary** listed below – able to explain and discuss it without reading it from their science workbook

Disciplinary knowledge: classifying and identifying, observation, observation over time, testing and recording data, questioning, testing using given variables, children are taught to draw with ruler, pencil and measuring their own table in their book.

Substantive: Knowledge and vocabulary of the human anatomy

The expectation is that ALL pupils can learn, explain and write coherently about the aspects below.

**Trip and Visit:**  
**local trip-**

Reading of books at home and in school on plants, teaching of how to use the glossary and contents.

**Misconceptions to be corrected**

-muscles create our shape (skeleton needed)

-muscles connected to skeleton by tendons. Bones connected together by ligaments. muscles DO NOT hold bones together

Pupils will learn	Vocabulary pupils will learn	Writing using a genre/tables	link to Y6 learning:	Fundamental principles and teaching techniques to ensure that work is of a high standard from all pupils
week 1 -invertebrates -vertebrates	classification mammals birds reptiles	Re-teach Y1 learning on animal groups- use odd one out to group and compare pictures of animals	using A3 paper with pictures of different animal/insect groups.	

Animals including humans : YEAR 3 SCIENCE MEDIUM TERM PLAN (5 weeks work)

	fish amphibians	Teach invertebrates and vertebrates and the difference between. Use the odd one out resource and model how to compare using characteristics taught.	IN pairs identify and classify using modelled speak -add to table in book.	
week 2 comparing human and animal anatomy -comparing skeletons -include exoskeleton -invertebrates -vertebrates	invertebrates vertebral column backbone internal organs external exoskeleton endoskeleton hydrostatic	<p><a href="https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac">https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac</a></p> <p>look at the slides starting at endoskeleton vs exoskeleton. Explain hydrostatic (worm- no bones) <a href="https://teachers.thenational.academy/lessons/how-does-human-anatomy-compare-to-other-animals-6rvk4e">https://teachers.thenational.academy/lessons/how-does-human-anatomy-compare-to-other-animals-6rvk4e</a> go through presentation- discuss differences between animals and humans</p> <p>Discuss different animals, look at pictures using resources and think of positives and negatives of each skeleton in pairs.</p> <p>Children to: sort creatures into table of endoskeleton, exoskeleton, hydrostatic skeleton</p> <p>write a brief sentence explaining each (HA- with one advantage and disadvantage of that type of skeleton)</p>		
skeleton- function and identifying names of key bones	femur rib cage skull	<p><a href="https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac">https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac</a></p> <p>use slides and diagram as example of how to draw their own. Stop when it gets to joints.</p> <p>Learning the function of the skeleton- purpose, include joints.</p> <p>Children draw their own simple diagram of skeleton and labelling major bones of the human body</p> <p>Brief paragraph using wordmat (teacher to make) explaining importance of the skeleton after labelled diagram of skeleton (see Oak national)</p>		

Animals including humans : YEAR 3 SCIENCE MEDIUM TERM PLAN (5 weeks work)

<p>week 4: <b>joints and ligaments</b></p>	<p>joints gliding ball and socket hinge ligaments</p>	<p><a href="https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac">https://teachers.thenational.academy/lessons/what-are-the-major-bones-in-the-human-body-69gpac</a></p> <p>go through slides on joints- think of reasons for their names.</p> <p>Where in our body can we find those joints- together as a class. move to show range of movement. Can knee move like elbow?why?</p> <p>Explanation of types of joints beside given picture. (snipping tool-take from Oak slides)</p> <p>table of joints and places in the body</p>		
<p>week 6 <b>Muscles</b> -contraction and -importance of stretching -</p>	<p>muscles tendons ligaments tendons contract relax bicep tricep quadriceps glutes hamstrings voluntary involuntary</p>	<p><a href="https://www.bbc.co.uk/bitesize/topics/z7x78xs/articles/zpbxb82">https://www.bbc.co.uk/bitesize/topics/z7x78xs/articles/zpbxb82</a></p> <p>-very short clip. Can we explain what the purpose of the muscles are? What are needed to ensure muscles are in place.</p> <p>Discuss voluntary and involuntary muscles- show pictures of heart, diaphragm, tongue- which are voluntary? why?</p> <p>Discuss movements of muscles- contraction (bouncing up) and relax. Muscles work sometimes work in pairs- when one contracts, the other relaxes (triceps,</p> <p>Chn to complete the simple movements on their own around the classroom- decide if contracting or relaxing and which muscle is doing it. Write explanation –function of muscles inc coluntary and involuntary</p> <p>Complete table in books of simple movements (listed by teacher) (open the door, pick up pencil) and which muscle is contracting.</p> <p><a href="https://kidshealth.org/en/kids/muscles.html">https://kidshealth.org/en/kids/muscles.html</a></p>		

Animals including humans : YEAR 3 SCIENCE MEDIUM TERM PLAN (5 weeks work)

investigation using knowledge of skeleton and muscles		Do people with longer legs jump further?		
: 2 hours <b>comparing animal and human diets</b>	carnivores herbivores omnivore producer vegan vegetarian	Recap Y2 learning-carnivores, herbivores, omnivores <a href="https://teachers.thenational.academy/lessons/how-do-we-classify-the-diets-of-animals-6rup2c">https://teachers.thenational.academy/lessons/how-do-we-classify-the-diets-of-animals-6rup2c</a>  read about the diets of different animals and compare them to humans including our pets (dog, rabbit etc)  Compare different human diets- vegetarians, vegan, gluten free, paleo etc. Why might people choose these diets?  Complete and stick in Venn diagram.Group different animals and humans by their diets- children to talk in pairs. Think about what different people might eat- humans could be groups into omnivores and herbivores (vegetarian humans).	-classifying plants based on characteristics	
week 1 – 2 hours what is nutrition	carnivores herbivores omnivore producer nutrition carbohydrate protein nutrition dairy vegetables fruits vitamins minerals	Discuss different food groups and function. Discuss in pair when we need most carbohydrates, dairy etc- think about when we drink milk daily in KS1- why?  Explain each food group and its function in book	-sorting and classifying plants and animals	<ul style="list-style-type: none"> <li>• Clear expectations for listening – repeating and learning the information. Clear bite-size instruction and explanation from the teacher using parts of video’s where appropriate.</li> <li>• Behave from all pupils is exemplary and comments are made on sitting and listening.</li> <li>• Bite sized chunks of knowledge making time for repetition discussion and rehearsing in pairs.</li> </ul>
week 2: 1.5 hours <b>comparing animal and human diets</b>	carnivores herbivores omnivore producer	Recap Y2 learning-carnivores, herbivores, omnivores <a href="https://teachers.thenational.academy/lessons/how-do-we-classify-the-diets-of-animals-6rup2c">https://teachers.thenational.academy/lessons/how-do-we-classify-the-diets-of-animals-6rup2c</a>	-classifying plants based on characteristics	

Animals including humans : YEAR 3 SCIENCE MEDIUM TERM PLAN (5 weeks work)

	<p>vegan vegetarian</p>	<p>read about the diets of different animals and compare them to humans including our pets (dog, rabbit etc)</p> <p>Compare different human diets- vegetarians, vegan, gluten free, paleo etc. Why might people choose these diets?</p> <p>Complete and stick in Venn diagram. Group different animals and humans by their diets- children to talk in pairs. Think about what different people might eat- humans could be groups into omnivores and herbivores (vegetarian humans).</p>		<ul style="list-style-type: none"> <li>• Emphasis on learning and exploring key vocabulary. Repetition in oral WORK AND INSISTENCE THAT THE CORRECT TERMS ARE USED IN WRITING.</li> <li>• Drafting process for tables and writing</li> <li>• Writing of date and modelling of key letters e.g. in January.</li> <li>• Demonstration and insistence on high standards of construction and presentation</li> <li>• Finger under words to copy words – insist accurate.</li> </ul> <ul style="list-style-type: none"> <li>• The vocabulary is broken down into the weekly learning, it is revised and used in writing</li> <li>• Pupils write their own vocabulary into their books putting their finger under the words to copy correctly.</li> </ul> <p>End products – handwriting and colouring is beautifully presented.</p>
--	-----------------------------	---	--	---