Year 3 – Animals including Humans



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| National Curriculum Outcomes: Knowledge* 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
* Identify that humans and some other animals have skeletons and muscles for support, protection and movement
 | National Curriculum Outcomes: Working Scientifically* Asking relevant questions and using different types of scientific enquiries to answer them
* Setting up simple practical enquiries, comparative and fair tests
* Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
* Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
* Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
* Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
* Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
* Identifying differences, similarities or changes related to simple scientific ideas and processes
* Using straightforward scientific evidence to answer questions or to support their findings
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| Children might work scientifically by:Identifying and grouping animals with and without skeletons and observing and comparing their movement; exploring ideas about what would happen if humans did not have skeletons. They might compare and contrast the diets of different animals (including their pets) and decide ways of grouping them according to what they eat. They might research different food groups and how they keep us healthy and design meals based on what they find out. (*Taken from the National Curriculum)* |
| Links to prior learning**Year 2:** Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene | Links to future learning**Year 4:** describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth and their simple functions.**Year 6:** identify and name the main parts of the circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the importance of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans. |
| Key VocabularyNutrition, nutrients, diet, fibre, carbohydrate, fat, protein, vitamins & minerals, skeleton, support, protection, movement, muscles, contract, relax | Common Misconceptions* Children may think that they shouldn’t eat any foods with fat or sugar at all.
* Children often think that fruity drinks, diet drinks and flavoured water are ‘good’ for them.
* Children may think snakes don’t have a skeleton, as they look similar to worms (this is also the case with other ‘floppy’ animals like fish and frogs).
* Children often think the word ‘diet’ refers to limiting food intake, rather than it meaning everything an animal eats.
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| Important knowledge/facts the children need to know* Animals, including humans, need the right types and amount of nutrition. They need food to grow, be strong and stay healthy.
* The 5 food groups are: Fruit and veg, carbohydrates, fats, proteins and dairy
* Humans should eat a balanced diet that is mainly made up of fruit and veg and carbohydrates, with some proteins and dairy and a small amount of foods containing lots of fat and/or sugar
* Nutrients that pupils should learn about are: Protein, fibre, carbohydrates, fat, vitamins and minerals
* Animals including humans need skeletons and muscles for support, protection and movement
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| Important Scientists**Wilhelm Röntgen** – German mechanical engineer who discovered X-rays**Adelle Davis** – American author and famous nutritionist in the early to mid-20th century | STEM Career Links**Dietician** (develops nutrition advice to improve people’s diets)**Nutritionist** (studies nutrition in food and how it affects our bodies)**Orthopaedist** (a doctor who specialises in bones and joints)**Sport Scientist** (works with sportspeople to help them achieve the best possible performance) | Links to real life* What nutrients are in our packed lunch/school dinner?
* What nutrients are in my McDonalds?
* Which muscles do we use for the different things we do each day?
* Do our parents need a different diet to ours? How about sportspeople, or people who live in different environments
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| Suggested Enquiry Activities |
| Identifying and Classifying* How can we sort and group the foods in our packed lunches?
* How many different kinds of joints are there in our skeleton?
* Classify animals according to their type of skeleton
 | Comparative and Fair Testing  | Observation over Time | Pattern Seeking* Do people with longer arms throw further?
* Can people with longer legs run faster?
 | Research using Secondary Sources* What nutrients are in my McDonalds (see weblinks below)
* How much sugar is in our favourite drinks/snacks?
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| Wow Factor Experiences* Explore the food that children eat everyday, either in their packed lunches/school dinners, their favourite drinks and snacks or even the nutritional content of their McDonald’s! (see weblinks below)
* Visit a working kitchen (could be at a restaurant or the school kitchen) and/or speak to a chef about how meals are planned to meet certain nutritional requirements
* Explore the Polar Explorer Program resources, including the Polar Cook Book and see how scientists working in the Arctic have to have different diets to survive in the harsh polar climate (see weblinks below)
* Learn about how our favourite sportspeople have a different diet to other people
* Carry out the cross-curricular Farming STEMterprise project (see weblinks below)
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| Maths Links* Practise measuring skills by investigating how much sugar is in different drinks and weighing out this amount accurately (this makes a very good display when finished!)
* Practise measuring length by exploring the relationships between the sizes of different bones, for example, do taller people have longer legs? Is there a link between arm length and leg length?
 | Literacy Links* Write a set of instructions (recipe) explaining how to make a healthy snack such as a salad or healthy pizza
 | Broader Curriculum Links**PE:** Which muscles do we use for different activities in PE?**PSHE:** Is my diet healthy? Are there any changes I should make? How much does it cost to eat healthily?**Design Technology:** Design and produce a healthy snack for a specific target market (see STEMterprise weblink below) |
| Story LinksFunnybones – Janet & Allan Ahlberg |
| Helpful WeblinksMcDonald’s Nutrition Calculator – <https://www.mcdonalds.com/gb/en-gb/good-to-know/nutrition-calculator.html> Polar Explorer Resources – <https://www.stem.org.uk/welcome-polar-explorer-programme>STEMterprise cross-curricular resources – <https://education.nfuonline.com/stemterprise>Assessment exemplification (could also be useful with planning ideas) – <https://www.planassessment.com/product-page/examples-of-work-animals-including-humans-y3-amelie>BBC Class Clips (useful videos) – <https://www.bbc.co.uk/bitesize/clips/ztfnvcw>Teacher CPD for this unit (free) – <https://www.reachoutcpd.com/courses/upper-primary/body-systems/>STEM Learning’s online resource library for Forces & Magnets – <https://www.stem.org.uk/resources/community/collection/12601/year-3-animals-including-humans> |