

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including Humans

Year 1	<p>KS1 National Curriculum Pupils should use the local environment throughout the year to explore and answer questions about animals in their habitat. They should understand how to take care of animals taken from their local environment and the need to return them safely after study. Pupils should become familiar with the common names of some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets. Pupils should have plenty of opportunities to learn the names of the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes. Pupils might work scientifically by: using their observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them; grouping animals according to what they eat; and using their senses to compare different textures, sounds and smells.</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	
Prior Learning	<p>In Early Years:</p> <ul style="list-style-type: none"> • Children know about similarities and differences in relation to places, objects, materials and living things. • They talk about the features of their own immediate environment and how environments might vary from one another. • They make observations of animals and plants and explain why some things occur and talk about changes. 	<p>Vocabulary:</p> <p>Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves Senses, touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue</p>
Key skills to be taught	Key Ideas	Possible Activities
Asking simple questions and recognising that they can be answered in different ways.	What are the parts of our body?	<ul style="list-style-type: none"> • Label diagram / each other for each body part. Draw around pupils/colour in, label parts. Make models in playdough. • Label stuffed/model/picture animals in the same way. What is the same, what is different) • Match each body part to its job. • Play 'Simon Says' with emphasis on body parts • Learn songs / rhymes to help identify parts • Funnybones story – supports understanding of the skeleton.
Observing closely, using simple equipment.	What are our senses?	<ul style="list-style-type: none"> • Learn songs / rhymes about senses. • Play games about senses (e.g. 'Grandmother's footsteps', 'feely bag', taste testing, smell herbs & spices, coloured foods (e.g. Purple potatoes), sound / colour walks, etc) • Write a story about using senses to describe. • Link each sense to body parts in each activity • Who has the fastest reactions? Use a number track on a meter ruler test reaction speed (drop through fingers and catch). Could line up in order to show blockchart • Outdoor learning walks. Discover using different senses. Develop improved descriptive language. • Explore senses in other animals.
Performing simple tests.	Are there different kinds of animal?	<ul style="list-style-type: none"> • Use external providers / own animal house to introduce pupils to each vertebrate group. • Use external providers to show pupils exotic animals such as reptile, amphibians, invertebrates, etc. Discuss / sort pictures to show the features of each (obvious visual similarities & differences) vertebrate. • 'feely box' with examples of feathers, skin, fur or real animals to identify • Group plastic animal models. Use picture keys to name. • Play '20 questions' / 'odd-one-out' /match sound to the animal / animal 'top-trumps'
Identifying and classifying.	Do animals feed in different ways?	<ul style="list-style-type: none"> • Look at DVD clips / pictures of animals eating. Discuss. Identify carnivores, herbivores & omnivores. Sorting activity. • Compare plastic skulls of carnivore (dog) & herbivore (sheep) & omnivore (human). Note teeth differences (introduce words), muscle strength and eye placement. From the teeth guess what food they eat.
Using their observations and ideas to suggest answers to questions.		
Gathering and recording data to help in answering questions.		
<p>Next steps in Year 2:</p> <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. • 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 		

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including Humans

Year 2	<p>KS1 National Curriculum Pupils should be introduced to the basic needs of animals for survival, as well as the importance of exercise and nutrition for humans. They should also be introduced to the processes of reproduction and growth in animals. The focus at this stage should be on questions that help pupils to recognise growth; they should not be expected to understand how reproduction occurs. The following examples might be used: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. Growing into adults can include reference to baby, toddler, child, teenager, adult. Pupils might work scientifically by: observing, through video or first-hand observation and measurement, how different animals, including humans, grow; asking questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> • Notice that animals, including humans, have offspring which grow into adults. • 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. 	
Prior Learning	<p>In Year 1:</p> <ul style="list-style-type: none"> • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<p>Vocabulary:</p> <p>Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)</p>
<p>Key skills to be taught</p> <p>Asking simple questions and recognising that they can be answered in different ways.</p> <p>Observing closely, using simple equipment.</p> <p>Performing simple tests.</p> <p>Identifying and classifying.</p> <p>Using their observations and ideas to suggest answers to questions.</p> <p>Gathering and recording data to help in answering questions.</p>	<p>Key Ideas</p> <p>What happens to our bodies as we grow?</p>	<p>Possible Activities</p> <ul style="list-style-type: none"> • Develop terms offspring, baby, toddler, child, teenager and adult. Create timeline. • Pupils bring in baby pictures & pictures of them growing up. Make a display / time line. • Describe changes over time & variation in class • Use height/weight data for cartoon baby growing up in key stages. Draw bar charts. • How does height/hand/foot spans compare across school? Measure, tabulate & chart • What grows as we get older? • Explore anybody feature across school e.g. head span, arm length, etc; measure height over year.
	<p>Do other animals grow in the same way as us?</p>	<ul style="list-style-type: none"> • Match animals to offspring. • Study key animals in detail (living or virtual) such as chicken, rabbit, butterfly, frog, sheep, etc. Short term and/or ongoing work over the year. Consider similarities & differences. • Describe changes using photographs, drawings, stories, poems, etc. Could collect ongoing data. • Do animals grow in the same way as we do? Measure animal growth in different ways over time e.g. length, weight. Tabulate & chart. Use own animals or farm visits (webcam, etc) • Compare actual to predicted growth to monitor animal health eg dogs. Compare data.
	<p>What do we need to live and be healthy?</p>	<ul style="list-style-type: none"> • Make food diary (including drinks). Research healthy diet. Compare. • Research foods of other animals. Compare. ☹ Hold breath (care!). What happens? Discuss snorkelling / scuba diving. • Introduce balanced diet (emphasise foods which are good, 'bad' for us). Water challenge. Measure volume of own water bottle. Drink amount needed each day. • Convert food diary into data eg. How many biscuits have I eaten this week? Which foods do I eat the most? How many days this week have I eaten my five-a-day? Tabulate & chart • Classify foods into groups; healthy/unhealthy • Which drink contains the most sugar? Chart
	<p>Why is it important to exercise?</p>	<ul style="list-style-type: none"> • Explore types of exercise. • Introduce 10 min new exercise into each day. Sports day using different exercises. Winner is the one that meets personal challenge. • Measure heart rate in different places on body. Measure resting. Measure with exercise. • Which exercise is the most fun? Why? What happens to our body when we exercise? • Classify exercises into those that make us strong, fit and flexible. • Step challenge. Measure steps to a daily goal.
	<p>Why is it important to keep clean?</p>	<ul style="list-style-type: none"> • Talk about ways we keep clean (e.g. brushing teeth, washing, etc). Importance of washing hands. Practice technique. • Take swabs from various parts of the body. Grow microbes (care!) on agarose gel/Petri dishes. • Glitter hands. Try to wash off glitter.
<p>Next steps in Year 3:</p> <ul style="list-style-type: none"> • 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 		

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including Humans

Year 3	<p>LKS2 National Curriculum Pupils should continue to learn about the importance of nutrition and should be introduced to the main body parts associated with the skeleton and muscles, finding out how different parts of the body have special functions. Pupils 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.</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> 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. 	
Prior Learning	<p>In Year 2:</p> <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. 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. 	<p>Vocabulary:</p> <p>Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints</p>
Key skills to be taught	Key Ideas	Possible Activities
<p>asking relevant questions and using different types of scientific enquiries to answer them</p> <p>setting up simple practical enquiries, comparative and fair tests</p> <p>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>What do animals need to eat to stay healthy?</p> <p>What is a balanced diet?</p> <p>Why do we have a skeleton?</p> <p>How do we move?</p>	<ul style="list-style-type: none"> All animals need to eat to get nutrients and energy. Introduce energy transfer model. Introduce food types. Demo: iodine test on a plant leaf to show presence of sugar (photosynthesis). Pupils do starch test with various foods. Custard bomb/burn food to show energy in food. Show pictures of animals eating. Research food for pets. Organise visit to/from vets or farm. Link to healthy schools Study food labels (simplify). Determine food types. Link size of dog to weight of food. Matching activities. Fair test: Which fruits contain the most water? <ul style="list-style-type: none"> Food games & quizzes (various) to show good nutrition. 5 a day. Make a 'balanced' plate using cut out foods. Design a healthy/fun menu for a party. Discuss balanced diet. Use illustrations / magazine ideas for breakfast or lunch. Use food pyramid / labels to compare. Try lots of healthy foods. Guess the fruit (try) Classify/order foods high in food types and energy. Note foods high in eat type of food type. Tabulate. Draw as bar charts for each food. Compare. Create food diary. Tabulate/chart. Change entries / plan targets to make the diet more balanced. Design healthy meals (make). Use 'Eat well Plate' <ul style="list-style-type: none"> Functions: support, protection, movement. Name & point to major bones. Card skeleton. Identify / name muscles on a skeleton picture. Relate to their own body. Draw around body. Place/name card bones on the body. Possibly explore skeletons of different animals. (Vertebrate / invertebrate / internal / external). Classify animals into those with skeletons (internal; vertebrates) and those without. Observe & describe differences in movement (e.g. observe a worm on a glass plate) Identify x-rays of bones. <ul style="list-style-type: none"> Demo: how antagonistic muscles work with 'balloons' attached to a pupil's arm. Ask pupils to apply to the leg. Label a diagram of model above to describe & explain the process. Annotate working model on poster. Make model arm by using strings for muscles to move laminated/hinged arm bones. Use to support description. Compare action of limbs in other animals.
<p>In Year 4:</p> <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators and prey. 		

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including Humans

Year 4

LKS2 National Curriculum

Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions. Pupils might work scientifically by: comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; finding out what damages teeth and how to look after them. They might draw and discuss their ideas about the digestive system and compare them with models or images.

Pupils should be taught:

- Describe the simple functions of the basic parts of the digestive system in humans
- Identify the different types of teeth in humans and their simple functions
- Construct and interpret a variety of food chains, identifying producers, predators and prey.

Prior Learning

In Year 3:

- 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

Vocabulary:

Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain

Key skills to be taught

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.

Key Ideas

Are there different types of teeth?

How should you care for your teeth?

What is digestion?

What are the parts of the digestive system?

What is a food chain?

Can you construct food chains?

Possible Activities

- Compare/count own teeth with others. Identify similarities and types. Use identification key. Make teeth using carrots.
- Demo: Large teeth/mouth model; scissors/potato masher
- Introduce as start of digestion process
- Use wooden 'teeth' to show types. Try cutting & crushing food using different teeth. Identify structure to function. Describe action

- Visit from a dentist. Question & answer / Watch video on care for teeth. Research.
- Write cartoon strip / poster to show people how to care / clean their teeth properly.
- Demo: brush to demonstrate correct cleaning
- Explore sugar in foods using food labels (demonstrate sugar by using cubes according to weight of sugar on label). Discuss healthy diet.
- Fair test: What happens if we don't clean our teeth? Eggs (white shell) covered / not covered in fluoride tooth paste. Placed in water or cola. Darkening likened to 'rotting' teeth. Discuss sugar/acid.
- Fair test: What happens if we don't clean our teeth? Use disclosing tablets to compare cleaned / uncleaned teeth
- Fair test: What do fizzy drinks do to our teeth? Chicken bones in vinegar, water, air. Action of acid. Explore acidic foods/drinks using litmus paper.

- Define. Model using a production line (cutting, crushing, mixing, dissolving) using food in bag/squeezed through tights. Link teeth to mechanical digestion. 'Big-picture model of the process of food break-down followed by absorption.
- Research digestion. Introduce enzyme but no detail.
- Investigate effect of saliva. Cracker/bread in dry/wet mouth. Allow time before chewing. When do you taste it? How quickly does it go sweet? Link to chemical digestion

- Label diagram of digestive system. Jigsaw puzzles of different parts. Make system from sweets and string. Make life size system as classroom display (draw around pupil and add organs). Annotation emphasise process.
- Operation Ouch! Clip. Class clips BBC. U tube clips
- Demo: model length and parts using hose pipe and bag (stomach). Label parts. Function.
- Fair test: Does surface area of food effect the speed of digestion in the stomach? Cut jelly babies and dissolve in white vinegar. Time taken to dissolve

- Develop 'model' of food chain. Use video clips to show feeding. Link into a food chain. Generate terminology. Role play modelling. Feeding and energy transfer
- Group into predators, prey (show predators can be prey) using pictures/models.
- Group into herbivores, carnivores, omnivores.
- Collect/photograph animals in local habitat. Research to find feeding profiles.
- Research animals in world habitats to find feeding profile

- Food chain card games, etc. Use information to place in a food chain (develop into food webs).
- Research specific food chains – what can they find out? Differentiate (common / unusual). ☑ Classify plants/animals from local habitat into feeding types. Organise into food chains/webs. ☑ Place human at centre of page. From food diaries construct food chains

In Year 5:

- Describe the changes as humans develop to old age.

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including humans

Year 5	<p>UKS2 National Curriculum Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty. Pupils could work scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows.</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> describe the changes as humans develop to old age. 	
Prior Learning	<p>In Year 4:</p> <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Vocabulary:</p> <p>Fertilisation, prenatal, Gestation, reproduce, asexual reproduction, sexual reproduction, lifecycle, puberty, menstruation, adolescence, adulthood, life expectancy</p>
<p>Key skills to be taught planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	Key Ideas	Possible Activities
	What happens as we get older?	<ul style="list-style-type: none"> Pupils draw themselves from a baby to an adult. Annotate changes they think occur. Rich questions: How tall/heavy do you think you will be? What makes you grow taller/heavier? Will you grow taller/heavier for ever? Do people get shorter/lighter? How/when do you notice you are growing? Use appropriate DVD (BBC Bitesize)
	What happens to our bodies as we get older?	<ul style="list-style-type: none"> Recall names of bones. Introduce human life cycle to introduce terminology. Stick pictures/diagrams into a cycle. Annotate. Understand change is inevitable / ongoing Compare & contrast to animal life cycles (model). Survey: What happens to bone length as we get older? Compare pictures of people/x-ray skeletons. Measure Survey: Do different parts of our bodies grow at different speeds? Head/hand span, leg/arm length, foot size, etc to investigate. Choose sample size. Use family members of different ages.
	What are our reproductive organs?	<ul style="list-style-type: none"> Use diagrams and label cards to explore pupil's own knowledge. Correctly label. Practice learning names (discuss learning strategies). Introduce sex cells (gametes). Draw diagrams & label/annotate. Link back to place in reproductive cycle (model)
	What happens during puberty?	<ul style="list-style-type: none"> Same, yet different. Explore similarities and differences between girls and boys (Venn diagram activity) Use key texts. Analyse language, process and effects on characters, etc. Explore physical / emotional change. Describe physical changes to the body in both males and females. Annotate diagrams to describe. Understand change happens at different times / speeds. Use appropriate DVD (e.g. Changing Bodies); leaflets Discuss physical (e.g. acne, hygiene) and emotional changes. Link back to place in reproductive cycle (model) Talking objects. Phone, diary, ring, bra, make-up, deodorant, valentine's card, shaving foam, spot cream, razor, sanitary towels, etc. Use to describe feelings and behaviour changes. Devise strategies for managing change. Could use concept cartoons for each to explore feelings and strategies. Role play scenarios / draw comic strip.
<p>Next steps In Year 6:</p> <ul style="list-style-type: none"> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact 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 human Links to SRE curriculum – where babies come from, reinforcing learning about puberty. 		

Waterville Primary School Progression of Skills and Vocabulary in Science – Animals Including humans

Year 6	<p>UKS2 National Curriculum Pupils should build on their learning from years 3 and 4 about the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function. Pupils should learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Pupils might work scientifically by: exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact 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.
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Prior Learning	<p>In Year 5:</p> <ul style="list-style-type: none"> Describe the changes as humans develop to old age 	Vocabulary:
		<p>Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs and lifestyle</p>

Key skills to be taught	Key Ideas	Possible Activities
<p>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</p> <p>Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <p>Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p> <p>Using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <p>Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	Do you know where your main organs are in the body?	<ul style="list-style-type: none"> Research Match pictures (organs) with function cards. Create information table. Emphasise that all organs/muscles need nutrients, oxygen and make waste. Role of blood system. Compare/contrast with other animals including invertebrates. Focus on similarities. Label and annotate (function) cut-out diagram of the human body organs. Draw around person. Make organ shapes for display (advanced organiser). Emphasise position of heart.
	Why do we have blood?	<ul style="list-style-type: none"> Use standing sample blood to demonstrate components (plasma; red/white blood cells; platelets. limited details). Use pictures to show actual components. Colour/annotate diagram of circulatory system. Explain oxygenation/deoxygenation Raining blood! (mix food dye + veg oil; float on water) explain effects. Review dissolving. Make mock blood samples from red sweets, marshmallows, rice and water (yellow food colouring). Mix in exact proportions for maths link.
	How does blood get around our body?	<ul style="list-style-type: none"> Annotate diagram of double circulation (model). Basic understanding of pressure differences & gas/nutrient exchange Make a model heart (washing-up bottle with long clear tube held vertical). Half fill with red coloured water. Squeezing bottle (shows power of heart). Role play to show double circulation 'big-picture' model
	What happens when we exercise?	<ul style="list-style-type: none"> Fitness tests (e.g. bleep test, vertical jump test, etc). Can be tabulated. Repeats. Explain changes when we exercise (e.g. fatigue, sweating). Devise a fitness programme. Carry it out over the term. Record changes in pulse/recovery/breathing rate over time. Demo: Measuring pulse (neck/wrist); measure pulse with a straw (pushed into plasticine; place on wrist); show resting pulse rate; listen to heart rate through plastic cup Fair test: What happens to our pulse rate when we do different exercises? Use pulse sensor during exercise Fair test: How quickly do we recovery after harder and harder exercise? Use different numbers of squat thrusts. Could compare recovery rate across class. Fair test: What happens to our breathing rate/volume when we exercise? Measure over time Fair test: What happens when we exercise? Cobalt chloride paper for sweat; pulse; breathing rate; fatigue during exercise (care!)
	What are the effects of diet, drugs & lifestyle?	<ul style="list-style-type: none"> Create food diary. Discuss implications and ways forward. Design poster / advise sheet Sort illegal / legal; recreational / prescription; harmful / harmless drugs. Discuss. Discuss effects of alcohol / smoking. Design poster / advise sheet. YouTube experiments Fair test: What is the effect of coffee on reaction time? Catch a falling meter ruler Sort food labels/pictures to identify sugary/fatty/high energy foods. Washing line
	Where do babies come from?	<ul style="list-style-type: none"> Treat this lesson with care & sensitivity. Contextualise. Order cards to sequence events in process. Link to information cards. Could use true/false cards. Use appropriate DVD. Discuss moral/social/cultural aspects. Use information cards for pupils to select to answer questions. Could use true/false statements Link back to place in reproductive cycle (focus on fertilization)
	Links to SRE curriculum	

<p>Next steps In KS3:</p> <ul style="list-style-type: none"> Reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta. The consequences of imbalances in the diet, including obesity, starvation and deficiency diseases. The effects of recreational drugs (including substance misuse) on behaviour, health and life processes. The structure and functions of the gas exchange system in humans, including adaptations to function. The mechanism of breathing to move air in and out of the lungs. The impact of exercise, asthma and smoking on the human gas exchange system.
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