

# Science

Big Idea: Humankind						
ASPECT: Human Body						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum	<p><u>Working scientifically</u> Perform simple tests.</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p><u>Animals, including humans</u> 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>	<p><u>Animals, including humans</u> Notice that animals, including humans, have offspring which grow into adults.</p>	<p><u>Animals, including humans</u> Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p><u>Working scientifically</u> Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p><u>Animals, including humans</u> Describe the simple functions of the basic parts of the digestive system in humans.</p>	<p><u>Living things and their habitats</u> Describe the life process of reproduction in some plants and animals.</p> <p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p>	<p><u>Animals, including humans</u> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p>

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Skills	Draw and label the main parts of the human body and say which body part is associated with which sense.	Describe the stages of human development (baby, toddler, child, teenager, adult and elderly).	Describe how humans need the skeleton and muscles for support, protection and movement.	Describe the purpose of the digestive system, its main parts and each of their functions.	Describe the process of human reproduction.	Name and describe the purpose of the circulatory system and the functions of the heart, blood vessels and blood.
Knowledge	<p>The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. The five senses are hearing, sight, smell, taste and touch. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch.</p>	<p>Human offspring go through different stages as they grow to become adults. These include baby, toddler, child, teenager, adult and elderly.</p>	<p>Humans have a skeleton and muscles for movement, support and protecting organs. Major bones in the human body include the skull, ribs, spine, humerus, ulna, radius, pelvis, femur, tibia and fibula. Major muscle groups in the human body include the biceps, triceps, abdominals, trapezius, gluteals, hamstrings, quadriceps, deltoids, gastrocnemius, latissimus dorsi and pectorals.</p>	<p>The digestive system is responsible for digesting food and absorbing nutrients and water. The main parts of the digestive system are the mouth, oesophagus, stomach, small intestines, large intestines and rectum. The mouth starts digestion by chewing food and mixing it with saliva. The oesophagus transports the chewed food to the stomach, where it mixes with stomach acid and gets broken down into smaller pieces. In the small intestine, nutrients from the food are absorbed by the body. In the large intestine, water is absorbed by the body. The remaining undigested waste is stored in the rectum before excretion through the anus.</p>	<p>Humans reproduce sexually, which involves two parents (one female and one male) and produces offspring that are different from the parents.</p>	<p>The circulatory system includes the heart, blood vessels and blood. The heart pumps blood through the blood vessels and around the body. There are three types of blood vessel: arteries, veins and capillaries. They each have a different-sized hole (lumen) and walls. The blood carries gases (oxygen and carbon dioxide), water and nutrients to where they are needed. The red blood cells carry oxygen and carbon dioxide around the body. The blood also contains white blood cells, which protect the body from infection.</p>
Topic / Coverage	Superheroes	Wriggle and Crawl and through Science lessons	Predator!	Burps, Bottoms & Bile	Time Traveller Weekly science – animals	Weekly science lesson - circulation

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ASPECT: Staying Safe						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum	<p><u>Working scientifically</u> Perform simple tests.</p> <p>Gather and record data to help in answering questions.</p> <p>Observe closely, using simple equipment.</p>	<p><u>Animals, including humans</u> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p>	<p><u>Light</u> Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p>	<p><u>Electricity</u> (no specific learning intentions related to this)</p>	<p><u>Properties &amp; changes of materials</u> (no specific learning intentions related to this)</p>	<p><u>Light</u> (no specific learning intentions related to this)</p>
Skills	Describe ways to stay safe in some familiar situations.	Describe what humans need to survive.	Explain why light from the Sun can be dangerous.	Explain the precautions needed for working safely with electrical circuits.	Explain the precautions needed for working safely when heating, burning, cooling and mixing materials.	Explain the dangers of using lasers and ways to use them safely.
Knowledge	It is important to stay safe. Some ways to stay safe include staying safe in strong sunlight (sun cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects) and with household chemicals (not touching, drinking or eating).	Humans need water, food, air and shelter to survive.	Light from the Sun is damaging for vision and the skin. Protection from the Sun includes sun cream, sun hats, sunglasses and staying indoors or in the shade.	Working with electrical circuits can be dangerous. Precautions include not touching electrical components with wet hands and not putting batteries in mouths.	Very hot and very cold materials can burn skin. Heating materials should be done safely.	Lasers are intense beams of light and they should never be pointed at people's faces or aircraft.
Topic / Coverage	Weekly Science	Weekly Science	Stand alone science lesson in unit 'light'.	Blue Abyss (stand alone lesson leading up to making lighthouses)	Weekly science – materials	Weekly science lesson - electricity

# Science

ASPECT: Healthy Lifestyle						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
National Curriculum		<p><u>Animals, including humans</u> Describe the importance of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p><u>Animals, including humans</u> 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>	<p>Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.</p> <p><u>Working scientifically</u> Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p><u>Animals, including humans</u> Identify the different types of teeth in humans and their simple functions.</p>	<p>Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.</p> <p><u>Animals, including humans</u> Describe the changes as humans develop to old age.</p>	<p><u>Animals, including humans</u> Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p>

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Skills	Explain why hand washing and cleanliness are important.	Describe the importance of a healthy lifestyle, including exercise, a balanced diet and good hygiene.	Explain the importance and characteristics of a healthy, balanced diet.	Describe what damages teeth and how to look after them.	Explain why personal hygiene is important during puberty.	Explain the impact of positive and negative lifestyle choices on the body.
Knowledge	Hand washing and good hygiene are important parts of a healthy lifestyle and prevent the spread of germs.	A healthy lifestyle includes exercise, good hygiene and a balanced diet.	Humans have to get nutrition from what they eat. It is important to have a balanced diet made up of the main food groups, including proteins, carbohydrates, fruit and vegetables, dairy products and alternatives, and fats and spreads. Humans need to stay hydrated by drinking water.	Regular teeth brushing, limiting sugary foods and visiting the dentist are important for good oral hygiene.	Good personal hygiene (washing, wearing clean clothes and brushing teeth) can prevent disease or illness. Puberty is the period during which adolescents reach sexual maturity and become capable of reproduction. It causes physical and emotional changes.	Lifestyle choices can have a positive (exercise and eating healthily) or negative (drugs, smoking and alcohol) impact on the body.
Topic / Coverage	Superheroes and weekly science lessons and links with PSHE	Wriggle and Crawl and weekly science lessons	Strumdiddlyumptious!	Burps, Bottoms & Bile	Time Traveller Weekly science - animals	Weekly science lesson - circulation