

Science



Learning Outcomes KS1 and KS2

Content of this grid is from the [National Curriculum in England: science programmes of study](#) with adapted outcomes from the [STEM Schemes of Work for Students Working up to Level 1](#). The 'Working Scientifically' outcomes of the National Curriculum are incorporated into the different topics covered.

Animals, including humans			
By the end of KS5 pupils should know:	Redway Pre-Formal Pathway Encounter → Foundation	Redway Semi-formal Pathway Core → Development	Redway Formal Pathway Enrichment → Enhancement
1. Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	a. Encounter a variety of different animals (e.g., visits from Zoo Lab, trips to a petting farm). b. Respond with curiosity and use their sense of sight, hearing, smell and touch when interacting with animals.	a. Can distinguish animals from plants. b. Can name some common animals (e.g., cat, dog, cow, pig etc.)	a. Identify some common fish (e.g., goldfish, shark) by seeing the living animal or from photos. b. Know that a frog is an amphibian and can identify them by seeing the living animal or from photos. c. Identify some common reptiles (e.g., crocodile, snake) by seeing the living animal or from photos. d. Identify some common birds (e.g., pigeon, duck, chicken) by seeing the living animal or from photos. e. Identify some common mammals (e.g., dog, cat, cow) by seeing the living animal or from photos. f. Know that humans are mammals.
2. Identify and name a variety of common animals that are	a. Explore through sight, touch, feel and smell (NOT taste) different types of animal food e.g., hay,	a. Know some foods that common animals eat e.g., cow, rabbit, bird, cat etc.	a. Know that some animals only eat plants and that these are called herbivores.

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carnivores, herbivores and omnivores.	grass, dried rabbit food, dog biscuit, bird feed.	b. Can match some foods to the animals that eat them.	b. Can name some common herbivore (e.g., cow, sheep, rabbit). c. Know that some animals only eat other animals and that these are called carnivores. d. Can name some common carnivores (e.g., lion, crocodile, shark) e. Know that some animals eat both plants and other animals and that these are called omnivores. f. Can name some common omnivores (e.g., pigs, dogs, bears).
3. Can describe and compare the structures of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	a. Encounter a variety of different animals (e.g., visits from Zoo Lab, trips to a petting farm). b. Respond with curiosity and use their sense of sight, hearing, smell and touch when interacting with animals. c. Explore some things associated with animals including: i. Fur ii. Feathers	a. Can say if an animal is a bird. b. Know that birds have feathers and wings. c. Can say if an animal is a fish. d. Know fish live in water and have fins. e. Can distinguish humans from other animals.	f. Know that fish: i. Don't have legs but move using fins. ii. Live in water. iii. Breathe water using gills. g. Know that amphibians: i. Live in water and on land. ii. Their skin is soft and moist. iii. When they are young, don't have legs and they breathe water using gills. They must live in water.

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			iv. When they get older, they grow legs and can breathe air. h. Know that reptiles: i. Have dry scaly skin. ii. Breathe air i. Know that birds: i. Have wings. ii. Have feathers iii. Have a beak. iv. Breathe air j. Know that mammals: i. Have hair ii. Breathe air.
4. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	a. Show awareness of different parts of their bodies through: a. Physiotherapy programmes. b. Massage. c. Story Massage. d. Songs about parts of the body (e.g., elephants have wrinkles) b. Respond with curiosity when using their different senses to explore. a. Touch b. Smell c. Hearing d. Sight e. Taste (where appropriate) c. Initiate using all their senses when investigating objects (e.g., turning to hear a sound, reaching out to feel etc.)	a. Can recognise and indicate the main parts of their body including: i. Head ii. Arms iii. Hands iv. Legs v. Feet vi. Eyes vii. Ears viii. Nose ix. Mouth b. Begin to identify some of the parts of the body that are linked to the senses.	a. Can label the main parts of the human body including: i. Head. ii. Shoulders iii. Arms iv. Legs v. Hands vi. Feet vii. Elbows viii. Knees ix. Eyes x. Ears xi. Nose xii. Mouth xiii. Tongue b. Know we see using our eyes. c. Know we hear using our ears. d. Know we smell using our nose.

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			e. Know we taste things with our tongue.
5. Notice that animals, including humans, have offspring which grow into adults.	a. Experience meeting people of different ages. b. Encounter a variety of different animals including offspring (e.g., sheep and lambs)	a. Recognise the offspring of some animals and know what adults they will become. b. Know the names of some offspring of common animals (e.g., lamb, puppy). c. Know that humans have babies that grow into adults.	a. Know that animals, including humans, have offspring b. Know that offspring grow over time and become adults. c. Know that some offspring look like small versions of the adult (e.g., calves, lambs, puppies, kittens, babies etc.). d. Know that some offspring look very different from the adult animal (e.g., tadpoles, caterpillars etc.) e. Can match some offspring to the adult animal they will become.
6. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).	a. Awareness of eating and drinking. b. Respond in a differentiated way to a variety of foods and drinks. c. Anticipate when they are about to eat.	a. Associate eating with feeling hungry. b. Associate drinking with feeling thirsty. c. Know that we need to regularly eat and drink or we will become ill. d. Know that all animals need food and water.	a. Can suggest what they think their basic needs to survive are (e.g., eat, drink, breathe, sleep, keep warm) b. Know some of the basic needs of animals including: i. Food ii. Water iii. Air c. Know that different types of animals require different amounts of these basic needs (e.g., desert animals only need small amounts of water)

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			whereas fish need to live in water)
7. Describe the importance of hygiene	a. Experience different types of activities that are involved in good hygiene including: i. Washing/showering/bathing ii. Oral care iii. Hair care	a. Know the different ways that we keep ourselves clean including: i. Washing hands ii. Showering/bathing iii. Brushing teeth. iv. Washing hair b. Know that we may become ill if we don't follow good hygiene.	a. Understand the importance of washing hands after going to the toilet and before eating. b. Know why we should: i. Shower/bathe ii. Brush our teeth iii. Wash our hair.
8. 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.	a. Use their senses to explore different foods including: i. Fruits and vegetables ii. Cereals and grains iii. Beans and pulses. iv. Fats and oils v. Dairy vi. Cooked meat and fish if appropriate.	a. Know that we need to eat and drink. b. Can identify which foods they like/dislike. c. Can match some foods to the animals that eat them.	a. Understand why animals need to eat and drink. b. Know that animals can't make their own food. c. Know that the food we eat is used: i. To make energy ii. To help us grow iii. To help us repair d. Understand the importance of a varied diet to keep us healthy.
9. Identify that humans, and some other animals have skeletons and muscles for support, protection and movement.	a. Experience movement of their skeletons and muscles through: i. Exercise ii. Physiotherapy programmes.	a. Explore real or replica bones. b. Know that bones make things rigid rather than floppy. c. Know there are bones inside their bodies.	a. Know that humans and some animals have skeletons that are made up of bones. b. Know that the bones in the skeleton are joined together

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		d. Can feel the bones in their own arms, legs, and hands. e. Can feel their muscles working when they move e.g., feel their biceps when they bend their arm.	- with joints so that the skeleton can move. c. Know that some bones provide support e.g., leg bones. d. Know that some bones provide protection e.g., skull, knee cap. e. Know that muscles are attached to bones in the skeleton. f. Understand that muscles cause the skeleton to move by pulling on the bones.
10. Describe the simple functions of the basic parts of the digestive system in humans.	a. Awareness of eating and drinking. b. Anticipate when they are going to eat. c. Awareness of being taken to the bathroom. d. Anticipate when they will be taken to the bathroom.	a. Know what items are edible or non-edible. b. Can indicate when they feel hungry. c. Can indicate when they need to go to the bathroom.	a. Understand that digestion is the breaking down of food so it can be taken in and used by the body. b. Know that teeth break the food down into small enough pieces to be swallowed. c. Know that food goes into the stomach where it continues to be broken down. d. Know that the food then goes into the intestine where nutrients and fluids are taken into the body. e. Know that what is left of the food that the body can't use is then excreted as faeces.

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11. Identify the different types of teeth in humans and their simple functions.	a. Tolerate having their teeth cleaned or other oral care.	a. Understand the importance of keeping their teeth clean. b. Know that they use their teeth to bite and chew food so it can be swallowed easily.	a. Know what incisors look like and that they are found at the front of the mouth. b. Know that incisors are used to bite. c. Know what molars look like and that they are found towards the back of the mouth. d. Know that molars are used for chewing. e. Know what canines look like and that they are found between the incisors and the molars. f. Demonstrate they can effectively clean their own teeth. g. Understand the importance of good oral hygiene.
12. Construct and interpret a variety of food chains, identifying producers, predators, and prey.	a. Explore through sight, touch, feel and smell (NOT taste) different types of animal food e.g., hay, grass, dried rabbit food, dog biscuit, bird feed.	a. Know some foods that common animals eat e.g., cow, rabbit, bird, cat etc. b. Know some animals just eat plants. c. Know that some animals just eat other animals d. Know that some animals eat both plants and other animals	a. Know that plants produce their own food using the energy from sunlight and carbon dioxide from the air. They are known as producers. b. Know that some animals are hunted and eaten by other animals. These are known as prey. c. Know that some animals hunt and eat other animals. These are known as predators.

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			d. Begin to understand the concept of a simple food chain e.g., grass (producer) – rabbit (prey) – fox (predator)
13. Describe the changes as humans develop to old age.	a. Experience meeting people of different ages. b. Show curiosity of photos of their family and friends.	a. Show curiosity of pictures showing humans at different ages including: i. Baby ii. Child iii. Adult iv. Old age b. Can sequence pictures of humans to show how they develop with time.	a. Know the stages that humans go through as they develop including: i. Baby ii. Child iii. Adolescent iv. Adult v. Old age. b. Know some of the features that you see at each stage of development.
14. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	a. Experience different tastes, smells and textures of foods and drinks. b. Experience different food and drinks: i. Taste (where appropriate) ii. Smell iii. texture c. Explore the different ways they can move their bodies through passive and active involvement in: i. Physiotherapy programmes. ii. Music and Movement sessions iii. Rebound (where appropriate) iv. PE sessions. v. Hydrotherapy/swimming.	a. Explore the tastes smells and textures of foods that come from the different food groups: i. Fruit and Vegetables ii. Starchy food iii. Dairy iv. Protein v. Fat b. Understand what is edible and what is not edible. c. Experience a variety of different forms of exercise (e.g., walking, running, ball games, dancing, yoga, rebound, swimming etc.)	a. Know why we need food and drink. b. Can group different types of food into: i. Fruit and Vegetables ii. Starchy food iii. Dairy iv. Protein v. Fat c. Understand what is meant by a nutritious diet. d. Understand why exercise is important to staying healthy, including what can happen if we don't exercise.

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			e. Can suggest a variety of different ways they can exercise. f. Understand that drugs prescribed by a doctor can help us stay healthy. g. Know that drugs can be very dangerous if taken inappropriately or in the wrong dosage. h. Can monitor their own lifestyles and suggest if it would be considered healthy.
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