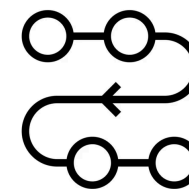


Science - Year 6 - Animals including humans “Staying Alive”



National curriculum statements/ Learning Objectives

- describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals
- give reasons for classifying plants and animals based on specific characteristics

Key questions:

- Q1. What is blood and why is it essential for life?
 Q2. What is the circulatory system?
 Q3. How are nutrients and water transported in animals and humans?
 Q4. What is a healthy lifestyle?

Links to other subjects:

PE: fitness unit

First Aid: skills development

DT: create a healthy snack

PSHE: learning about healthy choices

Reading Workshop: Comprehension
Ninja - Obesity

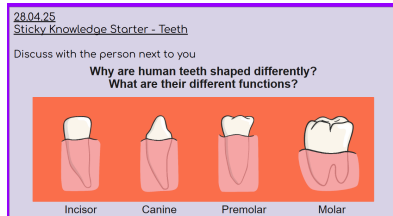
Previous relevant unit overviews:

[Y4 unit - Living things and their habitat](#)

Retrieval starters

Lesson 1:
N/A

Lesson 2:



Key learning tasks

[Entrance and exit quiz](#)

[Knowledge organiser](#)

[Context homework](#)

Lesson 1

Q1 - What is blood?

[KQ1 - What is blood? - Google Slides](#)

Children learn what makes up blood. They create a blood bag using various foodstuffs to represent parts of the blood. They create a diagram to label their food bag.



Key vocabulary

Human circulatory system: lungs, heart, blood vessels, blood, arteries, veins. The purpose is to transport oxygen, carbon dioxide and essential nutrients to all parts of the body.

Heart: muscle, aorta, arteries, veins.

Blood: red blood cells (carry oxygen/carbon dioxide), white blood cells (protect against infections), platelets (repair damaged cells/help clot wounds), plasma (watery substance that enables the blood to move easily).

Lesson 3:

What does the digestive system do?

Science: Sticky Knowledge Starter

Task: Match each part of the digestive system to the correct label.

Science: Sticky Knowledge Starter

- large intestine
- mouth
- oesophagus
- stomach
- small intestine

Lesson 4:

The eatwell plate

Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.

Lesson 5:

Which group are: carnivores omnivores herbivores?

A B C

Lesson 2:

Q2. What is the circulatory system?

[KQ2. What is the circulatory system? - Google Slides](#)

Children learn about the human circulatory system through slides and videos. They create a stop-go animation of blood moving through the heart and blood vessels.



Lesson 3:

Q3. How are nutrients and water transported in animals and humans?

[KQ3: How are nutrients and water transported in animals and humans? - Google Slides](#)

Children observe how diffusion occurs in cells once oxygen and nutrients are brought to them by blood vessels. This is demonstrated using the 'skittle' experiment. Children also create a poster to explain how oxygen and nutrients are transported around the body.



Lesson 4:

Q4. What is a healthy lifestyle?

[KQ4: What is a healthy lifestyle? - Google Slides](#)

Children recap the healthy eating plate. They plan a healthy meal and explain what makes it healthy. They learn about drugs and the effects of drugs.



Lesson 5:

Q4. What is a healthy lifestyle?

[KQ4: What is a healthy lifestyle? - exercise - Google Slides](#)

Children plan and carry out a PE lesson to include aerobic exercise, use of different muscles and explain why warm-ups and cool downs are important. Film 'exercise and healthy lifestyle' videos in their role as personal trainers? Teach their buddies a PE lesson.



Diet - balanced diet, proteins, carbohydrates, vitamins, minerals, fats, fibre, calcium.

Exercise - regular aerobic exercise good for the body

Healthy - in a good physical or mental condition

Drugs - can be harmful to the body

Resources needed:

Marshmallows (white blood cells), Cheerios (red blood cells), Oil, Water, Raisins (Platelets), Red Food Colouring, Plastic Bags.

Common misconceptions


- Eating little is healthy
- If you are skinny, you are healthy.
- All drugs are illegal and bad for you.

Website resources

- [THE CIRCULATORY SYSTEM| Educational Video for Kids. - YouTube](#)
- [Skittles Diffusion Experiment \(Chemistry\) - YouTube](#)

Subject knowledge links

- <https://www.bbc.co.uk/bitesize/topics/zwdr6yc/articles/zqv4cwz>
- [What is Diffusion? - YouTube](#)

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|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <p>PE equipment for PE lesson (based on what the children design)..</p> | | | |
| <p>Scaffolds:</p> | <p>WAGOLL models. Vocabulary on working walls. Word webs - with key vocabulary linked to electricity. Partner talk and partner activities. Videos and slides with key images.</p> | | |
| <p>Deepen the Moment:</p> | <p>Q1: Children research why we have different blood types and add this to their poster.</p> <p>Q2: Children research additional facts about the circulatory system using books/websites.</p> <p>Q3: Children research additional facts about how oxygen and nutrients are transported around the body.</p> <p>Q4: Children research recipes and foods using a device, investigating the specific nutrients that make up the food and making good choices for their suitability as a 'healthy meal'.</p> | | |
| <p>Useful context-related books:</p> |  <p>The image displays four book covers. From left to right: 1. 'The Glorious Gut: How it Works and How to Look After It' by Dr Roopa Farooki, illustrated by Viola Wang, featuring a girl holding a green character representing the gut. 2. '100 Things to Know About the Human Body' by Usborne, featuring various anatomical illustrations and facts like 'UP TO 30 TRILLION RED BLOOD CELLS PASS THROUGH YOUR HEART ONCE A MINUTE'. 3. 'Usborne Biology for Beginners' by Usborne, featuring a blue bicycle and various biological diagrams. 4. 'Infographics: Human Body' by Usborne, featuring a red background with various anatomical parts and facts like 'HUMAN BODY' and 'What's inside the human body?'.</p> | | |

