



The Canons CE Primary School



Year 6 – Animals, Including Humans

Prior Learning	In Year 6	Future Learning
In Year 2 children will be taught to: - recognise why hygiene is important and what they must do to be hygienic - describe what should be included in a human's balanced diet - describe the importance of exercise for humans. In Year 3 children will be taught to: - research and design their own balanced diet using different food groups - describe why animals need the right type of nutrition - identify that animals, including humans, get their nutrition from what they eat. In Year 4 children will be taught to: - describe how to look after their teeth - identify and describe the different types of teeth in humans and how they function - identify and describe the basic parts of the human digestive system.	In Year 6 children will be taught to: - describe how to keep their body healthy - recognise the impact of drugs, alcohol and smoking on the human body - recognise the impact of an unhealthy diet - describe how blood is pumped around the body - describe how water and nutrients are transported around the body - describe the functions of the heart, blood vessels and blood - identify and name the main parts of the circulatory system. Key Vocabulary heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle	In KS3 children will be taught about: - 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.
Famous Scientists	Common Misconceptions	Possible Evidence to be Secure
- Claudius Galen – anatomy - Leonardo Da Vinci – anatomy - Sir Richard Doll – linking smoking and health problems - Patricia Bath (BP website) – saving sight (<i>links to Light too</i>) - William Harvey (1578 – 1657) - discovered the circulatory system	Some children may think: - your heart is on the left side of your chest - the heart makes blood - the blood travels in one loop from the heart to the lungs and around the body - when we exercise, our heart beats faster to work the muscles more - some blood in our bodies is blue and some blood is red - we just eat food for energy - all fat is bad for you - all dairy is good for you - protein is good for you, so you can eat as much as you want - foods only contain fat if you can see it - all drugs are bad for you.	Children can: - draw a diagram of the circulatory system and label the parts and annotate it to show what the parts do - produce a piece of writing that demonstrates the key knowledge e.g. explanation text, job description of the heart.



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Working Scientifically

National Curriculum Statutory Requirements:

1. Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
2. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.
3. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
4. Use test results to make predictions to set up further comparative and fair tests.
5. Report and present findings from enquiries, including conclusions, casual relationships and explanations of result, in oral and written forms such as displays and other presentations.
6. Identifying scientific evidence that has been used to support or refute ideas or arguments.

Highlighted = main focus during this topic

Teaching Ideas – Different Types of Scientific Enquiry

Comparative and Fair Testing	Identifying and Classifying	Observation Over Time	Pattern Seeking	Research
Which type of exercise has the greatest effect on our heart rate? How does the length of time we exercise for affect our heart rate? Can exercising regularly affect your lung capacity?	Which organs of the body make up the circulatory system, and where are they found?	How does my heart rate change over the day? How much exercise do I do in a week?	Is there a pattern between what we eat for breakfast and how fast we can run?	What ideas did Edward Jenner have about small pox and how did he test them?

Teaching Ideas – How Pupils Could Work Scientifically

Teaching Ideas – Possible Evidence to be Secure

(Bracketed Number = National Curriculum Statutory Requirement Link)

- Create a role play model for the circulatory system. (5)
- Carry out a range of pulse rate investigations (1, 2):
fair test – effect of different activities on my pulse rate
pattern seeking – exploring which groups of people may have higher or lower resting pulse rates
observation over time – how long it takes my pulse rate to return to my resting pulse rate (recovery rate)
pattern seeking – exploring recovery rate for different groups of people.
- Research the negative effects of drugs (e.g. tobacco) and the benefits of a healthy diet and regular exercise by asking an expert or using carefully selected secondary sources. (6)

Children can:

- use the role play model to explain the main parts of the circulatory system and their role (5, 6)
- use subject knowledge about the heart whilst writing conclusions for investigations (6)
- explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body. (6)
- present information e.g. in a health leaflet describing impact of drugs and lifestyle on the body. (5)