Our Intent is: To develop inquisitive children who are excited about investigating with curiosity, "How can scientific enquiry explain the world?" Exploring answers by gathering and analysing evidence.

Forton Primary School
Science

Pendle Class
Spring 1 & 2
Year A

Etymology: circulation - movement to and fro or around something, especially that of fluid in a closed system.

Key Concept: Animals

Key Question: If you choose negative life style choices, should you be entitled to an organ transplant?

Animal Families
Wild Cousins Around the World
By Matt Sewell

N.C. LINKS:
Animals, including humans Pupils should be taught to:

- 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.
- describe the changes as humans develop to old age.

Unit Overview:

Vocabulary:

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<table>
<tr>
<td>The circulatory system and how to keep your body healthy.

Animals old and young.</td>
<td>Subject Specific:
Circulatory system
Heart
Blood vessels

Oxygenated blood
Deoxygenated blood
Drugs
Alcohol</td>
<td>Working Scientifically:

Plan Variables
Measurements Accuracy
Precision Repeat reading
Labels Classification
Scatter Key graphs
Predictions Bar graphs
Line graphs Patterns
Quantitative Interpret
Measurements Systematic</td>
</tr>
<tr>
<td colspan="2">New Knowledge Progression:
Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.
The heart is a major organ and is made of muscle.
The heart pumps blood around the body through vessels and this can be felt as a pulse.
The heart pumps blood through the lungs in order to obtain a supply of oxygen.
Blood carries oxygen/essential materials to different parts of the body.</td>
<td>Building on Prior learning when B follow A:
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.
An adequate and varied diet is beneficial to health (along with a good supply of air and clean water).
Regular and varied exercise from a variety of different activities is beneficial to health (focus on energy in versus energy out. Include information on making informed choices).</td>
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• During exercise muscles need more oxygen so the heart beats faster and our breathing and pulse rates increase. • Animals are alive; they move, feed, grow, use their senses, reproduce, breathe/respire and excrete. • An adequate, varied and balanced diet is needed to help us grow and repair our bodies (proteins), provide us with energy (fats and carbohydrates) and maintain good health (vitamins and minerals). • Tobacco, alcohol and other 'drugs' can be harmful. • All medicines are drugs, not all drugs are medicines.	

Key Skills (Disciplinary)

- Observe (including changes over time) and suggest a reason for what they notice.
- Suggest reasons for similarities and differences.
- Compare and contrast things beyond their locality and use these similarities and differences to help to classify *(e.g. features of animals, life cycles of different living things, melting compared with dissolving, etc).*
- Use secondary sources of information to identify and classify.
- Independently ask their own scientific questions taking some ownership for finding out the answers.
- Articulate and explain findings from their research using scientific knowledge and understanding.
- Make decisions about which information to use from a wide range of sources.
- Propose their own ideas and make decisions with agreement in a group.
- Support, listen to and acknowledge others in the group *e.g. Yes. I prefer that one too.*
- Check the clarity of each other's suggestions *e.g. are you saying you think this one is a herbivore?*

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- Build on / add to someone else's idea to improve a plan or suggestion.
- Use correct scientific knowledge and understanding and relevant scientific language to discuss their observations and explorations.
- Identify changes that have occurred over a very long period of time (evolution) and discuss how changes have impacted the world.
- Explore more abstract systems / functions / changes / behaviours and record their understanding of these *(e.g. the relationship between diet, exercise, drugs, lifestyle and health; evolutionary changes; how light travels).*
- Recognise the importance of classification to the scientific world and form a conclusion from their sorting and classifying.
- Compare and contrast more complex processes, systems, functions (e.g. sexual and asexual reproduction).
- Construct a classification key / branching database using more than two items.
- Compare and contrast things beyond their locality and discuss advantages / disadvantages, pros / cons of the similarities and differences.
-

Sequence of Lessons:

1. To identify and name the main parts of the circulatory system.
2. To describe the jobs of the blood vessels and blood.
3. To understand the importance of exercise.
4. To plan a scientific enquiry and record data.
5. To understand and explain how diet and exercise affect the body.
6. To recognise the impact of drugs and alcohol.
7. To describe changes as human develop and grow.

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Enhancements:	End of Unit Outcome:
Doctor/GP visit. Enquiry – physical activity.	Poster/leaflet stating the impact of drugs and alcohol on the body.

Oral Assessment:

Can you name the main parts of the circulatory system?
Describe the jobs of the blood vessels and blood?
What is the importance of exercise?
How does diet and exercise affect the body?
How can you spot the impact of drugs and alcohol?
Describe the changes as humans develop and grow.