

## Lowerhouse Junior School Science Overview Sheet



## Year 6 – Circulatory and Respiratory System



**Rationale**: Teaching the circulatory and respiratory systems in Year 6 science helps students understand how vital organs function to sustain life. It enhances knowledge of human anatomy, promotes health awareness, and lays the foundation for more advanced biological studies. This understanding is crucial for appreciating the body's complexity and maintaining overall well-being.

Substantive Knowledge:

- 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.

## Disciplinary Knowledge:

- Observing
- Pattern Seeking
- Comparative/Fair testing

Overview:	Key Vocabulary:
Lesson 1: What are the parts	Heart: A muscular organ that pumps blood throughout the body via the circulatory system.
of the human circulatory	Pulse: The rhythmic throbbing of arteries as blood is propelled through them, typically felt
system and their functions?	at the wrist or neck.
Lesson 2: What is a heart and	Rate: The speed at which something happens, such as the heart rate, which is the number
what does it do?	of heart beats per minute.
Lesson 3: What are the main	<b>Pumps</b> : The action of the heart as it moves blood through the circulatory system.
parts of the human circulatory	Blood: The fluid that circulates through the heart, arteries, veins, and capillaries, carrying
system?	oxygen and nutrients to cells and removing waste products.
Lesson 4: Why do we need	Blood vessels: Tubes through which blood flows, including arteries, veins, and capillaries.
blood?	Transported: The movement of substances, such as oxygen and nutrients, through the body
Lesson 5: How does blood	via the blood.
move around the human	Lungs: Organs in the respiratory system that exchange oxygen and carbon dioxide with the
body?	blood.
Lesson 6: How can we share	Oxygen: A gas essential for respiration, transported by the blood from the lungs to the
information on the circulatory	body's cells.
System with others?	<b>Carbon dioxide</b> : A waste gas produced by cells, transported by the blood from the cells to
Lesson 7: What keeps	the lungs for exhalation.
Lesson 8: What makes a	<b>Cycle</b> : A series of events that repeat regularly, such as the cycle of inhaling oxygen and exhaling carbon dioxide.
healthy diet and what impact	Circulatory system: The system that circulates blood throughout the body, consisting of
does a healthy or unnealthy	the heart, blood, and blood vessels.
diet nave?	Diet: The types and amounts of food and drink consumed regularly.
affect heartrate?	Drugs: Substances that can affect the body's functions, including medicines and recreational
Lesson 10: How can humans	drugs.
live a healthy lifestyle?	health and well-being.

## Impact/Assessment

**Most Children will be able to**: • 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 • use the role play model to explain the main parts of the circulatory system and their role • use subject knowledge about the heart whilst writing conclusions for investigations • explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body • present information e.g. in a health leaflet describing impact of drugs and lifestyle on the body