

## **Science Rationale**

### **Year 6 Science – The Human Body**

During this unit children will build on their knowledge of the circulatory system from Year 2. They will learn that William Harvey was a doctor who suggested the heart was at the centre of a circulatory system that moved blood around the body. They will learn that now; scientists and doctors know that the heart and blood vessels are parts of our circulatory system and that our circulatory and respiratory systems keep us alive. We know that our heart is divided into four chambers and blood enters and exits the heart. As the heart beats, it pumps the blood out to the lungs for a new supply of oxygen. Blood vessels, called arteries, carry oxygen-rich blood away from the heart. Blood vessels, called veins, carry blood back to your heart to be pumped to the lungs for more oxygen. Children will learn the importance of each part of the circulatory system including arteries, veins and capillaries.

Building on the understanding that some parts of our body are too small to see, children will learn that blood is made up of different components. They will learn that the main liquid in our blood is called plasma. Red blood cells contain a substance called haemoglobin which carries the oxygen and carbon dioxide. White blood cells attack and destroy bacteria. Platelets are responsible for clotting the blood. Children will learn about the important role the lungs play in oxygenating blood, a process that is vital for life.

When working scientifically, children will conduct an investigation to find out how exercise effects pulse rate. They will think about variables and control variables whilst planning the best way to find an answer to their question. They will then complete their investigation and analyse the results.