The Human Body (Biology)

Year 3

End Points:

- Muscles can be voluntary or involuntary.
- Muscles enable our body to move.
- A human has an endoskeleton that supports and protects their body.
- A joint is place where bones join connected by ligaments.
- The brain is at the centre of the nervous system, sending messages around the body.
- Animals, including humans, get nutrition from what they eat.
- A balanced diet means eating the right amounts of each food group.
- The digestive system is made up of many parts that each have a role.

In Year 2, children learned about our muscular system and the role muscles play in helping us move. Building on this knowledge, in Year 3, children will learn about voluntary and involuntary muscles and their purpose. They will learn that some muscles, like our heart, move without us consciously thinking about it, but other muscles require us to command them to move. Moving forward with their understanding, children will look in more detail at the skeletal system, building on prior knowledge and elaborating through studying names of bones, joints and their function. Teachers should have high expectations for vocabulary in this unit, scaffold vocabulary learning appropriately and include strategies such as oral rehearsal to support children. Learning names of bones and muscles will be useful as children move through the science curriculum and in other subjects, such as PE.

Building on their understanding of body systems, children will learn about the nervous system. They will learn that our brain is an organ that acts as the command centre for the many messages that run around our body through our nervous system. They will understand the importance of our spinal cord which runs through our backbone and the web of nerves that connect to it. This learning builds on their knowledge from Year 1 when they studied our senses. Children will learn about reflex actions and their importance if part of our body is in danger.

Children will continue to build on their knowledge of the digestive system; children will learn the key parts of the system including the mouth, oesophagus, stomach, small intestine, large intestine and anus. They will also look at nutrition and the concept of a balanced diet.

At the end of this unit, children will understand that our bodies are made up of systems that work alongside each other to keep us alive, moving and healthy.

Lesson Sequencing:

In lesson one, children will learn that muscles can be voluntary or involuntary, sorting these into a table. Children will learn in lesson two that bones help us to move and protect our body. Lesson three will teach children that the brain is at the centre of the nervous system and how this links to our muscle movement. Lesson four will develop knowledge of nutrition by exploring the idea of a balanced diet and which food groups there are. This will support learning in lesson five, which explores digestion, looking at a step-by-step process of it and the role of involuntary muscles in it. In the assessment lesson, children can either describe one of the systems of the body or draw and label the different systems on a template of a body.

Misconceptions:

- Around the word ‘nervous’ in the nervous system.
- The stomach is located behind the navel.
- The digestive system has different ‘tubes’ for urine and faeces (linking eating solids to making faeces and drinking liquids to making urine).
- We only eat food for energy.

Working Scientifically criteria met in this unit:

- Asking relevant questions
- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Using straightforward scientific evidence to answer questions
- Identifying differences, similarities or changes related to simple scientific ideas and processes
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions