

Organisms

2. Cells

CONCEPT 2

SPECIALISED ANIMAL CELLS

NOTES

All animal cells contain the same basic structures, but each type of cell has its own job to do. Cells become **specialised** in order to carry out this job. These cells have developed **structural adaptations** that allow them to perform different functions effectively.

Red blood cells are specialised to carry oxygen around the body. They do not contain a nucleus to make space for more oxygen molecules to bind to haemoglobin. Their biconcave shape gives the cells a large surface area to absorb the maximum amount of oxygen.

Nerve cells are specialised to transmit electrical signals around the body. They have very long extensions of cytoplasm to send messages over large distances, with branches at the end to pass on messages to messaging.

Muscle cells are made from protein fibres that rapidly expand and contract to create movement. They contain more mitochondria than any other cell due to requiring lots of energy.

Sperm cells are specialised to carry genetic material to fertilise an egg cell. These cells also contain many mitochondria, as they require lots of energy to swim long distances. Their large heads are connected to long tails, which help them to swim.

