

Children who struggle with reading and spelling are usually using most of their working memory trying to figure out individual words. Cross reference the grapheme to phoneme correspondences with those taught explicitly within synthetic phonics programmes. The children who do not struggle use that learning as a kick-start, to 'track back' on unfamiliar words and store in brain word bank for quick and easy retrieval: the more they read, the more they learn! They couldn't possibly learn all these correspondences via explicit instruction – so we need to give them strategies to self-teach. 1 in 4 will struggle without that 'bridge' – and they are not currently getting that in the UK. Get in touch and let's change that! Miss Emma

Science story

Cells

Organisms, living and dead, are made up of cells. Cells are made of molecules organised into membranes and other structures.

Most cells are too small to be seen with the naked eye but can be seen using a light microscope.

There are many different types of cells with different shapes and sizes, but all cells are made up of common parts: all cells have a genome and cytoplasm contained by a cell membrane; all animal and plant cells store their DNA within a nucleus, and they also have mitochondria; plant cells additionally have a cell wall and can have chloroplasts and a vacuole. These parts have common functions in all cells. Molecules move through the cytoplasm by diffusion, and some molecules can enter and leave a cell by diffusing through the cell membrane.

A single cell can carry out all the processes of life. An organism may be made up of a single cell or many cells working together. This is why scientists think of cells as the basic units of life.

Tissues, organs and systems

To stay alive, cells need a constant supply of energy and molecules for chemical reactions, and they need to get rid of waste. In a multicellular organism the cells are organised into tissues, organs and organ systems that work together to support the life processes of cells to keep the organism alive.

In humans, the circulatory system transports useful molecules and waste around the body. The blood transports useful molecules to cells from food that has been broken down by the digestive system. The blood also transports oxygen to cells from the gas exchange system, and transports waste carbon dioxide away from cells back to the gas exchange system to

be removed from the body.

Humans and other animals have a skeleton and muscles, which are types of tissue made up of cells.

Bones provide support and protection for organs. Bones and muscles work together to enable humans to move around, and muscles have vital roles in organs and organ systems.

Use orthographically mapped texts. Skilled readers understand this without conscious effort (orthographic mapping) – it's how they can focus on comprehension. As a skilled reader you will need to use a fair bit of effort to read this in phonemes, looking at the graphemes, as you recognise the words instantly (orthographic mapping kicks in) When it's a less familiar word you use your orthographic knowledge and if you have heard the word before then you have a new word stored in your brain word bank! We need to guide at least 1 in 4 children to be able to do that: synthetic phonics doesn't offer enough of a kick-start to those children: generally, as they have struggled with phonemic awareness deficits eg if learning with dyslexia.

Science story

Cells

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Most cells are too small to be seen with the naked eye but can be seen using a light **microscope**.

There are many different types of cells with different **shapes** and sizes, but all cells are **made** up of common parts: all cells have a **genome** and **cytoplasm** contained by a **cell membrane**; all animal and plant cells store their **DNA** within a nucleus, and they also have **mitochondria**; plant cells additionally have a cell wall and can have **chloroplasts** and a **vacuole**. **These** parts have common functions in all cells. **Molecules** move through the cytoplasm by diffusion, and some **molecules** can enter and leave a cell by diffusing through the **cell membrane**.

A single cell can carry out all the processes of **life**. An organism may be **made** up of a single cell or many cells working together. This is why scientists think of cells as the basic units of **life**.

Tissues, organs and systems

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chemical reactions, and they need to get rid of waste. In a multicellular organism the cells are organised into tissues, organs and organ systems that work together to support the **life** processes of cells to keep the organism **alive**.

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Miss Emma's Code Mapping Tool.

<https://www.thereadinghut.com/code-mapping-tool-to-support-phonemic-and-orthographic-awareness>

Code Mapping[®]