

## What are cells?

Your body is composed of trillions of cells. Within a cell, different compartments exist which perform different functions. Two compartments we will focus on are the nucleus and cytoplasm.

The nucleus contains genetic (hereditary) material. Genetic material, written in deoxyribonucleic acid (DNA), provides instructions for the cell. All cells contain the same DNA (the same set of instructions), but cell types are different because of different gene expression. For example, skin cells and blood cells look and function differently. In other words, they follow different parts (genes) of the same instructions (genetic material).

The cytoplasm is the rest of the cell, and it contains other compartments, which are not shown in this diagram. The cytoplasm is the place where most cellular activities occur.

