

2 Cells and their membranes – Part 1

—Answers

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Work through these after you have tried the questions yourself.

2.1 (a) the nucleus holds and protects the DNA (controls the cell); (b) the mitochondria carry out respiration to release energy.

2.2 as a cell grows its volume increases faster than its surface area, so the ratio falls; a small cell keeps enough surface to exchange materials fast enough for its volume.

2.3 phospholipids (a phospholipid bilayer).

2.4 it lets some substances cross while blocking others, so the cell controls what enters and leaves.

2.5 a chloroplast –it carries out photosynthesis (or a cell wall / large vacuole).