

Cell structure and specialised cells

What is a eukaryotic cell?

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What is a prokaryotic cell?

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Function of the nucleus

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Function of the cell membrane

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Function of mitochondria

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Function of ribosomes

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Which structures do plant cells have that animal cells do not?

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Function of chloroplasts

A cell with no nucleus. The genetic material is free in the cytoplasm. Bacteria are prokaryotic.

A cell whose genetic material is enclosed in a nucleus. Animal and plant cells are eukaryotic.

Controls the movement of substances into and out of the cell.

Contains the genetic material (DNA) and controls the activities of the cell.

Where proteins are made (protein synthesis).

Where aerobic respiration takes place, releasing energy for the cell.

Contain chlorophyll, which absorbs light energy for photosynthesis.

Cell wall, chloroplasts and a vacuole.

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Function of the plant cell wall and the vacuole

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Name the structures in a bacterial cell (spec list)

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What is a plasmid?

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Function of a flagellum

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Sperm cell: acrosome and haploid nucleus

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Sperm cell: mitochondria and tail

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Name three adaptations of an egg cell

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Why does the egg cell membrane change after fertilisation?

Chromosomal DNA, plasmid DNA, cell membrane, ribosomes and flagella.

The cell wall (cellulose) strengthens and supports the cell. The vacuole contains cell sap and keeps the cell firm.

A whip-like structure that moves to make the bacterium swim.

A small ring of extra DNA in a bacterial cell, separate from the chromosomal DNA.

Mitochondria release energy by respiration for the tail. The tail moves to propel the sperm towards the egg.

The acrosome holds enzymes that digest the egg's outer layers. The haploid nucleus has half the chromosomes, so fertilisation restores the full number.

So that no more sperm can enter the egg.

Nutrients in the cytoplasm, a haploid nucleus, and changes in the cell membrane after fertilisation.

How are ciliated epithelial cells adapted?

They have cilia that beat to move mucus,
with trapped dust and microorganisms,
away from the lungs.