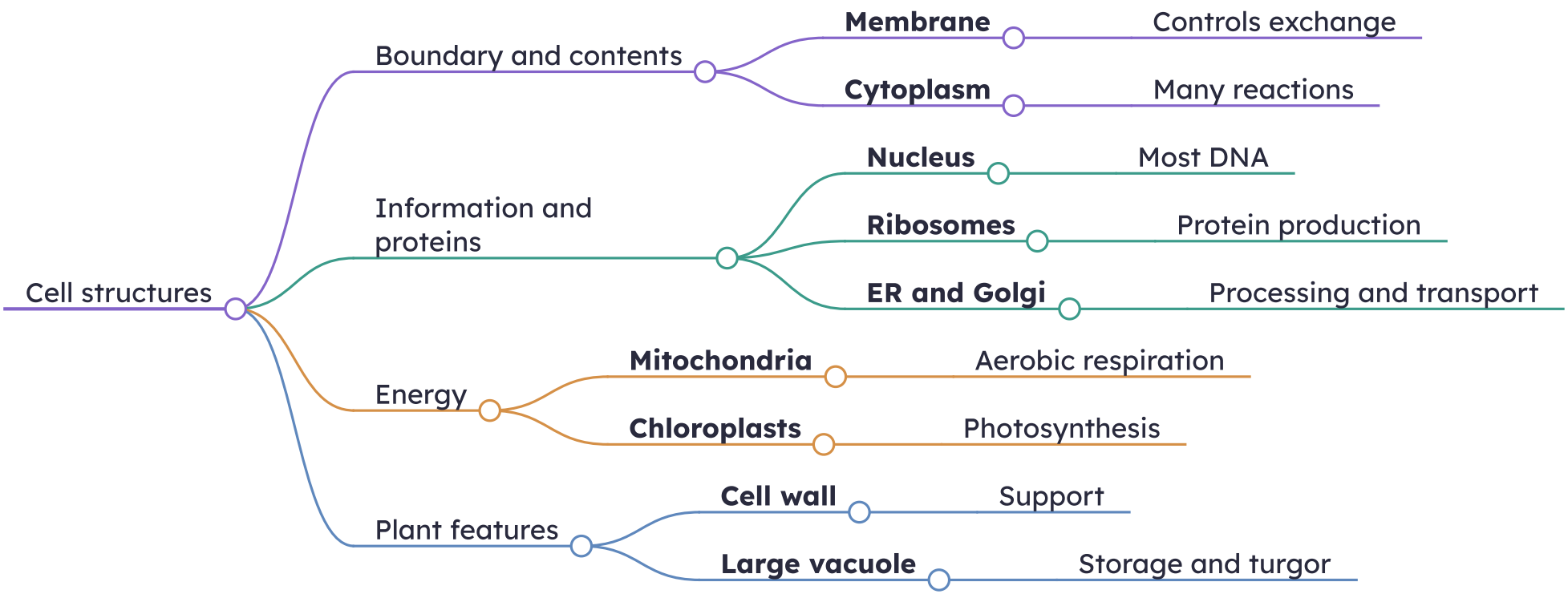
Cell structures

Link organelles to functions and compare animal and plant cells.



Read one branch at a time. Then cover the details and explain them in your own words.

Understand the topic

Eukaryotic cells contain a membrane, cytoplasm, and specialized structures. The nucleus holds most DNA, ribosomes make proteins, and mitochondria participate in aerobic respiration. Plant cells also have a cell wall; photosynthetic tissues contain chloroplasts. A cell's structures reflect the work it performs.

How the map is organized

Group boundaries, information, energy, and plant features. Explain a function for every structure you name.

> **Watch out for this**
> Not all plant cells photosynthesize. Tissue type matters.

Try it yourself

Compare a leaf cell and a root cell. Explain why both need mitochondria but not every plant cell has chloroplasts.

Two questions to answer

Which structure makes proteins?

Ribosomes assemble amino acids into proteins.

Does every plant cell have chloroplasts?

Chloroplasts are associated with photosynthetic tissues.

Sources

openstax.org
https://openstax.org/books/biology-2e/pages/4-3-eukaryotic-cells

Original practice material compiled by Studera.ai. Explore at studera.ai/en/resources/mind-map-examples.