Cells: Types, Endosymbiosis, Size

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Identify and label the eukaryote cell and the prokaryote cell.

Name 2 types of eukaryote cells.

How do prokaryotes and eukaryotes differ?

What do prokaryotes and eukaryotes have in common? (CCDR)



**Endosymbiosis**



Define Endosymbiont theory-

Which 2 organelles provide the best evidence for endosymbiosis?

Explain how each of the following provide evidence for the endosymbiont theory:

Double membrane-

Size-

DNA-

Ribosomes-

Divide independently-

Enzymes-

Antibiotics-

**Cell Size**

Which is the best size for a cell? Why?

Which is most efficient at transporting materials across its cell membrane? Why?

Calculate surface area to volume ratios for each cell.

B

A

Which cell exchanges materials the fastest? Why?

Which cell is least efficient? Why?

|  |  |  |  |
| --- | --- | --- | --- |
| Cell | Surface area | Volume | Surface area to volume ratio |
| A | 24 | 8 | 3 |
| B | 96 | 64 | 1.5 |
| C | 6 | 1 | 6 |
| D | 54 | 27 | 2 |

How do the folds of the inner mitochondrial membrane increase efficiency of cellular respiration?

How do the microvilli projections on intestine cells help improve efficiency of nutrient absorption?



