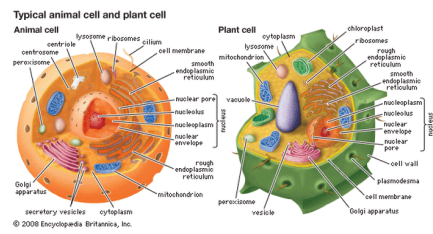
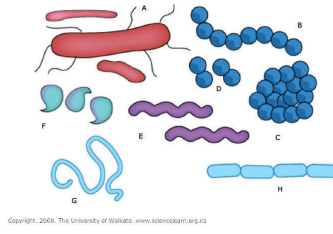


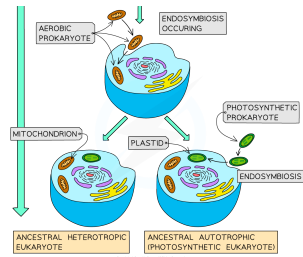
THE MAIN POINTS; CELLS STUDY GUIDE



Eukaryotic cells have organelles with special functions.



Prokaryotic cells have no organelles.



Endosymbiotic Theory of complex cells.

1. Compare and contrast plant, animal cells. What organelles do they have in common and what is different?
2. Give a short description (three words or less) describing the function of each of the following organelles or parts of the cell:

-nucleus

-nucleolus

-ribosomes make proteins

-rough endoplasmic reticulum makes proteins

-smooth endoplasmic reticulum

-Golgi apparatus

-lysosome

-vacuole

-cytoskeleton

-cytoplasm

-cell membrane

-cell wall

-mitochondria

-chloroplast

3. How does the size and shape of a cell impact its function?
4. How are mitochondria and chloroplasts similar to each other and some forms of bacteria?
5. Contrast prokaryotic and eukaryotic cells.
6. Determine whether each of the following categories are prokaryotes or eukaryotes:
 - animals
 - plants
 - archaea
 - fungi
 - protists
 - bacteria (eubacteria)
7. What are some of the benefits and dangers of bacteria to humans?
8. What characteristics are used to identify bacteria?
9. What are the three types of bacteria shown in the picture below? How do you know this?



10. Describe the ways in which bacteria can exchange genetic information. There are three main ways that we covered:
11. What is antibiotic resistance and how does it occur? What are some ways to prevent antibiotic resistance? Give your rationale (reasoning).
12. What is the endosymbiotic theory of cell development? Explain the evidence that is examined in developing this theory.