

Cells: 10th Grade- Unit 1, Lesson 3

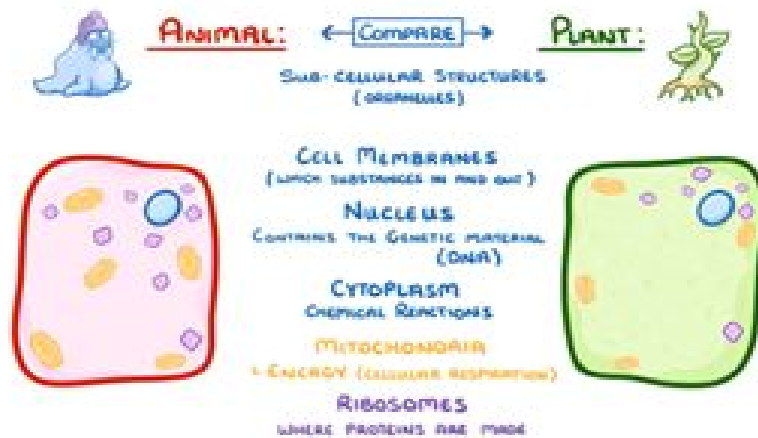
Science concept: The Structure of Plant and Animal cells

Hey guys! Today we'll be looking at **Cells**. Cells are the basic unit of life. All living things, regardless of their size, are made up of cells. Some organisms may be unicellular- made up of 1 cell, while others such as humans are multicellular- made up of many cells.



Supplementary teaching video link

Here's a video about plant and animal cells to kick off today's session. Be sure to pay close attention.



https://youtu.be/QCCp-Y_-7J0

Concept reinforcement questions

1. Plant and animal cells are classified as _____ while bacterial cells are classified as _____.
2. Sub-cellular structures are also referred to as _____.
3. What is the function of the nucleus present in plant and animal cells?
4. Where do chemical reactions occur in plant and animal cells?
5. Which cell organelle is responsible for controlling the flow of substances into and out of the cell?

Answers

1. *Eukaryotic*
 2. *Prokaryotic*
 3. *Organelles*
 4. *Cytoplasm*
 5. *Cell membrane*
6. List 3 similarities and 3 differences between plant and animal cells.

Similarities	Differences

Additional reading

Cells can vary greatly in size. We need light or electron microscopes to see most human cells.

Red blood cells are some of the smallest cells in the human body. These have a diameter of 0.008 mm, meaning a line of 125 red blood cells is only 1 mm long. The **ovum** (or **egg cell**) is one of the largest cells in the human body. It has a diameter of roughly 0.1 mm meaning a line of 10 egg cells is 1 mm long.

Cells of a similar type form tissues. These tissues form organs and these organs in turn form body systems which aid in the normal functioning of our bodies.

DID YOU KNOW?

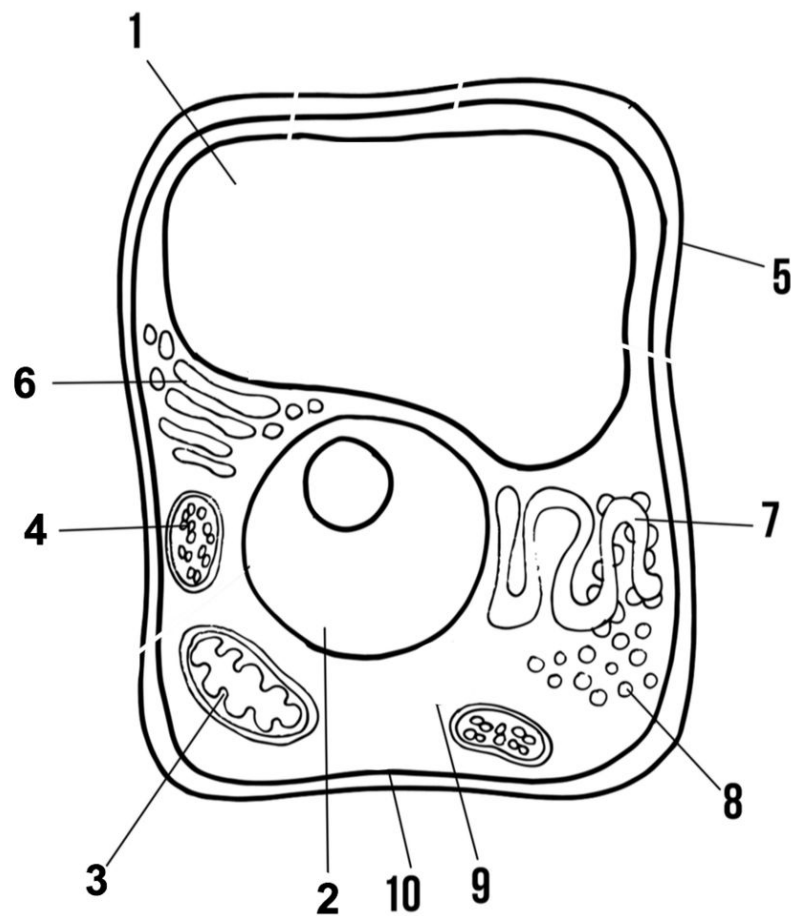
When forensic scientists collect skin, blood and hair cells from a crime scene they analyse DNA from these cells and compare it to DNA samples already collected from thousands of people. This enables them to identify suspects.

Supplementary concept reinforcement exercise

Follow this link for a worksheet compiled by the Ministry of Education Guyana:

<https://education.gov.gy/web2/index.php/students-resources/secondary-school-resources/grade10/grade10-worksheets/grade-10-worksheets-integrated-science/2582-grade-10-integrated-science-week-2-lesson-1/file>

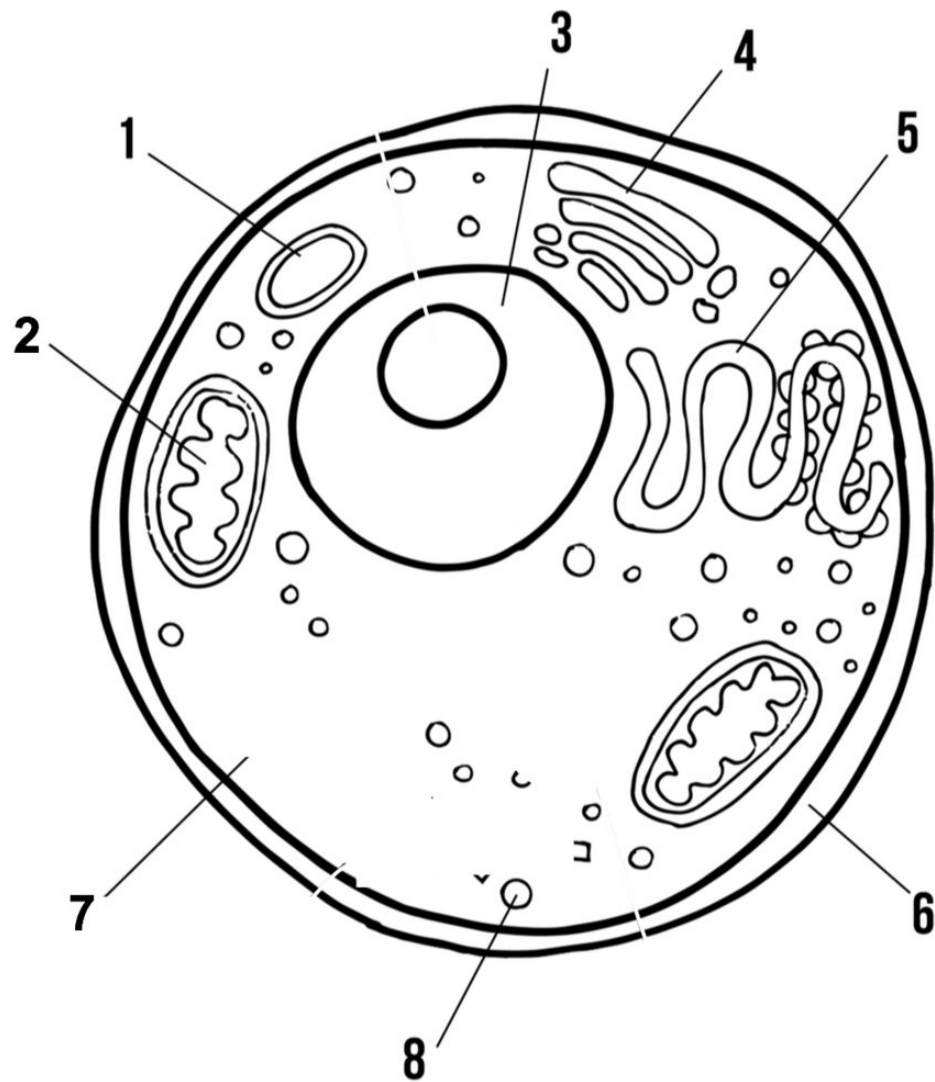
1. Label the plant cell below



1. _____
2. _____
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____

2. Label the animal cell below



1. _____
2. _____
3. _____
4. _____
5. _____

6. _____
7. _____
8. _____
9. _____
10. _____



Scratch software

I hope you guys enjoyed today's session. Now it's time to apply the new information you've learnt. Create a scratch animation explaining the differences between plant and animal cells. Be sure to include descriptions of at least 5 organelles for both cells.

These links may be useful when creating your animation!

<https://youtu.be/LQ7pgAr11sc>

<https://youtu.be/urGHDIYXFM0>