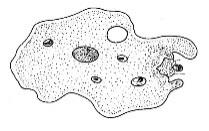
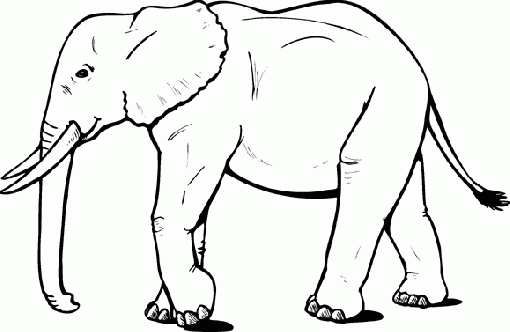
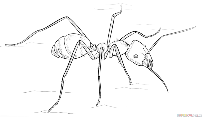
**September 2020 Covid Time** (https://www.youtube.com/watch?v=otCpCn0l4Wo)

**Class 1**

**The Cell**

Cells are the basic building blocks of all living things, from amoeba, to ants, to elephants!

* **The CELL is the basic unit of life.** 



**THE STRUCTURE AND FUNCTION OF THE HUMAN CELL:**

The human body consists of 37 trillion cells--you cannot count this high in your lifetime!

Most cells can only be observed under a microscope—HW: **Research** cells you **CAN** see!



Get out your 15 cm (6 inch) ruler.

15 cm = 150 mm = 150 000 µm

The human eye can only see as small as **0.1 mm** or 0.001 µm

**Sizes (in micrometers) of various cells:**

human egg ovum \_\_\_\_\_\_\_\_\_\_

human sperm \_\_\_\_\_\_\_\_\_\_

E. coli bacterium \_\_\_\_\_\_\_\_\_\_

SARS Cov-2 virus \_\_\_\_\_\_\_\_\_\_

Most microscopes only allow us to distinguish three components of the cell:

* the cell membrane
* the nucleus
* the cytoplasm.

Homework

* This afternoon **or** at the 2 min break put an egg in a glass and cover it with vinegar and keep it until next time--make observations (write them down quickly here)--then we’ll talk next class.

<https://www.exploratorium.edu/snacks/naked-egg>

* Safety is always IMPORTANT so wash your hands after handling the egg and do not touch your face!!!! Sound familiar??

<https://extension.umn.edu/preserving-and-preparing/handling-eggs-prevent-salmonella#:~:text=Salmonella%20doesn't%20make%20the,eggs%20are%20contaminated%20with%20Salmonella>

The **CELL MEMBRANE** is a flexible barrier that surrounds the cell content allowing the cell to interact with its environment.

|  |  |
| --- | --- |
|  |  |

The **CYTOPLASM** is the gelatinous fluid inside the cell membrane and outside the nucleus.

The **NUCLEUS** can easily be distinguished by its darker color. It is the cell’s control center

An electron microscope provides a more detailed viewing of the cell.

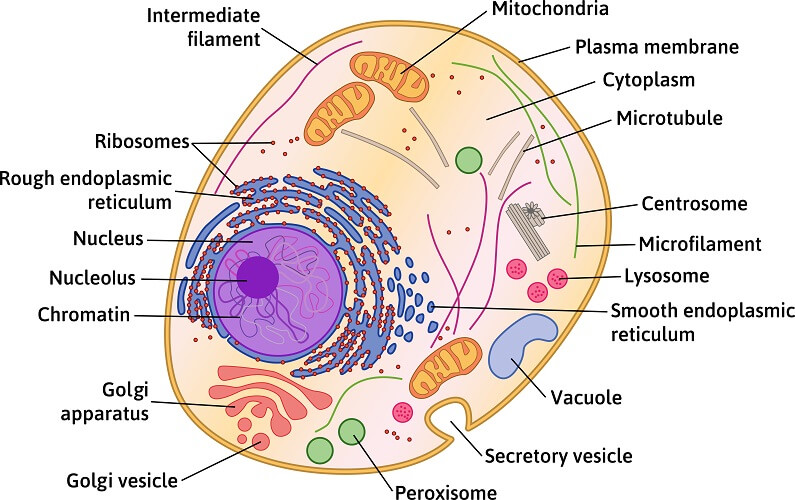
The **cytoplasm** is made up of a clear gelatinous substance called the **CYTOSOL.**

The **cytosol** envelops small structures called **ORGANELLES.**

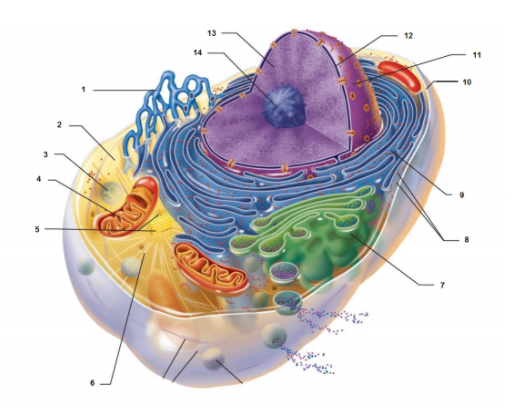
The **organelles** are:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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<https://www.google.ca/url?sa=i&url=https%3A%2F%2Fwww.yourgenome.org%2Ffacts%2Fwhat-is-a-cell&psig=AOvVaw00RAGjWGAgFDBMrdHp6kL2&ust=1600018242836000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCOidqdqS5OsCFQAAAAAdAAAAABAU>



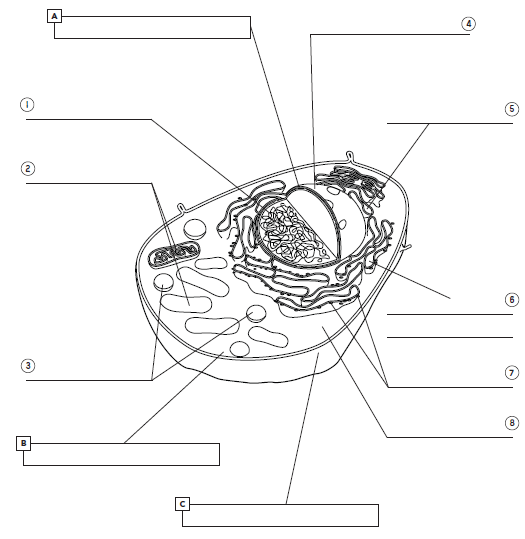
**Cell Structures Worksheet 1**

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|  |  |  |  |
| --- | --- | --- | --- |
| **Structure** | **Number** | **Organelle** | **Number** |
| cytosol |  | golgi apparatus |  |
| lysosome |  | nucleus |  |
| cell membrane |  | ribosomes |  |
| rough endoplasmic reticulum |  | smooth endoplasmic reticulum |  |

**Watch the following video until the 21:39 mark:** [**https://www.youtube.com/watch?v=RKmaq7jPnYM**](https://www.youtube.com/watch?v=RKmaq7jPnYM)

**CELL STRUCTURES WORKSHEET 2**



Label the numbered components.

i) Label the numbers.

ii) Indicate the functions of the lettered components.