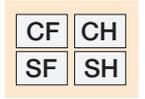


# CELL BIOLOGY

## CELL STRUCTURE

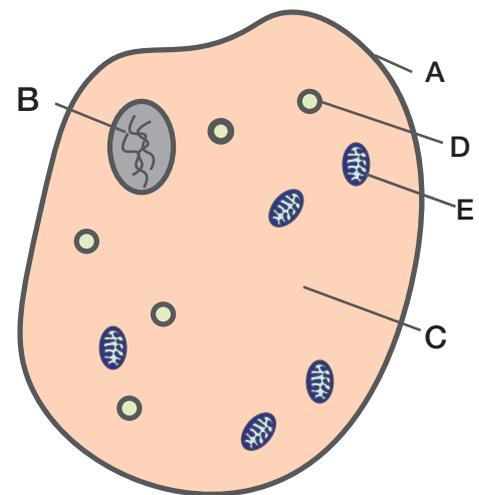


### FEATURES OF EUKARYOTIC CELLS?

A eukaryotic cell has DNA (genetic material) contained in a nucleus. This includes all animals and plants. Eukaryotic cells contain lots of **organelles**. Organelles have specific jobs to do within the cell. All eukaryotic cells contain the features labelled A - E, but only plant cells contain F-H.

|   |                   |  |   |
|---|-------------------|--|---|
| A | Cell Membrane     |  | Controls transport of substances in and out of cells.                                   |
| B | DNA in nucleus    |  | The DNA is found in the nucleus. It controls cell activity.                             |
| C | Cytoplasm         |  | The site of most chemical reactions. It makes up the main body of the cell.             |
| D | Ribosomes         |  | The site of protein synthesis in the cell.  |
| E | Mitochondria      |  | The site of respiration in the cell where glucose reacts with oxygen, releasing energy. |
| F | Cell Wall         |  | Plant cells only. Cell walls are made of cellulose and give strength to the cell        |
| G | Permanent Vacuole |  | Plant cells only. Vacuoles are fluid filled areas inside plant cells.                   |
| H | Chloroplasts      |  | Plant cells only. Chloroplasts are the site of photosynthesis in green plants.          |

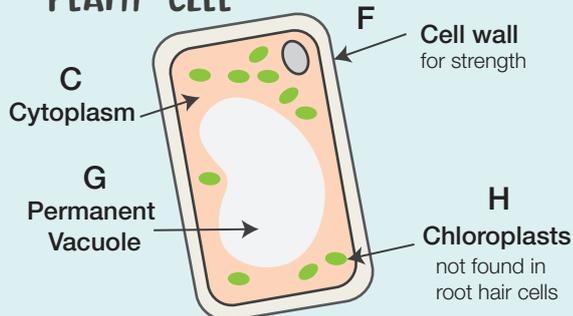
### TYPICAL ANIMAL CELL



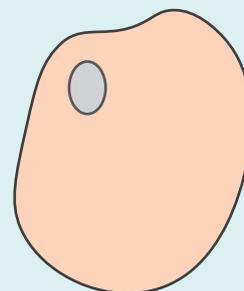
## 2 TYPES OF EUKARYOTIC CELLS

All eukaryotic cells have the parts listed in the table above but plant cells can have 3 extra features:

### PLANT CELL



### ANIMAL CELL



Animal cells do not have a cell wall, chloroplasts or a permanent vacuole.



All living things are made up of cells. Multicellular organisms can have hundreds of different types of cells, all with different structures and functions. Unicellular organisms have only one cell. Unicellular lifeforms like bacteria have a huge number of species and a combined mass equal to all the plants on Earth.