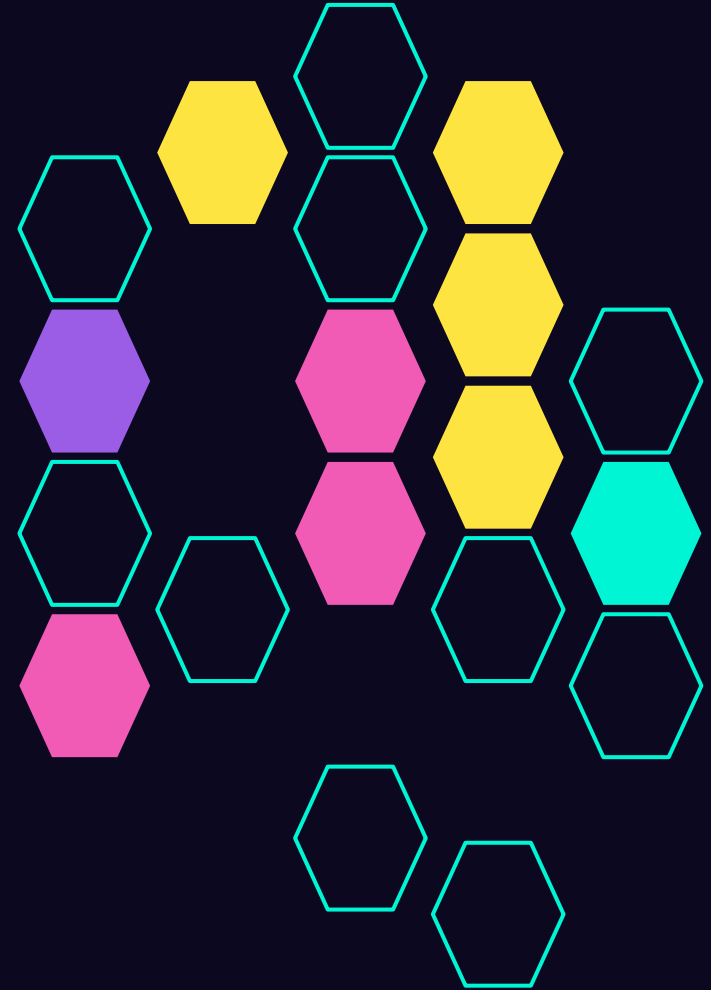


BIOLOGY PROJECT

Cell: The Unit of Life

Structure and function of plant and animal cells



PRESENTED BY
Student Name

SUBJECT
Biology

CLASS / YEAR
Class XI

Agenda

01

Introduction

02

Concepts

03

Experiment

04

Applications

05

Summary

What is cells?

A cell is the smallest structural and functional unit of life; every living thing is made of one or more cells.

Plant and animal cells share a nucleus, cytoplasm and cell membrane. Plant cells also have a cell wall, chloroplasts and a large vacuole.



Diagram

Key concepts

1

Nucleus

Control centre with genetic material.

2

Mitochondria

Powerhouse that releases energy.

3

Cell membrane

Controls what enters and leaves.

HOW IT WORKS

Viewing cells

1	Peel	Onion skin layer
2	Stain	A drop of iodine
3	Mount	Cover slip on slide
4	Observe	Under the microscope

Plant vs animal cell

Part	Plant cell	Animal cell
Cell wall	Present	Absent
Chloroplast	Present	Absent
Vacuole	Large	Small or none

Reference values for illustration.

TRY IT

Experiment

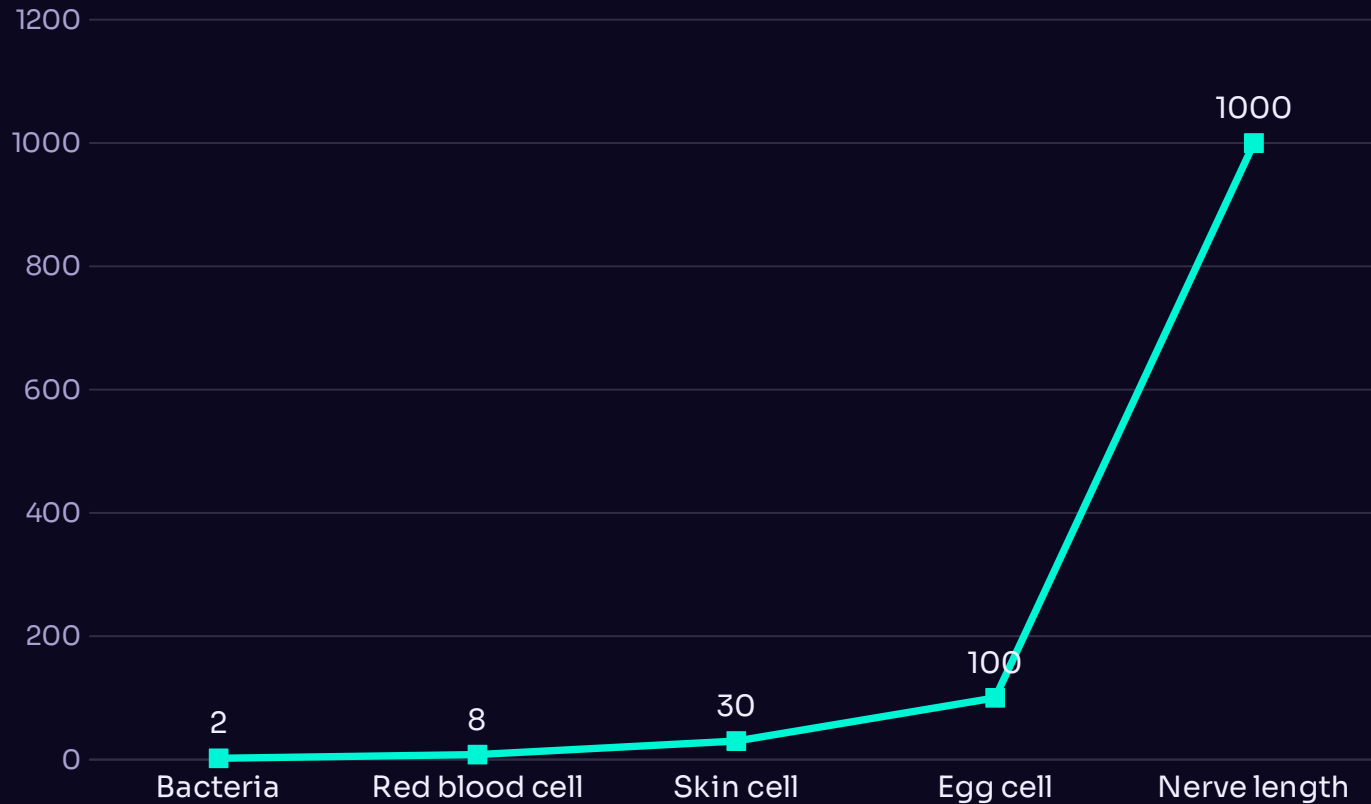
- Peel a thin layer of onion skin
- Place it on a slide with water
- Add a drop of iodine stain
- Observe and draw the cells

SAFETY

Handle slides and blades carefully.

RESULTS

Approximate cell sizes



Illustrative sizes (sample data).

Sample data for illustration — replace with your own figures.

Real-world applications



Image 1

Medicine

Understanding diseases



Image 2

Biotechnology

Growing tissues



Image 3

Agriculture

Better crop varieties

REMEMBER

Quick facts

1665

cells first observed

37 trillion

cells in a human body
(approx.)

1

cell in bacteria

Summary

- All living things are made of cells
- The nucleus controls the cell
- Plant cells have walls and chloroplasts
- Cells come from existing cells

Thank you

Questions?

Student Name • Biology