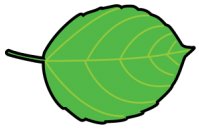
Name & Surname: _____ Class: _____ Date: _____

CELLS AT WORK

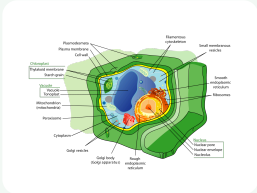
Jobs of parts in plant and animal cells

About 35 minutes Level ★★★☆☆



SEVEN PARTS TO LEARN

Animal and plant cells share a **nucleus**, **cytoplasm**, membrane and mitochondria. Plant cells have three extra parts for support and food making.



- Cell wall - rigid cellulose layer outside the membrane that **strengthens** and supports plant cells.
- Cell membrane - thin boundary that **controls** what enters and leaves every cell.
- Cytoplasm - jelly-like fluid where most **reactions** happen.
- Nucleus - holds DNA and **controls** all cell activities.
- Vacuole - large sac of cell sap that **stores** water and keeps plant cells firm.
- Mitochondria - tiny rods that **release** energy from food by aerobic respiration.

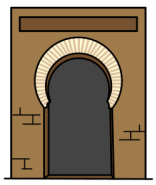
TASK A

Example done for you

/3

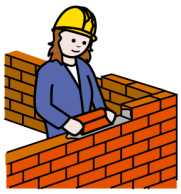
Label each close-up with the correct part from the word bank. Use the hints to help you.

chloroplast | mitochondria | cell wall | ~~cell membrane~~



cell membrane

controls entry



_____

strengthens plant cell



_____

releases energy



_____

traps light

Created with LessonDino.com · AI lesson planner with checkable sources

WORDS TO KNOW

Check meanings, then solve the crossword.

KEY WORDS

nucleus: controls the cell and holds DNA

cell membrane: controls what enters and leaves

vacuole: stores water and cell sap

chloroplast: traps light for photosynthesis

cytoplasm: jelly where reactions happen

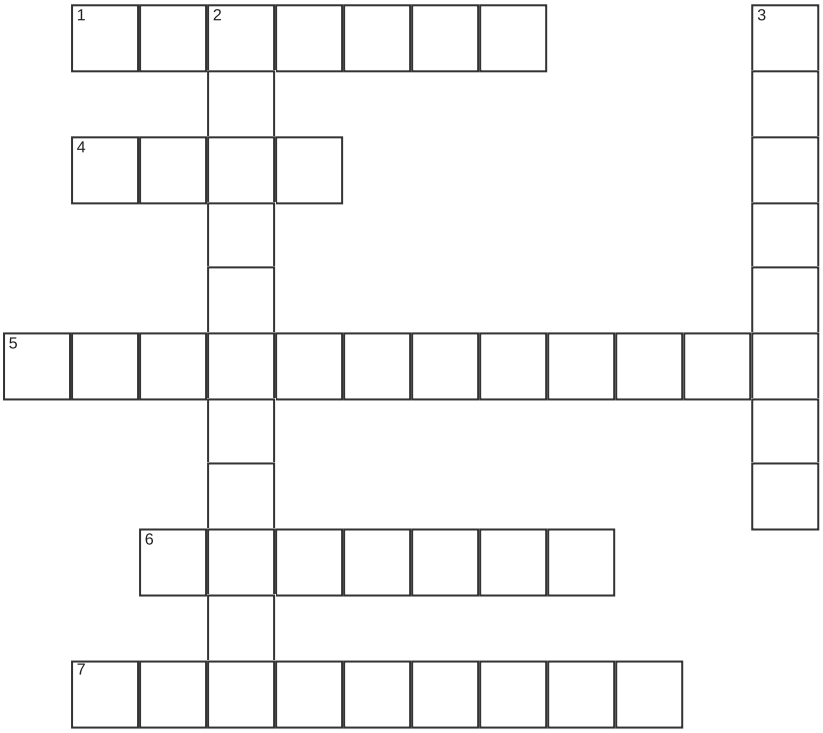
cell wall: rigid cellulose support outside membrane

mitochondria: releases energy by respiration

TASK B

/7

Read each clue and write the correct part in the grid.



Across

1. holds DNA and controls activities (7)
4. rigid cellulose layer in plants (4)
5. releases energy by respiration (12)
6. stores water and cell sap (7)
7. jelly where reactions happen (9)

Down

2. traps light for photosynthesis (11)
3. controls what enters and leaves (8)

Created with LessonDino.com · AI lesson planner with checkable sources

A DAY IN LEAF

Draw how a leaf cell makes and uses food.

TASK C

Draw and caption what happens in a leaf cell during the day.

1

First - Morning light hits the leaf. A chloroplast traps the light.

2

Then - The nucleus controls the cell as sugar is made.

3

Next - Mitochondria release energy from sugar for activities.

4

Then - The vacuole stores water to keep the cell firm.

5

Finally - The membrane controls movement and the wall holds shape.

Created with LessonDino.com · AI lesson planner with checkable sources

TWELVE PART REVIEW

Fill each wedge with a short note.

TASK D

Summarise each job in a few words around the clock.



Created with LessonDino.com · AI lesson planner with checkable sources

THINK LIKE SCIENTISTS

Use evidence to compare cells and explain ideas.

TASK E /3

Read the observation and use the evidence to decide.

A student places two cells under the microscope. Cell A has a **rigid** outer layer, green discs and a large sac filled with watery sap. Cell B has a stretchy outer boundary but no rigid layer and no green discs. Both cells have a control centre with DNA, jelly-like fluid and tiny rods that release **energy**.

Question	It says...	I say...	And so...
Which cell is most likely from a **plant**? Why?	It says Cell A has...	I know plants have...	So Cell A is...
Why does Cell A stay **firm** even with lots of water?			
Why do both cells need **mitochondria**?			

TASK F /4

Build a strong paragraph to answer the big question.

Why do plant cells need both a wall and a membrane?

P **Point**
I think that plant cells need both because...

E **Evidence**
For example, the membrane... and the wall...

E **Explain**
This shows that the membrane... while the wall...

L **Link**
Therefore, both are needed for...

HOW DID I DO?

Circle a face for each line.

I can name the seven cell parts. ☹ 😐 ☺

I can describe what each part does. ☹ 😐 ☺

I can compare plant and animal cells. ☹ 😐 ☺

Created with LessonDino.com · AI lesson planner with checkable sources

Answer sheet: Cells at Work

Task A

1. cell membrane
2. cell wall
3. mitochondria
4. chloroplast

Task B

1 across: NUCLEUS
2 down: CHLOROPLAST
3 down: MEMBRANE
4 across: WALL
5 across: MITOCHONDRIA
6 across: VACUOLE
7 across: CYTOPLASM

Task C

Answers will vary.

Task D

Answers will vary.

Task E

1. So Cell A is...
2. So it stays firm because...
3. So both need them to...

Task F

Example: Plant cells need both a wall and a membrane because they do different jobs. The membrane controls what enters and leaves, while the wall made from cellulose strengthens and supports the cell to stop it bursting. This shows the membrane manages substances and the wall gives rigid support. Therefore both are needed for control and strength.

Pictures: Pictograms: Sergio Palao, ARASAAC (arasaac.org) · CC BY-NC-SA; Drawing: LadyofHats · Public domain · Wikimedia Commons; "Green leaf png sticker, transparent" is marked with CC0 1.0. To view the terms, visit https://creativecommons.org/publicdomain/zero/1.0/.

Created with LessonDino.com · AI lesson planner with checkable sources