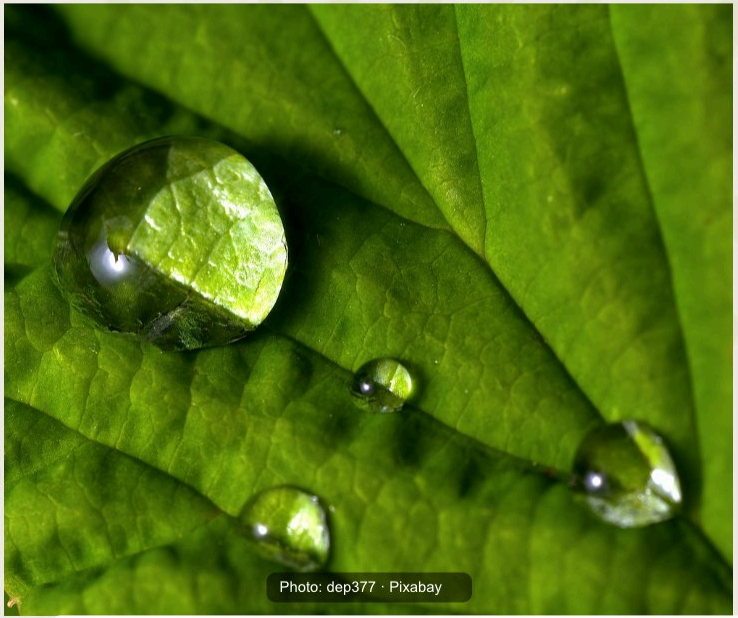
The Tiny City Inside Every Cell

Year 7 Science - cell structure and function



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Today we will...

WE ARE LEARNING TO

- Describe jobs of seven cell parts
- Compare plant and animal cells
- Link structure to function

SUCCESS LOOKS LIKE

- ✓ I can name a part from its job
- ✓ I can explain what each part does

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Cells are living building blocks

- All living things are made of tiny cells.
- Plant and animal cells share some parts.
- Plant cells have three extra parts.
- Each part has a special job to do.

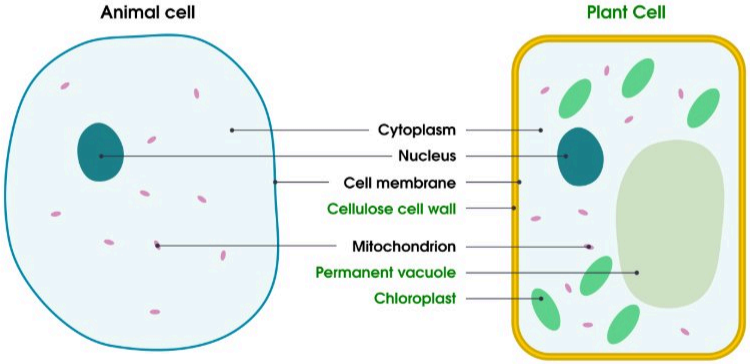


Diagram: domdomegg · CC BY 4.0 · Wikimedia Commons

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Four parts found in most cells

Nucleus

Controls the cell and holds DNA instructions.

Cell membrane

Controls what enters and leaves the cell.

Cytoplasm

Jelly where many chemical reactions happen.

Mitochondria

Release energy from food using oxygen.

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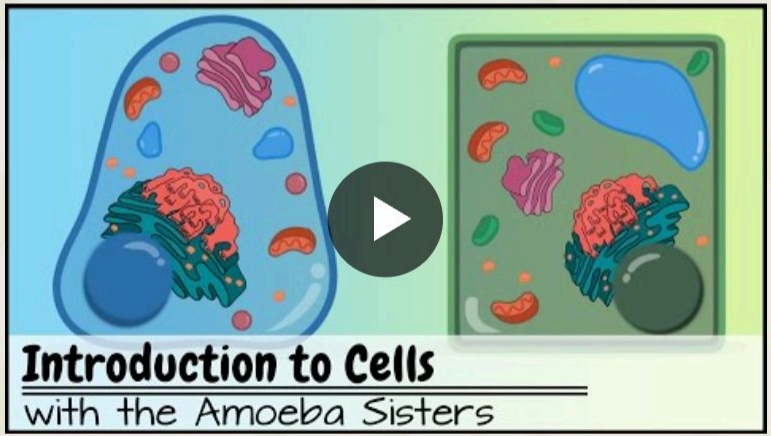
Think, pair, share

What would happen to a plant if it had no strong cell walls?



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Grand tour of the cell



▶ 0:00 – 4:30

- Listen for the job of each part
- Spot which parts are plant-only

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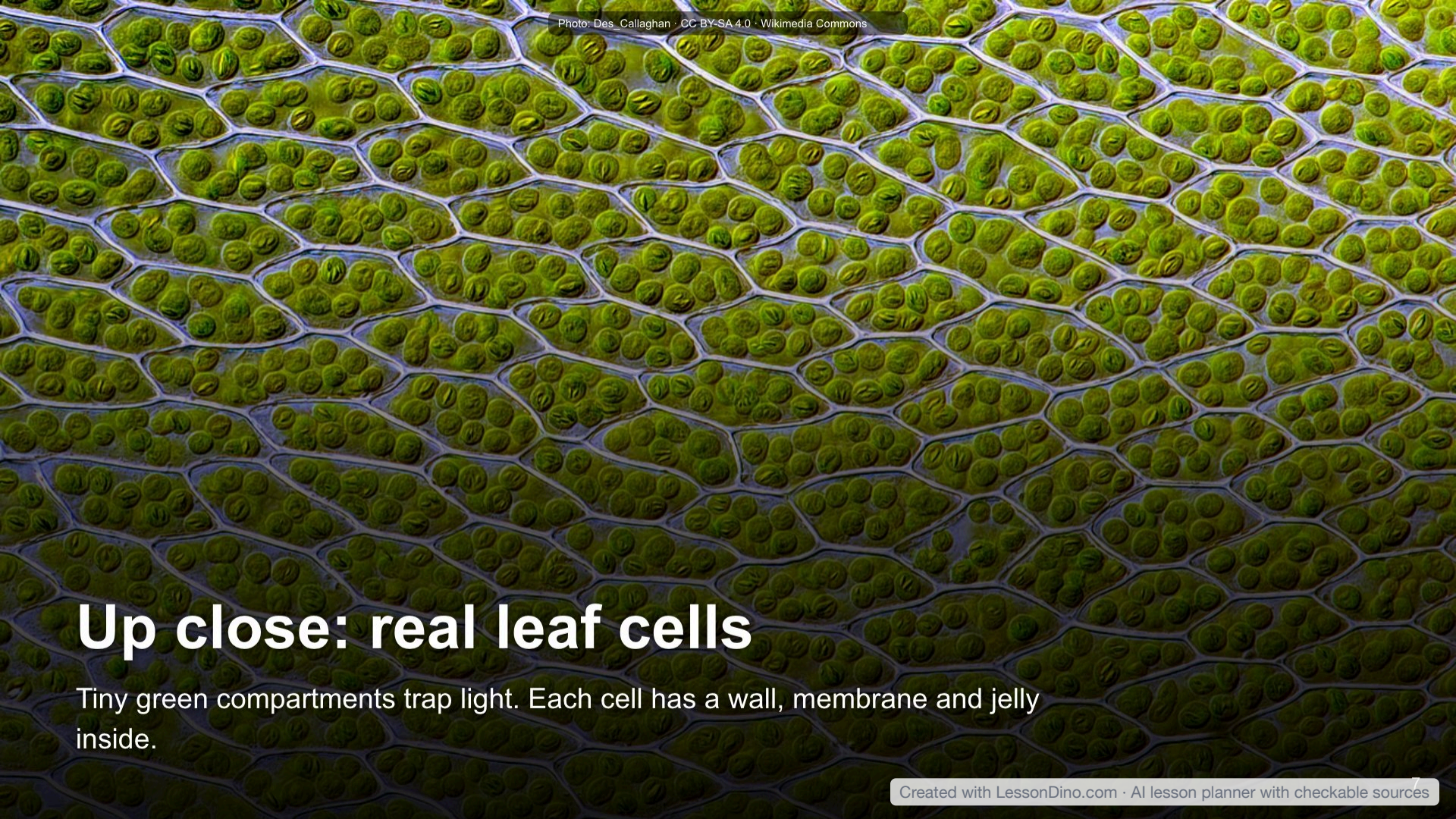


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Up close: real leaf cells

Tiny green compartments trap light. Each cell has a wall, membrane and jelly inside.

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Zoom in on plant cells



▶ 0:10 – 5:00

- Notice how the wall supports the cell
- Link vacuole and chloroplasts to plant needs

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Your task

In pairs, sketch an animal cell and a plant cell and label the seven parts with jobs.

1. Sketch two large cell outlines
2. Add and label all seven parts
3. Write one job for each part

10 min

In pairs

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From sunlight to energy

Sunlight is trapped by chloroplasts

↓

Chloroplasts make sugar by photosynthesis

↓

Sugar and oxygen are used by mitochondria

↓

Mitochondria release energy for the cell

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What could this be?

I store water and sap and keep the cell firm. I am huge in plants. What am I?



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True or false?

The nucleus controls the cell and holds DNA.

The cell membrane gives plants rigid support.

Mitochondria release energy using food and oxygen.

Only animal cells have chloroplasts for photosynthesis.

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