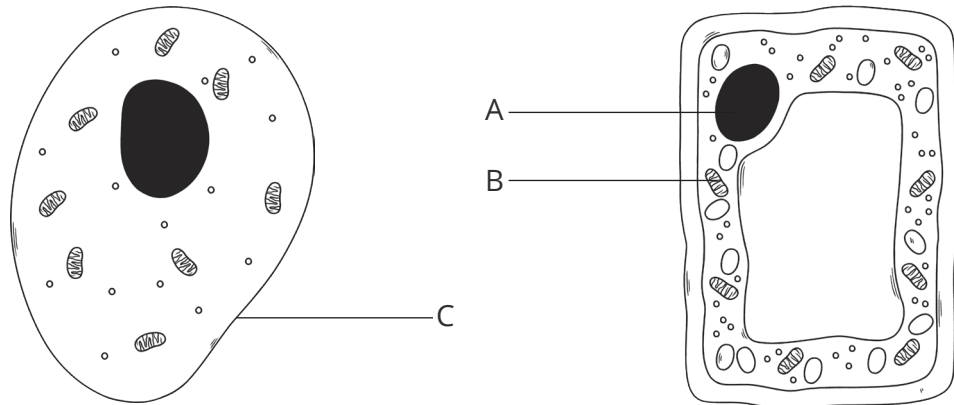


Cells and Organisation **Answers**

1. Name the parts of the cells labelled on the diagrams below.



A. nucleus

B. mitochondria

C. cell membrane

2. Describe the function of the cytoplasm.

A jelly-like substance in which sub-cellular structures are found and where most chemical reactions occur.

3a. Name **one** sub-cellular structure that is present in a plant cell and **not** in an animal cell.

cell wall, chloroplast or permanent vacuole

3b. Explain why this sub-cellular structure is in a plant cell and **not** an animal cell.

Plant cells need a cell wall and a permanent vacuole for structure and support. Animal cells do not need a cell wall or a permanent vacuole as they have muscle and skeletal structures to provide support.

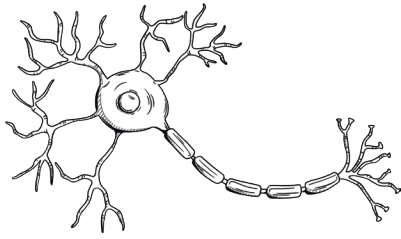
Plant cells need chloroplasts to photosynthesise/make their own food. Animal cells do not need chloroplasts because they catch or collect and eat their food.

4. Give **one** way that a bacterial cell is different from a plant and animal cell.

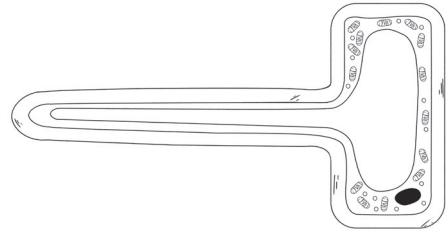
Any one from:

- **Bacterial cells can have flagella/a flagellum.**
- **Bacterial cells have circular DNA.**
- **Bacterial cells have plasmids.**

5. Name each of the specialised cells shown below.

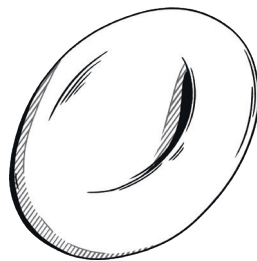


name **nerve cell/neuron**



name **root hair cell**

The diagram below shows a red blood cell.



6. Explain **one** way that the red blood cell is adapted for its function.

Any one from:

- It has a **biconcave shape to increase the surface area for diffusion.**
- **There is no nucleus. This means there is more room for haemoglobin, which binds to oxygen molecules.**

The diagram below shows a sperm cell.

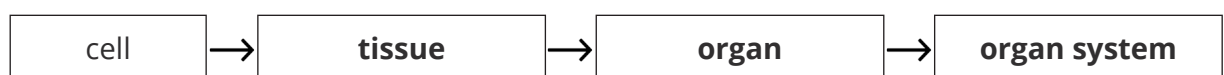


7. Explain **two** ways that a sperm cell is adapted for its function.

Any two from:

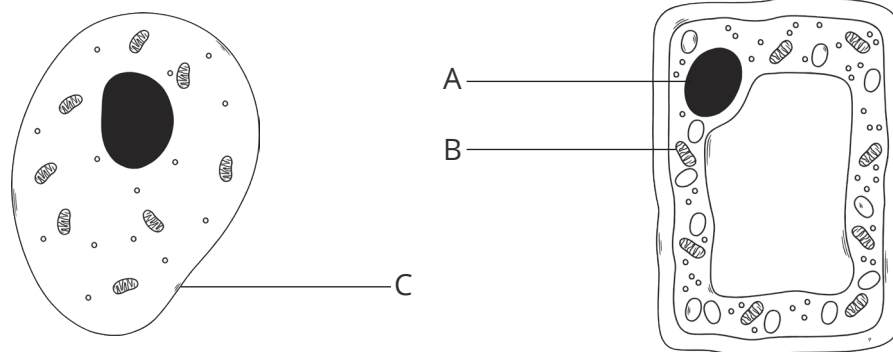
- **It has a tail so that it can travel to the egg for fertilisation.**
- **It has lots of mitochondria to release energy for movement.**
- **It has an acrosome/enzymes to help penetrate the egg cell.**

8. Complete the diagram to show the levels of organisation from smallest to largest.



Cells and Organisation **Answers**

1. Name the parts of the cells labelled on the diagrams below.

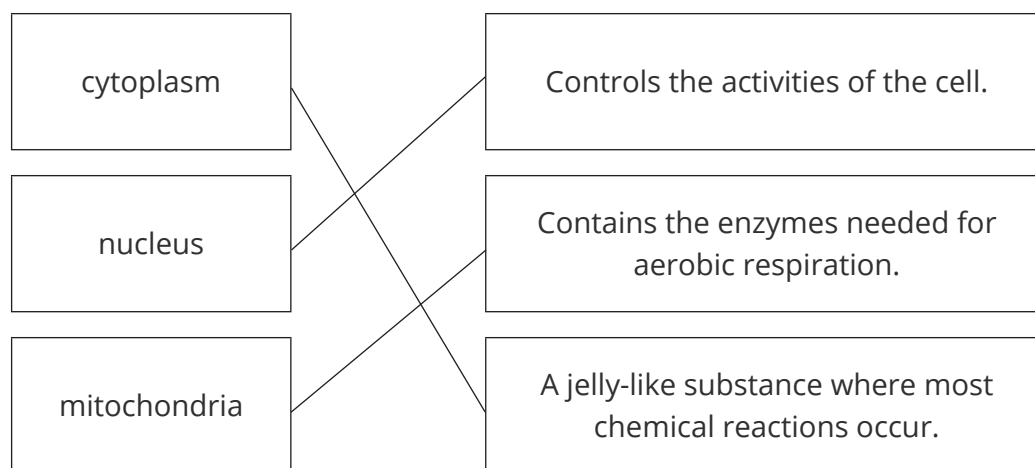


A. nucleus

B. mitochondria

C. cell membrane

2. Draw **one** line from each sub-cellular structure to its function.



3. Which structure is present in a plant cell but **not** in an animal cell?

Tick **one** box.

- cell membrane
- circular DNA
- permanent vacuole

4. Which structure is present in a bacterial cell, but **not** in a plant cell or an animal cell?

Tick **one** box.

- chromosomes
- nucleus
- plasmid

5. Plant cells have chloroplasts, but animal cells do not.

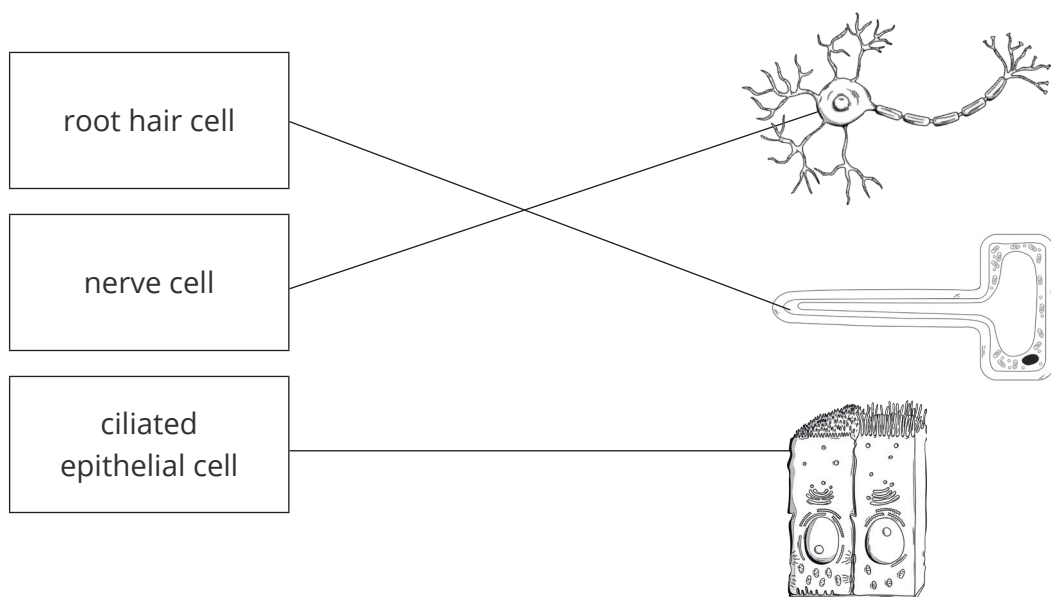
a. Give the function of the chloroplast.

to photosynthesise/make food

b. Explain why animal cells do not need chloroplasts.

Animal cells do not need chloroplasts because they catch or collect and eat their food.

6. Draw **one** line from each specialised cell to the correct diagram.



The diagram below shows a sperm cell.

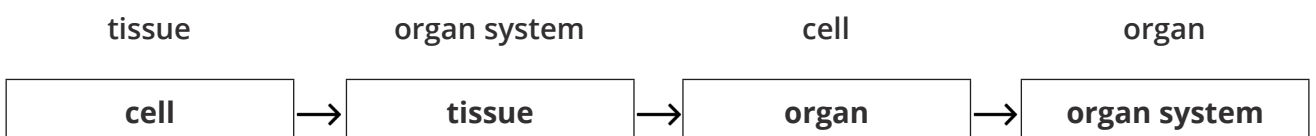


7. Give **one** way that a sperm cell is adapted for its function and explain why it needs the adaptation.

Any pair from:

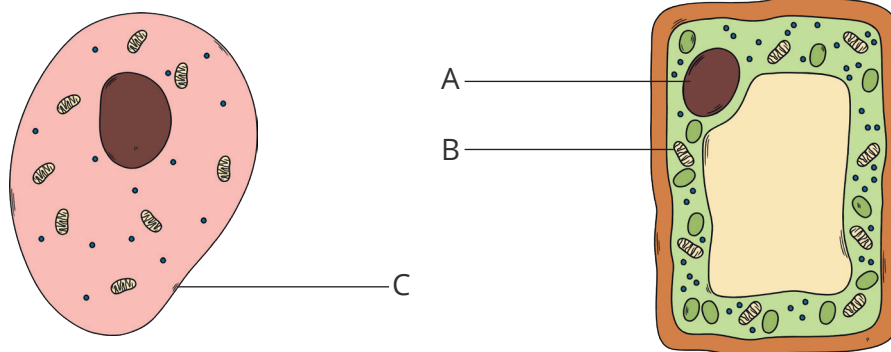
- **It has a tail; so that it can travel to the egg for fertilisation.**
- **It has lots of mitochondria; to release energy for movement.**
- **It has an acrosome/enzymes; to help penetrate the egg cell.**

8. Write the following key words into the correct boxes to show the levels of organisation from smallest to largest.



Cells and Organisation

1. Name the parts of the cells labelled on the diagrams below.



A. _____

B. _____

C. _____

2. Draw **one** line from each sub-cellular structure to its function.

cytoplasm

nucleus

mitochondria

Controls the activities of the cell.

Contains the enzymes needed for aerobic respiration.

A jelly-like substance where most chemical reactions occur.

3. Which structure is present in a plant cell but **not** in an animal cell?

Tick **one** box.

- cell membrane
- circular DNA
- permanent vacuole

4. Which structure is present in a bacterial cell, but **not** in a plant cell or an animal cell?

Tick **one** box.

- chromosomes
- nucleus
- plasmid

5. Plant cells have chloroplasts, but animal cells do not.

a. Give the function of the chloroplast.

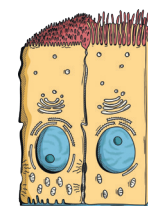
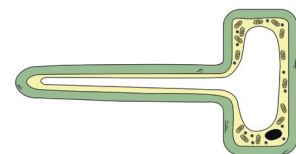
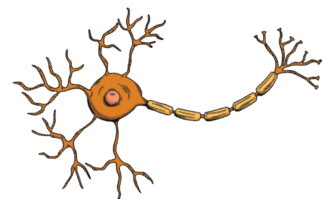
b. Explain why animal cells do not need chloroplasts.

6. Draw **one** line from each specialised cell to the correct diagram.

root hair cell

nerve cell

ciliated epithelial cell



The diagram below shows a sperm cell.

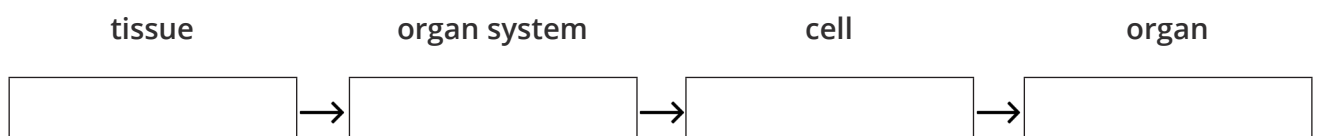


7. Give **one** way that a sperm cell is adapted for its function and explain why it needs the adaptation.

adaptation _____

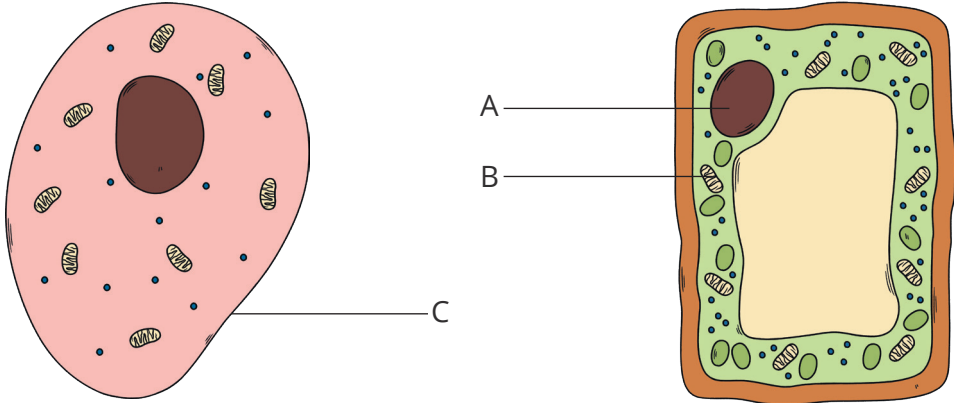
explanation _____

8. Write the following key words into the correct boxes to show the levels of organisation from smallest to largest.



Cells and Organisation

1. Name the parts of the cells labelled on the diagrams below.



- A. _____
- B. _____
- C. _____

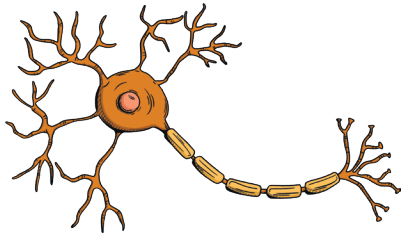
2. Describe the function of the cytoplasm.

3a. Name **one** sub-cellular structure that is present in a plant cell and **not** in an animal cell.

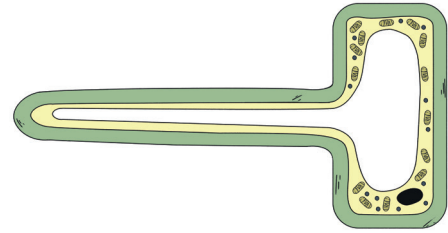
3b. Explain why this sub-cellular structure is in a plant cell and **not** an animal cell.

4. Give **one** way that a bacterial cell is different from a plant and animal cell.

5. Name each of the specialised cells shown below.

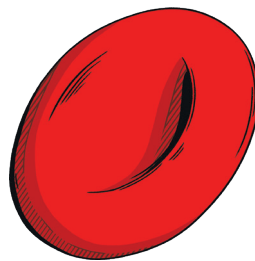


name _____



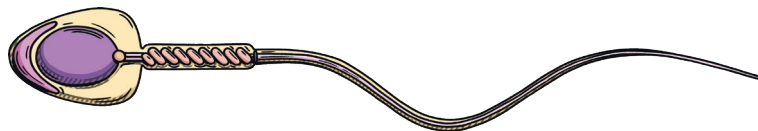
name _____

The diagram below shows a red blood cell.



6. Explain **one** way that the red blood cell is adapted for its function.

The diagram below shows a sperm cell.



7. Explain **two** ways that a sperm cell is adapted for its function.

1. _____

2. _____

8. Complete the diagram to show the levels of organisation from smallest to largest.

