

Combined Science - Biology - KS4
Cell Biology

Comparison of cells

(Downloadable student document)

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OAK
NATIONAL
ACADEMY

Pause the video to complete your task

Quick recap:

1. How is a prokaryotic cell different from an eukaryotic cell?
2. True or false: There is no cell membrane in a prokaryotic cell.

Resume once you're finished



Answers:

1. Prokaryotic cells do not have a nucleus while eukaryotic cells have a nucleus.

2. False. Prokaryotic cells have cell membranes.



Pause the video to complete your task

Quick concept check:

1. What is the function of the cell membrane?
2. True or false: Mitochondria are the sites for photosynthesis.
3. True or false: A permanent vacuole is found in an animal cell only.
4. True or false: A cell wall is only found in animal cells but not plant cells.

Resume once you're finished



Answers to quick concept check:

1. The cell membrane controls what goes into and out of the cell.
2. False. Mitochondria are sites for respiration.
3. False. A permanent vacuole is found in a plant cell not an animal cell.
4. False. A cell wall is always present in a plant cell.



Independent task

<u>Subcellular structures</u>	<u>Is it present in plant cells?</u>	<u>Is it present in animal cells?</u>
Nucleus	Yes	Yes
Cell membrane		
Cytoplasm		
Mitochondria		
Chloroplast		
Permanent vacuole		
Cell wall		



Answers:

<u>Subcellular structures</u>	<u>Is it present in plant cells?</u>	<u>Is it present in animal cells?</u>
Nucleus	Yes	Yes
Cell membrane	Yes	Yes
Cytoplasm	Yes	Yes
Mitochondria	Yes	Yes
Chloroplast	Yes	No
Permanent vacuole	Yes	No
Cell wall	Yes	No



Answers

There is a cell wall in both the yeast cell and the plant cell.

There is a vacuole in both the yeast cell and the plant cell.

There is a nucleus, a cell membrane and cytoplasm in both the yeast cell and the plant cell.

There are chloroplasts in the plant cell but not the yeast cell.



Answers:

1. The bacterial cell. It does not have a nucleus. Or, it has free DNA in the cytoplasm.
2. Both cells have a cell wall and the cytoplasm.
3. This is because the bacterial cell has a cell wall.

