



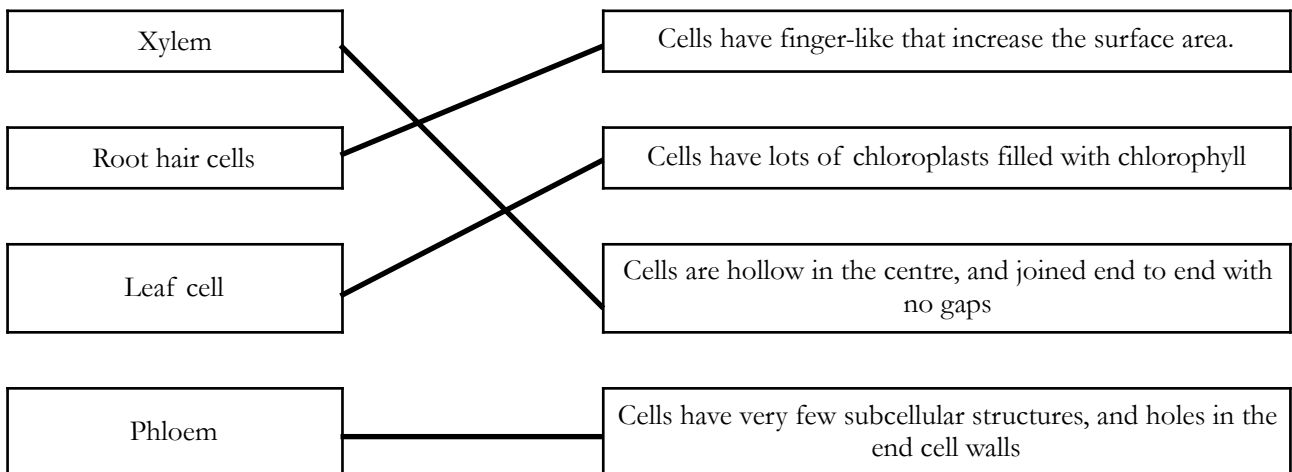
# Cell differentiation and Specialisation

1 Fill in the missing words

Animals and plants produced by sexual reproduction begin life as a **single cell**, which is known as a fertilised egg or zygote. This cell must **divide** to produce a multicellular organism. It must also **differentiate**, so that its cells develop features that enable them to fulfil specific roles, at which point we can say that the cells are **specialised**.

[ 4 marks ]

2 Match the below plant cells to their adaptations



[ 4 marks ]

3 What is the function of a sperm cell and how is it adapted to its function?

- The function of a sperm cell is to carry genetic information to an egg cell.

It is adapted to this by having:

- a streamlined body,
- lots of mitochondria
- Few other subcellular structures

[ 3 marks ]

4 Muscle cells are specialised for contraction. Give two adaptations that help them achieve this

- 1) Made of contractile filaments so that they can contract
- 2) Contain lots of mitochondria

[ 2 marks ]

[ Total - 13 marks ]