## #15 Cell functions



Multicelullar plants and animals contain many different types of cell. Each type of cell is design for a particular function.

Here are examples of cells and their functions in tissues

1. Ciliated cells in respiratory tract

jotesale.co.uk Features: tiny hairs called **cilin** which can movemucus. Function: waft mucus with eacteria and that away from the lungs.



Features: cells merge together to form fibres that can **contract**. **Function**: cause movement



## 3. Red blood cells

Features: have no nucleus, contain hemoglobin **Function**: transport oxygen around the body





## **Examiner's tips**

- 1. You need to be able to give examples of tissues, organs and organ systems in both plants and animals. A leaf is an organ made up of a number of tissues, e.g. upper epidermis, palisade, mesophyll.
- 2. If you draw a diagram to support an exam answer, make sure you refer to its in your written answer. Annotation is more likely to help you gain extra mark.

#### **Example of annotation**

Action of phagocyte



cytoplasm forms pseudopodia to surround and engulf bacteria - enzymes are released to digest and kill bacteria

# **Try this**



Figure above shows root hair cells.

- co.uk enables the 1. Explain how the presence of root hair celle on efficient absorption of water and mile as [2 marks]
- 2. Root hair cells can absorb mineral ions by diffusion and active transport.

sport [2 marks] a) Defi D term active tra

b Explain why respiration rates may increase in root hair cells during the uptake of mineral ions [1 mark]

## Answers

1. - Large number of root hair cells give a large surface area to the root.

- Mitochondria are present to provide energy for active transport.

2. a) active transport is absorption of a substance into a cell or across a membrane

- against (up) a concentration gradient.

- using energy

b) active transport requires energy