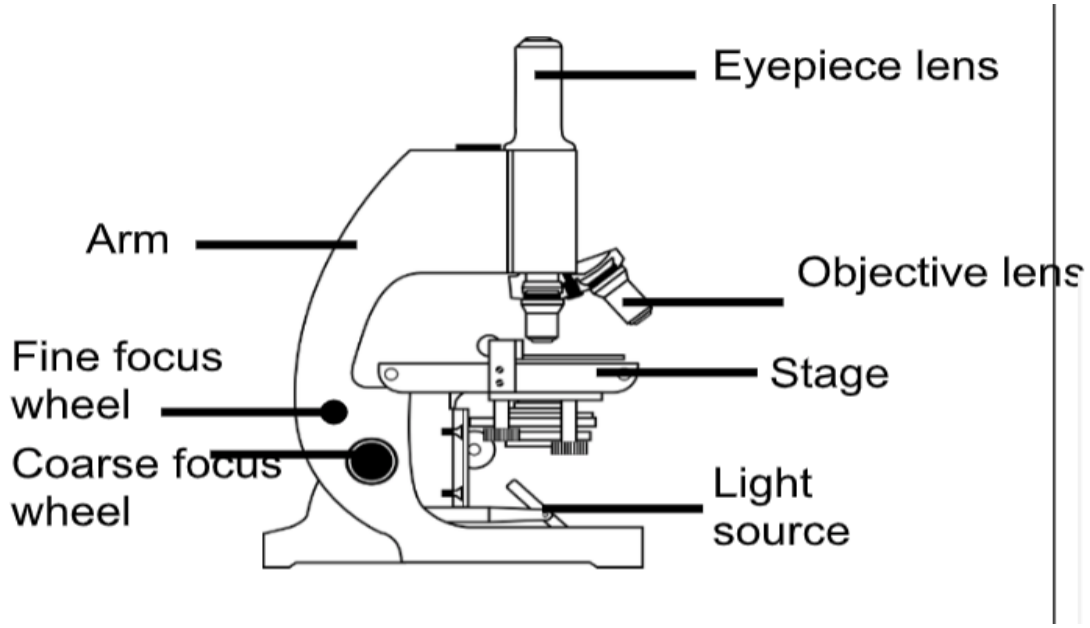
Name -

Cells and Microscopes Review Markscheme

1.



2. Describe the steps you would follow to view a cell sample under this microscope.

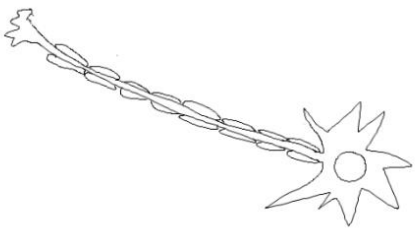
- **Place the specimen/sample on a slide (with a drop of stain and a cover slip) and secure with stage clips**
- **Set the objective lens to the lowest magnification**
- **Move the stage up towards the objective lens using the coarse focus wheel (ensuring that the lens does not touch the slide)**
- **Look through the eyepiece lens and use the coarse focus wheel to slowly bring the sample into focus**
- **When the image has become clearer, focus further using the fine focus wheel until the image is clear**

3. State the function of each of the specialised cells below and how its structure is adapted for its function:

Sperm cell

Function: **to swim to the egg/fertilise the egg**

Structure: **tail to swim/mitochondria to provide lots of energy**



Neuron (Nerve cell)

Function: **send messages/impulses to control the body**

Structure: **long (axon) and lots of connections to pass messages easily**

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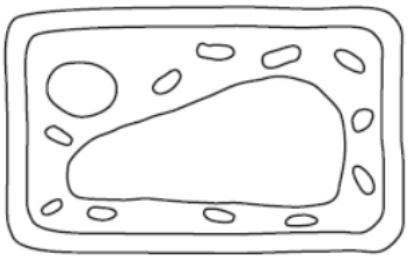
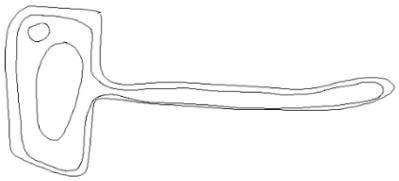


Leaf cell

Function: **to take in lots of sunlight for photosynthesis**

Structure: **lots of chloroplasts (containing chlorophyll)**



Root hair cell

Function: **to absorb water for photosynthesis**

Structure: **large surface area**

4. Write the correct keyword for each definition:

- A group of the same cells working together _____**tissue**_____
- A group of tissues working together for the same function __**organ**_____
- A group of organs working together for the same function __**organ system**___

Stretch Activity

- **Skeletal system – support and protection of the body, made up of all bones and joints**
- **Nervous system – transmitting signals throughout the body, controlling movement and responses, made up of brain, spinal cord, neurons, sense organs and muscles**
- **Circulatory system – supplies body with oxygen, transports hormones and removes waste, made up of heart and blood vessels**
- **Respiratory system – taking in of oxygen and expulsion of carbon dioxide, primarily focused on lungs**
- **Digestive system – breakdown of food into smaller components that can be used by the body, mouth, salivary glands, oesophagus, stomach, intestines, liver, gall bladder, pancreas, rectum, anus**