

Name ..... Class ..... Date .....

### Microscopy

#### Specification reference

- B1.1.5 Microscopy

#### Aims

This aim of this task is to incorporate the appropriate vocabulary necessary when working with and talking about the use of microscopes.

#### Learning outcomes

After completing this worksheet, you should be able to:

- use appropriate language when using and talking about a microscope.

#### Task

Read the passage below:

Scientists often want to look at things very closely. To help see things larger than they actually are scientists use a microscope.

When you look at something under a microscope, the thing that you are looking at is called the object. It may also be called a specimen.

The first thing you must do is to place the object onto a small sheet of glass called a slide. This process is called mounting.

You may need to cut a very thin slice of the object in order to see through it.

You may have to use a stain to make the features of it stand out.

After you have mounted it and stained it (if needed), cover it with a small square of thin glass called a cover slip to protect the sample.

Once this is done you can secure the slide to the microscope by attaching it to a flat plate called a stage with a pair of clips.

Turn the larger wheel on the side of the microscope, called the coarse focus, until the slide is well away from the objective lenses. There are several of these on a disc which can be rotated.

To view the object as big as possible turn the turret until the shortest objective lens is over the slide. This is the least magnification – how many times bigger the object looks.

Look down the eyepiece lens. This is usually a  $\times 10$  magnification. This is on the top of the tube. Slowly turn the coarse focus wheel clockwise until you can see the object clearly. This raises the stage nearer to the objective lens.

Now turn the turret until a larger objective lens is over the slide. Turn the smaller wheel (the fine focus) until you can see the object in greater detail.

# AQA Biology

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B1.1

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### Questions

- 1 Give two words for the name of the sample you look at through a microscope.  
..... (2 marks)
- 2 What is the piece of glass that you place your sample on called?  
..... (1 mark)
- 3 What is the thin square of glass that protects your sample called?  
..... (1 mark)
- 4 Explain why you might add a stain to the object you are looking at.  
..... (1 mark)
- 5 What word do you use to describe placing the object on the slide?  
..... (1 mark)
- 6 What is the name of the flat plate to which you attach the slide?  
..... (1 mark)
- 7 Which objective lens do you use first?  
..... (1 mark)
- 8 What magnification is usual for the eyepiece lens?  
..... (1 mark)
- 9 Give a reason why you might look at the slide from the side.  
.....  
..... (1 mark)
- 10 Explain how you can alter the illumination.  
.....  
..... (1 mark)