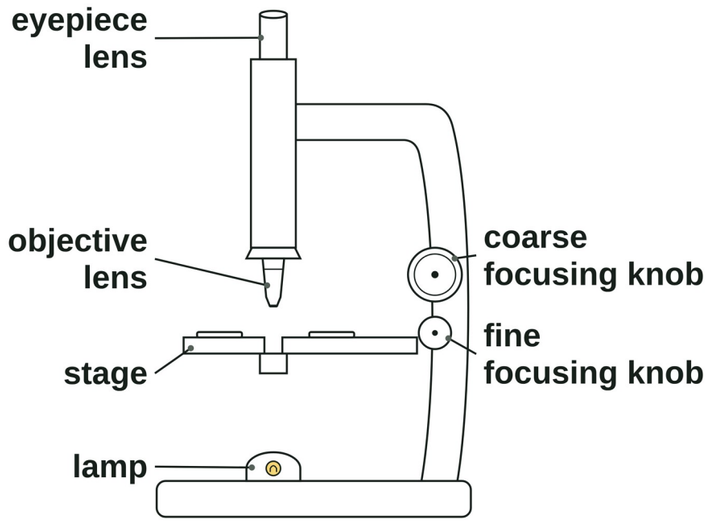
# B1 L3 Alternative worksheet: Using a microscope



Name: _____ Class: _____

## Key facts

- A **light microscope** uses light and lenses to make things look bigger.
- You look through the **eyepiece lens**. The **objective lens** is just above the slide.
- The **stage** holds the slide. The **lamp** shines light up through it.
- **Total magnification** = eyepiece × objective. × 10 and × 40 make × 400.
- To make a slide: a **thin** layer of onion, a drop of **iodine solution** (a **stain**), then a **coverslip**.
- Start on **low power**. Find the cells with the **coarse focusing knob**. Make them sharp with the **fine focusing knob**.
- Draw with a **sharp pencil**. Do not shade.
- An **electron microscope** shows much more detail than a light microscope.



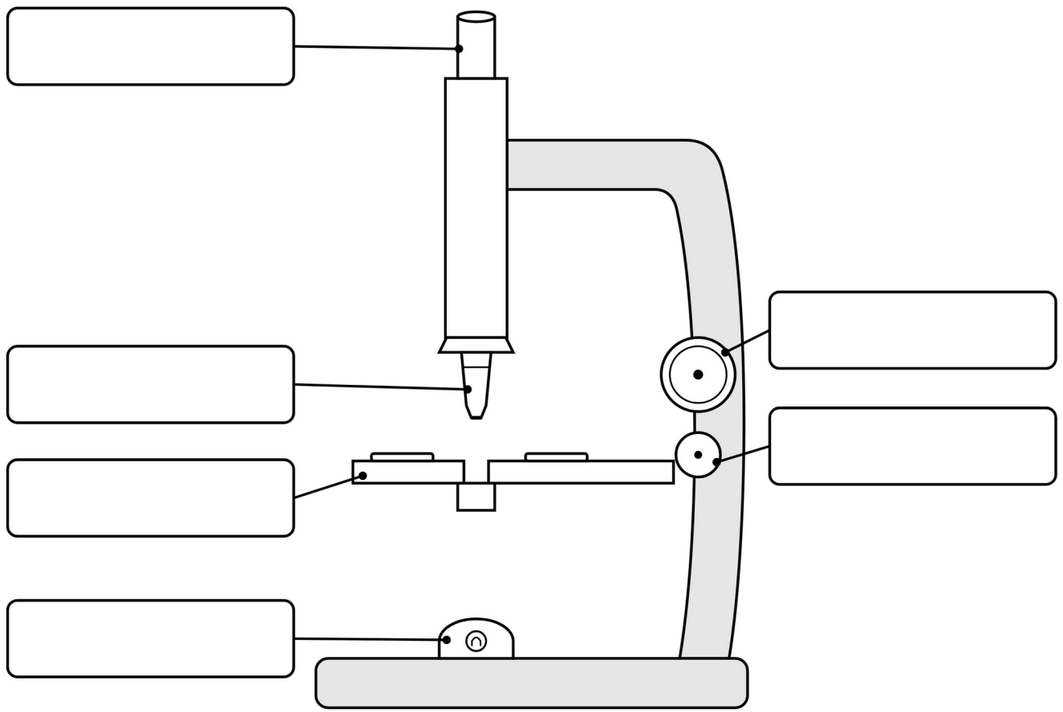

Look through the eyepiece lens. The lamp shines light up through the slide.

## A. Label the microscope

Help: online screens 1 and 3 [6]

Write a word from the box in each label box.

| | | |
|---|---|---|
| **eyepiece lens** | **objective lens** | **stage** |
| **lamp** | **coarse focusing knob** | **fine focusing knob** |



# B1 L3 Alternative worksheet: Using a microscope



Name: _____ Class: _____

## B. Match the part to its job

Help: online screen 3 [4]

Draw a line from each part to its job.

| | |
|---|---|
| **Eyepiece lens** | makes the image sharp |
| **Stage** | shines light up through the slide |
| **Lamp** | you look through it |
| **Fine focusing knob** | holds the slide |

## C. Fill the gaps

Help: online screens 6, 7 and 10 [6]

Use the words in the box. Use each word once.

| thin | iodine | coverslip | lowest | fine | pencil |
|---|---|---|---|---|---|

1. The layer of onion must be _____ so that light can pass through it.
2. Add a drop of _____ solution to stain the cells.
3. Lower the _____ slowly, at an angle.
4. Start with the _____ -power objective lens.
5. Make the image sharp with the _____ focusing knob.
6. Draw what you see with a sharp _____ .

## D. True or false?

Help: online screens 6, 7, 8, 10 and 12 [6]

Write true or false after each sentence.

1. Focusing makes the cells look bigger. _____
2. A stain makes the cells easier to see. _____
3. An air bubble is a kind of cell. _____
4. You should shade your drawing. _____
5. An electron microscope shows more detail than a light microscope. _____
6. Robert Hooke named cells in 1665. _____

## E. Multiply the numbers

Help: online screen 4 [4]

**Total magnification = eyepiece × objective. Fill in the totals.**

| Eyepiece | Objective | Total |
|---|---|---|
| × 10 | × 4 | |
| × 10 | × 10 | |
| × 10 | × 40 | |

Which total makes the cells look biggest? [1]

_____