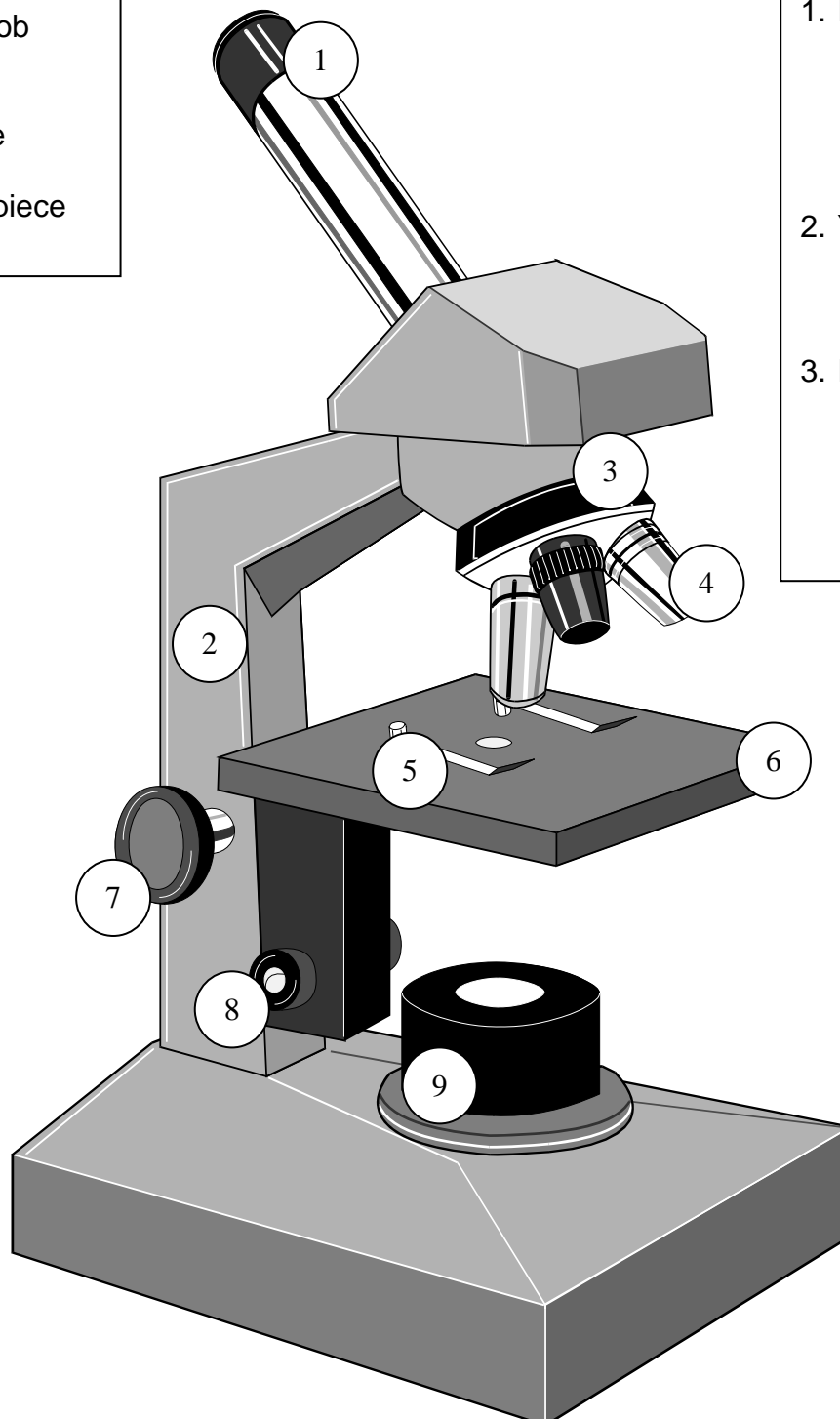


MICROSCOPE WORKSHEET

Label parts 1 – 9 of the microscope using the words provided.

Arm or body
Clip
Coarse focus knob
Eye piece
Fine focus knob
Lens or objective
Light or lamp
Revolving nose piece
Stage



TRUE OR FALSE?

1. It is easiest to focus on an object using the lowest power magnification first.
2. You should focus by moving the lens towards the slide.
3. If the eye piece is x10 and the lens is x4, then the object will be seen at x14 magnification.

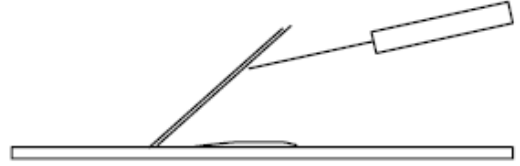
ANSWERS

1 – eye piece 2 – arm or body 3 – revolving nose piece 4 – lens or objective 5 – clip 6 – stage 7 – coarse focus knob 8 – fine focus knob 9 – light or lamp

True or False: 1 – true 2 – false 3 – false (it will be x40)

Making a slide. (Place statements A – E in the correct order)

- A. Gently lower the coverslip.
- B. Add a drop of stain.
- C. Lay them on the slide.
- D. Make sure the sample lies flat.
- E. Take a thin layer of cells.



□ → □ → □ → □ → □

How to use a microscope

_____ the microscope slide _____ your specimen on it on the stage.
_____ the _____ in place _____ the clips. Adjust the mirror
_____ lamp or turn on the light if this is built in to _____ microscope. Place
the smallest objective lens over the hole in the stage. This is the lowest power magnification
lens. Looking from the side of the microscope, turn the coarse focusing _____ to
make the objective lens as close to the stage as _____. Now look into the eyepiece
lens. Turn the coarse _____ knob until what you see is clear, always moving the
stage and lens away from each other. _____ the object is in focus, use the fine focus
to _____ the _____ really clear.

WORD BANK: with focusing make and image knob slide using
once possible the hold place

QUESTIONS

1. How do you put the cover slip on a slide without getting bubbles trapped under it?
2. How are air bubbles recognised when viewing a slide?
3. When you are focusing on an object, in which order should the three objective lenses always be used? Why?
4. When focusing on an object, why do we always start with the objective lens near the specimen and move the lens *away*?
5. Which is more powerful: a X10 eye-piece and a X20 objective or a X7 eye-piece and a X40 objective?
6. How should a microscope be a) carried safely? b) put away correctly?

ANSWERS

Making a slide: E → C → D → B → A

How to use a microscope: Place the microscope slide with your specimen on it on the stage. Hold the slide in place using the clips. Adjust the mirror and lamp or turn on the light if this is built in to the microscope. Place the smallest objective lens over the hole in the stage. This is the lowest power magnification lens. Looking from the side of the microscope, turn the coarse focusing knob to make the objective lens as close to the stage as possible. Now look into the eyepiece lens. Turn the coarse focusing knob until what you see is clear, always moving the stage and lens away from each other. Once the object is in focus, use the fine focus to make the image really clear.

Questions: 1 – lower it gently from 45° angle to flat using a pencil 2 – large, dark ringed circles 3 – lowest to highest magnification 4 – so that you don't risk smashing the lens into the slide as you try to focus it 5 – x7 and x40 (x280 magnification) 6 – a) with two hands, one on body/arm and one under base b) set lens to low power, cover microscope with bag/cover, wind up any electrical leads.