

## How to Use the Microscope

### Magnification

Your microscope has 3 magnifications: Scanning, Low and High. Each objective will have written the magnification. In addition to this, the ocular lens (eyepiece) has a magnification. The total magnification is the ocular x objective

	Magnification	Ocular lens	Total Magnification
Scanning	4x	10x	40x
Low Power	10x	10x	100x
High Power	40x	10x	400x

### General Procedures

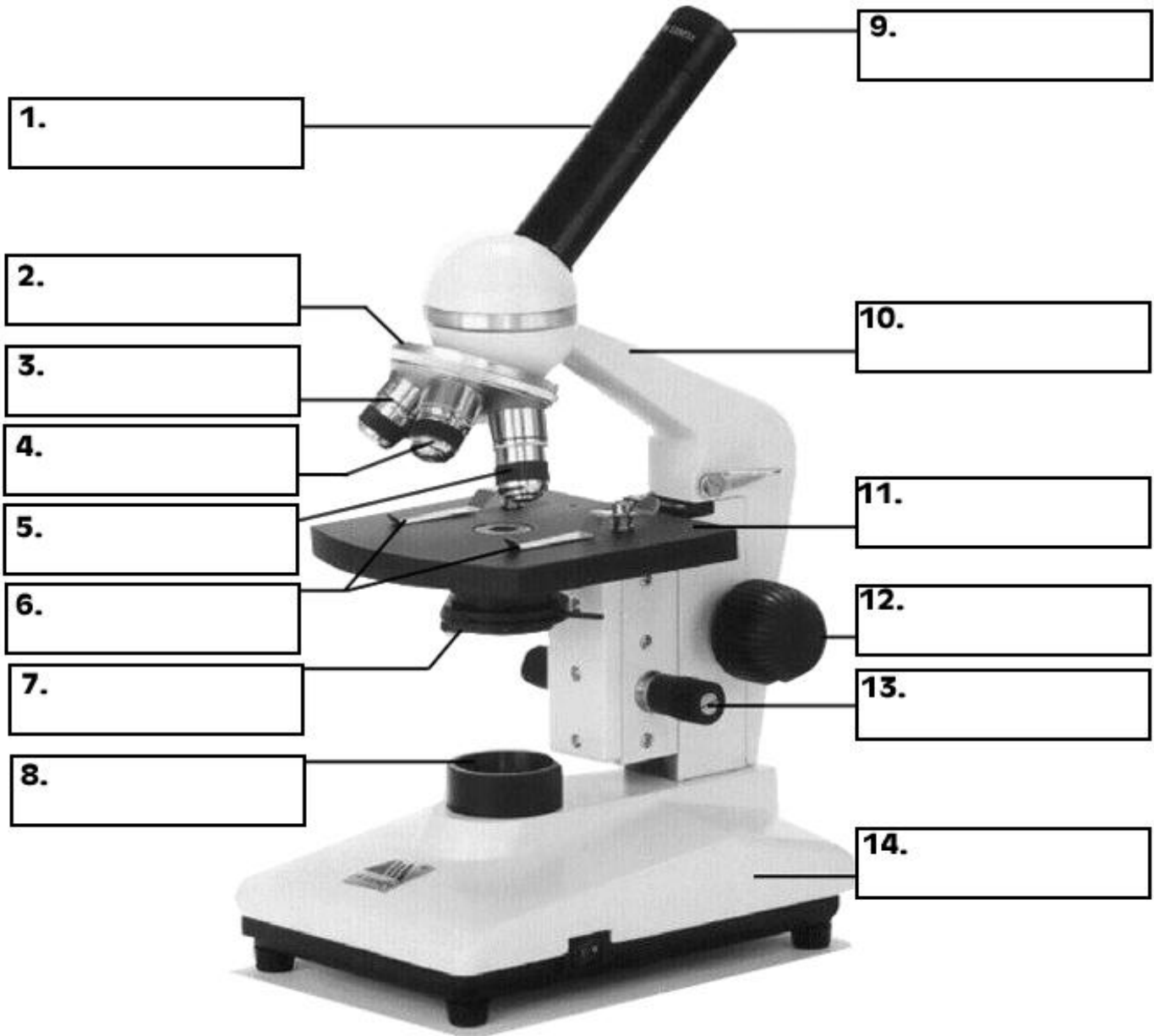
1. Make sure all backpacks and junk are out of the aisles.
2. Plug your microscope in to the extension cords. Each row of desks uses the same cord.
3. Store with cord wrapped around microscope and the scanning objective clicked into place.
4. Carry by the base and arm with both hands.

### Focusing Specimens

1. **Always start with the scanning objective.** Odds are, you will be able to see something on this setting. Use the Coarse Knob to focus, image may be small at this magnification, but you won't be able to find it on the higher powers without this first step. Do not use stage clips, try moving the slide around until you find something.
2. **Once you've focused on Scanning, switch to Low Power.** Use the Coarse Knob to refocus. Again, if you haven't focused on this level, you will not be able to move to the next level.
3. **Now switch to High Power.** (If you have a thick slide, or a slide without a cover, do NOT use the high power objective). At this point, ONLY use the Fine Adjustment Knob to focus specimens.
4. If the specimen is too light or too dark, try adjusting the diaphragm.
5. If you see a line in your viewing field, try twisting the eyepiece, the line should move. That's because its a pointer, and is useful for pointing out things to your lab partner or teacher.



Label the parts of the microscope



**Microscope Use:**

- 15. When focusing a specimen, you should always start with the \_\_\_\_\_ objective.
- 16. When using the high power objective, only the \_\_\_\_\_ knob should be used.
- 17. The type of microscope used in most science classes is the \_\_\_\_\_ microscope.
- 18. You should carry the microscope by the \_\_\_\_\_ and the \_\_\_\_\_.
- 19. The objectives are attached to what part of the microscope (it can be rotated to click lenses into place?) \_\_\_\_\_
- 20. A microscope has an ocular objective of 10x and a high power objective of 50x, what is the microscope's total magnification? \_\_\_\_\_

*Match the letter to the correct part function*

1.  holds the high and low power objective lenses, allows them to rotate for viewing

2.  high power objective

3.  fine adjustment

4.  controls the amount of light passing through the opening of the stage

5.  separates the eyepiece lens from the objective lens

6.  coarse adjustment

7.  supports the microscope

8.  eye piece

9.  low power objective

10.  mirror/light source

11.  stage

12.  supports the body tube

13.  holds the slide in place

a contains a lens that magnifies about 10x

b reflects light upward through the diaphragm

c magnifies about 10x

d diaphragm

e stage clips

f revolving nose piece

g moves the body tube for focusing with the high-power objective lens

h supports the slide being used

i moves the body tube for focusing with the low-power objective lens

j magnifies about 40x

k body tube

l arm

m base