



Amoeba Sisters | Video Recap

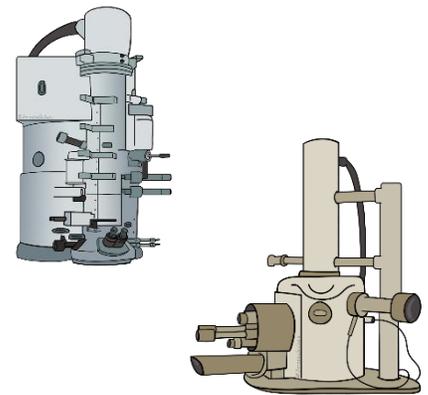
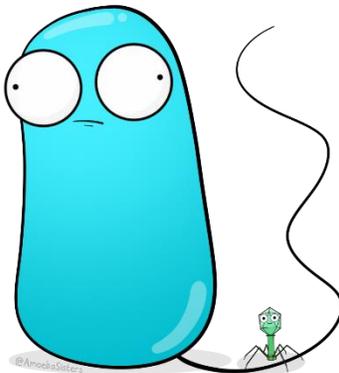
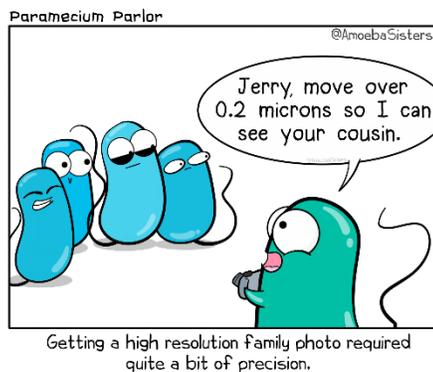
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Amoeba Sisters Video Recap: *Microscopes*

1. Explain why both **magnification** and **resolution** are important in order to see a microscopic organism.

2. How are **electron microscopes** different from **light microscopes** and how is their ability to observe a specimen different?

3. What are two different types of **electron microscopes** and how might their ability to observe a specimen be different?



4. Label the below objective lenses.



Assuming a 10X **eyepiece** (ocular lens), can you give the **total magnification** when using the above objective lenses?

Scanning Objective x Eyepiece

Low Power Objective x Eyepiece:

High Power Objective x Eyepiece:

For the following tip, explain the reasoning for why it should be followed.

It's important to be aware that many slides and coverslips are made of glass.

5. Reasoning:



For the following tip, explain the reasoning for why it should be followed.

When using a light microscope, focus the specimen with the scanning objective lens first.

6. Reasoning:



For the following tip, explain the reasoning for why it should be followed.

As you move up to the high power objective lens, avoid using the coarse focus knob.

7. Reasoning:





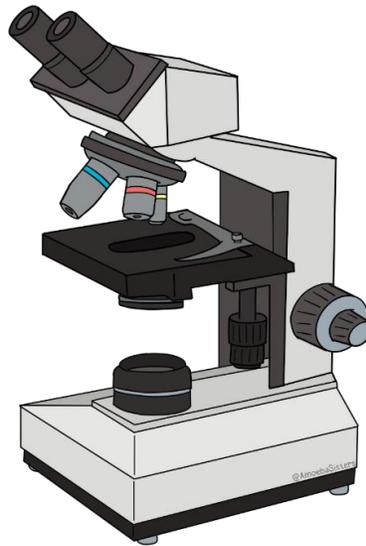
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Amoeba Sisters Video Recap: Microscopes

8. Explain, in your own words, how you would use the light microscope to view a wet mount of a protist, assuming the microscope is plugged in and that the light source is on. Please use *at least* the following 9 structures in your description and underline them as you use them: **stage**, **stage clip(s)**, **stage knob(s)**, **eyepiece**, **scanning objective lens**, **low power objective lens**, **high power objective lens**, **coarse focus knob**, and **fine focus knob**.

9. For the below light microscope, label all structures you were asked to include in the previous question (9 structures) and additionally label the **condenser**, **diaphragm**, and **light source**. Check that you have 12 structure names labeled on the below microscope.



True and False Quick Check

Place "T" for true and "F" for false.

10. ___ Follow the procedure for a **wet mount** to avoid air bubbles. An air bubble may be mistaken for the specimen.

11. ___ The **pointer** that you see in view can typically be rotated by rotating the eyepiece (ocular lens).



12. ___ If the lens needs to be *cleaned*, gently use tissue paper to wipe the lens thoroughly.

13. ___ The light microscope drawn is also known as a **compound microscope** as it has more than one set of lenses.

14. ___ **Oil immersion** can be used at all magnification levels to increase resolution.

