

Microscope Lab - Microbes in Your Mouth

Group names: _____ Date: _____

Materials you will need:

- Microscope
- Swabbing materials:
 - cotton swabs
 - slides
 - coverslips or additional slide
- Toothbrushes
- Toothpaste
- Floss
- Antiseptic mouthwash
- Small paper cups
- Alcohol swabs to clean the eyepiece between each participant

Part One: What's living in your mouth?

Making Your Slide

1. Look at your station. Identify all of the materials you will need for this lab.
2. Identify the parts of the microscope at your station. Operate the moving parts until you are familiar with how they work. Be careful!
3. Select a clean slide. Place it on the workspace in front of you.
4. Select a clean swab.
5. Rub the inside of your cheek and your teeth with the swab. Swab areas where you think the most microbes may live in your mouth.
6. Rub the swab on your clean slide.
7. Cover your slide with a coverslip or another slide.

Viewing Your Slide

1. Rotate the coarse adjustment knob so that the stage moves down and away from the objective lenses as far as it can go.
2. Rotate the nosepiece of the microscope so that the lowest power objective lens is over the iris diaphragm (this should also be the shortest lens).
3. Place your slide on the stage and center the slide over the hole in the stage.
4. Use the stage clips to secure the slide in place. If you are using a second slide as your coverslip and the stage clips disturb your slide, you may decide not to use the clips for this lab.
5. Using the coarse adjustment knob, move the stage all the way up, as close to the objective lens as it will safely move.
6. Look through the eyepiece. Use the coarse adjustment knob and slowly move the stage down until the prepared slide comes into focus.
7. If you move the stage all the way down and do not ever see anything, move your slide on the stage and repeat steps 5 & 6 again.
8. Once the slide comes into coarse focus, use the fine adjustment knob to bring it into sharper focus.
9. Carefully rotate the nosepiece so that the next higher power objective lens is now pointed at your slide. Do not move either the focus knob or the slide during this step.

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10. Move the fine adjustment knob as necessary to bring the slide into sharp focus again.
11. Sanitize the eyepiece of the microscope with an alcohol swab before the next member of your group uses the microscope.
12. Carefully remove your slide from the stage and clean or dispose of it according to the instructions you are given.

Part Two: How clean is your mouth?

Making Your Slide

1. Brush, floss, and use mouthwash according to your facilitator's instructions.
2. Select a clean slide. Place it on the workspace in front of you.
3. Select a clean swab.
4. Rub the inside of your cheek and your teeth with the swab. Be careful to swab areas where you think the most microbes may live in your mouth.
5. Rub the swab on your clean slide.
6. Cover your slide with a coverslip or another slide.

Viewing Your Slide

Follow the instructions above to use the microscope to view your slide.