

NOTE: This is a Science Lab lesson. If your lab is separate from your classroom, make sure you have signed up for the lab today.

TITLE OF LESSON

Biology Unit 1 Lessons 14 – Microscopy, Lab 4 Part 2
How do cells appear different on the inside and outside?

TIME ESTIMATE FOR THIS LESSON

One class period

ALIGNMENT WITH STANDARDS

California – Biol CB 1; IE 1

MATERIALS

Lab 4 Part 2 Microscopy – Student Page
student microscope with 10x, 40x, 100x lenses
immersion oil
transparent metric ruler
pond water
Elodea leaves
pollen from flowers
glycerin
cheek cells and methylene blue
slides and coverslips
other cells to observe, if available
water
eye dropper
microscope micrometer
tongue depressors

LESSON OBJECTIVES

- To understand the fundamentals of microscopy
 - To learn the history of microscopes, their types and functions
 - To learn how to use a microscope
 - To visualize different cells types
 - To understand the concept of magnification, field of view and depth of focus
 - To learn how to make a wet mount slide
 - To understand the importance of staining
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FOCUS AND MOTIVATE STUDENTS – WARM-UP ACTIVITY

- 1) Homework Review – Stamp/initial complete homework assignments. Pass back graded assignments and have students place them in the appropriate sections of their binders.
 - 2) **Agenda** – Have students copy the agenda you posted.
 - 3) Review – Briefly review with students how to use a microscope.
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ACTIVITIES – INDIVIDUAL AND GROUP

1. Directions – Hand out **Lab 4 Part 2 Microscopy**. This experiment is a modified version of The Sidwell Friends Virtual Lab Book at <http://www.sidwell.edu/sidwell.resources/bio/VirtualLB/> Review with students the lab instructions.
 2. Central Question – After students have read over the lab, ask them what central question this lab should answer. Have them write it at the top of their lab.
 3. Lab 4 Part 2 – Next, tell them they will have the rest of the period to complete this lab. If they finish early, they should organize their binders, as binders are due tomorrow at the end of the period. Remind them that binders should be organized in the following manner by date: vocabulary, notes, labs, readings, essays, tests/quizzes, journals.
 4. Homework Review – At the end of the period, collect all labs.
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HOMEWORK

Organize your binder.

GROUP ROLES

None

DOCUMENTATION FOR PORTFOLIO

Lab Report #1