

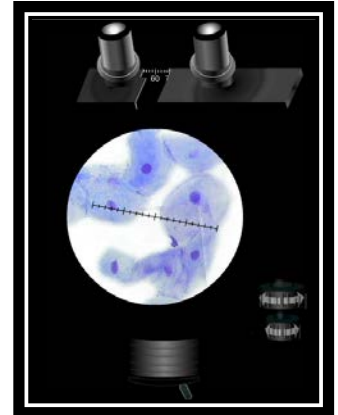
Virtual Compound Microscope

Study guide by Jim Gonyo

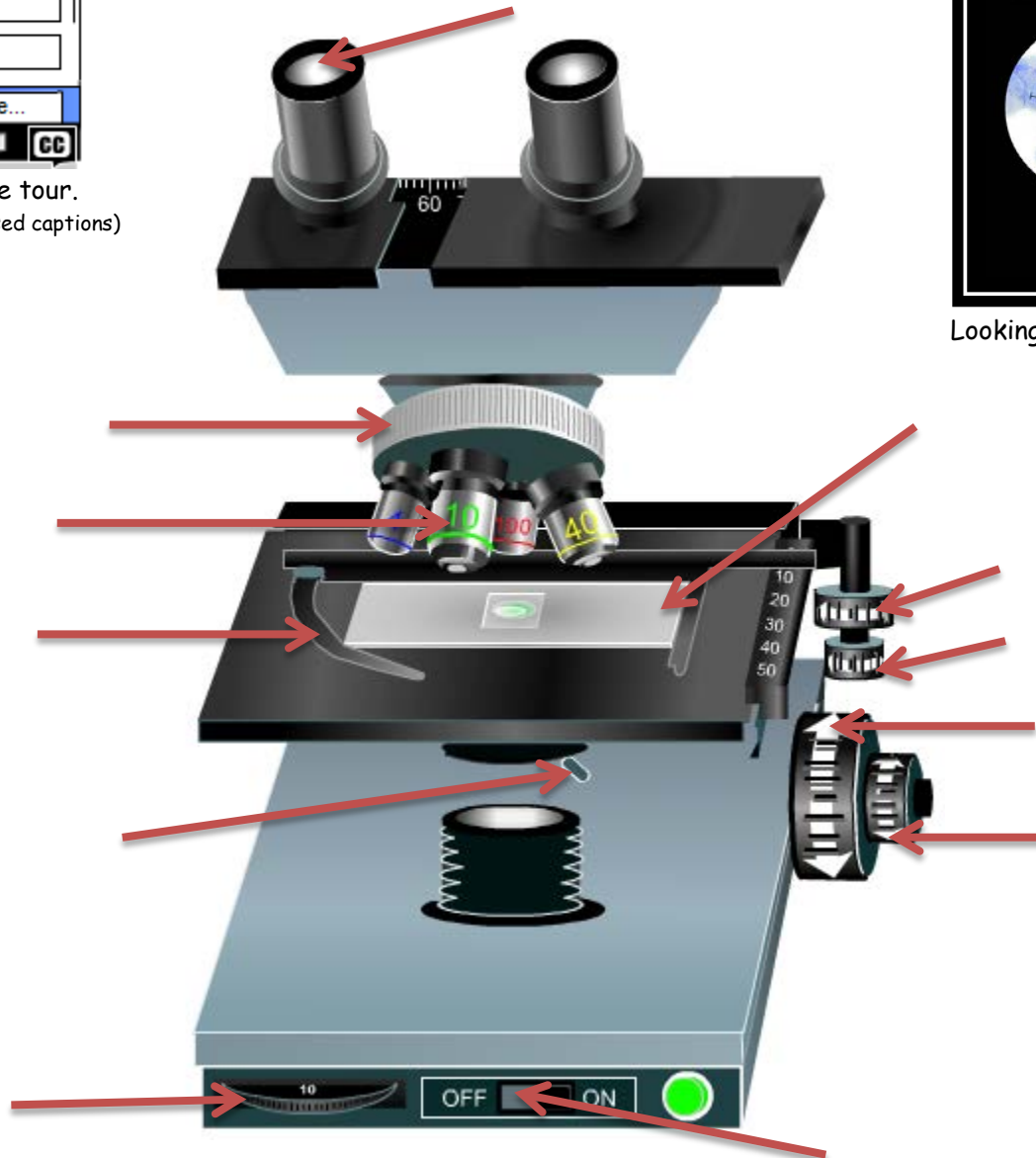
<http://www.udel.edu/biology/ketcham/microscope/scope.html>



Begin by taking the tour.
(Turn on sound and /or closed captions)



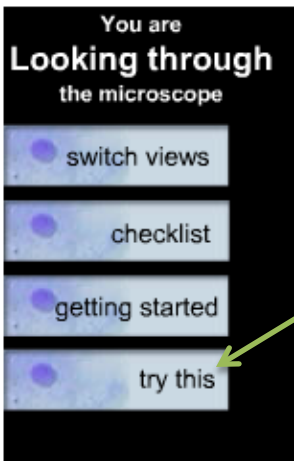
Looking through the scope



Label the parts of the Compound Microscope

Choose from this list:

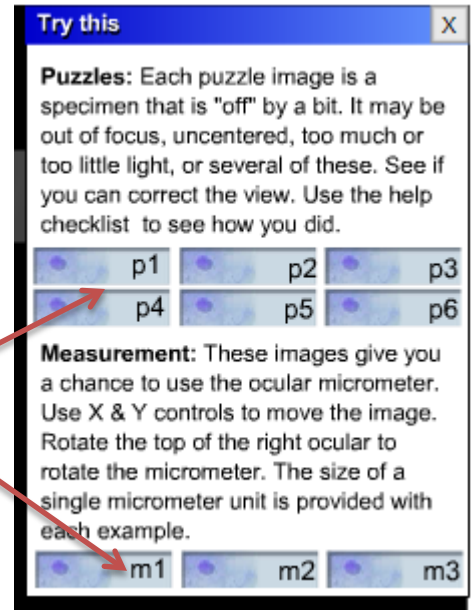
- | | | | | | |
|----------------------------|------------------------------|--------------------|--------------------|--------------|----------------|
| Light switch | diaphragm | rheostat | spring loaded clip | slide holder | ocular housing |
| Coarse focus knob | fine focus knob | oculars (eyepiece) | objective lenses | | |
| Moves slide left and right | moves slide forward and back | | | | |



Now click on "try this"

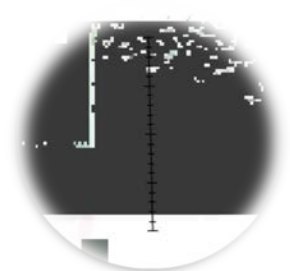
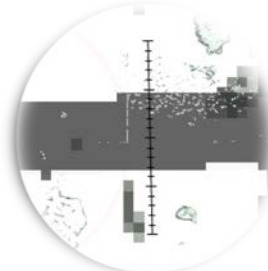
(You must complete the tour before "try this" appears)

Next, complete the six puzzles and the three measurement tasks.
Answer the questions below:



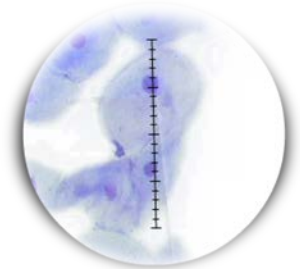
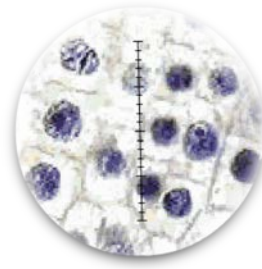
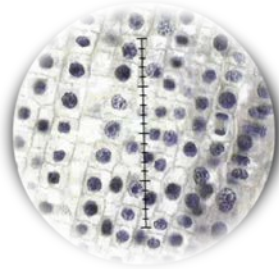
Puzzle 1:

Which picture best shows the letter "e" at 40x?



Puzzle 2:

Which picture best shows the onion root tip at 100x?



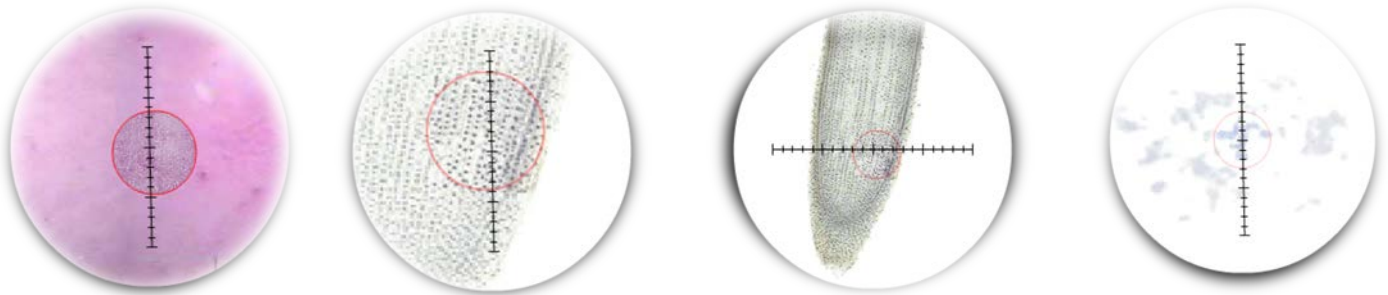
Puzzle 3:

Which picture best shows the cheek cells at 4x?



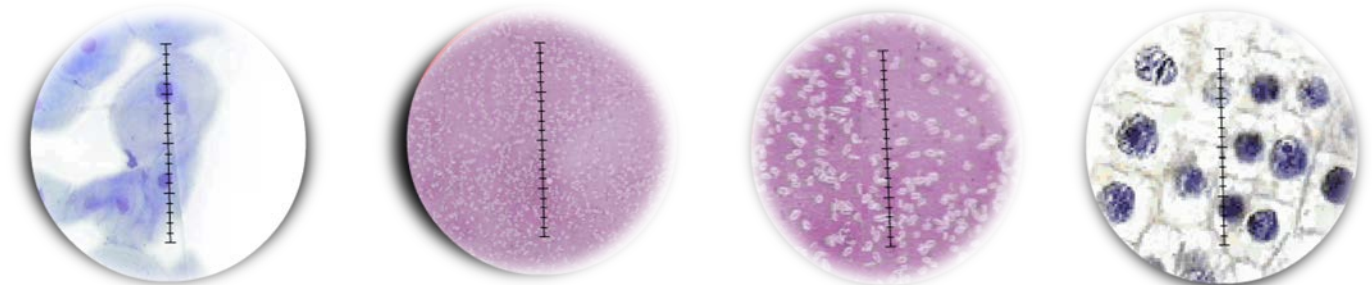
Puzzle 4:

Which picture best shows the onion root tip at 4x?



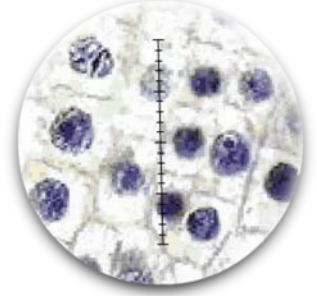
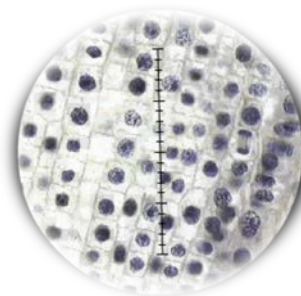
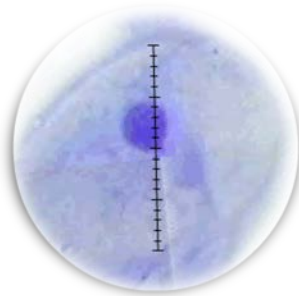
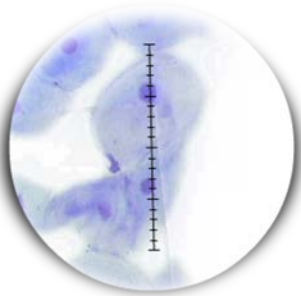
Puzzle 5:

Which picture best shows bacteria capsules at 100x?



Puzzle 6:

Which picture best shows cheek cells at 40x?



Measurement 1:


Try this X

menu

If each micrometer unit equals 10 micrometers at this magnification, how tall is the letter "e", top to bottom?

micrometers

submit

 To rotate the micrometer, drag your cursor around the top of the right ocular cap in a circular motion.

Measurement 2:


Try this X

menu

In the upper right of the field of view, is a cell that is nearly finished mitosis (chromosomes are mostly pulled apart). If each micrometer unit equals 1.0 micrometers, how wide is this cell at it's widest point?

micrometers

submit

 To rotate the micrometer, drag your cursor around the top of the right ocular cap in a circular motion.

Measurement 3:


Try this X

menu

There is a small air bubble near the top of the field of view. If each micrometer unit equals 1.0 micrometer at this magnification, what is the diameter of the air bubble?

micrometers

submit

 To rotate the micrometer, drag your cursor around the top of the right ocular cap in a circular motion.