

MAGNIFICATION

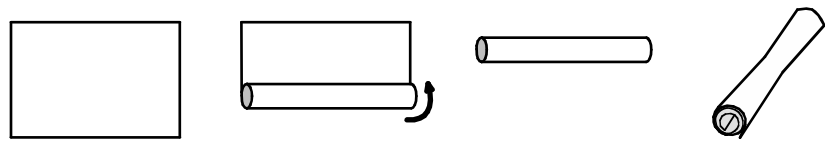
How much does your microscope magnify a picture? The box says 20X-40X, which means it makes things look twenty to forty times as big as they really are. Is your microscope really 20X-40X, or is that just advertising? Let's find out.

PART 1: The Hole in Your Hand Experiment

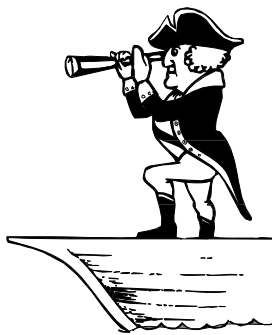
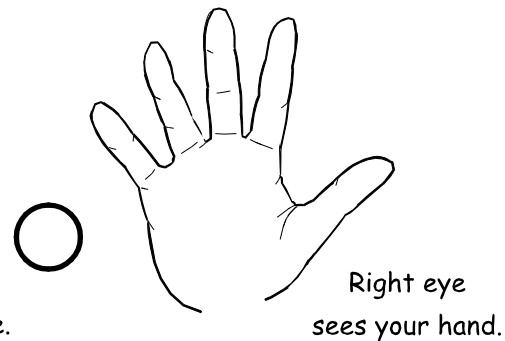
Before we begin working with the microscope, you will need to master the skill of using your two eyes to look at two different things at the same time.

WHAT YOU NEED: A piece of paper.

WHAT TO DO: Roll your piece of paper into a tube to look through.



Hold the tube up to one eye and look at something across the room. Meanwhile, put your hand in front of your other eye, touching the tube.



Washington crossing the Delaware, doing the "Hole in your Hand" experiment.

Keep looking and soon the hole will look like it goes right through your hand! Once you can easily see this, you will be ready to try Part 2.

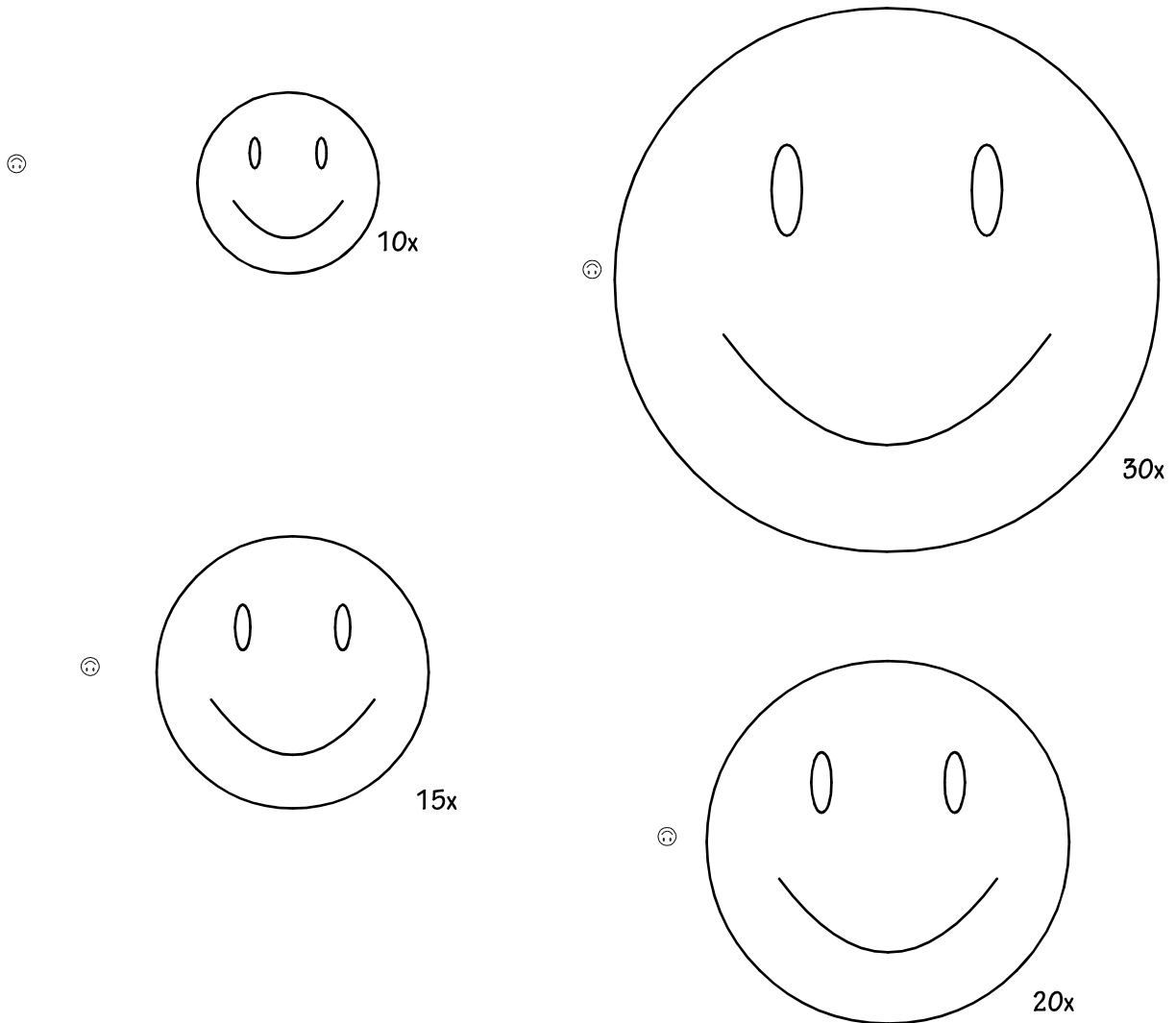
Weird Challenge

Try to poke something through the hole in your hand!

PART 2: Your Microscope's Magnification

Choose a pair of faces. A tiny face is just to the left of each bigger face. Focus your microscope on the tiny face. Magnify it as much as you can. Try tipping the front of the microscope back from the page a little for better focus. Then, OPEN BOTH YOUR EYES. Your left eye can see the tiny face magnified through the microscope. Your right eye sees the larger face. (If you would rather use your right eye with the microscope, just turn the page upside down.)

Check each pair of faces. Match up their edges. When it looks like the sizes match, you have your answer. Which large face is closest in size to the image you see in the microscope?



RESULTS: My pocket microscope has a magnification of _____x.

This means that the microscope makes everything look _____ times as big as it really is.