For this activity you will need:

- Foldscope & accessories
- Notebook
- Pencil
- Magnifying lens
- Small envelope to collect samples
- Plastic cup with lid to collect samples

Video instructions can be found here:

https://tinyurl.com/phjh523h

Directions:

1. The front of your Foldscope is blue and the back is yellow. Open the flap on the yellow side and remove strip of paper that says “INSERT SLIDE LIKE THIS, WITH SAMPLE FACING DOWN.”
2. Select a prepared glass slide (like the one included in your Foldscope kit) and turn it over so the sample is facing down. Insert your slide into the slots where the strip of paper was. It may be a little difficult at first, but keep trying and it should fit. Be sure to handle the glass slide carefully so that it doesn’t break.
3. Once the slide is inserted, make sure that the sample is lined up with the lens of the Foldscope. The lens is a small glass ball in the center of the black circle that is visible on the back of the Foldscope. Close the flap.
4. Remove the tab from the LED light module and turn it on. Attach the magnet on the light module to the magnet on the back of the Foldscope. You should see light shining through the small pinhole on the front (blue side) of the Foldscope. (You don’t have to use the LED light module. You can point your Foldscope at a lightbulb instead.)
5. You can adjust the focus by sliding the focus ramp to the left or to the right. Hold the blue side of the Foldscope up to your eye and look through the small pinhole in the center of the gray circle. (If you wear glasses, it may be helpful to take them off before looking through the Foldscope.) Draw what you see in your notebook.
6. Check out the following websites for more videos and tips on using your Foldscope!

https://www.foldscope.com/tutorials
https://www.foldscope.com/user-guide

What’s happening?

Microscopes use glass lenses to bend the light that passes through them. The Foldscope has a tiny sphere of glass that behaves as a lens, magnifying whatever specimen is placed under the lens.
The Front
The front side is blue with a black lens in the center. The side is where you view, image, move and focus samples!

- Grip Holes: Place thumbs here when moving & focusing.
- Focus Ramp: Move left/right to focus.
- Lens: Foldscope’s lens is a small glass ball with a magnification of 140x.
- Tracing Hole: Mark your place on your Foldscope with a pencil through this hole.

The Back
The back side is yellow with colorful artwork. There is a flap over the center with a magnetic clip. This side is where you insert samples and adjust your light source!

- Back Flap: Pull down this flap to insert samples.
- Slide Holding Slots
- Aperture
Samples & Slides

A slide is a base used to hold a sample. Foldscope works with traditional microscope slides (glass slides) as well as with new alternatives (paper slides).

Inserting a slide

Hold the slide so that the sample is on the bottom. Insert the slide through the slots highlighted by the red arrows. The final result should have the slide secured in both slots, with the sample on the bottom side, closest to the lens.
Eye View
To view directly, bring the lens to the eye and view while holding the Foldscope up to a light source, such as daylight or artificial lighting.

Remember!
The blue side of the Foldscope should be brought toward the face!

Moving & Focusing
To move around a slide, press and move thumbs in the desired direction (see “X movement” and “Y movement” below). To adjust focus, shift the focus ramp from side to side. Focus will be achieved when the lens is at the appropriate distance from the sample.