Make a Simple Microscope

Using just two simple magnifying lenses, students construct a microscope and explore the world around them.

Materials Needed
Contact the DuPage Regional Office (Dr. Mary Biniewicz STEM Coordinator mbiniewicz@dupageroe.org) to obtain 2 magnifying lenses per student, or pipettes if making a water bead microscope *(*see "Resources"*)*, objects around the house to study such as: air, fibers, food, carpet, rocks, coins, sand, a CD, and feathers.

Procedure
Find objects (specimen) that you think would be interesting to observe magnified. With two magnifying lenses, hold one lens near your eye *(the eyepiece)* but not touching your eye. Focus the other lens *(the objective lens)* as you observe the specimen under study. Slowly move the objective lens toward/away until specimen is focused.
Remember: Keep the eyepiece lens near your eye still, while slowly moving the objective lens until the specimen is focused. Do not move both lenses, one must be kept still. Make sketches of what you see.

Teacher Notes
Have students share what they find with classmates. Talk about challenges with this simple microscope, too.

Discussion Questions
Scientists use tools to help them carefully observe, measure, and collect data. What tools do you use daily that are similar to the tools that scientists use? What is the most interesting thing you have seen with this scope? What are you curious about studying under the microscope? What other types of microscopes are available to scientists?

Resources
Water Bead Microscope
https://raisinglifelonglearners.com/easy-homemade-microscope/