Collecting and Viewing Bdelloid Rotifers

You will need:

- Small, sealable plastic bag
- Filtered, sterilized rainwater (distilled water is OK too, but best if it's fresh, sterile, and hasn't been stored in a plastic bottle for weeks)
- Plastic liquid transfer pipette or syringe
- Petri dishes with a thin layer of agar (water agar is fine, no need to add any nutrients)
- Microscope (dissecting or compound; should offer at least 40x total magnification)

1. Go outside (you needn't go far!) Look for patches of moss, perhaps attached to a tree or wall, or growing through cracks in concrete. Almost any moss will work, even if dry or dead.
2. Place about 2g (1 tsp) into the plastic bag and return to the lab/classroom.
3. Add about 10mL of water to the bag and re-seal it.
4. Shake gently to wet the moss, then wait at least 20 minutes (longer is fine, even several days).
5. Shake bag vigorously to crumble the moss and mix it thoroughly into the water.
6. Cut the tip off a liquid transfer syringe or a large plastic pipette tip, so that the opening is at least 2mm in diameter, and won't become blocked by small moss particles.
7. Take up about 2-5mL of the moss and water mixture from the bag.
8. Expel this onto the middle of the agar plate
9. Place the agar plate under the microscope. The lid does not need to be on it.

Hunt for bdelloid rotifers! You may also see protozoa, nematodes, perhaps a few tardigrades.

10. If you store the plate for several weeks, bdelloids, nematodes and protozoans will multiply greatly (even if only a few were present at the start). Just keep the plate moist by adding a small amount (~0.5mL) of water as often as needed. It needn't be flooded, just kept slightly moist.