

## LRES 582 Streamside Science: Hands-On Approach List of Required Supplies

Students will need the following items for this class:

1. Drinking water; for you to stay hydrated.
2. Deionized (DI) water or distilled water for rinsing equipment.
3. Safety glasses/goggles/etc. Sunglasses aren't optimal as they can make differentiating colors difficult.
4. Rubber gloves.
5. Sunscreen.
6. Insect repellent.
7. Two 'stakes' to secure your measuring tape on the banks. PVC pipe, rebar. Stir-sticks for 5-gallon buckets are very sturdy and have a 'pointy' end that makes it easy to secure in the ground; you can get them at a hardware or paint store.
8. A water depth measuring device
  - a. i.e., PVC pipe or dowel rod from the hardware store, old broom/mop handle, yard/meter stick, paint stir stick or anything that you can mark 10th of a foot increments onto (this needs to be at least as long as your stream is deep).
9. Two old broom/mop/tool handles, PVC pipes or dowel rods from the hardware store, anything that is 4-6 feet long. To finish your kick net for macroinvertebrate sampling: We have provided the net, but you will need 'handles' to attach to either side.
10. A plastic container with a lid that you can use to collect stream water.
  - a. This should be airtight and covered in tape or black paper to keep the light out.
11. Turbidity tube:
  - a. You can purchase them online or make your own.
  - b. Here is a YouTube video for making one out of a 2-liter bottle.  
[https://www.youtube.com/watch?v=mEq\\_1kil21c](https://www.youtube.com/watch?v=mEq_1kil21c)
  - c. OR - You can use a plastic tube and cap.
    - a. There are multiple YouTube videos for doing this version.
12. An incubator for RCARDS coliform test; big enough for eight 4' X 5" RCARDS to sit on the bottom without overlapping.
  - a. If you have access to a drying oven in your school labs that's perfect
  - b. A cooler (Styrofoam or other) and 40watt bulb also works.
  - c. Or you could use a light table, 3D printer table...anything you can keep out of direct sunlight and at  $35\pm 0.5^{\circ}\text{C}$  for 24 hours.
  - d. Once finished, the incubator can be cleaned and sterilized with 10% bleach solution.
13. Bleach: enough to make a 10% bleach solution to dispose of RCARDS from coliform test and clean cooler if using one.
14. A sealable container that is big enough for your liquid waste and a small bag of kitty litter to 'solidify' your liquid waste when done with class. Think large yoghurt/cottage cheese/etc. tub, the plastic 'box' that laundry/dishwasher pods come in, the big red plastic Folgers coffee container or a gallon jug (you might want to cut the top off, so it's easier to pour your liquids (and kitty litter) into).