Field Methods - Record in Field Notebook or Computer Spreadsheet

1. Set a Radius (not reflected in our data set)

* Choose a radius size in which five or more rock pools can be sampled and their relationship to each other and their surroundings observed.
* Consider how the rockpool's relationship to its surroundings might affect it.
* How might the rockpool’s proximity to a body of water affect how often it floods?
* How might elevation affect the biodiversity of the rockpool?
* How does the rockpool’s proximity to other rock pools affect its biodiversity?

1. Pick out a rockpool to start with!

* Since you will be sampling all rock pools within a defined radius, it doesn't matter which one you choose to sample first.

1. Vegetation

* Estimate the vegetation coverage (%) in the pool.
* Make note of what kinds of vegetation are growing in the rockpool (native vs. invasive, grassy vs. shrubby, and any other distinguishing characteristics) as well as the kind of vegetation present in the canopy.
* Observe whether there is canopy coverage in the area
* Make note of what kind of vegetation is present in the canopy (deciduous vs. evergreen, trees vs. shrubs vs. vines)

1. Substrate

* Jot down what the bottom of the rockpool is mostly composed of (sand, dirt, large vs. small rock, etc.)

1. Wash bottle

* Fill the wash bottle with water from the rockpool to be sampled; we will need to fill this up multiple times in the sampling process.
* It’s important that this water continues to come from the same rockpool. Cross contamination will occur if this water is sourced or dumped into a different rockpool; which can greatly harm these unique micro-habitats!

1. Sweep sampling

* To retrieve our data samples, we will be performing 3 sweeps near the top, side, and bottom of the rockpool
* Holding the net, extend it near the top layer and drag it quickly for about a 10 inch stretch; moving quickly helps assure that anything swimming around gets caught. Pull the net out of the water and onto the sampling tray.
* Once you’ve done a sweep, use your wash bottle to spray anything that may be clinging onto the net.
* Additionally, douse the tray with enough water to cover the samples, some of the species may need more water coverage than others
* Repeat 2 times for the first layer (top)
* Check out this video (~5:00-5:30) for a visual reference on what this should look like!
* <https://www.youtube.com/watch?v=qQslK3lzVGU>

7. Observe, Identify & Record

* Using the hand lens, we can take a closer look at the specimen



* Depending on the species found in the tray, use iNaturalist, PocketMacros, or any other identification tool (field guides, etc.)
* A picture containing fish, aquarium

  Description automatically generated
* Photography by Sarah Ababneh
* <https://www.inaturalist.org/observations/165900346>
* Record the species guess as well as the amount and any other information that seems relevant.
* Return species to the rockpool before beginning the side and bottom sweeps

8. Repeat steps 6&7 for Side and Bottom Sweeps

* When finished with all net sweeps, discard the water in the wash bottle from the rockpool into the same rockpool it was taken from (mixing water from different rock pools can be dangerous to the micro habitats unique to each rockpool.

9. Measurement

* Using the ruler, measure the rockpool for its length longwise
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* Measure the width of the pool, taking multiple measurements if necessary
* Measure the depth, this is where a ruler that is not flimsy is necessary, take 3 or 4 measurements at various corners of the rockpool.
* Measure the rockpools proximity to other rock pools
* Approximate the rockpool's proximity to bodies of water and other features in the landscape (forest edge, wetland, etc.)
* Approximate elevation from water level
* Check out this video (~3:15-3:45) for a visual reference on how these measurements should be taken
* <https://www.youtube.com/watch?v=qQslK3lzVGU>