

Pro Tips for Field Learning for Teens Activities

Water Quality - Chemistries

1. Have the students lead the activity by handing them the directions
2. During waiting time ASK questions and create discussion
3. If you get weird/unanticipated results, just roll with it! Science has mishaps all the time and explain how that can help them become better scientists.

Water Quality - Macroinvertebrates

1. You won't find (m)any macroinvertebrates by swishing the net in the middle of the water. Aquatic Invertebrates do not live in the water column, that's where their predators live and can see them well (fish, frogs, birds, etc.). Instead, have your group think of areas they would hide from fish or from getting swept away by the current. If they look under rocks, leaf matter, in the sediment, or in aquatic vegetation... BINGO, you will find them!
2. You might catch minnows, frogs, or other backboned animals. Use this as a teaching moment to explain the differences between invertebrates and vertebrates.

Geocaching

1. GPS's seem complicated, but they really aren't. Go through the motions of entering coordinates into the GPS a couple of times. After that they won't seem so foreign to you.
2. Give the GPS to the kids. They grew up with tech and can probably figure it out. If they can't and you can't remember, don't worry flag a staff member down to help.
3. You should only have to lead the discussion at each geocache. If they kids are having trouble, give a "crazy" answer. If they see you being wrong, it might help them get courage to start talking through it. (Karli does this a lot with kids and it puts them at ease. They are smart and know you are being goofy, but it helps ease them into a discussion)

Biodiversity - Insects

1. Some people don't like insects, perhaps because they are raised to think of them like germs. Maybe you even have a fear of spiders. Don't worry. The purpose of this is to simply look and discover. See how insects aren't so bad and can actually be very interesting, beautiful, and fun!
2. Kids don't even have to touch the insects if they don't want to, but encourage them to at least look at them. Point out differences and explain how the insects are important to our ecosystem.
3. Fun facts:
 - More than 90% of known species lack a backbone
 - There are more species of insects than any plant or animal on earth
 - For every human on earth, there are approximately 200 million insects
 - If you put all invertebrates currently living on earth onto a scale, they would weigh more than all other land-living animals combined!

Biodiversity - Plants

1. The goal of this is not to become expert botanists by the end. The goal is to get the kids to realize the diversity of the plant kingdom. Look at how plants can be as big as trees or as small as single celled algae.
2. Discuss reasons for this diversity in the plant kingdom. For example, why would plants have flowers? Why would grasses have seed heads like that? What are the differences between conifers (pine) trees and deciduous (like oak or maple) trees? Why is this diversity important?