



Environmental Volunteers

Activities for Nature Hikes

Starting the Hike

There are a few things you can say at the beginning of a hike to set the tone for it to be both educational and respectful, but also fun and exciting.

- We are going to have fun exploring this beautiful habitat.
- When walking down the trail, stay behind me because I know where we are going.
- What will the animals do if we rush down the trails running and screaming? They will run away. So we are going to stay on the trails and be quiet so we can see the most wildlife possible.
- We are going to see a lot of things on this trip, but we will also hear, smell, and touch this environment. We will also return everything we examine to exactly where we found it (unless it is litter) because something in this environment can use it.
- Pick a name for your group. (Give students some guidelines, such as picking a color and an animal — e.g., The Purple Banana Slugs.)

Trail Activities

The following is a list of ideas for fun, explorational activities you can lead your group in. Remember you can be flexible – activities can be adapted to different ages, environments, and group sizes.

Color Detectives

Pass out colored paint chips (or other colored objects), a different color to each child. Ask the children to try to find the color that is on their paint chip somewhere along the trail. When they find something that matches their color, discuss that thing with them. Is it living, non-living, or once living? Try to discern what it is and talk about it, if you can recognize. For instance, a yellow leaf fallen from a bay tree. How does it resemble a banana slug? Does it have the same smell as the green leaves? Did you expect to see something this yellow and not a flower out here? Then encourage them to discover a different thing along the trail to match their paint chip. (Be sure to collect the paint chips at the end of the hike, and let the children know ahead of time that you will do so as you will need to use them again. This may discourage littering along the trail.)

Spider Jewels

If you carry a spray bottle of water, spray the web lightly so that your group can see the extent and intricacy of the workmanship. Early morning dew will often

collect on the webs in just this way. The moisture will soon dry and the spider's trap will again be invisible to its prey.

How Fast Was It Going?

Find an ant trail. Have each person in the group "adopt" an ant and figure out how fast it is moving. Measure out a foot along its trail, time how long it takes the ant to travel that distance. With paper and pencil, or a small calculator, figure the ant's MPH. Do the following calculations: $1 \text{ (foot)} / \# \text{ sec. to travel 1 foot} \times 3500 / 5280 = \text{approx. mph}$

Example: If it takes the ant 5 seconds to travel 1 foot, then that ant is traveling approximately .14 miles/hour. Pretty slow. (Note: 3600 is the number of seconds in an hour, and 5280 is the number of feet in a mile.) A small calculator might be handy for this.

Snooping In The Woods

Conduct a mini-scavenger hunt. You may want to list the five items below on a separate sheet of paper or a 3x5 card or cards. Ask members of your group to find the following:

1. A plant that looks like a feather
2. Three different decomposers
3. Something that would give you a rash
4. Something an animal left behind
5. Something that has been partially eaten by a. animal

They should be able to find all of these things within a few feet of where you stand along the trail. Most common answers would be:

- 1) a fern or damp moss,
- 2) a shelf fungus, a Lichen, moss, or a beetle,
- 3) poison oak,
- 4) a track or scat or a feather or fur,
- 5) a leaf or the tip of a branch that has been chopped off or has holes or a piece missing, or the shell of an acorn or bay nut.

Penny Hike

Pass out a penny to each child in your group, including those over eighteen years of age if they are interested, and challenge each of them to find at least three different things that will fit on their penny. They do not have to collect these, but can come and show you each item then put it back. Ask them not to pick any parts off of plants. Make a list of the different items found. When they have finished, ask if they are surprised to find so many small treasures on their hike. Which of the items they found were living or once living? Which were non-living?

Deer Walk

Explain to the children that deer walking normally always step in the same spot with their back foot as they stepped with their front foot. This is called "registering". Lead the children down the path asking them to see if they can step only on the spot where the person in front of them stepped. Many deer trails on a hillside exhibit an appearance of having steps, because many deer have stepped in the same place. Remind them that deer are very quiet, turning their big ears in all

directions so that they can detect danger coming. Have the children cup their hands behind their ears to make "deer ears". Walk quietly down the hill and listen for what you may hear. You may proceed in this way until you come to a spot where there is a new plant to point out or until you get to the bench. Be sure to praise them for doing a good job as quiet cautious deer.

Sounds Around

Have everyone quietly listen to all of the sounds around them. Have each person name one sound that they heard and what they think was making it. Ask them if they heard a sound that would not have been heard here two hundred years ago? Ask them if they heard any sound that they thought might not be heard one hundred years from now in this spot?

Magic Ring

Materials needed: Loops made from 18" lengths of yarn. Optional - Bug boxes. Have each person take a yarn ring and lay it on the ground near the trail. Caution them to find a spot without poison oak (and help them to do so if they need it). Explore this "mini-ecology" for different leaf shapes, seeds, decomposers, animals, etc. using all of the senses. How are all-of these things connected? I.e. producers/consumers, decomposers, including water and energy. How can we respect this environment and minimize our impact?

Acorn Aware-nuts

Materials needed: Acorns or other "identical" natural objects, a small sheet or plain colored handkerchief. Hand out an acorn to each person. Have everyone examine their acorn very carefully, especially noting any identifying features. Collect all of the acorns. Spread them out on a sheet and have everyone find their "own" acorn. Do the same thing with some screws or bolts for comparison with man-made objects. In nature, nothing is identical!

Keep on Tracking

Have everyone look for animal tracks along the side of the trail and on the trail. When a track is found, try to determine what kind of animal made the track and which direction it was headed. Does it appear that the animal was using a well worn game trail? There is too much poison oak for us to follow game trails. Have people suggest where the trail might lead to in either direction.

The Fallen Log

Locate a fallen log or branch along the trail. Observe the variety of life forms living around and on it. Have everyone trace the energy from the sun to the tree, the log, and the decomposers, and note their ability to get energy indirectly from the Sun.

Poet - tree

Materials needed: several pencils and pieces of papers. Station people along the trail at various distances from an oak tree. Have each person write down three words that describe the oak tree from their own particular

point of view. Collect all of the words and have three people arrange all of the words into a poem. Have the group poem read to everyone.

Are You an Animal?

Have each person say one way in which they are like an animal that they know well. Discuss qualities that all animals share, including ourselves, and qualities that may be uniquely human.

Where is Energy?

Materials needed: several pencils and pieces of paper.

Have each person find and write down the names of three things, one natural, one man made, and one that makes you feel good inside. Have each person decide how each of their things uses energy, and have everyone share their findings with the group.

Oak Silhouettes

Have one person mime an oak tree silhouette that is visible to everyone. Have one person at a time guess which oak tree it is until the right one is chosen. The person who guesses correctly can be the next "oak mime".

Recipe for a Forest

Materials needed: pencils and 3x5 cards or paper to write on. Have each person sit on the trail about 15 feet apart. Have them write down a recipe for their ideal forest, listing all of the important ingredients (Rainbows, waterfalls, etc.). Have everyone share their recipes. Discuss whether their forest would survive year after year, and what additional ingredients would be needed. Suggest that they take their recipe home with them and draw their dream forest and share it with someone they love.

Life on a Stick

Find a stick covered in lichen and moss. Have students count how many different species they can see on the stick. What starts as 1 or 2 usually becomes half a dozen or more. Most of what you find will be moss, lichen, or fungi (and bugs!). While there are many species of lichen and moss that they can be hard to tell apart, in general moss will be moist, dark green, and look "leafy" or plantlike (they are a plant after all). Lichen will be a variety of colors, have a drier appearance, and have a variety of structures.

Which One is Mine?

Choose any kind of natural object: rocks, acorns, leaves, etc. Have each student find one of that object on the ground. Find one for yourself as well. At Stevens Creek, the seed pods from the eucalyptus trees work very well.

Each student must look closely at their object and get to know it. They should familiarize themselves with every little detail. You do the same with yours. When they feel they know their object, collect them in your hand with yours. Turn around and mix them up. Now ask students to see if they can find their object again. When they select an object, ask how they know it is theirs.

The goal is after everyone has taken their object, for yours to be the only one left. The main message is that everything in nature is unique even if at first an object seems the same.

Scat Mystery

When you find scat on the trail you have two mysteries to solve

- 1) who made it, and
- 2) what did it eat?

Make observations to solve your mystery. Can you see the fur or other things in the scat? If the scat is very dry, you may even pull it apart and look for bones or seeds. If you find anything, what did it come from? Animals like coyotes use their scat to mark their territory, so it is usually right in the middle of the trail. Other animals are trying to hide their location, so you are more likely to find it under a bush or otherwise hidden. If there is not much in the scat (no bones, fur, seeds, etc.), this animal is likely an herbivore that chews its food multiple times (deer, rabbit, etc.).

Vapor locked (A transpiration activity)

Bring two small plastic Ziplock baggies. Into the first baggie put a small or waxy coated, arid-adapted leaf. Into the other, put a riparian broad leaf. Seal the bags and expose them to sunlight as you hike. Compare the moisture in the bags at the end of the hike. There will be a visible difference in the amount of water loss between the two leaves. The larger leaf will lose more water. Have the students tell you why they think this happened.

The leaf from the arid habitat needs to conserve its water as much as possible because there isn't a lot of water in the environment. The riparian leaf doesn't work to conserve water because there is plenty in its environment. It takes a lot of energy to create the adaptations that allow the other leaf to conserve water.

Walk and Talk

Organize students in pairs (or a group of 3 with an odd number).

Before you start walking to the next point on the trail, ask a question of the group. Make sure it is not a simple or one word answer. As you are walking to the next spot, the students should discuss their thoughts with their partners. When you arrive at the next spot, have the students share what they discussed. It is great to make a connection between the question and the new spot where you arrived, but it is not necessary. Examples of good questions:

- What makes up a habitat?
- What do decomposers do for our environment?
- Why do birds sing?
- What do you notice that makes you wonder?
- How might this site look different if we come at a different time of year?
- What kind of animal might live in this area?
- What do you think this area will look like in 50 or 100 years?
- How will this site be different if we come at night?
- Water is easy to find in a riparian area. What might be hard to find?
- Why might something choose to live on a steep hill?
- How do plants have to adapt so they can stay on the hill?

Hike Leader Tips - Mastering the Non-answer

When a student asks a question, it is tempting, even instinctual, to answer the question. However, there are often ways to guide the student to the answer without giving the actual answer — resulting in better connections to the information. Here are some strategies:

- 1) When a student asks a question, respond with, “What do you think?”
- 2) Guide observations: “What do you see/hear/smell? What does that tell you?” This is good for “Why?” questions.
- 3) When you get a question about identification of a species, ask, “Imagine you are the first person to encounter this {plant, animal, organism}, and no one in the world knows what it is. How can we decide what it is? How can we make sure that the next person that sees it knows it is the same as what we saw?”

For any of these strategies, after you have gone through this process, if there is additional information to impart, go ahead and do so.

The following are a couple of scenario examples.

Birds

You could encounter any number of bird species on this trip, and students will often know only a few of them. Have students make observations about the birds. How big are they? Are they singing? How are they interacting with each other — are they trying to get another bird to leave? These are the kinds of things birders study to help them identify a bird. If the birds are at a distance or in the shade, color or beak shape is harder to spot — but if you can see these features, it is good to note as well. See if the students can determine a general category of bird (raptor, songbird, duck, etc.). If they think the bird is sort of like a _____, but not quite, have them identify what the differences are (e.g., a coot is not a duck but it’s pretty duck-like). Ask if the students can think of birds they know from a category. They may have studied some in the EV classroom program. At the very end, identify the bird for the students (if you know it).

Holes

There are many holes to be found in the environment. Ask students who they think made the holes, and why they think that. Why is important because it gets students to think more deeply about their observations. Most often you will find insect and rodent holes. Differences include size and the amount of dirt around the hole. Sometimes students will suggest a snake made a hole. Ask, how do they think the snake dug the hole? Some students may suggest the snake used its fangs. You can point out that their fangs are too fragile for digging. Lead students to realize that snakes only use the holes others have made.