Pajaro Watershed headwaters field trip

**Introduction to watersheds and Corralitos creek at large clearing:**

- Using your senses, what do you notice about this plant community?
- How is the plant life here different from Watsonville?
- Can you hear or see any evidence of birds or wildlife?
- What kind of animals do you think might live here?
- Show where we are on the Pajaro Watershed map.
- Safety - poison oak, stay on trails.

**Mentors lead ice breaker in small groups**

**Stream stations:**

- In small groups with a docent and teen mentor, students explore 3 different parts of Corralitos Creek, using binoculars, hand lens, drawing tools, field guides, and IPADS. Instructor rotates the groups so they may see different parts of the stream.

Optional:

- Water quality testing with focus on oxygen and turbidity to compare to later field trips

- Stream assessment scavenger hunt - students look for signs of healthy and unhealthy streams using a checklist. Instructor or teen mentor can summarize the groups findings and discuss impacts on Steelhead and other stream animals as well as ways to improve water quality.

- Art activity

**Materials:**

- Pajaro Watershed map
- Mentor backpacks with binoculars, hand lenses, field guides, and an IPAD with pics of stream and forest animals, poison oak, etc.
- Snacks and water
- First aid kit

Optional:

- Water quality meter and turbidity tube
- Stream assessment scavenger hunt
- Paper for drawing or writing
- Color pencils
Optional Activity: Redwood Exploration

Background info:

The redwoods are an amazing place. Let's observe a redwood. What do you notice? How is it similar or different to other trees you have seen?

- The tallest redwood is about 379 feet tall.
- Our local redwoods' close ancestors date back to the time of the dinosaurs more than 100 million years ago.
- A coastal redwood can weigh up to 1.6 million pounds.
- The oldest confirmed redwood tree is at least 2,200 years of age.
- Can grow in “fairy rings” - when an adult redwood dies, many new trees sprout around it and form a ring. All of these trees are clones of the “mother” tree. Do you see any fairy rings?

Of the original 2 million acres of ancient coast redwood forest (the size of three Rhode Islands), approximately 95% has been logged.

Approximately 77% of the world’s remaining ancient coast redwood forests are protected in a park or reserve or by a land preservation agreement. The remaining 23% may be logged because it is either held privately or in a national forest.

Inquiry questions:
What is the bark like? Why? How is it different from other trees you have seen?
- Redwoods are naturally fire- and insect-resistant because of their bark (up to 12 inches thick)

Look for and describe the cones and seeds.
- Coast redwoods are able to grow from only a seed to 100 feet tall in only 50 years! Some of these trees can grow 6 whole feet in only one year.

What are the needles like?
- Redwood needles are different on the bottom of the tree than on the top. At the bottom the needles are longer and broader because they are in the shade. Why is this a good adaptation for the lower needles?
The underside of the redwood needles have two rows of white which are where the plant exchanges gases. What gases do the needles exchange here?

Hidden under the giant redwoods lurk other fascinating creatures. Take a closer look at the forest floor and even take time to dig under the layer of duff (leaves and needles on the ground) to look for hidden plants and critters.

- Over 200 hundred vertebrates (animals with backbones) can be found in the redwood forests, including salamanders, newts, snakes, shrews, beavers, mice, lizards, bats, squirrels, chipmunks, weasels, deer, elk, bears, frogs, turtles, voles and dusky footed-woodrats. Because of all the moisture that falls in the redwood forest, decomposition can happen at a rapid rate. There are many decomposers because of this moisture; including fungus, bacteria, and invertebrates.

Now let's look in the understory, or plants growing on the ground under the redwoods. What kind of plants do you see?

- Ferns and flowering plants

**Individual activities:**
- Redwood bingo- find the items on the sheet and check them off
- Draw a redwood tree community
- Redwood observations- You are an early explorer describing the redwoods to people that have never seen them before. Use your senses. You may include drawings, and what it feels like to be in the redwoods.