

Classroom Presentation PowerPoint Script

1. Hi, I'm ____ and I'm here from Friends of the Dunes to talk to you about the field trip you'll be going on tomorrow.
2. This is a map of where you will be. You will be visiting the Samoa Peninsula. Who can tell me what a peninsula is? (A piece of land surrounded on 3 sides by water). What are the two bodies of water that surround the Samoa Peninsula? (Pacific Ocean and Humboldt Bay). You will be visiting both the Pacific Ocean side, where the dunes are, and the Bay side, where you will see the fresh and salt water marshes.
3. Here is a photograph of what the map showed us. You can see the ocean, Humboldt Bay, and Mount Shasta is that big white spot way in the back, about 120 miles from here. The Trinity Mountains lie between us and Mt Shasta. Can you see them in the photo? Where is your school in this photo?
4. Tomorrow on your field trip, when your bus (or vehicles) arrives at the Manila Community Center, you will be greeted by your field trip guides.
5. We will split into smaller groups (each class will be split into two groups) to make it more fun for everyone. Some groups will go to the dunes first, and the others will go to the bay.
6. We will come back to the Manila Community Center for lunch, and then the groups will switch sides, so everyone gets to see and do everything. Since we will all be meeting back where we started for lunch, you can leave your lunches on the bus/in the cars.
7. OK, let's find out more about what we will be learning on our field trip! Here is a guide showing students a mole crab at the beach.
8. Does anyone know where this is? It is the marina in Eureka. Humboldt Bay has been an important place for people for hundreds of years. One way we have used the bay is as a safe place to dock boats and ships. Can anyone think of any other ways people use the bay? (Food/fishing, recreation, research, etc)
9. What are these? They are crab pots. Food and fishing is another way people have used the bay for a long time. Also, the Wiyot people, who are the native American people that lived around Humboldt Bay, used to use the bay and sloughs as a way to get from place to place before we had roads.
10. Besides being an important resource for people, the bay is also *habitat* for plants and animals. What is a *habitat*? (a home). Here is a picture of the bay at high tide. Where does the water in the bay come from? (Ocean) Is it salty or fresh? (Salty). We will be visiting a few different habitats on our field trip, and this habitat is called the saltwater marsh.
11. Here is a picture of the bay at low tide, when all the water has gone out to the ocean. What might we find on the mud flats that are exposed when the water goes out? (crabs, clams, worms, insects, etc)
12. This is pickleweed, a plant that grows at the bay. Pickleweed is edible. What does that mean? (can eat it). Pickleweed also has a special *adaptation*—what does that big word mean? (something a plant or animal has or does to help it survive). It can use saltwater. If you watered your house plants with saltwater, what would happen? (they would die). Pickleweed deposits the salt in its leaves and then the leaves fall off and it gets rid of salt that way. How do you think it might taste? (Salty). If it's OK with your guides, chaperones and teachers, you can take a taste of pickleweed tomorrow.
13. Here is a clam. This dime is there just to show you how big it is. Can you see the clam's foot? Did you know clams had feet? What do you suppose they use them for? (Digging down

in the mud). How does that foot help it survive? (dry out/get eaten without). This clam is a filter feeder, which means it filters teeny tiny plants and animals out of the water to eat. What are those teeny tiny plants/animals called? (Plankton).

14. Here is a crab. We won't do what this person is doing tomorrow. Why not? (Crab could pinch you, you could hurt or scare the crab). This goes for any animal we see tomorrow, unless your guide gives you special permission to pick up animals, which will happen a couple times during the trip.
15. This is an American Avocet feeding during low tide. Birds love the salt marsh! Why do you think that is? (Food-clams, worms, fish, insects). All those things we talked about are great food for birds. It's a bird buffet!
16. Now we will leave the salt marsh and head into the freshwater marsh. Can you see this plant growing in the water? What plant is that? (Cattails). Cattails don't like salt water, so when cattails are growing we know there is freshwater.
17. The freshwater marsh is a habitat for many plants and animals. It is a safe place to lay eggs, nest and find food. What plants and animals might we find in the freshwater marsh? (frogs, salamanders, birds, snakes, insects, etc)
18. Can everyone see the tadpole? A tadpole is a baby what? (Frog). The freshwater marsh is like a nursery for animals. Frogs and salamanders start their lives in the water, birds make nests here, and some insects also start their lives in the water, like dragonflies. The freshwater marsh has a lot of food, a lot of hiding places and lots of water, so it is a good place for animals to start their lives.
19. This is a pacific tree frog? What do you think is their *adaptation* for hanging out in trees? (camouflage/blending in). How does blending in help it? (Hide from predators and prey)
20. Some things that live in the freshwater marsh are too small to get a good look at with your naked eye. While we're there, we will get a chance to look for little tiny creatures in magnifying viewers like this one.
21. Now we are going to leave the Humboldt Bay side of the peninsula and head over to the Pacific Ocean side, where the dunes are.
22. This is the edge of a dune forest. Do these trees in the front look very healthy? (No). The dunes are a difficult place to live. Sandy soil doesn't hold water and doesn't have a lot of nutrients. There is a lot of wind and salt spray from the ocean. Also, the dunes are always moving and changing, and these trees are beginning to be covered by the dunes. Somewhere else, the dune forest is coming back. These trees are Sitka spruce trees.
23. In this picture we see some bearberry, which grows in the dune forest. What I really want to talk about is lichen, the fluffy white stuff. There is a story about lichen (tell Alice Algae/Freddy Fungus story). So, lichen is a cross between and algae and a fungus.
24. Here is a rough-skinned newt, they love hanging out in the cool and shady forest habitat. Is this a baby or an adult newt? (Adult, because it is not in the water...a baby newt would still be in the water).
25. Now we are leaving the dune forest and heading out to the open dunes. These look like branches sticking out of the sand. That is the top of a tree that has been buried by the sand. When you are out there tomorrow, it's cool to think about that you could be walking around on top of a standing dune forest under the sand. What made these ripples in the sand? (wind). Wind is a very important part of the dune habitat.

26. We will do some animal tracking on your field trip. There are lots of animals we won't see because they sleep during the day and are active at night, what's that called? (Nocturnal) But we will find signs of animals. Let's practice now. What animal might have made these tracks? Its feet look like a dog, but the tracks make a straight line. (Fox).
27. We might also find other signs that animals have been around. Do you know what these are, and what kind of animal left them behind? (Brush Rabbit pellets)
28. This is a habitat called the dune hollow, a valley between two dunes. Dune hollows are seasonal wetlands, which means they are filled with water in winter and spring when it rains a lot. This is a great place for animals to find freshwater, and for water-loving plants to grow.
29. This is a dune rush, a plant that only grows in very wet habitats like the dune hollow.
30. Our last dune habitat is the nearshore dunes, the dunes closest to the beach. There are over 40 plant species that live in the dunes. The plants in this picture are all native. What does that mean? (This is their natural habitat).
31. This is a bumble bee on a beach buckwheat flower. The many native plants in the dunes are important for the animals that live there.
32. Here is a garter snake slithering through yellow sand verbena and wild strawberry, two native plants.
33. This is a very special native plant called the Humboldt Bay Wallflower. The only place in the whole world this plant grows is in our dunes. This plant is endangered. If something happens to its habitat, what will happen to the plant? (It will go extinct).
34. Native dune plants are threatened by invasive (non-native) plants that take over their habitat. This is iceplant, which was brought from Africa in ballast in boats a long time ago. Ballast is something you put in the bottom of a boat to make it more stable in the water. Once the boats got here, they didn't need the ballast anymore, so they dumped it out. And what happened? (It started to grow and took over). This plant grows like a carpet out on the dunes and pushes out native plants.
35. This hairy monster is European beachgrass, aka *Ammophila*. Can you see any other plants growing here? European beachgrass pushes out the native plants. It was brought here on purpose to help stabilize the dunes and keep the sand from blowing around when people wanted to build railroads around here about 100 years ago and the sand kept blowing over the tracks. Now it has taken over the dunes.
36. Tomorrow on your field trip, you will become restorationists. Restoration means trying to bring the dunes back to the way they were before the invasive plants came. Here are some students and their guide removing European beachgrass.
37. This is a Western Snowy Plover, which is a threatened bird that lives on our coast. The beachgrass makes it hard for this bird to find a place to nest because it nests in open sand so it can see its predators coming. Do you think there is much open sand if there are invasive plants around? (No)
38. Here's a picture of a nest in the sand with 2 newly hatched chicks and an egg.
39. The last habitat we will visit is the beach, where we will hopefully have some time to explore and play.
40. While we're there you can collect shells or build sand sculptures if you want. But, we will leave all the shells we collect behind when we go back, and take nothing with us.
41. On the field trip tomorrow, the number one rule is to have fun and learn a lot. (Go over things to remember on the list on the screen).