How to Arrange for a Field Trip to the Mendocino Coast

Contact the California State Park Mendocino District Office:

P.O. Box 440
Mendocino, CA 95460
Phone: (707) 937-5804
FAX: (707) 937-2953

For MacKerricher State Park, which offers guided tide pool trips:

Phone: (707) 961-0471
FAX: (707) 961-1287

Before calling, it is good to have several dates in mind. You might want to check tide tables for low tides at times that are feasible.

A reservation request form will be sent, and teachers will need their principal's approval. The maximum number of students for a guided hike is 30. It would be good to have a theme or topic in mind so that the ranger/ interpreter can best meet your needs.

You will also be sent a sheet explaining how to minimize your group's impact on the intertidal environment. Be sure to review it with your students. (Actually, most of the guidelines would apply to any field trip to a natural area.)

It is possible to arrange to have an Interpretive Specialist lead your group. Depending on the California State budget, there may be a nominal fee for this service, but it is well worth it.

Visits Not Led by an Interpretive Specialist

Prior to bringing a group to visit the tide pools, you must make a reservation (see above). To help reduce the impact on the tide pools, the number of groups and individuals allowed to visit on a given day is limited. It is possible to bring a group without arranging for a State Parks staff member or trained volunteer to work with the group, but there are many benefits of a trip led by a staff member or a volunteer. Not only are they familiar with the local organisms and ecosystems, but they are trained in working with children and familiar with safety issues. **Also, groups with a Parks Service staff member or volunteer get priority over other groups wanting to visit. Why not utilize the service?**

Field Trip Preparation

Whether you have arranged for State Parks personnel to lead your group or you are bringing a group on your own, the following suggestions will help make your visit a success.

It is highly recommended that the teacher/trip leader visit the site before the trip and meet with the ranger or naturalist.

It is best to arrive for a field trip before the lowest tide and to "follow" the tide out. If you arrive at or after the low tide time, it is best to go out to the lowest point and work your way back in. (This is difficult to do with students, though, because they will want to stop and look at things on the way out!)

Two books written by Gloria Snively provide extensive suggestions on how to prepare for and conduct field trips. They are *Once Upon a Seashore: A Curriculum for Grades K-6* and *Beach Explorations: A Curriculum for Grades 5-10*.

You might contact the ranger or interpretive specialist to work out some specific goals and learning expectations, along with activities to support those goals. Also ask about equipment: Do you need to bring plastic magnifiers (on strings so that they're less likely to get lost and so that hands are free)? Plastic jars or bowls? "Bug Boxes" (plastic boxes with magnifiers)? I recommend a device called a 2-way magnifier. This marvelous tool has a plastic container for the object being viewed, a magnifier for viewing from above, and an angled mirror for viewing the under side of the organism. They are available from several of the sources listed in the Resources at the end of this book. Consider making underwater viewers (see page 75).

What Should Students Know Before Coming to the Coast?

The first thing that all visitors should understand is the need for safety. The coast can be a dangerous place; every year, several people lose their lives while visiting the coast.

Visitors can be dangerous to the coast, too. It's hard to believe, but teachers used to bring their classes to the tide pools and assign each student to collect one of each organism! In addition, many teachers collect dozens of organisms to preserve and study in the classroom. Everyone must learn to respect the environment and the right of others to enjoy the organisms, too.

The following suggestions will help ensure a tide pool visit that is enjoyable yet safe and results in minimal damage to the tide pools and the organisms living there.

Protecting the Environment

Watch your step!

1. The coastal environment is rich in life, and much of it is very fragile. Being careful about where you walk will not only protect the plants and animals, but it will also help you avoid slips and falls.
2. Stay on established trails, and use boardwalks where they are provided.
3. Sand dune plants are especially fragile. Don't step on them.
4. When on rocky shores, try to step only on solid, bare rocks.
5. Algae (seaweeds) are very slippery, and animals may be living under them
6. Animals may also be living under loose rocks
7. And, you'll be less likely to slip and fall!
8. Try to walk in a line, stepping where others have stepped.

Be considerate of the animals!

1. When examining animals, be careful not to injure them and to put them back exactly where you found them. Many have very exact requirements for survival, right down to a particular hole or depression in a rock. The very act of picking up some animals can damage them, so be careful! Leave even empty shells for others to see and organisms to use for shelter.
2. The seashore animals need to be kept moist. Keep your hands wet, and keep the animals moist, too.
3. Try to look at the organism without even picking it up. Often their behavior when left alone is more interesting than what they might do when picked up.
4. If you do pick up an animal, place it in a clear plastic container of sea water. Allow others to examine it so that they don't have to pick it up again. Show the organism to the whole group, rather than having every individual pick up the same organism. Replace it exactly where it was found; replacing it only a few feet from its "home" may expose it to conditions that it can not tolerate, thereby killing it!
5. If you do move or roll over a stone, mass of seaweed, or piece of wood to look underneath, be sure to do so carefully and to replace it exactly as you found it. Imagine how you would feel if a giant came to your neighborhood and lifted your home off of its foundation! The rock, wood, or algae mass provides protection not only from predators, but from the drying of the sun.
6. Many animals and plants attach themselves to the rocks firmly. **Do not pull hard to remove any organism**! **Doing so may damage them, perhaps fatally.** If they don't come off with a gentle tug, leave them in place and enjoy observing them "at home."

Take nothing but pictures, learning, and memories!

1. The seashore abounds with beautiful and fascinating shells, rocks, driftwood, and other things that you may be tempted to collect. Don't!
2. The plants and animals at the coast live in a carefully balanced environment. They need the materials provided by the decomposition of dead organisms. Also, other visitors may be just as interested in seeing the shells as you are. Leave them for other people (and organisms!) to enjoy.

3. Most dry specimens taken home are soon stored away and forgotten. Live specimens soon become smelly messes and are thrown away. It's better to leave them.
4. **And . . . it's illegal to collect most plants, animals, shells, or even rocks from state beaches and parks, and also from many other places. To collect legally, one must obtain a permit from the California Department of Fish and Game.**

Leave nothing except a better environment.

1. Be sure not to leave behind bags, scraps of food (which may actually harm animals that eat them), or any other signs that you were there.
2. Encourage students to use reusable lunch containers.
3. Bring cloth towels for drying hands, rather than paper towels or napkins.
4. If you find litter, be sure to remove it; it is a good idea to bring a bag or box specifically for carrying trash or litter.
5. **As the group leader or teacher, your example will teach more than your words will. Be a model!**

Safety for Students

Safety at the coast begins **before** leaving home or school. Be sure that students understand how to protect both themselves and the environment before leaving.

Proper attire is important. Students should wear clothing that is comfortable and durable.

- ❒ An old pair of sneakers will help prevent slipping and protect the feet.
- ❒ A warm jacket or sweatshirt should be brought, as it is often cold at the coast even if it is warm inland.
- ❒ Some teachers find it useful to bring something for their students to sit on.
- ❒ Sunscreen and a hat will help protect from sunburn.
- ❒ Caution the students NOT to wear jewelry, clothes that can't get wet, etc.

Where the footing is slippery, encourage students to "do the tide pool limbo" and "walk like a crab," getting low and using both hands and feet. It's better to look like a crab than a patient!

Impress upon students the danger of large "rogue" waves that can occur at any time of the year. Teachers should check the weather and surf conditions before they come, and be prepared to modify the intended study area if conditions are not safe when they arrive. Teachers must also monitor the local conditions throughout their visit to note changes in winds, tides, and waves so they don't catch your group off guard. Teachers and students need to stay aware of their surroundings, and avoid getting distracted by their study activities. When you are near the water, face the ocean at all times to reduce the chance that a large wave will surprise you. Instruct students that, if they can't avoid getting hit, they should "make like a sea star," getting low and hanging onto the rock. If you see someone swept into the ocean, throw something floatable if it's close at hand, but don't go in yourself. Go for help.

Broken shells, glass, and cans are a hazard; so are sea urchin spines, pinching crabs, and sharp barnacles. Wet rocks are slippery, especially when covered with algae ("sea weed").

Remind students to respect each other, other people at the beach, and the environment.

- Bring reusable lunch containers.
- Keep the noise down. Other people might not appreciate it.
- No running. It is unsafe, and students will miss seeing what they came to see.

Have adequate adult supervision, and be sure that the adults know what to do. There should be one adult per 4-6 children, and the adult should stay with their group.

Set up a buddy system. Students go nowhere without their buddy!

Have a first aid kit, and know how to treat minor scratches and cuts.

Have towels for drying off at the end of the trip. They are also useful for wiping sand off of legs and shoes, which bus drivers and parents will appreciate.

Consider having a box or plastic bag for especially wet clothes, lunches, or ??? (Your bus driver will appreciate it!)

Tide pool areas are often found at the base of cliffs. Students may want to climb the cliffs, and that is very dangerous, not to mention potentially destructive.

Have clear objectives, and be sure that the students and any parent chaperones understand that this trip, while it should be enjoyed, is intended to help the students learn.

While on the Field Trip

Set boundaries as to where the students may and may not go. Safety is the most important issue. Also be sure that students and chaperones know the time schedule.

Students must stay with their group and their buddy.

One of the best ways to explore the tide pools is to simply sit quietly beside one. Tide pool organisms are alert to the approach of predators such as sea gulls and raccoons, so they will hide when they see you approach. If you simply sit quietly beside the tide pool for a few minutes, they will emerge from their hiding places and you are likely to see many more than you would by glancing quickly and moving on. One way to get students to do this is to have them count to 20 (or 30) while looking into a tide pool. The students' eyes will begin to focus better, and organisms which fled at the students' approach will come out of hiding.

If possible, plan some time for students to explore the tide pools on their own, either before or after their exploration with the naturalist.

Using underwater viewers can help settle the students down while improving their ability to see the organisms. See page 75.

Students will learn more and be less likely to get into trouble if they have plenty to do. Worksheets can be helpful, but are likely to get wet, lost, or forgotten. Some teachers have success by assigning specific questions to individual students, then having them report out at lunch or at the end of the trip. That way, they don't have to try to remember too much, but they still have a responsibility.

Some teachers divide the class into learning/research teams. Prior to the trip, individual students can become "experts" on specific aspects of the tide pool environment. For example, one might be the "crabologist" and come prepared to identify and tell something about the various species of crabs that students are likely to encounter. Another might be the "algologist," while another might be the snail expert. Assign an adult chaperone to stay with each group.

Before leaving the parking lot to begin the trip, review safety procedures for both the environment and the students, as well as expectations for behavior, lunch plans, and departure.

See the following pages for more ideas of things to do before, during, and after your trip to the coast.

Coastal Cleanup Day

Every September, the California Coastal Commission and other organizations sponsor a Coastal Cleanup Day. This is a great way to get the students (and their parents) interested in the coast at the start of the year. For information and dates about this activity as well as many others, including contests and teacher resources, go to the California Coastal Commission website and click on "Education and Volunteer Programs" and/or "Programs and Contests."

<**www.coastal.ca.gov**> or <**www.coastforyou.org**>

Standard(s) that can be addressed by participating in a Coastal Cleanup Day:
Grade 3 - S.S. 3.4.2; Math Number Sense 1.1; Writing 2.3
Grade 4 - Math 3.1
Grade 5 - Science: Investigation 6.g
Grade 6 - Science Resources 6.b, 6.c