# THE COASTAL ACADEMY

Fort Ross Conservancy



# Community, Conservation & The Marine Ecology Program

Immerse yourself in the natural world in Metini - Fort Ross State Historic Park.





A hub for environmental stewardship on the Sonoma Coast

**EDUCATION** 

Empowering individuals with knowledge to care

for coastal habitats.

**COLLABORATION** 

Partnering with local communities, organizations, and government agencies.

**SUSTAINABILITY** 

Promote the resilience of coastal environments

**ACCESSIBILITY** 

Reduce physical, cultural, and socioeconomic barriers to coastal engagement.

**RESEARCH** 

Scientific studies that contribute to the conservation of important coastal habitats for wildlife and people.

MISSION STATEMENT To steward the coastal environment through education, collaboration, conservation, and community engagement



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# Contact or follow us



Metini- Fort Ross State Historic Park 19005 Highway One, Jenner, 95450



http://www.fortross.org/the-coastal-academy



Visitor center on (707) 847-3437 between 10 am - 4:30 pm



Workshops/events: info@fortross.org, Programs/natural environment: mep@fortross.org



@fortrossconservancy



Fort Ross Conservancy

Fort Ross Conservancy (FRC) is a 501(c)(3) non-profit organization and California State Park Cooperating Association.

This booklet was written by Dr. Dione Deaker, Director of the Coastal Academy, Fort Ross Conservancy in August 2025 and made using CANVA. All photographs are taken by Dr. Deaker in Fort Ross State Historic Park unless specified.

# Support FRC

FRC is a non-profit in a rural coastal community that specializes in environmental education, advocating for wildlife conservation, and coastal stewardship.

At Fort Ross, we are doing everything we can to support the local environment, community, families and schools from near and far. To achieve this, we heavily rely on you, our community, to support what we do.

# Your gift will help us to:

- Inspire the next generation of ocean stewards by enriching our Marine Science Program with cutting-edge equipment and scholarships for underserved schools.
- Support conservation initiatives in FRSHP
- Expand accessibility across trails and facilities, so everyone can experience the beauty and history of Fort Ross.
- Foster partnerships with diverse communities to amplify the stories, cultures, and voices that make Fort Ross truly unique.

### The Education Fund

Our goal is for every school to have the opportunity to experience and learn about the spectacular California Coast.

On average, we provide \$800 of discounts per Title 1 school to participate in an MEP and each program has between 10 and 120 students. FRC also provides transport support (\$1000 per school) and programs for children from low-income through Point Arena's Action Network.

Hands-on outdoor learning provides invaluable experiences to bring textbooks to life and get students excited about and exploring the natural world. FRC strives to help children create a deep and meaningful connection to their coast and foster the next generation of environmental stewards and ocean protectors. For many students, this is the first time visiting the coast.

"I never thought in my life I would touch any sea life because I don't go to the beach" MEP student and her drawing 8<sup>th</sup> Grade, Oakland, CA





# A Community Space

Fort Ross State Historic Park are public lands for everyone. The visitor center and park lands are community space to hold workshops, events, classes, and meetings. The auditorium is equipped with tables and a projector.

Environmental and art workshops FRC has supported include:

- Central Sonoma Coast Firewise Community
- MPA Collaborative training
- LiMPETS education program training
- Fork in the Path: Sea urchin classes
- Volunteer sea urchin collections
- Leather bag workshop
- Nature journalling
- Yoga

Call the Visitor Center (707) 847-3437 or email info@fortross.org to schedule an event, workshop or to book the auditorium.

# Sea Urchin Class

# **Festivals**

FRC's festivals are a celebration of the beauty and bounty of the coast as well as its history.

Every year we host two festivals in the Fort:

- 1. August: The Ocean and Art festival
- 2. October: The Harvest Festival.

FRC welcomes artists, craftsmen, produce, musicians, dancers, wildlife conservation groups and researchers from the local community and beyond to join us at our festivals. You can table, run activities and workshops for over 500 visitors.

In 2025, the Sonoma County Pomo Dancers performed traditional song and dance in the Fort, on their ancestral homelands, at the Ocean and Art Festival.





# Collaborate with us!

At Fort Ross Conservancy, we believe that positive change and growth for the coastal environment, for both wildlife and people, is built on strong connections in the local community and beyond. We partner with other nonprofits and organizations who share our values to support each other and work hand in hand.

If you are involved with environmental protection, scientific research, social justice, outdoor education, or community wellbeing, we are interested in working with you. For researchers, we can provide letters of support for projects in Fort Ross State Historic Park, encourage citizen science sightings of wildlife, and facilitate communications with California State Parks.

### Who do we work with?

California State Parks
The Kashia Band of Pomo Indians
The Alaska Native Community
US Fish and Wildlife
The Marine Mammal Center
Cleaner California Coast

Fieldguides Outdoor Education Greater Farallones Association LiMPETS outdoor education Laguna de Santa Rosa Foundation Point Arena's Action Network

# Volunteering in the Park

Volunteering is a great excuse to get outdoors and visit the coast. If you are a birder, love hiking, interested in marine mammals, or enjoy tidepooling and gardening, we have a number of opportunities to get involved with.

# There are a number of ways to get involved:

Marine mammal surveys and citizen science events Garden volunteers: restoring native habitat Beach watch – Led be Greater Farallones Association Festival volunteers and State Park docents

# California State Park Volunteer benefits:

40 hours = a district day use pass for the next year.

200+ hours = a statewide day use pass for the next year.



# Research & Citizen Science

Fort Ross is home to a huge variety of wildlife! We lead and support a number of research and citizen science monitoring programs.

More benefits of citizen science:

- The community together can collect so much more data than the few scientists studying it could ever aspire to collect on their own
- The data is a resource not only for scientists, engineers, naturalists, and students, but the global community. This data is used to inform research, management, environmental protection, classes and even personal travel plans.

Throughout the year, FRC holds iNaturalist events called Bioblitz to support the California Academy of Sciences. Everyone is welcome to attend and take as many photos of different species as you can!



# Sea Lion Survey (weekdays, monthly)

Started in 1997, this is a Fort Ross-led citizen scientist project where volunteers from the local community, across the Bay Area, and beyond meet and count the sea lions in Fort Ross State Historic Park through telescopes.





# **Harbor Seal Survey (March to July)**

Bring a friend and walk along the coast to count adults and pups! Training is in February and surveys are fortnightly during the pupping season (mostly flexible dates). If you can only help with one survey- that's ok! All data is sent to Point Reyes National Seashore





### **Habitat Restoration Research**

FRC is committed to planting larval hosts and native flowering plants to support the endangered Behren's and Myrtle's silverspot butterflies and other species. Get involved in our greenhouse or by planting in the fall.



# The Coastal Academy's

# Marine Ecology Program Dive into marine science and explore coastal ecosystems!

The Marine Ecology Program (MEP) is an incredible way to experience and enrich your knowledge of the Sonoma Coast and its diverse fauna and flora.

This STEM program taught through outdoor experiential learning is suitable for groups of all ages including school and university students, families, and both social and professional groups. The goal of this program is to inspire passion for the natural world and marine environment.

Connect with and gain a deeper understanding of coastal ecosystems and wildlife, human impacts, and local incompacts, and local impacts. impacts and local impacts. impacts and local impacts and local impacts.

Engage in hands-on exploration and observation to enhance creativity, critical thinking and scientific reasoning.

Learn about scientific methods such as observation, data collection, and interpretation. Scientific 54

Inquiry

Have an increased sense of mental and

physical well-being through nature

Personal Development

Feel empowered and be a voice for the preservation of coastal habitato the greater natural world world Stewards coastal habitats and



An outdoor education program on coastal wildlife and ecosystems!

Experience the wonder of the spectacular Sonoma Coast - See marine mammals, learn about kelp forests and the 1800s sea otter fur trade, go tide pooling, and more in hands-on activities!

Ever since I first visited Fort Ross, I have been captivated by its beauty, the diversity and richness of the ocean and abundance of wildlife. Every day there is something new to see from wildflowers and bobcats on the prowl, to migrating whales.

With such an accessible coastline and as a key outpost during the 1800s fur trade, Fort Ross is an ideal location to explore the coast, witness how history has shaped the environment we see today and see restoration efforts by scientists and the wider community.

The MEP is for anyone interested in seeing and learning about the coast and marine life. It is suitable for school students, youth groups, summer camps, university classes, and adult groups both social and corporate. Join us during the day or stay overnight in the historic, restored fortress.

We look forward to welcoming you to Fort Ross State Historic Park!

Dr. Dione Deaker Director of the Coastal Academy Fort Ross Conservancy





# Program options

# **Pricing structure**

### Day Programs including homeschool programs

\$10 per participant per hour (full day, 5 h = \$50) For school programs, each chaperone is \$10 overall

## Overnight programs

\$75 per participant Includes ~7 hours of program activities across two days For school programs, each chaperone is \$20 overall

# **Programs**

# School and youth groups

The MEP is suitable for learners of all ages. We teach classes and grade levels of students from all ages: kindergarten to 12<sup>th</sup> grade and university. The delivery of each activity can be modified to suit the level of your group. FRC provides resources for teachers and activity booklets to enhance student learning.

# **School Partnership Program**

Experience all of the activities on offer! FRC can provide three field trips + in-class lessons for your class in one year. If multiple grades at your school are interested in coming back each year, we can structure the program so that students do new activities each time.

# Homeschool programs

Special programs for homeschools are run throughout the year including:

- Winter: Help Kelp! Learn about kelp forests and what happened to them
- Spring: Invert Alert! Exploring the intertidal
- Summer: Amazing marine mammals
- Fall: Search for sand crabs......and more!

# Family Camps, social groups and corporate retreats - and anyone else!

The MEP is also available for groups of friends, coworkers, and families! Stay overnight in the Fort or stay nearby at a hotel or campsite and visit us for a program during the day.



# Activities and curriculum

# The intersection of natural & cultural history

Fort Ross is an ever changing place reflected in the modified landscape. The wildlife and ecosystems in the ocean and on land have significantly

changed since the Kashia lived on and cared for the land for over 25,000 years. Back then, kelp lined the coast and the bluffs were covered with native plant species.

Today, we are working to learn about and restore the wildlife and environment. The MEP connects you with both coastal wildlife, local history, and restoration. You will have the opportunity to explore the coastline, historic buildings and learn about the different people and animals who lived in the State Park over time.



There are three curriculum themes:







Each curriculum has a number of different activities (1–1.5 h length). A program can consist of activities from one curriculum or a mix of activities from across curricula.

Your FRC instructor will choose a mix of activities based on the weather conditions and tides unless a preference for activities is expressed.



# Incorporate geology into your trip!

The San Andreas fault runs along the length of the state, skirting on and just off California's coast and through Fort Ross' historic orchard. This fault line is a transform boundary between the Pacific and North American plates.

If you walk up Fort Ross Road, the fault line is clearly marked on the road and surrounded by stunted trees and sag ponds left behind from the famous 1906 earthquake.



# Kelp Curriculum

# Helping kelp

Kelp forests in California have declined by more than 90% since 2014 due to a population increase in purple sea urchins. These classes cover the key aspects of kelp forest loss and how they are being restored by scientists today. The decline has been caused by over-exploitation of sea otters in the 1800s, the sea star wasting disease in 2013, and a marine heatwave in 2014-2016.



The creation of this curriculum was funded by The Greater Farallones Association (GFA). These classes can be taught individually.

# The ideal program structure\* for a 5 h MEP:

Time	Activity
10 am	Welcome to Fort Ross + tide pool practice + sea otter fur trade
11:30 am	Tide pooling (explore/survey) + Lunch
1:30 - 3 pm	Kelp forest and sea urchin lesson

<sup>\*</sup>This itinerary is tide-dependent

# Tide pool treasures

Find purple sea urchins, sea stars, crabs, abalone, anemones and more while exploring the incredibly diverse rocky shore in Sandy Cove. Middle and high school students can do a survey of the intertidal using transects and quadrats just like marine scientists and practice species ID.





# MORE CLASSES\*

We provide a number of indoor classes\* inside our visitor center. These are also options when wet weather or high tides/swell prevents tide pooling.

# Tide pool Practice: species identification

Get ready to explore the tidepools! Learn how to identify different marine invertebrates, fish, kelp, and other algae species.

### Kelp forests: underwater cities

Learn about kelp and sea urchin biology and ecology and how an increase in purple sea urchin population numbers has lead to kelp forest decline. This activity includes:

- Marine protected areas and the impact of warming oceans
- The role of kelp: why is it so important?
- Kelp forest food webs
- Biology and ecology of purple sea urchins
- Kelp forest restoration in Sonoma led by GFA and NOAA's Greater Farallones and Cordell Bank National Marine Sanctuaries
- Handle and measure live sea urchins like restoration scientists!

### Stars of the sea: sunflower sea stars

There are so many cool species of sea star! The sunflower sea star is a key predator of purple sea urchins. This includes:

- Anatomy: Create a sea star
- Learn about sea star wasting disease and the sunflower sea star
  - Mussel dissection sea star food.

\*These classes are available as in-class programs at your school!

### Sea otters and the 1800s fur trade

Sea otters are the other key sea urchin predator. Fort Ross played a key role in sea otter decline as a hunting outpost. This lesson includes:

- Explore the historic buildings and feel the pelts of sea otters and other hunted mammals
- Learn about sea otter biology, ecology, and their role in healthy kelp forests.
- Learn how reducing biodiversity leads to weakened ecosystems and kelp loss

# Marine Manmals

# **SEALION HIKE**

Walk across the bluffs to see sea lions through binoculars and telescopes.

FRSHP is lucky to have resident california and steller sea lions that live on near-shore rocky islands throughout the year. This is one of the best places to see Steller's in California!

Sea lions are endlessly entertaining. They play, spar, climb and jump of cliffs, and have a lot of energy on land and in the water. On the bluffs, we have a great vantage point to see large groups of sea lions in the water.

### Learn about:

- Species identification
- Coastal upwelling
- The importance of marine mammal monitoring







# HARBOR SEAL SURVEY

How many seals call Fort Ross home?

Harbor seals haul out along the shoreline in FRSHP. They are the opposite to sea lions: shy and quiet. See pups in April and May!

### Learn about:

- Species identification
- · Habor seal biology and ecology
- Do a survey like a marine scientist
- The importance of respecting marine mammals







Do the MEP as part of The Marine Mammal Center's Ocean Ambassadors program for middle school students!

This is an award-winning marine science program includes visiting the hospital in Sausilito and provides teachers with curriculum connected to access to Next Generation Science Standards, resources and professional development throughout the academic year.

# Winged Wildlife + More!

There are so many birds, butterflies and bees to see in FRSHP that flit, float and flap along the coast, fields of wildflowers, and through the redwood and cyprus forest. Keep your eyes peeled!

# **Bird Bingo!**

At the intersection of grasslands, forests, and the ocean, the coast is a great place to see a wide variety of birds! While you are walking around the State Historic Park, try to spot as many birds as you can. How do they compare to the birds you see at home?



# Plants and pollinators

Learn about the amazing hummingbirds, butterflies and bees on the coast and the native plants that support them. Help with habitat restoration for endangered silverspot butterflies! Includes:

- How art and scientific communication are important for wildlife conservation
- Butterfly identification
- Create clay seed balls to assist with habitat restoration

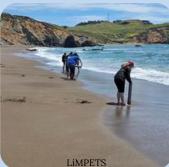


### Shorebird diet

Search for mole crabs in the sand on the beach! These unassuming crustaceans are indicators of toxins, important herbivores in beach ecosystems, and food for birds, fish, and sea otters. Includes:

- Mole crab biology and ecology
- Survey the beach for mole crabs
- Do a dissection class (age dependent).





# Creatures of the night: BATS!

This is available for overnight programs with FRC\* or with Fieldguides Outdoor Education.

Bats are part of the nocturnal wildlife community. They are wonderfully creepy but also very cute and not to mention extremely important! They pollinate crops, disperse seeds, eat insect pests, and are part of the food chain. Includes:

- Echolocation game
- Anatomy
- Species ID
- Using an echolocation device to hear bats in real time!

\*An additional fee is required if you would like an instructor to stay after hours (after 5 pm).



# COME AND SEE WHY SO MANY STUDENTS LOVE OUR PROGRAMS!

### **Student Feedback**

It was really amazing and I loved the sea lions, touching the urchins, and seeing many amazing historical buildings in Fort Ross.

It was extremely fun to learn about everything in Fort Ross! I may even go urchin diving someday!

The presentation about kelp forest and sea urchins [was my favorite]. I LOVED [the marine science instructor]! She was so nice and just the best. Also touching the sea urchins was so fun and cool.

I had an excellent time because we got to participate in adventurous experiences like tide-pooling. I learned that abalone are endangered and I learned what a nudibranch is.

I enjoyed the MEP program, I loved watching the seals and learning all about them. My favorite activity was looking at the sea lions and seals through the binoculars.

I enjoyed the program very much. I loved seeing the humpback [whale], seals and [the] hike was very pretty.

### **Teacher and Parent feedback**

Our class very much enjoyed the entire experience. The instructors were knowledgeable and interesting. The students really enjoyed their time on the beach and learning about the seals



The amount of engagement we saw was spectacular. The delivery of this program was what made it so engaging and I want to thank you for that. Our students have struggled to fit in the "traditional ways" of education which is why they end up in our Alternative Education program...yesterday it was something we hardly saw and that is what gave us the definition of a successful leave to learn outing. We would love to do this again next year.



The information was at the correct level and everyone learned so much. It was a fantastic program!

# HOW TO BOOK

Visit our website:

https://programs.fortross.org/mep

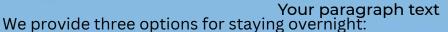
Email: mep@fortross.org



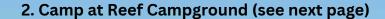
# Staying overnight

We know Fort Ross is not easy to get to! Why not make the most of the coast while you are here?

Overnight programs are \$75 per student/participant. For school programs, chaperones are only \$20 each. They include a 5 hours of program activities on day two and 1.5 h on day two. Options are available for schools who need financial assistance.



**1. Stay in the Fort:** Sleep in historic buildings or pitch tents in the Fort! Staying overnight in a historic, restored Russian Fortress originally constructed in 1812 is an incredible and unforgettable experience! We can also reserve campsites at Reef Campground for groups doing programs with us.



**3. All-inclusive camping with Fieldguides Outdoor Education:** FRC does not provide evening activities, dinner, or camping equipment but Fieldguides inc. does! This makes for a much more relaxing and entertaining camping experience with your school or youth group.

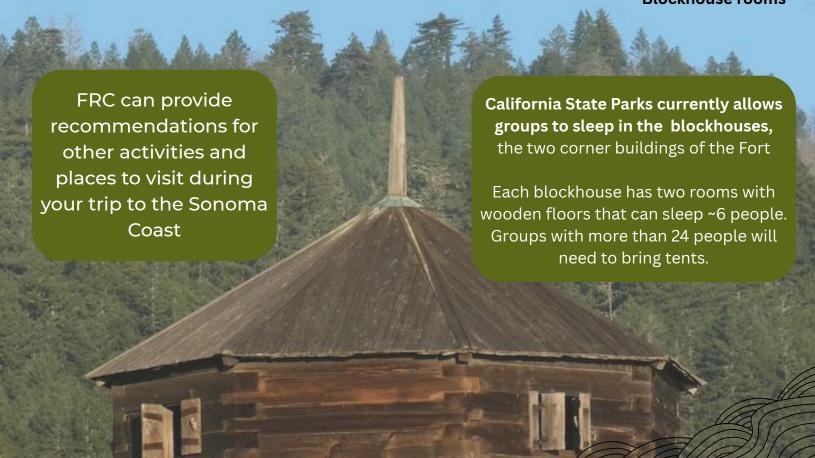


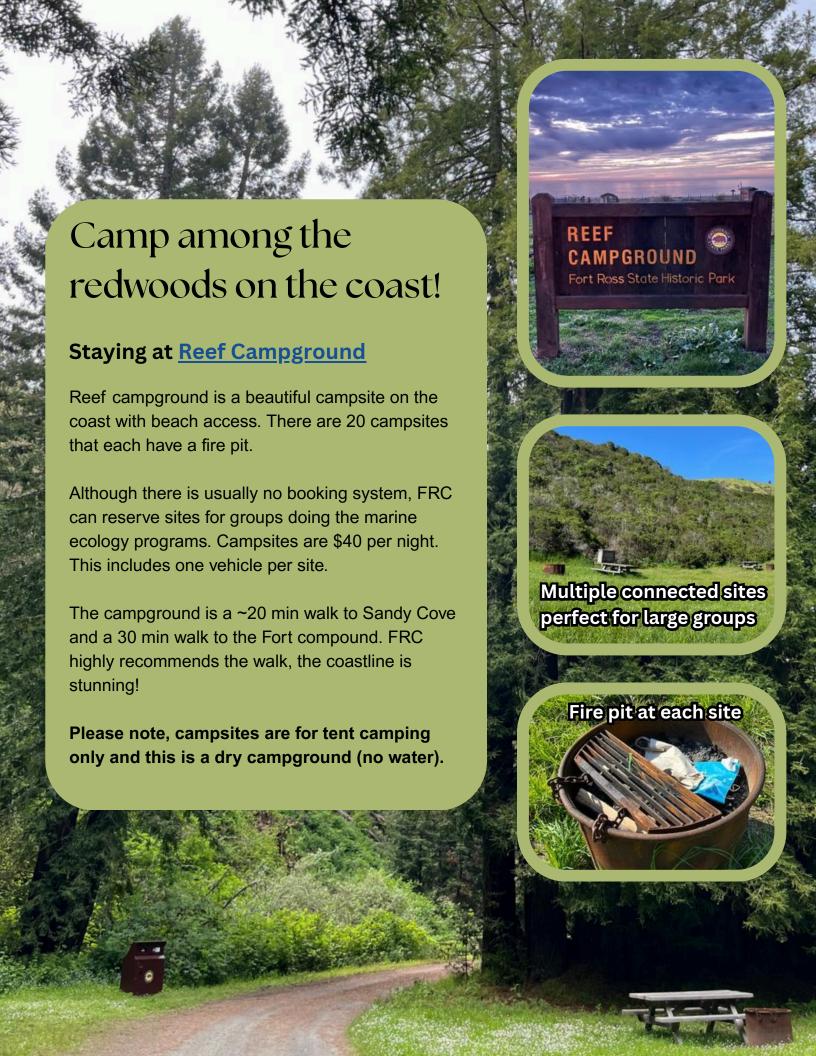
Fire pit with grill





**Blockhouse rooms** 











# Camping by The Fort



For Fort Ross Conservancy's Marine Ecology Program



Enjoy a night of all inclusive camping on the coastal bluffs with FIELDGUIDES INC. after a day of experiential learning in the Marine Ecology Program!

Fieldguides INC provides all camping equipment, dinner and evening activities.

Marine Ecology program: 1-5 hours, \$10/student/hour, \$10 per chaperone

FIELDGUIDES overnight: \$100/student, \$25 per chaperone





# How to book:

info@fieldguides.org

(650) 969-6325

@fieldguides.inc

Available for youth and school groups. For more information on the MEP, scan the QR code or email mepefortross.org



# **Evening Activities**

# Creatures of the night: BATS

Learn about Bats and use an echolocation device to hear and identify different species flying past in real time!

This activities can be run by the group lead. If you would prefer an MEP instructor to take this, there is an additional cost to pay for their time after normal program hours.

### Other activities

Bring boardgames, cards, books. If it is raining, we can put on a NatGeo documentary in the visitor center.

### Presentations - Involves pre-program preparation

Before the MEP, students research one animal in Fort Ross State Historic Park. In the evening, students (individuals or in groups) give a short talk to the rest of the class about their animal including their habitat, diet, distribution and fun facts. Students can also dress up as their chosen animal!

# **Evening walk**

You can walk to the beach, up the road to the cemetery, or visit the historic orchard where you can see the San Andreas fault line marked on the road, the influence of the fault line on the topography and stunted trees, and a beautiful view over the park.

# Nature journalling:

Take some time to paint or draw the stunning coastline, wildlife, note down observations of what you see and feel or write a comic or a poem....

INTERESTED IN NATURE
JOURNALLING?
For a few dollars to cover material
costs, students can create

to use throughout the program.

Please let FRC know in advance

booklets in the morning of the MEP



# Example itinerary: Overnight Program

# **Day One**

Time	Activity	Notes
10 am	Arrive at 10 am at Fort Ross Visitor center. Welcome to Fort Ross at 10:15 am	Opportunity to use visitor center restrooms and have a snack after the bus ride.
11 am	Sea lion hike	~20-30 min walk to the viewpoint each way
12 pm	Lunch	Students bring a sack lunch to have lunch in the Fort compound
1 pm	Sea otter fur trade	Tour through the Fort historic buildings
2 pm	Harbor seals	See the seals from the bluffs overlooking Fort Ross Cove.
3 pm	Overnight debrief (day programs end at 3pm)	Opportunity to visit Fort Ross Visitor Center museum, free time, or an evening activity
4:30 pm	Start unpacking sleeping areas and setting up for dinner	Cars can be driven down to the Fort

# **Day Two**

9:30 am	Pack up	Return all cars to visitor center parking lot
11 am	Tide pooling	Sandy Cove
12 pm	End of program	Farewell and depart Fort Ross

<sup>\*</sup>Please note that the activities available on the day may vary depending on tides, weather, and ocean conditions

# Fort Ross, a California State Historic Park

Dogs are permitted on-leash on roads, paved trails and in the Fort. Dogs are not permitted on the bluffs, trails and the beach.



### Leave no trace:

Collecting geological and plant material in California State Parks is prohibited. FRC asks that students do not collect shells. Trash and sea glass can be collected.

Please encourage students to collect all trash and dispose of it appropriately.

Leave only footprints, take only memories

### Respect the wildlife

Inside the park, we have bobcats, raccoons, coyote, deer, gophers, snakes, birds, marine mammals and many other wildlife you will hopefully see but should also be mindful of.

FEEDING WILDLIFE IS PROHIBITED. Please make sure all food scraps are put in the trash or in sealed containers

The wildlife, especially predators, are best left alone and admired from a distance. The harbor seals are very shy, it is important to not make loud sound if you are walking near them and keep a distance of 150 feet (half of a football field) on land or in the water. This INCLUDES PETS! Do not allow dogs to approach marine mammals, it risks the safety of both your pet and wildlife.

Shorebirds: If you see them flap, take a step back!



### **Facilities**

- Restrooms in both the Fort and Visitor Center (not at the beach)
- Potable water next to the restrooms in the Visitor Center and Fort
- A fire pit with a grate for cooking can be used during programs.
- Parks free wifi is available in the officers barracks and in the Visitor Center

# **Accessibility**

### Terrain

Includes: Stairs down to the beach, grassy bluffs with gopher holes, sandy beach, rocky shore



### Hazards:

Tide pools: Sharp rocks due to barnacles, unsteady boulders, slippery algae-covered rocks, unpredictable waves (Sandy cove is usually protected). Accessing the tidepools includes walking across the beach.

Trails: uneven paths, hiking on and off trails

- The hike to the sea lion islands is a 30 min walk (one way) across the grassy bluffs through a cow pasture. There is minimal change in elevation (the walk is mostly flat).
- The walk to the beach is ~10 min from the Fort down a gravel hill.

A cross-country wheelchair is available at the visitor center. It can be used on the sandy beaches and on the bluffs.

Please note there is often no cell reception on the beach and areas of the park. Verizon has the best reception.



# **Tidepooling programs**

- Ideal tides are under 0 ft. The tidepools become more unpredictable as the tide comes in.
- If the swell is too high, an alternate, non-tidepooling activity may be necessary.

# Tidepool etiquette

- Step carefully, check rocks are sturdy and not slippery before stepping. Avoid stepping on algae and animals that are living on the rocks.
- NEVER wade into the tidepools.
- Use your hands three points of contacts helps with stability
- Replace rocks that are flipped to their original position
- Respect the wildlife in the tidepools. Touch gently: Use one or two fingers to gently touch tidepool animals. No poking, pulling, or picking up any tidepool animal. Leave fish in the water.
- Tidepools are protected. Never remove animals, rocks, or shells from the tidepools. Take nothing but pictures, memories, and any trash you find!







