

## **Santa Cruz Island Project Kit**

Congratulations! You're going to Santa Cruz Island! Use these project ideas to enrich your educational experience. Read through them before you go to make sure you understand the terms and concepts, and to help you determine if you want to expand upon any of them. **You'll find fun facts and printable worksheets at the end of this packet.**

a- elementary level activity    b- middle school level activity    c- high school level activity

### **Language Arts**

People are built to walk on dry land, but being out on the ocean in a boat is so much fun! When we do new things, or things that are foreign to us, it can be easy to get caught up in the excitement and miss the depth the experience can bring to us. In this project, you'll think about your trip a little deeper and record your thoughts. Do one of the following activities:

- a. How is being on the ocean different than being on land? What do you smell? What do you see? What do you feel? What is the weather like? Use all of your senses and write a few sentences or draw a picture about your experience.
- b. Think about how large the ocean is compared to the size of the boat you're in. How do you feel? How would you feel if you had to spend months at a time out on the ocean like some people do? Write your thoughts, or a short story, about what it would be like.
- c. Take your ocean trip to the next level. Research an ocean subject and write an essay, or write a fictional story set in an ocean setting. Take notes, either mentally or on paper, of things that stand out to you on your trip so you can incorporate them into your writing.

Materials required: Notebook, pen/pencil

Submission: A copy of your writings/drawing, and any pictures/videos

Teaching or learning notes:

### **Applied Math**

There are many ways marine biologists and zoologists use math when out on the islands. Complete one of the projects below:

- a. Count the number of animals you see. Group them into categories and graph your findings.
- b. Ask your guide about how many whales usually travel in the area you are watching. How many different pods have they identified? How many whales are usually in a pod? Use this information to determine how many whales usually trek through the area. Also, ask your guide about the different ways he/she uses math in their job.
- c. You are a whale-watching guide. The last known coordinates for Bessie the whale were north of your current location by 1,537 nautical miles, 14 days ago. You know she is headed south toward your location. If Bessie travels at a speed of 4 nautical miles per hour, how much longer will it take her to get to where you are? When finished solving this problem, design one of your own and solve it!

Materials required: Notebook, pen/pencil, calculator or smartphone (optional)

Submission: Your calculations, estimations, and conclusions, and any pictures/videos

Teaching or learning notes:

## **Science**

Islands have a very unique ecology. They are secluded from other land, and yet carry a wide diversity of life. This can present unique challenges to the animals there, and to conservation efforts.

- a. Choose an animal that lives on the island to learn more about. Draw or write about your findings. Include at least one detail about how it survives on the island.
- b. Discuss and diagram the unique life history (the story of its life from birth to death) of one of the animals you see. Write a paragraph about your findings.
- c. Do some research about island conservation. Make observations on your trip about the ecology of the island and write a plan for conserving biomass and geological features.

Materials required: Notebook, pen/pencil

Submission: A copy of your drawings, diagrams, maps, or designs, and any pictures/videos

Teaching or learning notes:

## **Social Studies**

The relationship between people and the ocean has a rich history. Since the beginning of human history, the ocean has played an integral role in sustaining life for coastal peoples. Complete one of the following:

- a. What kinds of things can people use from the ocean? Make a list or draw a picture.
- b. Imagine what life would be like living on the coast before the discovery of electricity. What would your day look like? What would you eat? How would you stay warm during the winter? How would you build boats? Draw a picture of what your village or town might look like, or write a short story or essay about living in a pre-electricity coastal village.
- c. Research the Chumash people of Southern California. How did they live before the Spanish arrived? Complete a research project about the Chumash. Include drawings/pictures and a short essay describing their culture and the importance of the whales.

Materials required: Notebook, pen/pencil, smartphone (optional)

Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

# FUN FACTS

- Santa Cruz is California's largest island, almost three times the size of Manhattan. Approximately 24 miles long and up to six miles wide; 96 square miles; 62,000 acres; 77-mile shoreline.
- One of the largest sea caves in the world is Painted Cave on Santa Cruz Island spanning over four football fields in length (1215 feet) and a width of 100 feet with a ceiling height almost as tall as the Leaning Tower of Pisa (160 feet).
- Santa Cruz has over 60 endemic, or completely unique, species.
- 10% of the global blue whale population gathers at Channel Islands National Park and Marine Sanctuary each summer, making it home to the largest aggregation of blue whales in the world.
- Dolphins are extraordinarily intelligent animals who also display culture, something which was long-believed to be unique to humans (although now recognised in various species).
- Dolphins have been observed teaching young how to use tools. They cover their snouts with sponges to protect them while foraging.
- Dolphins sleep by resting one side of the brain at a time. This allows them to continue rising to the surface for air and to keep an eye open to watch out for predators.
- When sea lions balance a ball, they are actually utilizing their whiskers and not their nose.
- Sea lions can swim at burst speeds up to 25 miles per hour, but most of the time they swim around 11 miles per hour. Sea lions can swim faster by gliding on the surface of the water.

## Santa Cruz Island

1. Draw a picture of your favorite part of the trip.



2. Describe your favorite part and why you love it.

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3. Are dolphins mammals? Why?

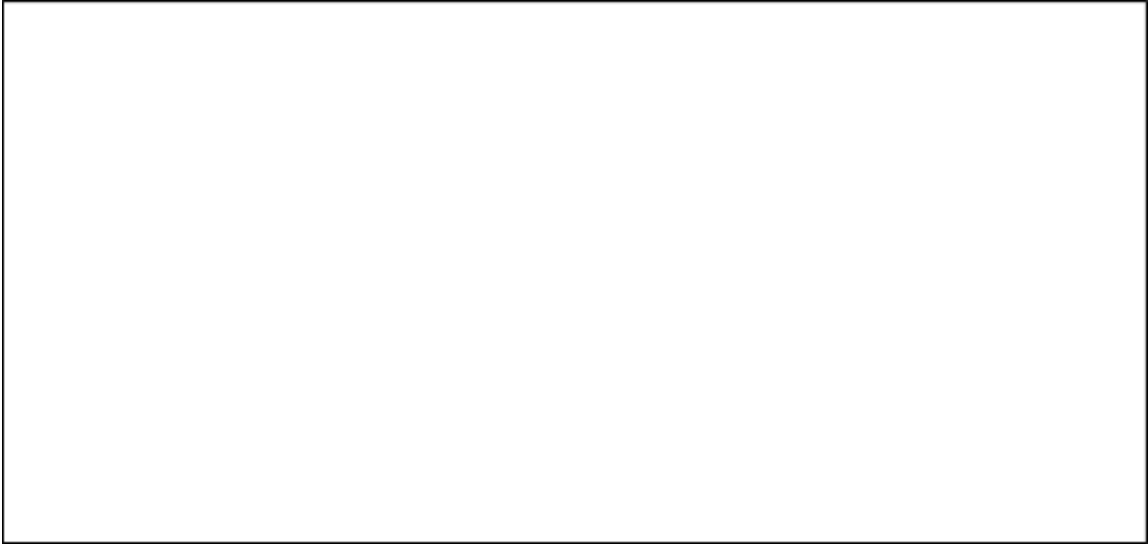
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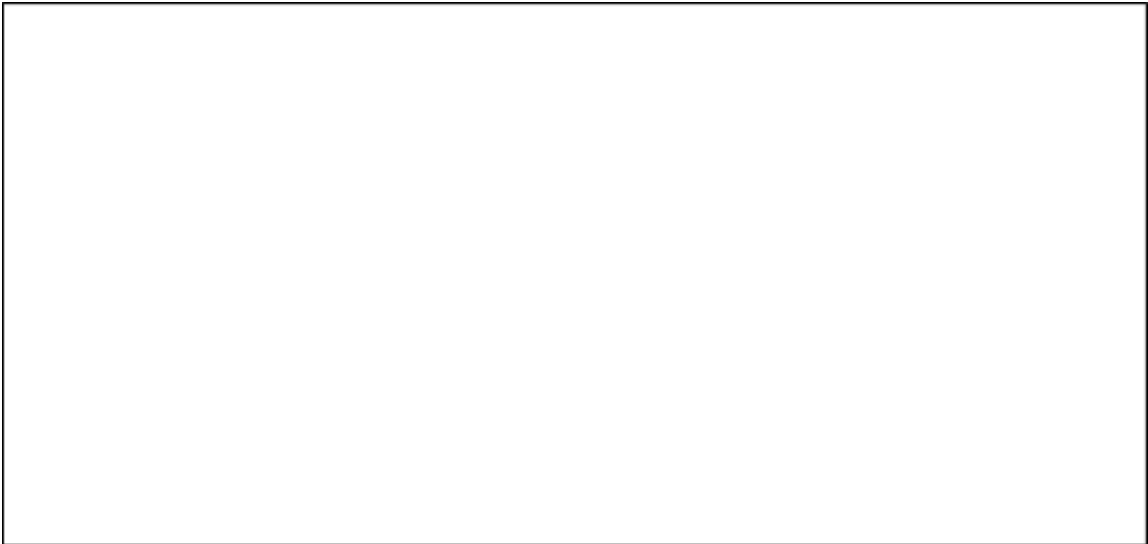
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4. Draw or describe one animal you saw on the island.



5. Draw the boat you rode on to the island.



6. Name 3 things that the island is known for?

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**BONUS:**

Go on a hike on the island. Catalog the plants and animals you see by listing their names, how many you saw, what they eat, and where they live or grow.

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