Monterey Bay Aquarium Project Kit

Congratulations! You're going to the Monterey Bay Aquarium! 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

Animals have language, too! Take some time to observe animals interacting with each other. How are they communicating to each other? How are they reacting to one another? Do you see positive or negative emotions in their communications? What are they trying to achieve? Is the way they are communicating effective? What can we learn from them? What are the differences in the ways mammals, amphibians, reptiles, and fish interact?

a. Draw a picture about what you see. Talk or write about it.
b. Write a few short paragraphs about what you see. Talk about it.
c. Write a short essay about what you see. Discuss ways in which we, as humans, can use some of our communication skills to better exist in harmony with one another. What kinds of communications should we avoid, and which should we employ more frequently?

Materials required: Notebook, pen/pencil
Submission: A copy of your writings/drawing, and any pictures/videos

Teaching or learning notes:

Applied Math

Animals eat a lot! How much animal food does the aquarium have to purchase and prepare? How many animals live at the park? Use technology or ask a docent/keeper/employee to get estimates, and use those estimates to calculate how much money the aquarium spends to feed its animals.

a. Choose one animal to research how much it eats in a day. Calculate how much food it would need in a year. Draw or write about your findings.
b. Choose one animal to research how much it eats. Calculate how much food it would need in a year, and estimate how much that food will cost. Then, multiply that figure by the number of that type of animal the aquarium takes care of. Record your calculations.
c. Calculate estimates of food needs for each animal, each type of animal, and all of the animals at the aquarium. Do this per day and per year. Estimate how much that would cost. Record your calculations.

Materials required: Notebook, pen/pencil, calculator or smartphone (optional)
Submission: Your calculations, estimations, and conclusions, and any pictures/videos

Teaching or learning notes:

Science

Every animal has a unique life history. A “life history” is the story of an animal’s life from birth (or fertilization) to adulthood (and death). How many different ways can an animal begin it’s life? Are some animals more independent as babies than others? Why do you think this is? What about their lives affect how vulnerable they are when they are born? What kinds of animals raise their babies, and what kinds don’t? How does this affect how many babies survive to adulthood?

a. Choose an animal to think about these questions for. Draw or write about your ideas.
b. Discuss and diagram the unique life history of one of the animals you see. Write a paragraph about your findings.
c. Discuss the life history of one of the animals at the aquarium. Write a short essay on your findings. Then, explore animal keeping. What kinds of things does the aquarium need to keep in mind about each animal's’ life history when it is designing its living space and their plan for taking care of it? Does the aquarium have breeding programs for any of the animals? What are they working on currently? Ask a keeper/docent/employee.

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

There can be a lot of people at the aquarium! How do they handle the crowds? What affect does the layout of the aquarium have on the movement of people? How does the design help both the animals and the people have an enjoyable time? Can you see these same principles in use in the planning of large cities or other social environments?

a. Notice how many people are at the aquarium. Discuss some of the things they do to control crowding and help make each guest's experience pleasurable. Write down the techniques you see and how often you see them being used.
b. Analyze the layout of the aquarium and if/why certain features were designed with the purpose of managing crowds. Use the map, and write down what you find.
c. Discuss crowd control and analyze the layout of the aquarium. Discuss the things you've seen in light of larger social environments you've been in. How universal are these techniques? What are your ideas for improving guest experience at the aquarium?

Materials required: Notebook, pen/pencil, park map
Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

Fun Facts

- The Monterey Bay Aquarium is home to more than 35,000 creatures representing over 550 species which fill 34 major galleries. With nearly 200 exhibits in all, the Aquarium is a window to the wonders of the ocean!

- The Hovden Cannery, which houses the Aquarium, was first opened in 1916 and closed in 1973 when the sardine fishery collapsed.

- Nearly 1/4 million tons of sardines were processed on Cannery Row in 1945, the year John Steinbeck's Cannery Row was published.

- The Aquarium had a leading role in the movie *Star Trek IV: The Voyage Home*.

- In 2004, the Aquarium become home to a Great White Shark, the first and only one on exhibit in the world at the time!

- Monterey was first discovered by Europeans in 1602 and settled in 1776. It served as the original capital of California and the state constitution was signed here in 1846!

- Neon signs, billboards and hot dog stands are prohibited in the quaint village of Carmel-by-the-Sea, and a permit is required to wear high-heeled shoes!

- The Monterey Bay National Marine Sanctuary covers 5,312 square miles, one and a half times the size of the largest national park in the continental U.S. At it's center, is an underwater canyon twice as deep as the Grand Canyon.

- The Outer Bay Wing of the Aquarium has a million gallon tank that depicts the open ocean, and a three story kelp forest and Deep Seas display show creatures never before brought to the surface.

Monterey Bay Aquarium

1. Draw a picture of your favorite creature at the Aquarium.

2. Describe 4 different ways that you saw animals move.

3. What is one thing you learned about otters?

4. Describe or draw your favorite part of the Aquarium.

5. Fill the box with as many animal names or pictures of creatures you saw as you can.

6. What is one thing you learned about the ocean?

BONUS:

How many shark species can you find at the aquarium? List their common names and scientific names.