Bay Area Discovery Museum Project Kit

Congratulations! You're going to the Bay Area Discovery Museum! 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

There is so much to see at the bay Area Discovery Museum (BADM)! Choose one of the exhibits that you'd like to explore deeper. Then complete one of the activities below:

a. Imagine you are only 1 inch tall! Explore your favorite exhibit and talk about how it might look or feel if you were very small. Use your exploration to create a story and tell your story to others. You can even draw a picture for your story and write it down if you want!
b. Imagine you were going to teach about your favorite exhibit to a class of students just like you! How would you get your students excited about it? What would you teach them? Write a short lesson plan and then find someone to give your lesson to. Don't forget to include questions to get your student(s) thinking!
c. Imagine you lived 1000 years ago. If you saw your exhibit for the first time, what would you think? What would you try to do with it? Could you find a useful purpose for it? How could you use it to improve your life or the lives of others? Write a short essay about your ideas.

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

Teaching or learning notes:

Applied Math

Children's museums host more than 31 million visitors every single year. How many of those come to BADM? There are several ways to estimate this: ask someone who works there, find out the area of the building and divide it into representative areas that you can count and multiply, or find the information on the internet. How many people visit Bay Area Discovery Museum every day? In an average week? In a year?

a. Talk about the math and make verbal estimates with your teacher. Write down your math.
b. Do the calculations on your own and write everything down. Talk about holidays or operating hours and how those may affect their numbers.
c. Do the calculations, write it down, and ask more questions to determine BADM's estimated visits. (don't forget outside forces that may have effect like traffic, holidays, seasons, weather, vacation seasons etc.). Estimate how many people visit per day, month, and year. Find out what days of the week and what holidays BADM is closed for. Ask if they have regular extended closed periods for maintenance etc. Run a hypothetical model to see how the numbers change during specific times of the year (of your choice).

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

Teaching or learning notes:

Science

There is more science in BADM to see and do than you could possibly do in one day! Take some time with one of your favorite exhibits to document the science. What questions were the scientists asking that inspired them to think of this exhibit? How did they go about testing their ideas? What did they need to build their exhibit/experiment? What questions were answered from their experimenting?

a. Talk about what goes into doing an experiment. What methods did the scientists use to create the exhibit? Draw or write about your ideas.
b. Practice using the Scientific Method to analyze the exhibit. What was the scientist's initial question? What was their hypothesis? How did they test it and what did they conclude? Write down your analysis.
c. Design your own experiment. After analyzing an exhibit and how it's creators used the Scientific Method, use the same method to ask and answer your own question. Design your own exhibit to show others your work or explain how you can use the same exhibit to answer your own question. Draw a picture or explain it in a short essay. If you want, take it a step further and actually perform your experiment and write down your conclusions!

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

Northern California is a popular tourist location. Throughout your trip pay attention to the people around you. Can you tell if any of them are foreign travellers? Do some come from other states? How can you tell? What other languages can you hear? How far did they travel? Do they look like they're enjoying their vacation? How large are their groups that they are travelling in? How well do you feel BADM is representing America, California, or the Bay Area?

a. Pay attention to the people around you. Find at least one group of tourists and see if you can find out where they are from. Be discreet and polite while you look and listen for clues. Write down the clues you found. If you are brave, ask them where they are from and tell them you hope they are having fun on their trip!
b. See how many languages or accents you can identify. Where are those languages or accents spoken? What can you guess about the travellers based on their language or accent? How far did they have to travel to come to Discovery Cube? Why do you think they picked the Bay Area Discovery Museum or the San Francisco area? Is there anything like this in their home country? Write about your ideas.
c. What makes the Bay Area so popular for tourists? Do a little research about the area. Write a short essay about this area and why it is so interesting.

Materials required: Notebook, pen/pencil, smartphone (optional)
Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

Fun Facts

- The Bay Area Discovery Museum has a new program that is helping low-income families access their stellar programs. They teamed up with Museums for All, a program of the Association of Children's Museums and the Institute of Museum and Library Services, to give families of all backgrounds easy access to their museum and to help build a love of learning in the youngest generation.

- BADM has 7.5 acres of indoor and outdoor space to engage children in activities and exhibits that are fun and creative to ask children to use key creative problem-solving and thinking skills.

- Their daily drop-in programs, traveling and permanent exhibits, and special events encourage all children to discover and grow their natural curiosity for science, technology, engineering, and math (STEM) concepts to achieve seven learning goals: Be curious. Develop new ideas and test them out. Make thoughtful decisions. Communicate thinking. Take risks and persist through challenge. Learn to collaborate. Build STEM knowledge.

- BADM features seven exhibition spaces and more than six daily drop-in programs for children 6 months of age to 10 years.

- BADM offers free admission to all visitors on the first Wednesday of each month.

- Each year, BADM serves more than 1,800 preschoolers, preparing them with the critical skills they'll need to reach their full potential in kindergarten through a partnership with the Connections program. Connections fosters multi-year partnerships with low-income, federally subsidized preschools in San Francisco, Contra Costa, and Marin counties. Throughout the school year, they bring students, families, and teachers to the museum with free transportation and admission, so they can engage in creative learning.

- Launched in 2008, Connections is the Bay Area Discovery Museum's (BADM) school-readiness program and is celebrating 10 years of partnership . In that time, Connections has partnered with 61 schools to serve more than 13,000 low-income preschoolers.

Bay Area Discovery Museum

1. Draw a picture of your favorite exhibit at BADM.

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

3. What is one thing you learned about at BADM that you didn't know about before?

4. Draw or describe something robotic you saw.

5. Describe or draw something biological you saw.

6. What is the difference between kinetic and potential energy?

BONUS:
Bay Area Discovery Museum Scavenger Hunt!

- ❑ Something that flies
- ❑ Something that spins
- ❑ Something with 5 colors
- ❑ Something tiny
- ❑ Something huge
- ❑ Something fast
- ❑ Something fun
- ❑ Something alive
- ❑ Something cold
- ❑ Something that helps the earth
- ❑ Something you can build