McDermont Field House Project Kit

Congratulations! You're going to the McDermont Field House! 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 Field House! 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 area of the Field House 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 a class about your favorite area 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 the Field House for the first time, what would you think? What would you try to do with it? What would it teach you? 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

Advances in science are fueled by imagination, but if it weren't for math, nothing would work right! Observe the math all around you and discover just how important it is.

a. Go on a shape hunt! Find all the shapes you can, and create a short report with pictures/drawings of the shapes you found, their use, and importance.
b. Explore the math needed in one of your favorite areas. What kinds of math does the creator/designer need to know in order to make it function properly? Of the math used, what do you already know, and what would you need to learn? Write a short report on the math involved in your favorite exhibit.
c. Identify math in one of the areas. Using estimates or measurements, run through a few of the equations needed to create that exhibit. Draw a diagram of the exhibit and label where your math is applicable and the equations you used.

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 the Field House than you can probably imagine! Take a closer look at the physics of the Flowrider. It's so cool!

a. What direction, up or down, does water normally flow? Why? What causes the water to flow up on the Flowrider?
b. What direction does the water flow on the Flowrider? Why is this important to this activity? What would happen if the water flowed down? What does the Field House use to get the water to flow up?
c. Learn more about real waves. What causes waves? How does that make them usable for activities like surfing? How close of a resemblance is the action of the Flowrider to a real wave?

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

Spend some time in the arcade and observe how the people behave. How do exciting games change the dynamic of normal social interaction?

a. Which games do the kids like more? Are there more people around that game than the others? Why?
b. Be observant and find an example of someone being kind in the arcade. Were there any examples of someone not being kind? How can being excited or competitive change someone's behavior? Do something kind for someone else during your visit to the Field House.
c. Examine the layout of the arcade. Is it laid out well? Are there some areas that get congested? How would you lay it out differently? Design your own arcade room.

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 first account of surfing was given in 1778 by Captain James Cook when he saw it being practiced in Hawaii. Cook wrote: “I could not help concluding this man had the most supreme pleasure while he was driven so fast and so smoothly by the sea.”

- There has been a degree course in Surf Science and Technology at Plymouth University in the UK since 1999.

- A person who hangs around a beach pretending to be a surfer but isn’t is called a ‘hodad’.

- The biggest wave ever recorded was 1738 feet! This mega-tsunami, 500 feet higher than the Empire State Building, happened in 1958 in Lituya Bay in southern Alaska and Bill and Vivian Swanson were unlucky (or privileged?) enough to see it with their own eyes from their fishing boat.

- There are rivers that, at certain times of the year, create a backflow and make waves on the river in one spot. These waves are known as tidal bores. People have gone out and surfed these river-waves. One such river is in England.

- Despite Mt. Everest being one of the most difficult mountains to climb in the world, it has been climbed time and time again. The current world record holder for fastest climb is Pemba Dorje Sherpa with a time of 8 hours and 10 minutes!

- The first artificial climbing wall is believed to be Schurman Rock in Seattle, which was built in 1939.

- Rock climbers are often employed to fix or maintain wind turbines, as it is usually cheaper and more efficient than using machinery to reach the turbine.

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1. Draw a picture of your favorite area.

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

3. What is one thing you learned about surfing?

4. Draw or describe one example of engineering you saw.

5. Describe or draw your favorite arcade game.

6. Explain the science behind one of your favorite areas.

BONUS:

Choose one of the areas to do more research on. Include something you learned and a real-world application. What sciences are involved? Why is it important? How does it affect your life?