

Post-Trip Activities

The following information and activities are provided to help your students get the most out of their trip to the Discovery.



Program name: Magnetic Madness

Standards addressed in the program:

Standards:

Common Core Language Arts

(SL) Speaking and Listening

- Comprehension and collaboration

SL.(K-2).2 Ask and answer questions about key details in a text.

SL.(K-2).3 Ask and answer questions in order to clarify comprehension on a topic.

(L) Language - Vocabulary acquisition and use

L.(K-2).4 determine the use of unknown word or phrase

L(K-2).6 acquire and use accurately grade appropriate general academic and domain specific words and phrases.

Mathematical Practices

1. Make sense of problems and persevere in solving them.

3. Construct viable arguments and critique the reasoning of others.

8. Look for and express regularity in repeated reasoning.

Science

N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings. E/S

N.2.A.2 Students know tools can be used safely to gather data and extend the senses. I/L

N.2.A.3 Students know observable patterns can be used to predict future events or sort items. E/S

P.B.2.3 Students know magnets can be used to make some things move without being touched. E/S

Key Vocabulary	Literacy Connection (books to read):
Observation	Magnets by Anne Schreiber
Magnet	Magnetic Magic: Magic tricks done with Magnets by John Cassidy and Paul Doherty
Magnetic field	What Makes a Magnet by Franklin M. Branley
tools	What can Magnets do by Allan Fowler

Reflection activities - these activities allow your students to build their metacognitive skills by thinking about their experience and learning at the museum.

These reflection questions can be done through discussion or in writing or both.

1. Ask students to remembering and think about what was experienced at the Discovery. What did they like the best? What did they learn? Were they surprised by anything?
2. Discuss/write about how their experiences relating to current and prior experiences. Did anything they saw connect to what they are learning in school?
3. Revisiting their experience at the Discovery by looking at the value of the experience and exploring what else can be learned from it.
4. Would students do anything differently if they returned to the Discovery.

Extension activities - Build on your Discovery experience with the following activities in your classroom.

1. Ask students what is the size of the biggest magnet they can think of? Take 2 to 3 answers and then tell them the earth. It has two poles just like the bar magnets and this is how compasses work. Compasses will point to the magnetic north pole an area that has a lot of iron. Bring students outside with compasses to see where the needle or red part of the compass point.
2. If there is time, pass out the North Pole and South Pole signs (paper on a Popsicle stick). Have students go back to back. Tell them you are going to say

the word either attract or repel. Together the partners will need to choose the right combination of letters. Make sure to model this with two students before letting the student do it on their own. Have students go back to back like a duel. Then say repel, the two students should look at the group while standing side to side. They then have 5 seconds to hold up either N N card or S S combination. It makes them work together. If they are breezing through this hold up one a magnadoodle and ask them how it works. There is no need to tell them specifically if they don't answer right. Students can get use to educators having all the answers and leaving the impression that adults know everything. This can be motivating for some learners. Have students complete their KWL sheets with what they learned during the trip. Also have students write questions they still have about magnets. Have students do internet research to see what else they can learn.

3. Have students measure/quantify magnet's strength. How many washers, paperclips, etc. it can hold. This is a great way to introduce pictographs to young students. Have them work through the scientific method: ask the questions, make a prediction, make observations and collect data, analyze your graph, and then answer your question.
4. MAKING A COMPASS: 1) Set out a straight pin, a strong magnet, a piece of cork, and a bowl of water. 2) Magnetize the pin by rubbing it in the same direction across the magnet at least 25 times. 3) Push the pin through the cork. 4) Have your children watch as you place the cork in the bowl of water. 5) The pin will point north. 6) Let your children check this with a compass. 7) Twist the bowl around; the pin will still point north. (Retrieved on January 13, 2011 from http://www.preschoolexpress.com/discovery_station07/magnet_experiments_jan07.shtml).

Home connection – Build on your discovery experience by having students do these activities at home.

1. Have students take home a small refrigerator magnet home and explore what magnets stick to at their house.
2. Have students take the magnet to other public places like a local park or store to explore what the magnet will stick to.
3. With two magnets have students explore with their family what the magnet force can go through. Can it go through toilet paper? Newspaper? Regular paper? A plate? Your hand?

When you come back – Encourage students to return to the museum and teach their parents about something that you learned at the museum.

Web References:

http://www.lessonplanet.com/directory_articles/homeschooling_lesson_plans/02_September_2009/116/magnet_lessons_opposites_do_attract
http://www.windows2universe.org/teacher_resources/magnetism/teach_magnet_levitate.html
http://www.teachnet-lab.org/ps101/bgglasgold/magnetism/magnetism_contents.htm (great ideas for 3-5 grade about magnets)
http://www.essortment.com/hobbies/magnetslearning_sopi.htm
<http://www.eduref.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Physics/PHS0203.html>
http://en.wikipedia.org/wiki/Iron-rich_sedimentary_rocks
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