

# Pre-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:

### 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.

### Common Core Math

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 to know before your trip:	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 Can Magnets do by Allan Fowler
Tools	What Makes a Magnet by Franklin M. Branley
	39 Amazing Experiments with the Mega Magnet by Brian Rohrig
	Forces Make Things Move by Kimberly Brubaker Bradley
	And Everyone Shouted, "Pull!" Claire Llewellyn
	Motion: Push and Pull, Fast and Slow by Stille

**Note for teachers:** The Discovery museum education team has designed the Magnetic Madness lesson as a hands on investigation where students begin to understand principals of magnetism. The best way to prepare students for this lesson is to talk about how scientist observe the world around them and how they use words and writing to communicate what they observe. It is also helpful if they have an understanding of forces of motion. The following lessons have been designed around forces of motion so students will be ready to observe and discuss one of the forces, magnetism, at the Discovery.

## Pre-Trip Literacy Activity

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

**Activity:** Forces of Motion Read-a-loud; Reading Strategy - Questioning.  
Before reading your selected book on force and motion pose the question to the students, "What is the difference between pushing and pulling?" Explain

that they will learn about different forces that can be used to move things and the language to use when talking about forces. Review or teach that we can improve our understanding or comprehension of a text by asking questions as we read. As you read, demonstrate asking questions to improve comprehension by modeling through think-alouds.

### **Pre-Trip Writing Activity**

**Standard:** W.2.3 Write narratives in which they recount a well elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

**Activity: Forces of motion in our lives.**

Have children write/draw about one object that is moved by pushing and one object that is moved by pulling. These writings can be placed on a bulletin board and the class can discuss the forces that were used to put them up and take them down. (you push the pushpin to attach the picture and you pull the pushpin to remove the picture).

**Other related resources:**

BBC interactive game, pushes and pulls

[http://www.bbc.co.uk/schools/scienceclips/ages/5\\_6/pushes\\_pulls.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml)

### **Pre-Trip Content Activity**

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

**Activity:** Class discussion, student lead investigations of motion.

Here are some questions to stimulate a discussion on motion. (Questions taken from: <http://www.sasked.gov.sk.ca/docs/elemsci/gr1ucesc.html>) The discussion could involve some drawings which the students make to illustrate some Here are some questions to stimulate a discussion on motion. The discussion could involve some drawings which the students make to illustrate some types of motion.

- How do you tell if something moves?
- What are some different types of motion?
- Could you illustrate one type of motion?
- What is the same about all types of motion?
- What types of things can move?
- What types of things are hard to move?
- If you want to move, how can you do it?
- What can cause motion?
- What are some places in this room to where you can't move?
- How is fast motion different from slow motion?
- How is the flight of a bird and the flight of a plane the same? How are they different?
- What questions do you have about motion?
- Is it easier for a kitten to play with a ball of yarn on a tile floor or on a rug?
- Why is it difficult to ride a bicycle through soft sand?

Some of their answers could be oral; some could be drawn. As a class you can choose to investigate one of these questions further if desired.