



Teacher's Packet 2nd – 3rd Grade

*Please share this guide with other teachers from your school who will be joining you on this trip. Thanks!

There are many great opportunities for students to learn and explore at the MOSH. This guide will help you make the most of your visit and provides activities to continue your discoveries after you leave.

Planning Your Visit:

- We suggest you plan at least 1 ½ hours for your visit.
- A Science Show or Planetarium Program will increase the length of your visit
- In general The MOSH is less crowded early in the week and early in the school year
- Please arrive at least 15 minutes prior to your first program
(Scheduled programs may be cancelled for groups arriving more than 10 minutes after the scheduled start time of their program)
- Please have a head count of all your students and adults ready before you enter the museum
(Have separate numbers for students, teachers and chaperones with you that day)
- We do not have an eating space indoors, so please plan accordingly for inclement weather.
(For fire safety reasons students cannot eat in the Lobby or under the covered walkway)
- MOSH does not have a place to store school lunches and there is not a refrigerator or microwave available for public use
- Each group will receive 1 free adult for every 10 children
(Except for pre-K groups and special needs groups who are allowed 1 free adult for every 5 children)
- Please inform MOSH of any students with special needs so that we can best serve them.

Notes:

Students **MUST** stay with a chaperone at **ALL TIMES**. Unchaperoned groups will be asked to leave the Museum without refund.

Teachers/Chaperones you are in charge of your students and they must conduct themselves in an orderly fashion. Please remember that others are touring the Museum during your visit. Our Kidspace area is **only** for children 5 years old and younger.

Tips for the Best Visit:

- Go over rules with your group before arriving at MOSH
- Make sure that chaperones and children know their groups before arriving
- Tell your children what to do in case they get separated from their group
(They can go to the front desk or find a MOSH Staff member)
- Give each chaperone a different path through the museum so that you avoid congestion and waiting around. For Example, Group A starts in *The Body Within*, while Group B starts in *The Currents of Time*.

MOSH Rules

1. **There is no chewing gum inside the museum**
2. **There is no running or horseplay inside the museum**
3. **If someone in your group is more than 5 minutes late to a private program they will not be allowed to enter, as this will disrupt the program**
4. **If you exit a private program that has already started the doors will lock behind you and re-entry will not be allowed, so be sure to use the restroom before your show begins**
5. **There are live animals that live here at MOSH and it is very important to treat them kindly and stay quiet while you are around them**
(Also, it is never appropriate to bang on their cages / enclosures or yell at them)
6. **A chaperone must be with students while they are in the Gift Shop and only 20 people are allowed in the gift shop at one time, so you may have to form a line outside of the gift shop if it becomes full**
7. **Cell phone and camera use are PROHIBITED in the Planetarium, as it can be a distraction to all those seated in the room**
8. **HAVE FUN!**

How to Use this Guide

Before your visit:

Gather your students together to talk about the field trip. There are many permanent and traveling exhibits that they will get to explore when they arrive here at MOSH. Take some time to talk about how they will recognize each exhibit. For Example: What do they think they will find inside “The Body Within?” Or what kinds of animals might live in “The Naturalist Center?” Vocabulary for each exhibit is included below. This is also a perfect time to talk about staying with their chaperones/teachers and what to do if they get lost. You can download scavenger hunts for our exhibits at www.themosh.org these can be handed out to student’s right before your arrival at MOSH.

During your visit:

As you explore the museum, take some time to stop at the exhibits mentioned in this guide as you discover them. Gathering your group together to investigate particular exhibits will help slow your children down and encourage them to spend time exploring the exhibits. It also gives them a chance to use some of those vocabulary words that you introduced to them. Don’t worry about being an expert on any of the topics. You are exploring along with them.

After your visit:

Ask students what they noticed in different exhibits and ask them to explain some details about their favorite part of the field trip. Then try some of the post-visit activities that we have included below.

Curriculum for our Permanent Exhibits

The Body Within



Vocabulary:

Backbone: The spinal column

Heart: The primary hollow organ that pumps blood through the body

Lungs: Two spongy organs that allow us to take in oxygen and expel carbon dioxide

Eyes: The black spot in the middle of the eye which regulates light entering the eye

Skeleton: An internal framework of bones that support the body

Stomach: One of the primary organs of digestion

Mouth: An opening in our body where we take in food

X-ray: A black and white negative image or picture of the interior of the body

Post Visit Activities:

2nd Grade: Guess the Item

Remind students about the "Senses Station" at MOSH where they had to feel an item and guess what it is. Tell them that different parts of the body are more sensitive to touch than others. Collect items with a specific texture, such as a pine cone, tennis ball, rock and seashell. Pair the students up and blindfold one in each pair. The other student should press these items one at a time on various spots on the other person's body. The blindfolded student should guess what the item is, based on feel. Switch the partners so both students get a turn. When everyone has gotten a turn, ask the class which spots were more sensitive and which made it harder to tell what the object was.

3rd Grade: Lub-Dub

The heart is a part of the body that students can both hear and feel, making it easier to teach about it. Explain the purpose of the heart to the students. Allow them to use a stethoscope on each other to hear how the heart sounds. The "lub" portion of the heartbeat is the sound made by the first set of valves closing; the "dub" portion is the other set of valves closing. Show the students how to find their pulse as well. Have them check their own after sitting for a while, and again after running around at recess or during physical education class. Note the differences.

Science Standard Big Idea #14: Organization and Development of Living Organisms

Currents of Time



Vocabulary:

Timucua: Native peoples who inhabited Northeast Florida and Southeast Georgia for about 2000 years.

Midden: A mound of discarded shells and trash

Exploration: The act of looking into or traveling over thoroughly

Ponce de Leon: The Spanish Explorer who discovered Florida in 1513

Colony: A group of people who leave their native country to settle in a new place

Segregation: The separation of people into groups based on the color of their skin

Civil Rights: Rights that protect a person's freedom and ensure equality

Post Visit Activities:

2nd Grade: Artifactual

Explain to your students that an anthropologist is a scientist that studies artifacts to learn more about ancient cultures. Ask the students to describe some of the artifacts that they saw while walking through the exhibit and what they learned about the culture from viewing that artifact. Tell the students to pretend that they are anthropologists and have found 4 artifacts they must identify and explain. Give the students four pieces of paper. On each they are to draw one of the artifacts from the exhibit, name it, and write what they would learn about the culture to which it once belonged.

3rd Grade: When I Grow Up

Explain to your students that Timucuan Indians might have given their children toy versions of things they were going to need to know how to use in real life. Ask the students to think about what they might like to do when they grow up. Have them create a toy that might be related to what they plan to do when they grow up. When they present them to the class, have students explain how this toy will help them "learn" about their adult occupation.

Social Studies Big Idea #2: Historical Knowledge

Atlantic Tails



Vocabulary

Mammal: An animal that processes seven basic characteristics: warm-blooded, live birth, nurse young, breathe air, presence of hair or fur, muscular diaphragm, and external ears

Pectoral Fin or Flipper: Small airplane wing-like appendages

Blowhole: Opening of nasal passage on top of head

Blubber: Layer of fatty tissue below skin in marine mammals

Fluke: Flattened, blade-like tail on marine mammals

Ocean: A large body of salt water that covers most of the earth

Adaptation: Traits that allow the animal to survive better in the wild

Baleen: Slats that hang from plates from the roof of the mouth of baleen whales

Warm-Blooded: Animals that keep their bodies warm by heating inside, instead of using the sun to warm up

Post Visit Activities:

2nd Grade: Blubber Glove

Whales depend on a thick layer of body fat called blubber to stay warm. It is almost impossible for the cold temperatures to penetrate the blubber which keeps whales warm.

To learn how blubber can keep things warm, make a blubber glove and put it to the test by sticking your protected hand into a bucket of ice water. The “blubber” in the mitt will protect your hand from the cold.

Materials: Two zip top sandwich bags, One cup solid shortening, Duct tape

3rd Grade: Marine Mammal Trading Cards

Allow students time to research marine mammals using the internet and nonfiction books. Let the students pick seven marine mammals that interest them. Make a list of the information students should look for such as size, weight, length, herbivore or carnivore, physical characteristics, etc. Tell students to gather this information as they read about the animals. Give each student a 3 X 5 blank index card. They will draw their animal on the front and write its name on the bottom. On the back, they will put all of the facts they gathered. Students may keep their cards or trade them with their friends.

Science Standard Big Idea #14: Organization and Development of Living Organisms

JEA PowerPlay



Vocabulary

Fossil Fuel: A fuel formed in the earth for plant or animal remains

Thermal Energy: A fuel source made from plant matter that is very old

Natural Resource: A resource that we can find in nature

Renewable Resource: A natural resource is not depleted when used by people

Nonrenewable Resource: Any natural resource that cannot be replaced once it gets used

Wind Energy: Power that is made from wind

Natural Gas: A mixture of many different gases that forms beneath the Earth

Post Visit Activities:

2nd Grade: Envelope Please

Have the students seal 2 legal sized envelopes and cut them in half. They will glue the 4 halves on the cover of a letter sized manila folder, and write the word "Energy". Each envelope half should be labeled with a renewable, nonrenewable, or alternative form of energy. Give the students 10 3 X 5 index cards to cut in half. On each half, ask students to draw as many sources of energy as they can think of. The activity might begin with brainstorming to give all students so examples to draw. As the students draw their energy sources, they should sort them into the three pockets on their folder.

3rd Grade: Keep it Clean

Read *Wump World* by Bill Peet to the class. Talk about all the pollution that invaded the Wump's world. Talk about how air and water are polluted. Talk about some of the alternative fuels that might help prevent pollution. Have the students create their own "world" that is pollution free in a picture and with an explanation of how they will keep their world pollution free.

Science Standard Big Idea #10: Forms of Energy

The Florida Naturalist Center



Vocabulary:

Reptile: Cold blooded, egg laying animals that have a backbone

Carnivore: An animal that eats mostly other animals.

Ecosystem: A community of organisms in their natural environment.

Endangered: A group of animals or plants in danger of becoming extinct

Prey: An animal that is hunted or caught by another animal for food

Habitat: Where an animal lives

Herbivore: An animal that eats mostly plants.

Predator: An organism that feeds on other organisms.

Post Visit Activities

2nd Grade: I'm Not Scared!

Ask the librarian for assistance in providing the class with books that portray “scary” animals like snakes, bats, spiders, wolves, etc. in a friendly atmosphere. Some suggestions are: *Stellaluna* by Janell Cannon, *The Day Jimmy's Boa Ate the Wash* by Trinka Hahes Noble, *Miss Spider's Tea Party* by David Kirk, *Jessica and the Wolf* by Ted Lobby and Tennessee Dxon, and *The Story of the Kind Wolf* by P. Nickl and J. Wilkon. Ask students to give a book talk and explain how the animal in their book is different from stereotypical perceptions.

3rd Grade: Museum Break!

Read *Two Bad Ants* by Chris Van Allsburg. Talk about how the pictures are drawn from the ants' point of view to help the reader understand how the world looks from their perspective. Tell the students to imagine that a Gopher Tortoise has escaped from their display case in the Museum. Ask them to write a story from the one of the Gopher Tortoise's point of view. Tell where they go, what they see, and the details of their adventure. Have the students illustrate their story from the point of view of the tortoise.

Science Standard Big Idea #14: Organization and Development of Living Organisms

Science Standard Big Idea #17: Interdependence

Follow Up Resources:

Esbensen, Barbara Juster. *Baby Whales Drink Milk*. Harper Collins Publisher, NY. 1994.

Everts, Tammy and Bobbie Kalman. *Dolphins*. Crabtree Publishing Co., NY. 1995.

Jenkins, Priscilla Belz. *A Safe Home for Manatees*. Harper Collins Publishers, NY. 1997.

Lambert, David. *The Kingfisher Young People's Book of the Oceans*. Kingfisher, 1997.

Lionni, Leo. *Swimmy*. Random House, NY. 1968.

Tokuda, Wendy and Richard Hall. *Humphrey the Lost Whale*. Heian International, Inc., CA. 1992.

Weitzel, Kelly. *The Timucuan Indians- A Native American Detective Story*. The University Press of Florida: FL, 2000.

Costabel, Eva Deutch. *The Early People of Florida*. Atheneum Macmillan Publishing Company: NY, 1993.

Sherrow, Victoria. *American Indian Children of the Past*. The Millbrook Press: CT, 1997.

Ciment, James and Ronald LaFrance. *Encyclopedia of the North American Indian*. Scholastic, Inc: NY, 1996.

Philip, Neil. *A Braid of Lives- Native American Childhood*. Clarion Books: NY, 2000.

For more resources visit www.themosh.org and click "Education". There are additional guides there for specific science programs as well as scavenger hunts that your students can use while at MOSH.