

WATER IS LIFE 2018

Program Overview

“Water is Life” is a collaboration between Mia, the Science Museum of Minnesota, and the Minnesota Landscape Arboretum. Mia’s “World of Water” experience is one of a series of three programs presented by Mia, MLA & SMM designed to engage students in powerful, real-world learning experiences that stimulate scientific discovery, critical thinking, and language development, supporting academic standards in science, social studies, English/language arts, and visual arts. During each program, students will practice making observations and using evidence to describe and support their ideas.

The Three Big Ideas of “Water is Life” are:

- **Plants, animals, and people need clean water to live.**
- **Water has special properties. It changes forms.**
- **People around the world create ways to interact with water in their lives.**

A student journal is available to teachers for use in the classroom to engage students’ curiosity, provide writing opportunities for reflection and synthesis, and provide insight into student learning. This journal reinforces the connectedness of the three experiences.

Mia’s “World of Water” is the second in the sequence of three programs.

“WATER CHANGES” (IN-SCHOOL ASSEMBLY AND RESIDENCY) Science Museum of Minnesota

- Make observations about water and how water changes.
- Conduct experiments to explore the processes that move water through the water cycle.
- Learn the differences between precipitation, evaporation, and condensation.
- Race against the “sun” to evaporate water from puddles.
- Hold a cloud in your hands.
- Condense water to make rain right in the classroom.

“WORLD OF WATER” (FIELD TRIP) Minneapolis Institute of Art

A two-hour field trip comprising three 35-minute activities

- Observe and discuss images or objects depicting how humans from different times and cultures capture, move, and depend upon water for personal and community use on a conversational tour.
- Create a watercolor painting using diverse materials and techniques in a studio art activity.
- Sketch ideas from global artworks on a treasure hunt and design an original water container.

“PLANTWORKS, WATERWORKS” (FIELD TRIP) Minnesota Landscape Arboretum

- Explore how plants use water, and how people use that information to grow plants during a 2-hour field trip program at the Arboretum’s Marion Andrus Learning Center.
- Students participate in hands-on learning through four 30-minute blocks, including Introduction, Discovery Lab, Greenhouse Visit and Planting Investigation.

“World of Water”

Mia’s “Water is Life” program comprising three activities is called “World of Water” because it emphasizes how people around the world need water and make art to store, carry, drink, use, and celebrate water.

What do I need to do Water is Life?

Most of all you need a sense of adventure and a sense of joy and wonder. Second graders, especially, and some third graders like to have fun and use their imaginations. They need to move! They need quiet time to look and think and time to make, talk, and share their thoughts.

Blue Bags with sketchbooks, clipboards, and pencils. And photo props of fish and map. These will be stored in the coat check area of Target Atrium. The Water is Life assistant will restock the bags before the next day.

There will be six bags available at all times.

How is it organized?

Two or three classes of 2nd graders (in a few instances, 3rd graders) from each of our 10 “Water is Life” schools will come for an experience scheduled from 10:30 to 12:30. Each of three segments will take about 35 minutes plus travel time. Please allow plenty of time for the students to get back to the Target Atrium to get their coats and leave on time for their buses.

Each of the two or three classes has two tour guides (one for each half of the class) who will coordinate the tour and design activity with each other. **Lead Guides, please assign the pairs for each group. Individuals in each pair, decide together what routes each of you will use.** A teacher and assistant will conduct the watercolor activity with the guides present in the studio.

So, four or six guides will be working at the same time. Each pair will cycle through the activities as illustrated here:

	Group 1	Group 2	Group 3
10:30-11:05	Studio 112	Design-2 nd floor West	Tour- 3 rd floor and 2 nd floor East
11:10-11:45	Tour- 3 rd floor and 2 nd floor East	Studio 111	Design-2 nd floor West
11:50-12:25	Design-2 nd floor West	Tour- 3 rd floor and 2 nd floor East	Studio 112

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11:50-12:25	Design-2 nd floor West	Tour- 3 rd floor and 2 nd floor East

1. The design activity takes place on the second floor. Please be sure to include ceramic artworks from both the Americas and Africa. Depending on how much time you have, show them glass from ancient Rome, and metal water vessels such as the Indian Bidri ware in the Arts of Islam gallery.

2. The Studio watercolor activity is taught by an instructor. Both tour guides should bring their students to the studio at the designated time. If you need a quick break, this is a good time to do so. The more helping hands in the room, the better, so please do not leave for the entire activity.

3. The tour focuses on three paintings on the third floor, and a Japanese screen, Chinese jade water vessels, and a quick look at Taihu rocks on the east end of the second floor. The teachers really want the students to have a consistent experience on the tour, so we have selected these artworks, and even designed routes for each guide to follow. The routes include opportunities to look for specific water-related artworks or designs along the way.

World of Water Design Activity

The design activity is like a big, fast-paced treasure hunt. Students search for water containers from around the globe that will inspire their own original design of a water bottle, flower vase, or pet water bowl. Equipped with a pencil, sketchbook, and clipboard, each student makes sketches of design ideas (shapes, patterns, designs) they like. They also discuss the pros and cons of different materials for the product they will design. Students gain an understanding of how people around the world value water so much they make beautiful artworks to contain it for many purposes.

This is designed to be lively and engaging, and to encourage students to look closely at artworks for inspiration. You do not need to engage in extended conversations about the artworks themselves. The focus is on the qualities of the different materials and looking for designs that they might like to include in their final drawing(s) on the back page of the sketchbook.

Overview

We are going to look at water containers from Africa, India, the Americas, and Rome, (or whichever you plan to show) today to see how artists use patterns, shapes, and different materials like clay, metal, and glass to make beautiful objects that honor how important water is to them.

After we look at water vessels from around the world you get to draw a design for your own pet water bowl, flower vase, or water bottle inspired by the art we will look at today. (Show them the page at the end of the booklet.) So, as we walk through the museum galleries we will take time for you to sketch designs, patterns, and shapes that you think you might like to include in your design. What does the word sketch mean? There are pages in your sketchbook just for this.

We will see containers made of different materials.

Use these pages to make notes about the qualities of different materials too. What material do you think will work best for your design? Why?

In each gallery we will talk about how artworks are part of each community's culture. As such, each artwork tells us something about the history, daily life, or beliefs of the community in which it was used.

Talking Points

- People around the world need water to survive.
- Water unites all living things around the world.
- People around the world value water so much they make beautiful artworks for fetching, carrying, storing, cooking, serving and drinking water.
- Artists make choices when designing beautiful artworks to contain water.

Discussion Prompts

As you begin: Water is an essential resource for people around the world. Let's list as many ways as we can think of that people use water. What about animals? What about plants?

What kinds of containers do humans use to fetch, carry, store, cook, serve, and drink water? (Ask one at a time.)

What does the word culture mean to you? Discuss. Explain.

Artwork Discussion Question Ideas

What do you see? What else? What shapes do you see? What colors? What kinds of lines? What kinds of patterns?

What kind of container do you suppose this might be? What do you see that makes you say that? What does the shape tell you about how it might have been used? What about the surface texture?

Artists use different materials based on the type of artwork they want to make and what they have available. What material does it appear to be made of? What do you see that makes you say that?

Review the materials and speculate about the pros and cons of each. For example, why would metal be a better choice for this than clay?

What do you wonder about this artwork?

How do you suppose this designed object benefited the people or community for whom it was made?

Notes

You do not need to look at artworks made of all of the materials. And you definitely do not need to have the students sketch at every stop. It is important for the students to see African and Native American art, so please be sure to visit each these galleries and allow students time to sketch shapes and designs of water vessels there.

As you move from one gallery to the next, encourage the students to look for certain water designs or water-related images. For example, when moving through the African art galleries, you could have them look out for the Benin Leopard (bronze water vessel) and Lobster coffin.

Be sure to allow time for students to draw a water vessel on the back page of their booklet.

Studio Experience

Watercolor Exploration – Led by Angela Olson

Students will explore watercolor painting with a variety of techniques (wet on wet, dry on wet, blowing, dabbing) and materials (salt, plastic wrap, wax crayons) to create abstract paintings with a variety of textures. Students will learn how water can create art and how watercolors interact with a variety of materials.

Tour: “Water Gives Us Life”

Each pair of guides will decide who takes which of these two routes.

Route 1	Route 2
The Element of Water	Tiger and Dragon screens
Fishing Vessels Offshore in a Heavy Sea	Chinese rocks/ jades
Bear Chance	Fountain
Tiger and Dragon screens	The Element of Water
Chinese rocks/ jades	Fishing Vessels Offshore in a Heavy Sea
Fountain (on way to studios or design activity)	Bear Chance

Please be sure to stop at the big fountain on the tour. Young people love it and it is a great Art and Engineering object! There is a great view of it from the third floor rotunda.

Be sure to build in physical activities as you move from one artwork to the next.

Invite kids to pretend to row a boat or twist like a Chinese dragon in the waves, or whatever feels best to connect the different objects.

Introduction: key ideas

Key points for museum tour and to connect with Science Museum visit to their school and upcoming visit to Landscape Arboretum:

- All plants, animals, and people need and use water to live and grow.
- You saw how water changes form during the Science Museum's visit to your school.
- Scientists closely observe what happens to water in nature.
- You will see how plants need water to live and grow at the Arboretum.
- At the museum today, we'll see how artists make close observations of nature to create images of water and decorate vessels for holding water.
- Works of art tell stories about how people around the world use water and its importance to our life.
- We're going to be like scientists and do some very careful looking at the art, so we can see how "water gives us life."

Jacopo and Francesco Bassano, The Element of Water, about 1576-77 G 341

This night scene is a great treasure hunt painting. What are the people using the water for? The painting shows a fish market being set up on a riverbank at dawn. The vendors display a variety of seafood, while other activities involving water, such as laundering, ferrying, and drinking, take place nearby. Neptune, god of the sea, drives his chariot across the sky.

- Fish market being set up at dawn in Venice, Italy
- Shows water's importance in daily life; people are engaged in a variety of activities requiring water: washing laundry, ferrying, fishing, carrying for use at home, drinking
- Fish offered for sale at the market are accurately depicted: one clearly identifiable fish is Northern pike, the same species we have here in Minnesota
- People choose to live by water for all the resources water provides – and learn to access/navigate the water by boats and bridges (Engineering).
- Along with objects that relate to water, Neptune, the god of the sea, rides a horse-drawn chariot across the darkened skies – water as magical/mystical.

Ludolph Backhuysen, Fishing Vessels Offshore in a Heavy Sea, 1684 G 309

Please note that on Tuesdays some book tour groups will be using this painting and the Abraham Storck battle painting. Please use the shipwreck scene by

Thomas Chambers in the Folk Art Gallery (304) instead.

What's going on in this picture? What do you see that makes you say that? What more can we find?

What do you imagine it feels like to be on that boat? What clues in the picture make you say that? What does wind sound like? Has anyone in the group heard the sound of waves crashing against something? What does that sound like?

Label copy: A fishing boat caught in a storm thrashes about the waves, its mainsail torn. Another boat, in the far right of the picture, is on its way to help. Meanwhile, a merchant ship in the distance heads out to battle the storm. As one of the great marine painters of the 1600s, Ludolph Backhuysen painted many dramatic scenes like this. A Dutch artist, he would naturally have been drawn to the sea as a subject, the oceans being the main source of food, trade, and military victories for the Dutch, enabling their prosperity. Though, as this painting shows, the sea was sometimes more foe than friend.

- Before airplanes, ships were the best way for people and things to get from one county to another.
- The world's five oceans are connected and cover 71 percent of the planet [source: NOAA].
- Engineering – building boats that could traverse the seas and carry large amounts of cargo.
- Water as powerful and dangerous – wind, waves and currents
- Oceans provide valuable resources – minerals and oil

Philip Goodwin, Bear Chance, 1907

G 301

Please note that on November 14 and 20 Picture Person training groups will be using “Bear Chance,” so guides will need to select an alternative work from the Mississippi River gallery (303).

What form(s) of water do you see here? Where do you see snow in this painting? Look at the sky. What would it feel like to sit in the snow with this bear? If you were to paint a snow scene what colors might you use? If you were to paint a sky that was about to snow, what colors might you use?

The Cream of Wheat Company originally commissioned this painting as advertisement for their cereal. Philip R. Goodwin, an artist known for his wildlife paintings

- Liquid form of water changes to snow and ice when the temperature drops
- You talked about animals and hibernation during winter with the Science

Museum

- Bear comes out of hibernation because Cream of Wheat is so tasty.
- You make cream of wheat with boiling water – heat/melt snow to make water. Fresh water vs. salt water for drinking and cooking with.
- No plants growing or visible except for trees that keep needles during winter
- Plants are covered by the snow
- Snow as insulation in the winter, melts into water in the spring

Yamada Dōan, Tiger and Dragon screens, mid-16th century

G 223

These are fabulous compare and contrast screens to see how the artist has expressed the symbolic nature of each animal through its watery environment.

And, be sure to point out that these large screens were painted with only water and ink!

These are big pictures. Explore each fully before beginning the compare and contrast. What do the environments have in common? How are they different? How are the tiger and dragon alike? How are they different? If you knew that the artist used the watery environments to symbolically show qualities associated with the tiger and dragon, what do you suppose he was showing about them?

According to the label, in traditional Chinese cosmology, the tiger and the dragon are two of four creatures associated with the cardinal directions. The tiger is the emblem of the west, and the dragon, the east. In Zen Buddhism, however, the tiger came to be associated with the earthbound enlightened mind, and the dragon the soaring spirit of the freed soul. Consequently, images of tigers and dragons are frequently encountered in Zen temples in Japan.

According to the Japanese Screen catalogue:

- The dragon, a ferocious character, emerges from the wind-driven storm clouds and churning waves symbolic of nature's creative energy.
- Less threatening, the powerful tiger crouches near a wind whipped bamboo thicket, keeping its eyes on the dragon
- Vigorous, dynamic brushwork adds to the strength of the tiger and dragons and their watery environs
- In Chinese cosmology, on which this draws for inspiration, the Dragon is identified with *yang*—the male principle, spring, rain, and the east
- The Tiger signifies *yin*—the female principle, autumn, wind, and the west
- To Chinese and Japanese Buddhists, the animals together represented the elemental forces of the universe.

Chinese Jades and Taihu Rocks G 210 & G 216

Explore the Chinese Taihu rocks in scholar's study garden or out the window from the landing. You will need to look from the landing during Picture Person training on 11/28.

From the label copy for rock garden: Strangely shaped rocks are an important physical and symbolic element in Chinese gardens. The pores, holes and strange forms of these limestone rocks were naturally molded through erosion by flowing water and acidic soil. These rocks are called Taihu because those produced at the foot of Dongting Mountain in Suzhou near the Taihu Lake. The more eccentric the rock, the more it was prized.

Explore Chinese Jade water vessels, including those made for painting and calligraphy.

Jade was an extremely valuable material for making art. It was so valuable people were willing to travel for years and thousands of miles on donkeys to get it! It is so hard you have to carve it with even harder stones like diamonds! Look at the vessels to explore all of the different ways they hold water and for what purposes. Also explore all of the different plant and water images on the jades. Note: Although this has traditionally been a stop on the design activity, we moved it to the tour because these cases are so high the students have had some difficulty drawing here.

On the way from the jades to the design activity or studio, be on the lookout for dragons twisting around in the waves. You will find them all over the place!

Fountain, Italian, 16th century (on way to studios or design activity) G 235

Conclusion

We've seen how humans use water and depend on it. We know that humans, plants, and animals all need water to live. We need to protect this precious resource so that clean water is available for us as well as all the plants and animals around the world.