Chapter 2

The Water Cycle

Pre-K – 5th grade

Chapter Objective

Students will learn about the water cycle. Through observational studies and discussions, students will explore how human actions impact the water cycle and what local organization makes sure our water is safe to drink.

Supported Standards

Supported Standards: Wisconsin Department of Public Instruction / Standards for Science / 2017

Science: Disciplinary Core Ideas (DCI) — Earth and Space Science 3 (ESS3) — Earth and Human Activity

Standard SCI.ESS3: Students use science and engineering practices, crosscutting concepts, and an understanding of earth and human activity to make sense of phenomena and solve problems.

Wisconsin Department of Public Instruction / Standards for Art and Design / 2019

Art and Design (AA)

Standard AA 1: CREATE—Students will generate, develop, and refine artistic work.

Standard AA 3: RESPOND—Students will critically interpret intent and meaning in order to evaluate artistic work. (1. Describe; 2. Analyze; 3. Interpret; 4. Inquire; or 5. Evaluate)

Water moves in an endless cycle—changing form continuously through evaporation, condensation, and precipitation—known as the water cycle.

All of our water, whether it comes out of a well, a lake, a river, or the sky, has been recycled many times through the water cycle. When precipitation hits the ground, it may stay on the surface and form surface water, such as a lake, river, or stream. The water that soaks into the ground sustains plant and animal life in the soil. Some water seeps into underground aquifers.
Learn more here.

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Alexis Rockman (American, b. 1962), *Kapok Tree*, 1995. Oil on panel, 96 x 63 3/4 in (243.84 x 161.93 cm). Gift of Peter Norton, Collection of the Haggerty Museum of Art, Marquette University, 2001.13.7.

Art in Context

Use this timeline with your students to explore Alexis Rockman's life and work.

Alexis Rockman was born on September 5, 1962 in New York City, New York, U.S.A.

American event: The modern Environmental Movement, which began in the 1960s with concern about air and water pollution, became broader in scope to include all landscapes and human activities.

1962

1980

Rockman studied animation from 1980 to 1982 at the Rhode Island School of Design and continued his studies at the School of Visual Arts in Manhattan, earning a BFA in 1985.

1994

During Rockman's trip to Guyana in 1994, there was a collapse of a tailings dam (a dam usually used to store materials left from mining operations after separating the ore from the gangue) at the Omni gold mine, causing cyanide to leak into the waterway.

1995

Rockman has undertaken expeditions into the Amazon Basin, Tasmania, Madagascar, South Africa, and Antarctica to research his paintings. Where might he have traveled to research before painting *Kapok Tree* in 1995?

2008

Rockman traveled to Antarctica in 2008 with Dorothy Spears, and works resulting from this voyage were featured in the *Badlands: New Horizons in Landscape* exhibit at the Massachusetts Museum of Contemporary Art.

2011

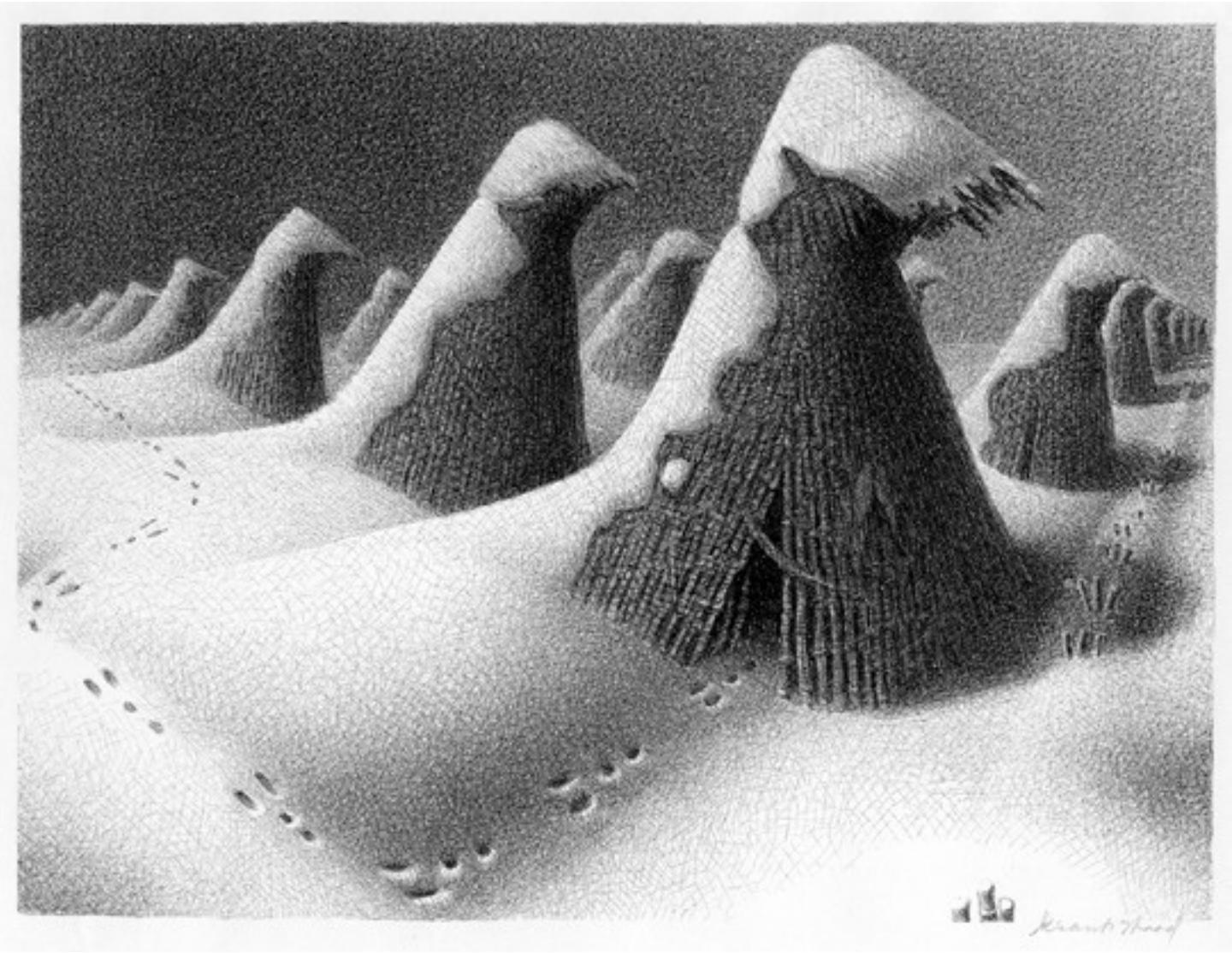
Rockman was involved in the Ang Lee film *Life of Pi*. He completed several watercolor concept paintings and contributed to several visual sequences, including an underwater transition scene which he claims was inspired by the "Star Gate" sequence in Stanley Kubrick's 1968 film *2001: A Space Odyssey*.

Learn more about why film director Ang Lee chose Alexis Rockman to work on concept drawings for *Life of Pi* here.

2019

In 2019, the exhibition *Alexis Rockman: The Great Lakes Cycle* was held at the Haggerty Museum of Art. This multifaceted body of work was initiated in 2013, when Rockman embarked on a research tour of the Great Lakes region.

* How many different species of animals can you find in *Kapok Tree*,1995?



Grant Wood (American, 1891 – 1942), *January*, 1938. Lithograph, 9 x 11 7/8 in (22.86 x 30.16 cm). Gift of the Marquette University Jesuit Community, Collection of the Haggerty Museum of Art, Marquette University, 91.9.47.

Art in Context

Use this timeline with your students to explore Grant Wood's life and work.

Grant Wood was born February 13, 1891, in Anamosa, Iowa, U.S.A.

American Event: On May 20, 1891, Thomas Edison's prototype kinetoscope (an early motion picture exhibition device) was first displayed at Edison's Laboratory.

1891

Wood began as an apprentice in a local metal shop in Cedar Rapids, Iowa, at the age of 10.

1901

1910

Wood enrolled in the Handcraft Guild, an art school run by women in Minneapolis, Minnesota, in 1910. In 1913, he enrolled at the School of the Art Institute of Chicago, where he created work as a silversmith.

1923

Between 1922 and 1928, Wood made four trips to Europe. In 1923, he spent a year in Paris, France, where he studied at the Académie Julian.

French event: In March 1923 the play *Antigone* by Jean Cocteau appeared on a Paris stage. Set designs by Pablo Picasso, music by Arthur Honegger, and costumes by Gabrielle Chanel. Antonin Artaud played the part of Tiresias.

1930

Wood was involved in the American Regionalism movement, which depicted realistic scenes of rural and small-town America. It grew in the 1930s as a response to the Great Depression, and ended in the 1940s because of a lack of development within the movement and the end of World War II.

1942

Wood died February 12, 1942, in Iowa City, Iowa, U.S.A.

1980

1980 was the first year of issue for the American Arts Commemorative Series. The one-ounce gold medallion honors Wood.

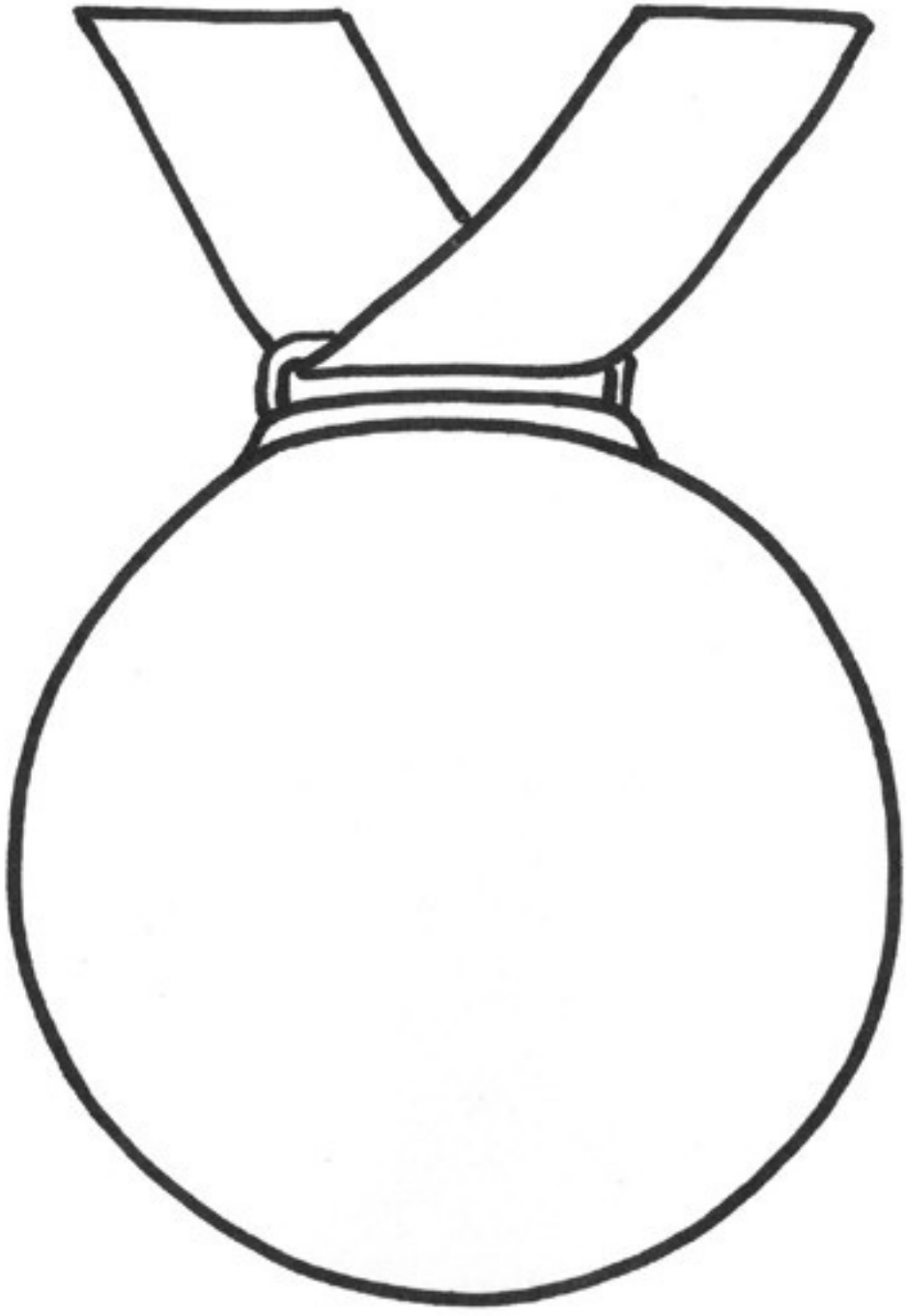
Today, Wood's art can be found in the collections of the Haggerty Museum of Art, Art Institute of Chicago, The Metropolitan Museum of Art in New York, the National Gallery of Art in Washington D.C., and the Los Angeles County Museum of Art, among others.

* Grant Wood was born in February. Why do you think he titled his artwork *January*? Do you have a favorite month? Make a chart in your classroom to compare everyone's favorites.

Use the American Arts Commemorative Series medallion designed to honor Grant Wood in 1980 as an example.

Design your own medallion below.

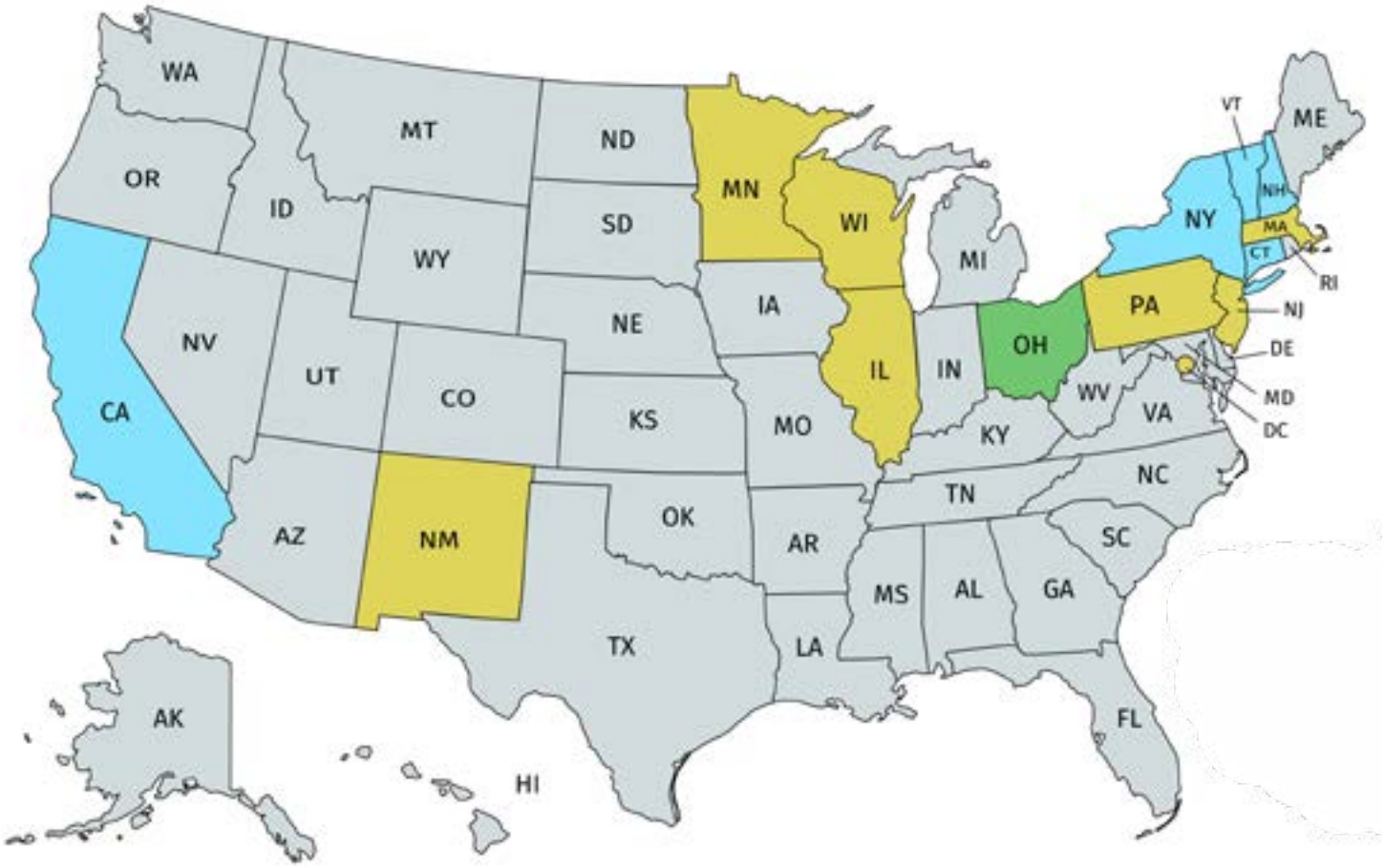
Who will you honor with your design?



Ralph Steiner (American, 1899 – 1986), *Peacock Tail (Peacock Feathers)*, 1980. Gelatin silver print, 7 1/4 x 9 5/8 in (18.4 x 24.4 cm). Gift of Richard D. Riebel, Collection of the Haggerty Museum of Art, Marquette University, 97.10.32.

Art in Context

Use this map with your students to explore Ralph Steiner's life and work.



Ralph Steiner was born February 8, 1899, in Cleveland, Ohio, U.S.A.

Steiner traveled all over the U.S.A. to take pictures and make films.

Where in the U.S.A. is Steiner's art?

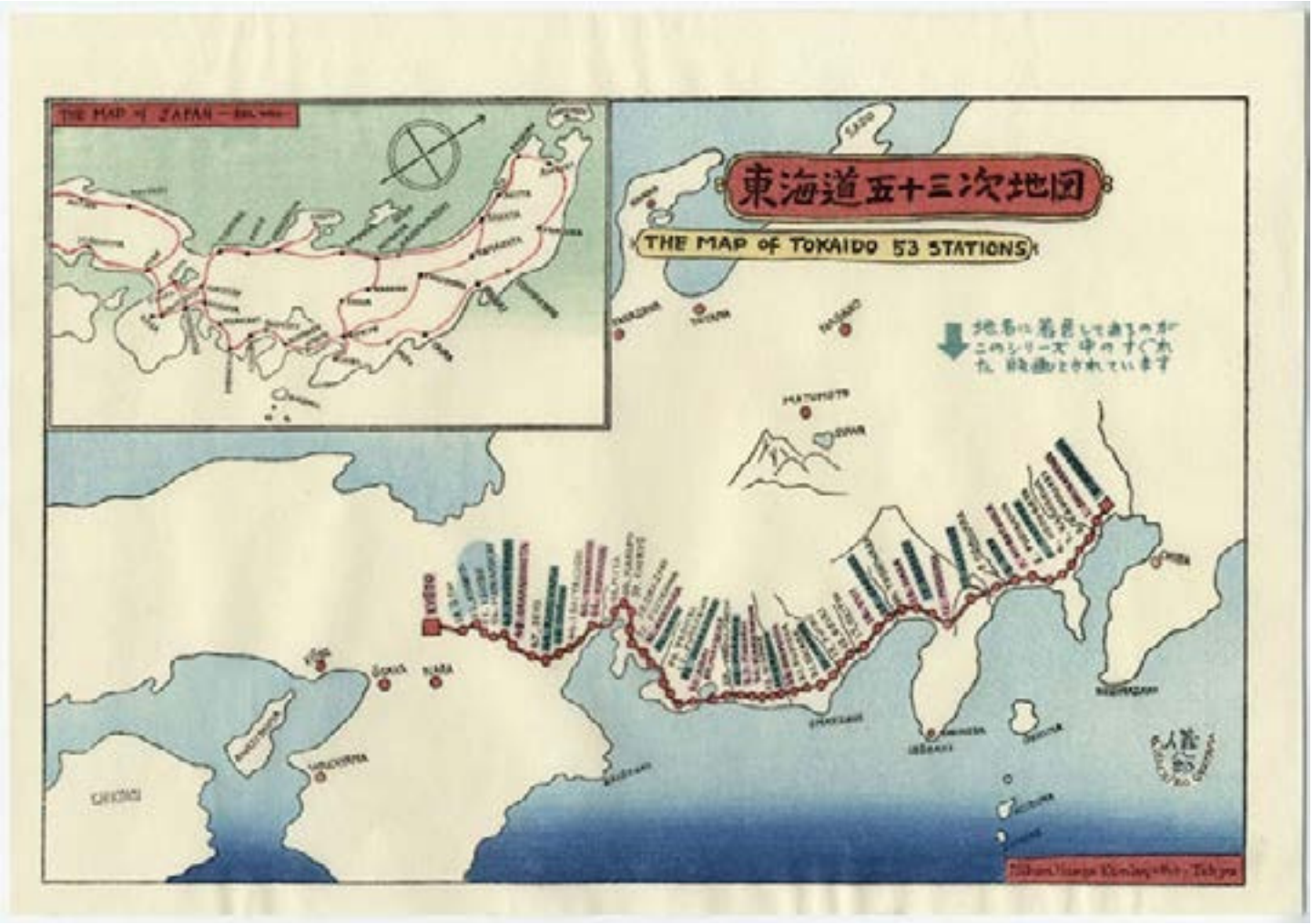
Fun Fact

Steiner studied chemistry at Dartmouth College (New Hampshire), but in 1921 he started attending the Clarence H.White School of Modern Photography (New York City).

Steiner made photographs and moving-image films during his life. Watch his film *Ode to Water*, 1929, here.

Utagawa Hiroshige (Japanese, 1797 – 1858), *Driving Rain at Shuno (no. 46) from Fifty Three Stations of the Tokaido Road*. Woodblock print, 9 5/8 x 15 in (24.4 x 38.1 cm). Gift of Mr. Samuel Gansheroff, Collection of the Haggerty Museum of Art, Marquette University, 83.14.9.

Art in Context



The Tokaido road, linking the shogun's capital, Edo, to the imperial one, Kyoto, was the main travel route in old Japan, made of the "Five Roads"(Gokaido)— the five major roads of Japan created or developed during the Edo period to further strengthen the control of the central shogunate administration over the whole country.

In 1832 Utagawa Hiroshige traveled the length of the Tokaido from Edo to Kyoto, as part of an official delegation transporting horses that were to be presented to the imperial court. *Fifty-Three Stations of the Tokaido Road* is a series of ukiyo-e woodcut prints created by Hiroshige after his trip.

See all 55 prints here. How many stations include some form of precipitation?

Embossing was a common technique in Japan during the Edo era. Watch a video to learn how to make embossed paper using a carved woodblock here.

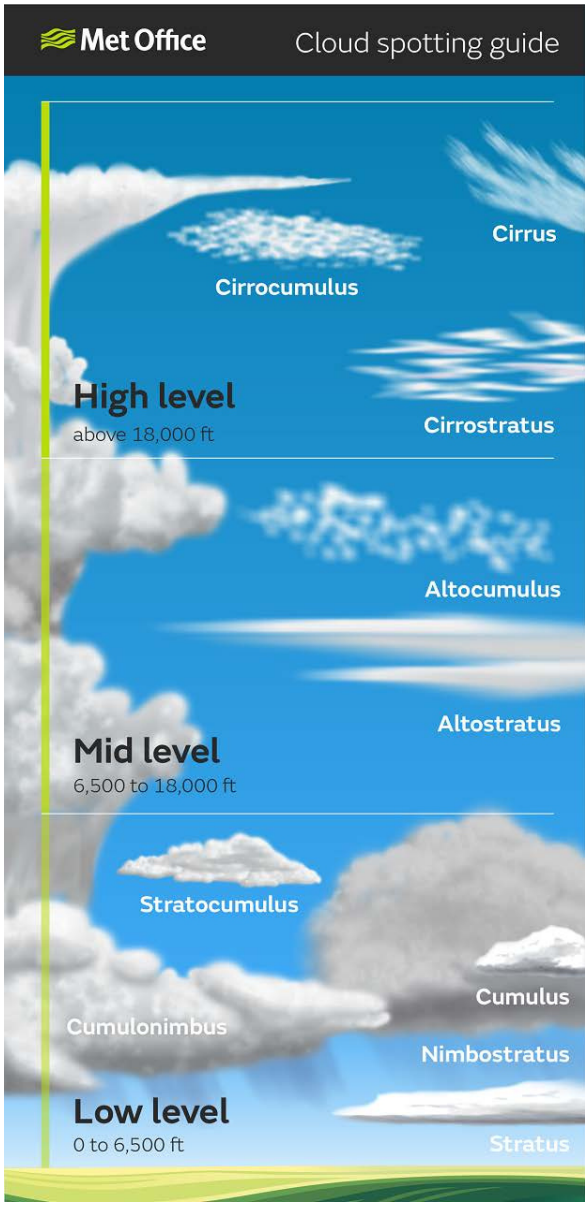
Experience and Explore

Cloud Spotting Activity

Explore different types of clouds as a class. Begin by discussing Steiner's, *Peacock Tail (Peacock Feathers)*, 1980 with your class. Use a cloud spotting guide (or make a cloud wheel here) to identify what type of clouds Ralph Steiner captured in his photograph.

As a class, start observational studies of clouds while on the playground or looking through the classroom window to make a note of the different types of clouds. Collect students' observations to track the types of clouds that they see at certain times each day, and record their findings. These can then be used to draw conclusions about the most common cloud type for that week/month/year. Have students create charts/graphs of the data.

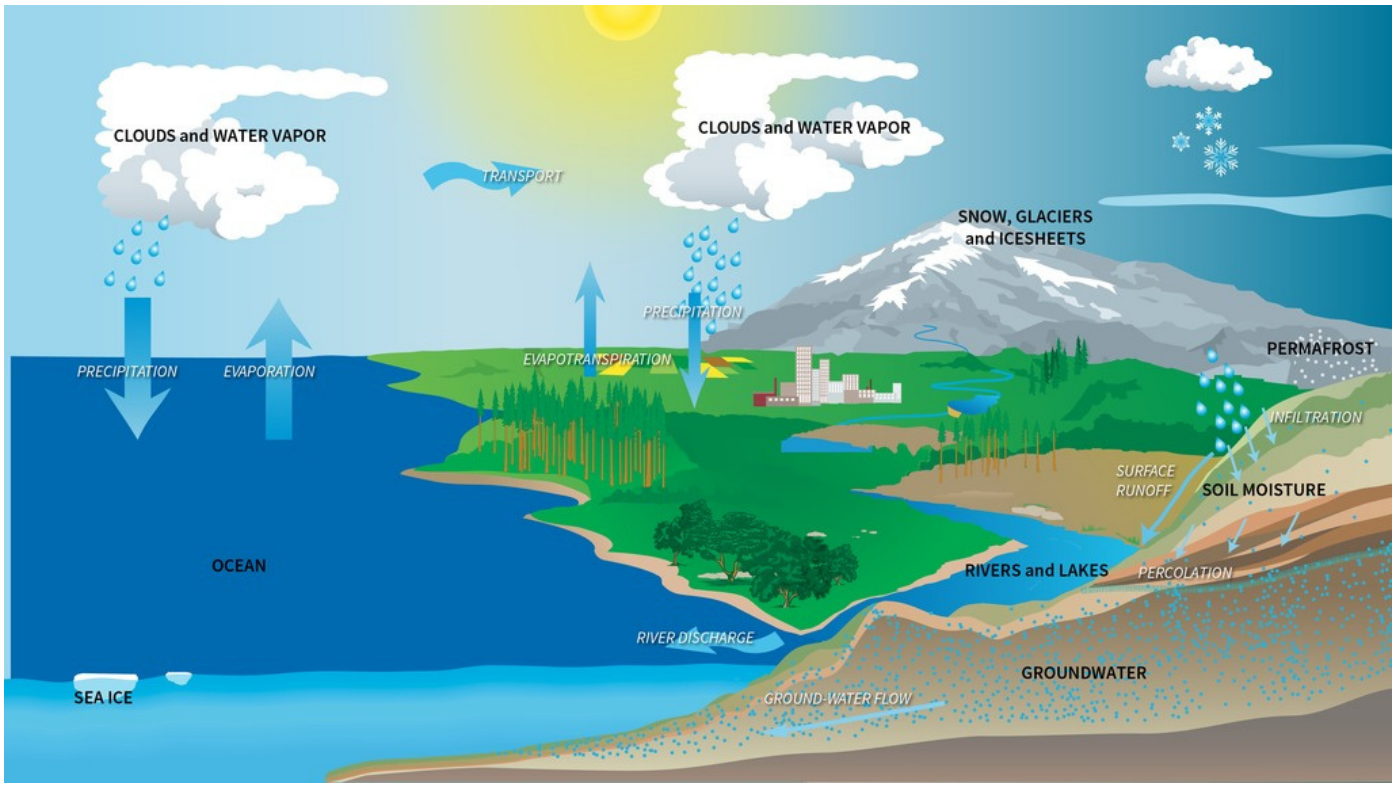
Follow up activity: In small groups, have students select a new title for *Peacock Tail (Peacock Feathers)* using the cloud spotting guide.



Make It Personal

What part of the water cycle do humans impact the most? Use the image below to discuss ways that human actions might impact water moving through the cycle.

A number of human activities can impact the water cycle: damming rivers for hydroelectricity, using water for farming (irrigation), deforestation, the burning of fossil fuels, storing of water in reservoirs, and groundwater mining.



Who makes sure that the water we get from the lake is safe to use in our homes? Milwaukee Water Works! Learn more about the water treatment process here, or watch this video.

The area of land that drains to a body of water is called a watershed. Milwaukee's three rivers are the Milwaukee, the Menomonee, and the Kinnickinnic. Each has its own watershed. Learn more about our local Milwaukee watershed here.

Ask a local expert!

Send Christina Taddy, Outreach Program Coordinator at Milwaukee Metropolitan Sewerage District, an email at CTaddy@mmsd.com to ask a specific water-related question. She will help to get you and your students an answer.

Engage and Take Action

Connect to the Lake

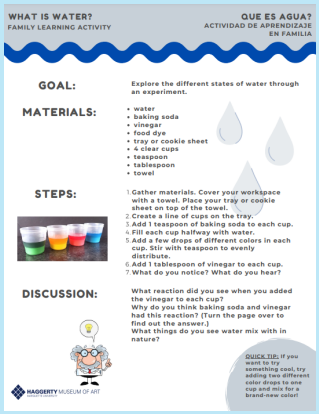
“Adopt” a storm drain! It is a free and fun way to help our local water cycle. Check out the Respect our Waters website to learn more here.

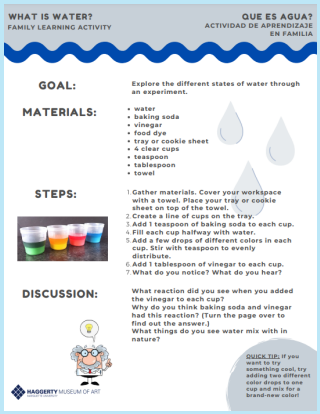
Sweet Water Freshwater Facilitators is dedicated to protecting our most valuable resource — freshwater. Learn more here.

Deep Dives

Family Learning Activity

(Available in both Spanish and English)





Learn More

Listen to one of the *Art Across Curriculum Podcast* episodes.

Episode 2: Alexis Rockman

Episode 4: Utagawa Hiroshige

Check out the "Water Cycle Rap" Mr. Lee! Listen here.

EcoLiteracy Challenge

Join the EcoLiteracy Challenge with your students or school here.

Ride the Wave

Lessons can be scaffolded to meet the needs of any grade level.

Choose to do one lesson, or all three! Visit the Haggerty Museum of Art's Educators webpage to get started.

Essential Questions:

- What is the water cycle?
- How do human actions impact the water cycle?
- What local organization makes sure that our water is safe to drink?
- How are artists from different cultures and time periods inspired by the water cycle?

PreK–5

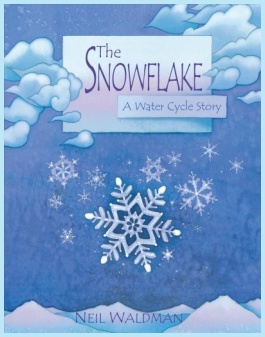
Lesson 1: Students will be introduced to *Kapok Tree* by Alexis Rockman and will focus upon the patterns created throughout his artwork. Students will also be introduced to the water cycle and the vocabulary associated with this complex scientific process. Patterns in the water cycle will form the basis of the artwork that the students will create.

Lesson 2: Students will be introduced to *Peacock Tail (Peacock Feathers)* by Ralph Steiner, and *January* by Grant Wood, and students will be introduced to *Driving Rain at Shuno (no. 46) from Fifty Three Stations of the Tokaido Road* by Utagawa Hiroshige and will discuss how the water cycle is a pattern and how it can affect humans and animals. Students will experiment with different printing patterns.

Lesson 3: Students will experiment using the influence of nature to create their own environmental patterns in block printing. students will write an artist's statement to accompany their prints.

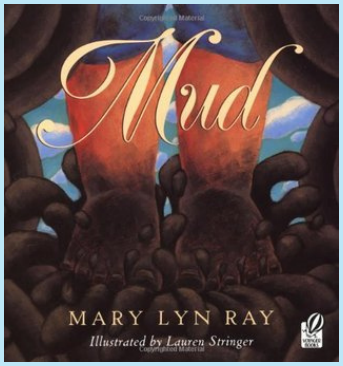
Book Recommendations

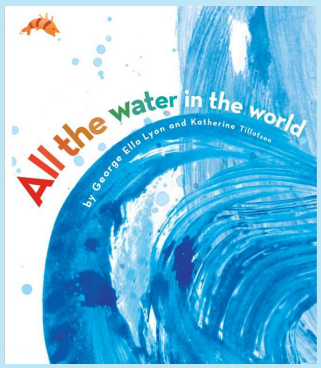
Find them at a library near you!
Or click on each book title to follow along with a virtual reading.



The Snowflake: A Water Cycle Story
Author: Neil Waldman

Mud
Author: Mary Lyn Ray
Illustrator: Lauren Stringer





All the Water in the World
Author: George Ella Lyon
Illustrator: Katherine Tillotson

For more ideas, check out Goodreads list “Best Children’s Books about Water“ here.