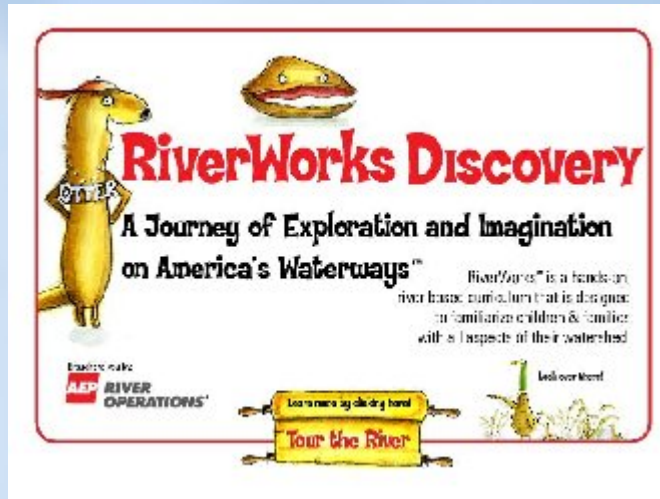


Impact via Family Education



Presentation for
the marine freight
community: shippers,
carriers, ports, terminals &
related parties

AEP
RIVER
OPERATIONS™



Education Mission

Going to Market



End Game



How RiverWorks Helps



Activities for Kids

Scavenger Hunt on the Mississippi River

Training for Warehouse Captain
 Find 10 objects that fit 10 questions. Go outside with the process that you have learned from this!

- 1. Find a river or stream.
- 2. Find a bridge.
- 3. Find a boat.
- 4. Find a house.
- 5. Find a tree.
- 6. Find a fence.
- 7. Find a sign.
- 8. Find a car.
- 9. Find a person.
- 10. Find a dog.

Write your answers on the lines below.

RiverWorks
 LEARN ABOUT THE RIVER

Scavenger Hunt on the Banks of the Ohio River

Training for Warehouse Captain
 Find 10 objects that fit 10 questions. Go outside with the process that you have learned from this!

Red Side - to
 (Use a red side of a paper or a red object)

Green Side - to
 (Use a green side of a paper or a green object)

All Water

Write your answers on the lines below.

1. Does the river still flow?	What are the large rectangular containers that carry cargo on the river called?	Name one type of boat used on the river before steamboats.	Name one of the pioneers or explorers who traveled the river.	Name the famous pair of explorers that began their expedition on the Ohio River in 1793.
Name a tributary to the Ohio River.	What do you receive when you drink?	What is the type of boat called that is used to push barges?	When navigating on the river, what does port mean?	Find a piece of paper and dispose of it properly.
When navigating on the river, what does starboard mean?	Find a duck or other water bird.	The Ohio River empties into the _____.	Do you promise to protect streams?	Name 2 of the _____.

Free Space

Activities for Kids

Discovery is the journey; understanding is the destination. Imagine!

Locks & Dams

A large cargo-carrying lock

Steamboats on the River

Kids for Clean Rivers Pledge

Listen as we tell some of the stories the river has to share. Shut your eyes now and imagine...

Rich, Deep Program

Multiple Choice: You are looking through

Endless and Thrilling

Draw a line to each type of boat with the type of water it is best suited to travel on.

 Sloop	best in slower-moving, shallow water
 Dugout canoe	best in rapid-moving water
 Pirogue	best in slower-moving, deep water

Environmental Consequences of the Deep-Water

Multiple Choice

Rich, Deep Program

Barge Works

...

...

...



What is a watershed?



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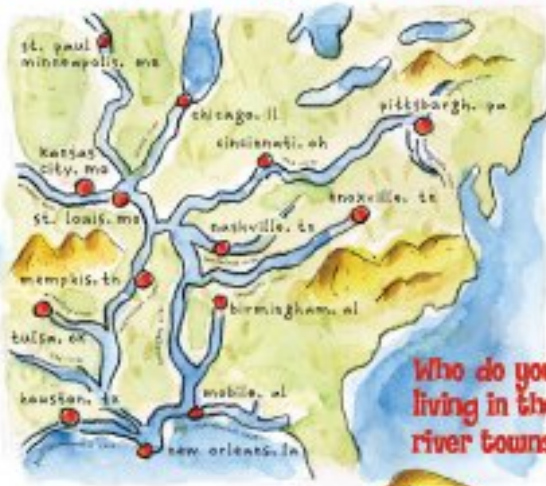
Mississippi River Fish

Did you know?
The Mississippi River has the largest number of fish species in North America.



© 2000

Where Can You Find Barges in the U.S.?



Who do you know living in these river towns?



Early River Vessels



Keelboat

During the Lewis and Clark expedition, the Corps of Discovery used a total of 25 different boats. The largest was a 55-foot long keelboat. The keelboat had a large beam running underneath the middle of the boat that made it suitable in the shallow, faster water they encountered as they traveled west on the Missouri River.

When the keelboat had trouble in the shallow waters, the Corps added two pirogues. Pirogues are flat-bottomed boats that are square at the rear. They are easy to maneuver on its bottom and ends, made up the rest of the fleet.



Dugout Canoe



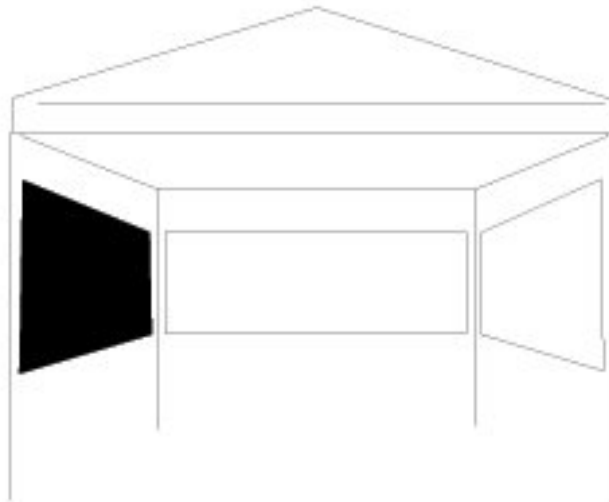
Pirogues





Packet Boat (Stern Wheeler)




Flat Bottom Raft



RiverWorksTM A Journey of Imagination and Discovery on the River.





ENGINE




The engines driving the barge are up to 1,500 horsepower each. Their exhaust pipes are 25 feet tall. Some exhausts are on the engine. The engine room is a hot space. They are also the source of the barge's power.

CONTROL ROOM




The barge is controlled from the control room. The operator sits at a console and controls the barge. The control room is a hot space. They are also the source of the barge's power.

WATER




The barge is filled with water from the river. The water is pumped into the barge. The water is used for the engine. The water is also used for the barge's power.

WIND




The barge is filled with water from the river. The water is pumped into the barge. The water is used for the engine. The water is also used for the barge's power.

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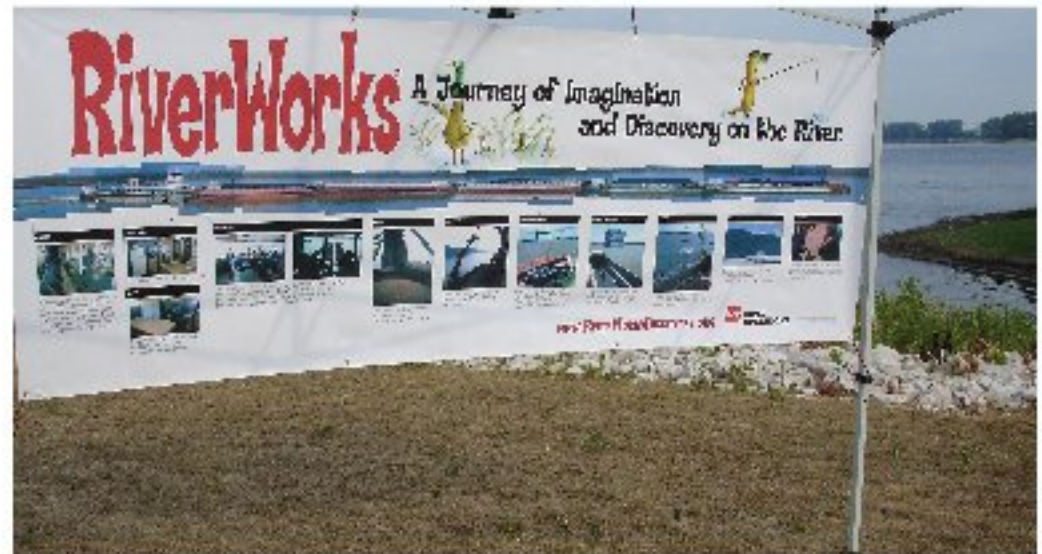
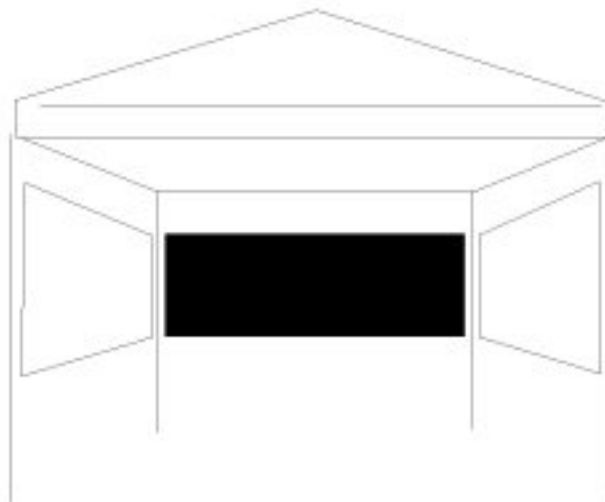
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WWW.RIVERWORKSDISCOVERY.COM 



10' & 20' versions of this panel are available

Fuel Efficiencies of the Transportation Industry

Transportation by barge is about 98% more fuel efficient than truck transport and 48% more fuel efficient than rail transport.

Greater fuel efficiency reduces **costs** such as air pollution particles and sulfur.

What goes up must come down. Less air pollution means less contamination in our Watershed.



Can you imagine how long it would take to get **ANYWHERE** on the highway if there were no barges? Can you imagine polluted?



Ton Miles per Gallon of Fuel

Environmental Commitment of the Barge Industry

The barge industry is committed to overall environmental, safety, and health laws and regulations. In fact, many industry rules are even tougher than government laws.

Some environmentally responsible actions barge companies are doing and urge everyone to do:

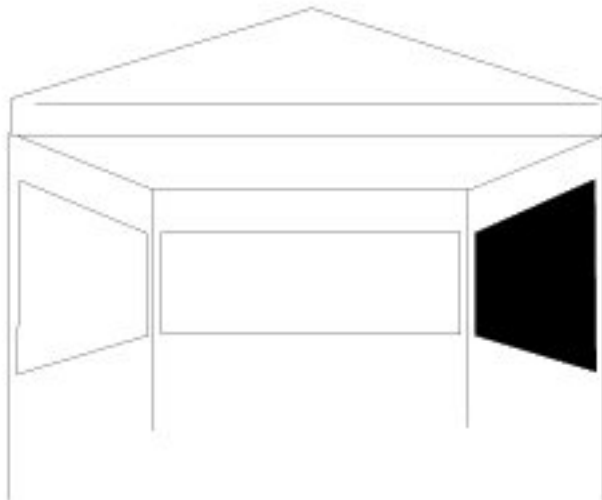
- Dispose of waste properly.
- Use biodegradable disinfectants and/or sanitizers. Biodegradable means that a product is capable of being broken down by micro-organisms.
- Start recycling programs for labeling oil and other waste products.
- Do intent drives, avoid tying up to trees.
- Use segregated bilges to prevent oily water discharge.
- Conduct more equipment inspections.
- Use water blasting instead of sandblasting.
- Strive for greater fuel efficiency.
- Work to decrease vessel stack emissions.
- Safely reduce speed in narrow channels to cut down on bank and bottom erosion.
- Report environmental incidents internal timely.

My River Pledge

It has been proven time and time again, that one person can make a difference. **Imagine** that person is you!!

Here are some ideas:

- Learn all you can about the importance of rivers. Educate others.
- Get involved in planting trees, shrubs, or other plants on hill sides to keep soil in place.
- Keep oil, gasoline, and chemicals out of drains, sinks, and toilets. Take these products to a recycling facility.
- Reduce the amount of water you use.
- Get involved in river clean-up activities in your area.
- Be a smart shopper. Choose products with minimal or recyclable packaging.
- Clean up after your pets, so that animal waste doesn't pollute storm water runoff.
- Protect wildlife. Don't dispose of fishing lines, nets, or plastic items in or near the water.
- Always put trash in its place.
- When possible, make sure to reduce, reuse, and recycle.



Story of Cargo and People



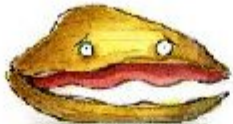
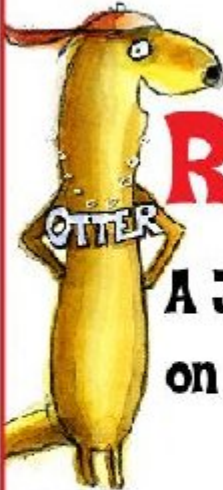
Lock Toys



Large-Scale Puzzles



RiverWorksDiscovery.org






RiverWorks Discovery

A Journey of Exploration and Imagination
on America's Waterways™

RiverWorks™ is a hands-on, river-based curriculum that is designed to familiarize children & families with all aspects of their watershed.

Brought to you by:



Look over there!

Publishing & Distribution



Success to Date

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Success to Date

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Startup in Communities



Recruiting Opportunity

Greatest Threat to Success

Call to Action

Questions?

RiverWorks Discovery

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on America's Waterways™

AEP
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OPERATIONS**

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