

**Buffalo Trace Education Box
Lesson 12**

The Floating House
by Scott Russell Sanders
with illustrations by Helen Cogancherry

Reader's Guide

Purpose: Students will follow the McClure family as they travel down the Ohio River on a flatboat to Jeffersonville, Indiana.

Subject Areas: English/Language Arts, Social Studies, Science

Questions While Reading Aloud the Story

Page 1 of text:

- Who were the members of the McClure family?
- Where did the McClure family start?
- Why did the McClure family have to wait to leave?

Page 2 of text:

- Describe the river.

Page 3 of text:

- What was the cost of the land?
- Describe the "wild country."

Page 4-6 of text:

- What were the children's jobs?
- How did other travelers help out?

Page 7-9 of text:

- Tell about a typical day of travel by flatboat.

Page 10-14 of text:

- Contrast the wilder country with the settlements.
- Where did the family end their journey?

Page 15 of text:

- What happened to the wood from the flatboat?

Page 16 of text:

- What did the children imagine about their house?

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Literature Circle Discussion Questions:

Phase 1 (key ideas and details):

- Preview the story -- setting, character, importance of 1815 in Indiana.
- Discuss the theme of the story (a family on a journey, migration).
- Retell the story -- beginning, middle, end.
- How does the time and place seem to be important to the story?

Phase 2 (text structure and author's craft):

- Discuss the meanings of: simile ("the ice groan and creak like the stairs in an old house"), personification of the river ("sleepy old river" "the river's yawning"), hyperbole ("in the wild country where the dirt was so rich, people said, you could plant a stick and it would break out in leaves") and visual details ("churning carpet of squirrels")
- Discuss the genre.
- What is the author's message to the reader?
- List all the sensory words the author uses on the page beginning "Before falling asleep..." (sight, smell, hearing, feeling)

Phase 3 (what the author and illustrator convey)

- Examine the text features -- map, full page illustrations on the left, text on the right, last page illustration with text.
- Read Sander's notes about his background and how his history was used in the story.
- Closely examine the illustrations. Look for details about river travel.

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**Social Studies and Science
Activities**
(activities are listed by subject area)

Social Studies:

- A. Information About Flatboats**
- B. Dangers of River Travel**
- C. Make a Flatboat Model**
- D. Water Transportation in 1800s**
- E. Create a Timeline**
- F. Follow a Map**
- G. Geography of the Ohio River**
- H. Falls of the Ohio**
- I. Cooperation with Others**
- J. Family Responsibilities**

- **A. Information About Flatboats:** Research specific information about flatboats. Flatboats were a rectangular, one-way vehicle. It was a flat-bottomed boat with square ends. (In The Floating House story, Wayne McClure had made the flatboat out of poplar and walnut lumber with tar for caulking the joints.) According to steamboattimes.com, these boats used the current to float downriver, with poles or oars for steering. The boats were usually 8-10 feet wide and usually 30-40 feet in length. A small cabin on the boat was used for protection, with a small, if any, window and a door that could be closed securely. Inside there may be a cooking pit, made like a sandbox. With animals and supplies on board, no wonder the author referred to the boat as an “ark.”
- **B. Dangers of River Travel:** Discuss the dangers of river travel from The Floating House story: low visibility of morning fog, hazard of colliding with large steamboats, strike a stump, scrape a rock, ground on gravel or sand, encounters with large wild animals. Birdy McClure in the story reads out loud from a book called “The Navigator.” It was a guide book for settlers and travelers moving westward. The eighth edition was published in 1814 and contained maps detailing the navigable waterways, like the Ohio River, and all the hazards. The greatest threat to boats along the Ohio River was underwater obstacles called snags. A snag could be trees, boat wreckage, rock piles or debris.
- **C. Make a Flatboat Model:** Put together a paper flatboat model or a flatboat made with Popsicle sticks. Find directions for making a paper flatboat at the website for the Eiteljorg Museum (Indianapolis): (eiteljorg.org/docs/learn-doc/flatboar.pdf?sfvrsn=2)
- **D. Water Transportation in the 1800s:** Compare the types of water transportation mentioned in The Floating House story:
 - Flatboat displaces the water and floats in the water; carries immigrants and produce downstream.
 - Raft is made of logs fastened together and floats on the water..

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- Keelboat is pointed at both ends, a light draft boat of 5-12 feet wide and up to 80 feet long; could go upstream or downstream; carries passengers and produce Canoe is used for personal transportation and propelled by paddles.
 - Barge is a flat-bottomed boat for carrying freight, typically on canals and rivers, either under its own power or towed by another.
 - Skiff is a shallow, flat-bottomed open boat with sharp bow and square stern.
 - Scow is a wide-beamed sailing dinghy.
 - Steamboat is a boat that is propelled by a steam engine, especially a paddle-wheel craft of a type used widely on rivers in the 19th century.
- **E. Create a Timeline:** Design a timeline for the McClure's journey in The Floating House story. The year was 1815 in the late winter. The families were waiting for the spring thaw, then waited one more week, in Pittsburgh. Toward the end of the story, the trees are budding out. The family arrives in Jeffersonville, Indiana. Timing was important when traveling on the river. Some historical accounts talk about travelers would "wait until Maytide," so that the runoff from the spring rains and the melted snow made the water higher. A flatboat, like the McClure's, drifted about 5.5 miles per hour, "about the speed of a person walking." So their journey could take one and a half to two months travel time, approximately 514 miles. The Ohio River is 981 miles long, starting in Pittsburgh and ending in Cairo, Illinois. (The Ohio River website.)
 - **F. Follow a Map:** Practice map skills as students trace the McClure's journey in The Floating House story. Make a copy of the front or back covers on regular size paper. (If cream colored paper is available, the copy will match the map in the book.) Use colored pencils to trace the route downstream through Pennsylvania, Ohio, Virginia, Kentucky and Indiana. Discuss the importance of the Falls of the Ohio to the migration of the bison. On a larger United States map, follow the Ohio River farther south. The McClure children imagined their house "heading downstream to unknown places."
 - **G. Geography of the Ohio River:** Examine the geography of the Ohio River in 1815. The Floating House story lists these: shallow areas with gravel or sand, protruding tree stumps, visible rocks, islands, bluffs, rapids and falls. The shallow areas of the Ohio were especially useful to the bison as the herd crossed the Ohio River.
 - **H. Falls of the Ohio River:** Research the Falls of the Ohio and the connection to the Buffalo Trace. The Falls were a series of rapids where the river dropped 26 feet in a location of about two miles. This was where the migrating bison crossed the Ohio River at its shallowest point. The McClure family in The Floating House story heard the falls and "saw the water foaming white." Louisville was on the left and Jeffersonville was on the right. Jeffersonville was founded in 1802. The city was named in honor of Thomas Jefferson, who personally laid out the original plan of 150 acres. The website (fallsoftheohio.org) has virtual exhibits with extensive information on Local History with flatboat illustrations.
 - **I. Cooperation with Others:** Discuss how cooperation among families was essential for survival. Families traveled together for protection from dangers. In The Floating House, the travelers coordinated their activities and responsibilities.

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- **I. Cooperation with Others (Continued):** Together the men would go hunting and stand guard. When going ashore, the women traded food, lantern oil and stories. Together the men and women shoved the flatboat off gravel or sand and kept each other company. When the McClures tied up at the dock, others helped unload the flatboat, dismantled the boat, hauled the lumber and built a house.
- **J. Family Responsibilities:** What responsibilities did each family member have? Why was each responsibility important? How did the family cooperate with each other?
 - Dad (Wayne McClure) -- built the flatboat, hunted, stood guard at night, steered, shoved the boat
 - Mom (Birdy McClure) -- read aloud from *The Navigator*; traded food, lantern oil and stories; steered; shoved the boat; made candles out of tallow; hung out laundry
 - Mary McClure -- blew tin horn to signal other boats
 - Jonathan McClure -- yelled to signal other boats
 - Both children -- watched for sand bars and snags, hollered if she/he saw danger, sang songs to calm the horse, pulled in trotlines to catch fish, gathered driftwood for fires, refilled water barrels

Science:

- A. Wildlife
- B. Floating Flatboat Model
- C. Sandpit
- D. Buoyancy
- E. Freezing of the Ohio River
- F. Fog
- G. Using Sound for Navigation

- **A. Wildlife:** List the animals mentioned/illustrated in The Floating House story: white-tailed deer, turkeys, doves, owl, eagle, bear, raccoon, rabbits, fish, eagle, wolves, gray squirrel, hawk, chickens, goose, cow, horse, mule, pig, and dog. The students may ask about the colorful Carolina parakeets (now extinct), found on the map page. They were the only parrot species native to the eastern United States and lived in old forests along rivers.
- **B. Floating Flatboat Model:** Make a flatboat model that floats. Find directions for making one with a milk or juice carton from Meeting of the Rivers Foundation in the section called "Float Your Boat," page 21-22 (meetingoftherivers.org/our_mississippi_unit_4_LR.pdf). Test out the boats in a plastic bin of water. Try adding cargo, such as toy figures or pennies. Examine closely how a flatboat floats in the water, but not too far down. This shallow draft is especially helpful in low areas of a river. Examine the distribution of weight. The flat boat requires careful balance of cargo and passengers. |
- **C. Sandpit:** Discuss the use of the fire sandpit on the flatboat. The McClure family had built a sandbox for their nightly fire on the flatboat. The small wood fire provided heat on the cool nights. The sand was useful in putting out the fire and keeping the fire contained to a small area. Larger wood fires were made on shore during the day.

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- **D. Buoyancy:** Introduce Archimedes' Principle and Buoyancy, the amount of water displaced is related to the weight of the object. View the paintings "The Jolly Boatmen" (1846) and "The Jolly Flatboat men in Port" (1857) by George Caleb Bingham. (Go to npr.org for a description of one of the paintings.) Look closely how the flatboat is very low in the water with the load of cargo. For other lessons about buoyancy go to the website teachengineering.org.
- **E. Freezing of the Ohio River:** Could the Ohio River really freeze over? In the opening text of The Floating House story, "the Ohio River froze from shore to shore" in the winter of 1815. The river regularly freezes over at Pittsburgh, where the family began their travels. Some historians called the year of 1815-1816 The Year Without a Summer due to the eruption of Mount Tambora on Sumbawa Island in Indonesia. The cloud of ash and sulfur dioxide shot more than 20 miles high into the atmosphere. The cloud prevented the sun's rays from warming the surface of the Earth and dropped the temperature 3 degrees. The sulfuric acid takes months to dissipate and had time to affect the climate. The Ohio River at Cincinnati has frozen 14 times since 1874, according to the Washington Post.
- **F. Fog:** Discover how fog is formed on the river. Fog forms when cool air passes over a warm body of water. Fog is a cloud at ground level. During a morning fog on the river, travelers could not see very far. So flatboats were in danger from running into larger swifter boats. Travelers would delay their departure until the fog would evaporate as the sun heated the ground. (Steamboat Times)
- **G. Using Sound for Navigation:** Discover how sound is used during fog on the river. According to working-the-sails.com, a fog horn, bell and gong are used to indicate a ship's presence, its size and activity. A boat under 39 feet carries a fog horn. Larger boats carry a bell and vessels over 328 feet will also use a gong. Fog horn, bells and gongs use certain patterns to signal meanings. For example, one prolonged blast from a fog horn and two short blasts means "under sail." Travelers were in danger from not seeing through the fog to the river shore in time to avoid hitting the bank. In The Floating House story, "If the morning was foggy, Mr. McClure would judge the distance to shore by throwing stones and listening for a splash or thud." If Mr. McClure heard a splash, he knew the flatboat was floating safely down the river. If he heard a thud, he knew he was too close to the side of the river. Flatboat travelers used the tin horn on foggy mornings. ("Mary blew hard on the tin horn...") The sound from the tin horn was used as a warning by boatmen to keep from colliding with others during fog on the river. For an audio of the sound, go to the article "Sounden Horn" on the website: lewis-clark.org/article/580. The tin horn was also used by flatboat merchants. As the merchant approached a town, a blast on the tin horn would tell the townspeople cargo was ready for sale.