

The Dan River Twins Teaching Guide



Story written by Cyndy Unwin and illustrated by Will Fowler

Teaching Guide developed by:

Cyndy Unwin, Ph. D., author and reading specialist

In collaboration with:

**Amy Baynes, Woodberry Elementary School, Danville City Schools
Wendy Bradner, Chatham Elementary School, Pittsylvania County Schools
Lauren Hearp, Chatham Elementary School, Pittsylvania County Schools
Shelley Mayhew, Chatham Elementary School, Pittsylvania County Schools
Debra Rojas, Forest Hills Elementary School, Danville City Schools
Tafton Trent, Schoolfield Elementary School, Danville City Schools**

Pre-Reading Activities

Discussion Starters:

- Based on the title and the cover, what do you know and what can you predict about the Dan River twins?
- What will be the setting of the story?
- Will this book be fiction or non-fiction? How do you know this? What does this tell you about the author's purpose? (Highlight how most of the text is fiction, but that there are also non-fiction Fun Facts at the end and on the *Dan River Twins* website.)
- What do you know about the Dan River? What do you predict this story will help you learn about the Dan River?
- Have you ever been on the Dan River Riverwalk? If so, what was it like?
- Have any of you seen a river otter? If so, where? What are river otters' personalities like?
- Are you a twin or do you have any twins in your family? Do you know anyone who is a twin? What do you think life is like in a family with twins?

ELA 4.1b, 4.5a, b, i, 4.6 a, b, c, i

Activity: See next page for Anticipation Guide

Anticipation Guide

Directions: Try to answer these questions based on what you already know about North American River Otters, the Dan River, and Danville. Then, when you're finished reading the story and have explored the *Dan River Twins* website, try again and see how much you've learned!

1. True or False: North American River Otters float on their backs when they swim.
2. What are two kinds of trouble river otter pups could get into?
3. What do these words mean?
Nocturnal:
Diurnal:
Crepuscular:
4. What special thing can river otters' noses and ears do?
5. True or False: North American River Otters can hold their breath for eight minutes under water.
6. What is a fish ladder?
7. True or False: A batteau is a special bat that was used by Danville baseball players during the Civil War.
8. For how long was Danville the capital city of the Confederacy?
9. What are textiles? Name three ways they have affected Danville and the Dan River.
10. What are your experiences with and feelings about the Dan River?

Activities, Questions, Vocabulary (by page)

Note: Question 10 from the Anticipation Guide and highlighted questions below are also included in the separate student journal.

Page #	Question or Activity	Vocabulary
1	What do you think the Otter Frolics are? ELA 4.5i	
	What type of fish might Momma have fed the twins? ELA 4.9b	
2	Highlight suffixes in words like “swimmiest” ELA 4.4b	
	Sensory words: wet, slimy ELA 4.5g	
3	Multiple-meaning word: zip ELA 4.4a	tensed
		crouched
4	Where is the “Big Dam” in Danville? What is its real name? If you have been there or seen it, describe what it’s like. ELA 4.5h	
	Why would the water be running more quickly?	
5	Using a map of Danville and the Dan River, retrace the otter family’s route from their den (alongside the Sandy River) to the Big Dam (Schoolfield Dam). VS1i	upstream
6	Locate and/or describe the habitats of the various animals encountered in the story. Science 4.5d	
	What are webbed feet? Why might they be useful as an adaptation? Science 4.5a	
	Compare and contrast the animals in the story (e.g., beavers and otters) ELA 4.5h	
7		scrambled
8	What is Danny like? (highlight his competitiveness) What connections do you have to Danny? ELA 4.5k	bounded
		pinged
9	Compare/contrast otters’ mud-sliding to penguins’ tobogganing, humans’ sledding, etc. ELA 4.5h	lunged
	What does “neck and neck” mean? ELA 4.4a	
11	SPLOOSH--onomatopoeia	nuzzled
	Write about a situation in your life when someone else has beaten you in a competition. How did you feel? ELA 4.7	
	Make “Otter Character Traits” graphic shaped like an otter. Use to describe each otter character. ELA 4.5k	
	Cause and effect: What effect did winning have on Mist? ELA 4.5j	
12	Internet research: find examples of what otter barks	somersaulted

	(and other noises) sound like ELA 4.9b, c, d	
	Multiple-meaning word: current ELA 4.4a	launched
13	Synonyms and antonyms: furiously ELA 4.4b	
	Why did Mist's heart sink? How would you have felt if you were Mist? Describe a similar situation in your life. ELA 4.5j	
14		pelting
		peered
15	Multiple-meaning word: rapid ELA 4.4a	
15-16	Suffixes: -ing, -ed, -ly, -er ELA 4.4b	
16		massive
17	What would you have done if your friend went over the falls? Compare this to what Danny and Mist did. ELA 4.5e, h, i	precipice
18	How is Danny changing? How do you know this? ELA 4.5h	crevices
	Suffixes: -ness ELA 4.4b	murky
		boulders
19	Share a time when you had to hold your breath for a long time. Describe how it felt.	frantically
19-20	Suffixes: -ally, -ly, -es, -ment ELA 4.4b	
20	Multi-meaning word: sailing ELA 4.4a	surge
21-22	Identify the Danville landmarks the otters pass by in this part of the story. ELA 4.5k	
22	Describe a time when you were separated from your parents or loved ones. How did you feel? ELA 4.7	island
24	Sequencing: Using visualization, describe the steps Danny and Mist used to save Splash. ELA 4.5e, k	insistent
	Who are the strange creatures the otters saw? ELA 4.5h	
	Describe (or draw) what an island in the middle of a river would look if there was flooding. ELA 4.5h, j, k	
25	How could two-legged creatures be dangerous to otters? If you were one of those creatures in that situation, what would you do? ELA 4.5h, j	jolt
	How long is an otter length? Calculate what the distance would be in feet. How far were the otters from the two-legged creatures? ELA 4.5h, Math 4.7a	halt
	Multiple-meaning word: banks ELA 4.4a	swayed
	Vocabulary game: Students act out these words, and students guess which one their classmates are pantomiming: frantic, flung, thrashed, launched, quivering, glanced ELA 4.4a, d	See activity
	What are the musical noises? ELA 4.5h	
	What does an animal look like when its teeth are bared?	

25-26	SNAP: Onomatopoeia	
27	Predict what you think will happen next with the two-legged creatures. What would you do? ELA 4.5i	clutching
	Talk or write about a time when you, like Danny, really wished your mother or father was with you. ELA 4.7	
	What did Danny's momma mean when she told him, "Think before you act?" Do you usually do this? Describe a time when you <u>have</u> or <u>haven't</u> thought before you acted. What did you learn? ELA 4.5h, j	
	Danny asks himself, "What happens now?" What do YOU think happens now? ELA 4.5i	
28	What is self-defense? How is Mist using self-defense in this part of the story? Is it right or wrong? ELA 4.5e	lurched
		ferociously
30	What is teamwork? How have the otters used teamwork during this story? Can you think of a time when you have used teamwork? What was the result? ELA 4.5c, d, h, j	foes
	Rewrite the last few pages of the story from the two-legged creatures' point of view. ELA 4.7, 4.8	
	Write the next <i>Dan River Twins</i> adventure! ELA 4.7, 4.8	

Content Area Lesson Ideas

Math:

- Use measurement data or pH testing data to compare numbers with decimals. **Math 4.3a, c**
- Use measurement wheels in Dan Daniels Park (available from Danville Parks and Recreation). **Math 4.7a**
- Measurement conversion: Calculate how long an otter length is (non-standard measure) and convert to feet/inches and meters/centimeters. This can also be done for levels of flood stages, the distance on the Dan River the otters traveled (miles to feet, kilometers to meters, etc.). **Math 4.7a, b**
- Research the liquid volume and the speed of flow of the Dan River when it is at normal levels and when it is flooding. **Math 4.8 a, b**
- Calculate flow rate (cubic feet/second) of the Dan River; compare a gallon of water to a basketball. **Math 4.8 a,b**
- Track elapsed time during the story using a timeline or chart. **Math 4.9**
- Geometry: perpendicular and parallel lines—the Dan River bridges. **Math 4.10b**
- Study how math is used in predicting and measuring the weather. **Math 4.9, 4.13, 4.14**
- Graph the possible water level of the Dan River as it flooded (can use actual flood data from previous floods). **Math 4.14**
- Use various types of graphs (bar, line, etc.) to chart information or events in the story (e.g., a line graph with water level gauge readings; usgs.gov—NOA site that has historic flood data). **Math 4.14**

Science:

- What are the different types of otters? Compare and contrast North American River Otters and Sea Otters. **Science 4.5a**
- What adaptations do river otters have that make rivers and the land nearby their ideal habitat? (webbed feet, thick coat, ability to hold breath under water for long periods of time, etc.) **Science 4.5a**
- Create diagrams, models, or mobiles to illustrate various food webs or chains associated with the Dan River. **Science 4.5b, c**
- Participate in the *Catfish in the Classroom* program through Danville Parks and Recreation. **Science 4.5b, f**
- Who are producers, consumers, and decomposers in the Dan River ecosystem? **Science 4.5c, e**
- Weather—What sort of weather conditions lead to river flooding? How is flash flooding different from other types? How is weather measured? (Connect to math) **Science 4.6a, b, c**

- Study the water quality of the Dan River: Water temperature, dissolved oxygen and pH, how they affect river life. Conduct testing at various points along the Dan River (can also connect with math). How does flooding affect dissolved oxygen and pH levels? (Danville Parks and Recreation or the Danville Science Center may be able to assist with this testing.) **Science 4.9a**
- What is the water cycle and why is this important to the Dan River? **Science 4.9a**
- Research the habitat of river otters, beavers, great blue herons, and other wildlife dependent on the Dan River. **Science 4.5d, 4.9a, b**
- Describe the various ecosystems in and along the Dan River. (Dan River Basin Association has materials and possible guest speakers) **Science 4.5b, c, 4.9a, b, d**
- What are human influences on rivers? How has the Dan River been influenced by humans in good and bad ways? (fabric dyes, coal ash spill, riverwalk, recreation, fishing) **Science 4.5f, 4.9a, b**
- How does flooding affect a river, its banks, the surrounding land, the plants and trees, and wildlife? (sediment, erosion, displacement of wildlife) **Science 4.6a, 4.9a, b, d**
- Research ways ordinary people can care for the Dan River. What can children do? Create a service project that would help the Dan River. **Science 4.5f, 4.9a**
- Research the ways in which the Dan River is an important water resource (drinking water, irrigation source, recreation, habitat for fish, plants, and other wildlife). **Science 4.4d, 4.5b, c, d, f, 4.9a, b, d**

Virginia Studies

- Collect various types of maps of Danville and the Dan River, including historical maps. Study characteristics of maps (scale, compass rose, map key, etc.). **Virginia Studies 1a, c, i**
- Study the Dan River Atlas. What is an atlas? What sorts of information could you find in this atlas? **Virginia Studies 1a, i, 2b,**
- What is the difference between a river and a canal? When and why were canals built along the Dan River? **Virginia Studies 1a, d, g, i**
- How was the City of Danville founded? How was this connected to the Dan River? **Virginia Studies 1a, b, f, i**
- How did the Dan River get its name? **Virginia Studies 1a, d, g**
- How did the tobacco and textile industries affect Danville? How did they affect the Dan River? **Virginia Studies 1a, b, d, e, g, h, i, 9a, 10b, c**
- Study the batteau. Create models of this type of boat. How was the Dan River modified to make river transportation easier? **Virginia Studies 1a, b, i**
- Make a photo collage of historic floods of the Dan River. **Virginia Studies 1a, c, i**
- Explore the beginning and the end of the Dan River. What Virginia (and North Carolina) regions does it travel through (Mountain, Piedmont)? **Virginia Studies 2b**

- What Native Americans lived near the Dan River? What happened to them? (The Monaccan Tribe...what might you find if you did an archeological dig near Danville? What would the artifacts of this tribe look like?) **Virginia Studies 2e, f, g**
- How was Danville involved in the Civil War? (The Dan River transported materials and supplies for the war; Danville was the capital city of the Confederacy for about a week at the end of the war.) **Virginia Studies 7a, b**

Language Arts:

- Point of view: Discuss and write scenes from differing points of view (Momma, the humans, the other animal characters). **ELA 4.1b, 4.2d, 4.5h, 4.7**
- Vocabulary: Make a dictionary of all the vocabulary words in the story; teach guide words, alphabetical order. **ELA 4.4a, c, e**
- Utilize the glossary on the *Dan River Twins* website. **ELA 4.4c**
- Grammar: prefixes/suffixes **ELA 4.4b**
- Verbs—List all the action verbs in the story; discuss importance of verbs in effective writing. **ELA 4.4d, 4.5b**
- Fiction vs. non-fiction (story and non-fiction Fun Facts) **ELA 4.5, 4.6**
- Comparison/contrast: fiction vs. non-fiction, different animals in the story, personality of the characters, changes in the characters over time, setting at various points along the Dan River. **ELA 4.5f, h, 4.6 f**
- Explore author’s purpose (the story—to entertain; non-fiction elements—to inform) **ELA 4.5a, 4.6c**
- Graphic organizers: compare/contrast, sequencing, story elements, character traits **ELA 4.5, 4.6 (varies, depending on graphic organizer)**
- Explore different text features in the non-fiction Fun Facts **ELA 4.6a**
- Functional texts: Collect local flyers, maps to read and interpret **ELA 4.6a, 4.9b**
- Write a persuasive letter (to the local newspaper, city council, etc.) about preserving the health of the Dan River **ELA 4.7, 4.8**
- Write friendly letter to a friend or family member about the Dan River **ELA 4.7, 4.8**
- Journal (see separate section of Teaching Guide with questions in journal format) **ELA 4.5h, i, j, k, 4.7**
- Write the next chapter the *Dan River Twins* saga. **ELA 4.7, 4.8**

Other Ideas:

- Field trip: Visit all the places in the story that the otters traveled. Go on your own, or contact the Danville Parks and Recreation Department for additional field trip options and ideas.

- Other field trip ideas: the Danville Water Treatment Plant (will also do classroom visits), the Danville Science Museum (water quality or Dan River wildlife focus)
- Invite speakers from the Danville Historical Society, the Danville Foundation, the Danville Science Center, or the Dan River Basin Association to come to your classroom.
- Dan River Stewards: Students develop a service project related to the Dan River.
- Students work with local community groups to advocate for the Dan River (Dan River Basin Association, Danville Foundation, Danville Science Center, etc.)

_____’s *Dan River Twins Journal*

(Before you read the story)

What are your experiences with and feelings about the Dan River?

(After page 4)

Where is the “Big Dam” in Danville? What is its real name? If you have been there or seen it, describe what it’s like.

(After page 8)

What is Danny like? What connections do you have to Danny?

(After page 11)

Write about a situation in your life when someone else has beaten you in a competition. How did you feel?

(After page 13)

Why did Mist's heart sink? How would you have felt if you were Mist? Describe a similar situation in your life.

(After page 17)

What would you have done if your friend went over the falls? Compare this to what Danny and Mist did.

(After page 22)

Describe a time when you were separated from your parents or loved ones. How did you feel?

(After page 25)

How could two-legged creatures be dangerous to river otters? If you were one of those creatures in that situation, what would you do?

(After page 27)

What did Danny's momma mean when she told him, "Think before you act?" Do you usually do this? Describe a time when you have or haven't thought before you acted. What did you learn?

(After page 30)

What is teamwork? How have the otters used teamwork during this story? Can you think of a time when you have used teamwork? What was the result?

Websites

City of Danville

<http://www.danvilleva.gov>

City of Danville Parks and Recreation

<http://www.playdanvilleva.com>

Dan River Basin Association

<http://www.danriver.org>

Danville Regional Foundation

<http://www.drfoonline.org>

Danville Historical Society

<http://www.danvillehistory.org>

Historical Information:

<http://www.danvillehistory.org/saponi-indians.html>

<http://www.victorianvilla.com/sims-mitchell/local/native/redis.htm>

http://www.encyclopediavirginia.org/Wreck_of_the_Old_97#start_entry

http://www.encyclopediavirginia.org/Tobacco_in_Colonial_Virginia#start_entry

Information about North American River Otters:

www.otters.net

<http://www.otterpaddlefoot.com/facts/index.htm>

<https://www.nwf.org/Wildlife/Wildlife-Library/Mammals/North-American-River-Otter.aspx>

<http://www.esf.edu/aec/adks/mammals/otter.htm>

www.animals.nationalgeographic.com/animals/mammals/american-river-otter/

Spelling “Demons” (commonly misspelled words) in *The Dan River Twins*

said (p. 1)
excited (p. 1)
favorite (p. 2)
caught (p. 3)
muscles (p. 3)
enough (p. 4)
answered (p. 4)
once (p. 5)
whispered (p. 7)

friends (p. 8)
disappeared (p. 8)
though (p. 9)
finally (p. 11)
yeah (p. 11)
climbed (p. 11)
could (p. 12)
might (p. 14)
straight (p. 16)

searched (p. 18)
suddenly (p. 19)
opposite (p. 20)
building (p. 22)
island (p. 23)
dangerous (p. 23)
creatures (p. 23)
approached (p. 25)
companions (p. 29)