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Educational materials for *Sylvia Doe and the 100-Year Flood:*

Prompts for Discussion and Writing

Activities, Assignments, and Quizzes

Vocabulary

Go to [[robertbeattybooks.com](http://robert-beatty.com)/education](http://robert-beatty.com/education) for links to the PDF files, teacher testimonials, and other resources.

**COMMON CORE COMPATIBLE**

***Sylvia Doe and the 100-Year Flood* and its educational materials are well-suited for Common Core and similar state standards.**

Content developed by Kim Donehower, Professor of English, as well as the author, Robert Beatty.

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**Activity for Any Subject Area: Sketchnoting**

“As Ms. Romerez taught the physics lesson, Sylvia took detailed notes in her notebook, knowing she had to catch up. At first she concentrated on capturing the specifics of what Ms. Romerez was explaining, but as the ideas became clearer in Sylvia’s mind, her thoughts began to wander and she started sketching all the different ways she could use levers in the barn—pry bars, hay bale lifters, all sorts of things.” (115)

“‘So, you keep a log . . .’ Jorna said quietly as he watched her…. ‘Let me just take a few more seconds . . .’ she said, feeling emboldened as she pulled out her notebook and began to sketch. She tried to capture the unusual, curving shape of the bird’s beak, the delicate white ring around her eye, and the way the red blended into the yellow on her face. From there she drew the shoulders, and the wings, and the tail feathers, trying to see everything there was to see so she could finish the drawing properly later.” (132-233)

Sylvia’s methods of notetaking, seen in these scenes and in her life list entries, are very similar to a method of notetaking called “sketchnoting.” Sketchnoting combines words, pictures, and symbols to give you a deeper understanding of a subject and to help you remember what you learn.

Take a look at Sylvia’s life list entries on pages 12, 16, 28, 92, 116, 134, 181, 184, 185, 227, and 239, and notice the kinds of things she writes down. Then, watch this [introductory video on sketchnoting](https://youtu.be/4ItcHag3agE?si=fS_exKa9vxVLIRXu) and try the technique yourself in one of your classes. If you like the technique, the same YouTuber has [additional videos on advanced ways to use sketchnoting](https://youtube.com/playlist?list=PLdKI62dB717zf-JFTqDLsrIGaNDhAtft6&si=gSd6FPX3WHmtAYt_). If you’re someone who likes to take notes in words moreso than in pictures, consider [this technique that blends sketchnoting and the Cornell notetaking technique](https://youtu.be/pZgMpjjgCRA?si=myDHqS5uCDYcD2F8).

**Language Arts/Literary Elements: A Field Guide to Characters**

It’s always a good idea to track character development for the main characters in any novel you read for school. Consider using Sylvia’s “life list” or “log” notetaking technique that you can see on pages 12, 16, 28, 92, 116, 134, 181, 184, 185, 227, and 239 of the book to create a field guide to some of the characters in *Sylvia Doe and the 100-Year Flood*. Below is a template you can use for the characters you choose.

|  |  |
| --- | --- |
| **Character Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Location:** Write next to your drawing  and characteristics notes the page numbers  where you saw evidence for what you draw and write. | |
| **Drawing:** Sketch a visual here of what you imagine this character to look like, based on clues in the text. | **Characteristics:** Write here the different personality traits and facts you notice about the character as you read. |
|  |  |

**Language Arts/Literary Elements: Tracking Plot**

“Somebody wanted but so” is a good way to summarize the plot of a story. For example:

Somebody: A Wolf

Wanted: To eat pigs

But: They all hid in a house made of bricks

So: The wolf couldn’t blow the house down and get them.

*Sylvia Doe and the 100-Year Flood* has a complex plot because it has many changes of setting that impact what the characters want; what makes it difficult for them to get what they want; and what they decide to do and/or what happens to them as a result.

To map the plot of *Sylvia Doe and the 100-Year Flood*, complete the chart on the following page. As the plot unfolds, some characters want new things. The chart has space for you to add new “wants” for characters who have multiple motivations throughout the plot. There’s an initial entry as an example to get you started.

***Somebody Wanted But So* Plot Chart**

|  |  |  |  |
| --- | --- | --- | --- |
| **Somebody Wanted**  (Add the character’s name here and describe what they want.) | **But**  (what prevents them from getting it) | **So**  (what does the character do or what happens) | **Ch. #** |
| Sylvia wanted to try to stay in her foster home. | A huge storm made her worry about the horses and people at Highground. | She ran away by hiding on the back of a truck. | *1 & 2* |
|  |  |  |  |
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**Language Arts/Literary Elements: Tracking Symbolism**

*Symbolism* is when a writer uses an object, character, event, or some other concrete element in a story to represent an abstract concept. For example, the color red is often understood as representing love or passion. When a symbol means the same thing throughout the a text, it’s being used as a literary device. But when the meanings of symbols grow and change over the course of a text, they become literary elements—they help structure the whole meaning of the text and how the reader’s experience of the story changes as the symbol gathers more and more meanings.

For example, there are places in *Sylvia Doe and the 100-Year Flood* where the river represents danger and destruction. But there are other places where the river is life-giving and nourishing. As the book progresses, the river symbolizes more things.

Use the chart below to choose one of the symbols in the book and track the abstract things the symbol seems to represent as the book progresses. Note the chapters in which you see the different potential meanings of the symbol. You might consider symbols such as the river, water, the storm, trees, the horses, or any other symbols that you see in the story that gather different meanings over time.

|  |  |
| --- | --- |
| **Symbol: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |
| **What It Seems to Represent** (at this point in the novel) | **Ch. #** |
|  |  |
|  |  |
|  |  |
|  |  |

**Language Arts/Author’s Craft: Metaphors and Nature**

When writers use **metaphors**, they describe one thing in terms of something that is unrelated to it. For example, in this passage, Sylvia compares herself and Jorna to driftwood: “[S]he had the unsettling feeling that they weren’t controlling most

of what was happening to them. They weren’t the sun and the moon and the flowing water; they were the driftwood.” (222)

Once you start noticing the metaphors in *Sylvia Doe and the 100-Year Flood*, you’ll see that many of them are nature metaphors. They either compare nature to humans and non-natural objects, or humans and non-natural objects to nature. Here’s an example: “She had a strong feeling that this thing wasn’t over, that Hurricane Jessamine had more to say before she departed, and the river wanted to hear it.” (53)

In this example, the author is giving two natural forces—the hurricane and the river—the qualities of people. The hurricane is described as having “more to say” and the river is described as “want[ing] to hear.” This kind of metaphor is called **personification** or **anthropomorphism**. These terms mean giving non-human things human qualities, by describing them in human terms.

To try your hand at writing metaphors, you might want to start with a type of metaphor called a **simile.** A simile uses “like” or “as” to make the comparison. Here’s an example from the book: “[T]he more she looked at the Chutes, the more something began to bother her, little connections crawling in her mind like spiders.” (224-225). Here, “like” makes it clear that the connections are being compared to spiders.

The next page has a type of “Mad Lib” for you to experiment with different types of nature metaphors. If you follow all the directions, you’ll end up with a type of poem called a “Pantoum” when you’re done.

**Create a Pantoum with Nature Metaphors**

A [pantoum](https://poets.org/glossary/pantoum) is a type of poem that repeats lines in a certain sequence. The repetition creates a kind of echoing effect, and allows each line or metaphor to take on new meanings as it is combined with the other lines in different ways.

**First, you’ll need eight lines.** Generate them by filling in the blanks below, following the italicized guidelines in brackets within each blank:

1 I saw a \_\_\_[*object from nature*]\_\_\_ standing like a \_\_[*type of human being*]\_\_

2 It seemed as \_\_\_[*human emotion*]\_\_\_ as a \_\_\_[*season*]’s\_\_\_ day

3 Its \_\_\_[some specific part of the object in line 1]\_\_ were \_\_[*action that a human would do*]\_\_\_

4 Its \_\_\_[another specific part of the object in line 1]\_\_ were \_\_[*another action that a human would do*]\_\_\_

5 I wondered if the \_\_\_[ object in line 1]\_\_\_\_ ever felt \_\_\_[*another human emotion*]\_\_\_

6 From \_\_[*another action that a human would do*]\_\_\_ like a \_\_[*any comparison you would like to make*]\_\_\_

7 Or if it thought about \_\_[*something a human would think about*]\_\_\_

8 I know I would, if I were a \_\_\_[*object in line 1*]\_\_\_\_

[continued next page]

**Here’s an example:**

1 I saw a tree standing like a soldier

2 It seemed as calm as a summer’s day

3 Its branches were waving at me

4 Its leaves were whispering secrets

5 I wondered if the tree ever felt lonely

6 From standing at attention like a guard

7 Or if it thought about whether anyone could hear it

8 I know I would, if I were a tree

**Once you have your eight lines,** arrange them this way, repeating as indicated:

1

2

3

4

2

5

4

6

5

7

6

8

7

1

8

3

**Last,** play around with the punctuation of your lines. You might create different effects by changing the punctuation that connects each line to the next. You can also adjust a single word in each line if you want.

**Language Arts/Author’s Craft: Foreshadowing**

*Spoiler Alert! Only complete this activity once you’ve finished reading the book.*

Have you ever read or watched the type of mystery called a “whodunnit,” and when the “who” was revealed, realized that there had been all kinds of clues to that person’s identity the whole way through the story? This means the writer was good at **foreshadowing**.

To be good at foreshadowing, you have to provide clues for the “who done it” or “what is really happening” without making it too obvious what the “who” or “what” actually is. Finding out “who” or “what” is what drives your reader to keep reading, so you don’t want to figure out the answer too early in the text.

In *Sylvia Doe and the 100-Year Flood*, the author provides several clues that Jorna is not from Sylvia’s time in the present day, but those clues might not seem obvious until you get to chapter 20 where the element of time travel is revealed. When you look back at those earlier clues, you’ll see that some of them appear more obvious—like Jorna not knowing what helicopters, planes, and movies are—and some of them are more subtle—such as this quote about Sylvia from chapter 10:

“[T]he scent of wood burning in a campfire had always made her feel nostalgic…yearning for some vague autumn memory of her past. Perhaps it was from a time when she wasn’t Sylvia Doe, but Sylvia somebody else.” (77)

As you look back at the clues to the time-travel twist in the novel, notice that the author puts the more subtle clues earlier in the book and the more obvious ones right before the reveal of the twist. The clues also get more frequent as we get closer to the reveal.

**If you’d like to try out the technique of foreshadowing**, come up with the plot for a short story that involves a “twist,” secret, or “reveal.” Think of some clues for your twist, and rank them by how obvious they are. Then, write your story, putting the less obvious clues more sparingly in the beginning, building up to more clues (and more obvious clues) as you get closer to the reveal of the twist.

**Language Arts/Creative Writing Activity:**

**Writing a Story with Characters from Different Time Periods**

Since the plot of *Sylvia Doe and the 100-Year Flood* has characters from different time periods, constructing its plot in a way to avoid “plot holes” becomes more difficult. A “plot hole” occurs when there is an inconsistency in the plot. This activity asks you to write a short story with characters from different time periods while avoiding plot holes.

In *Sylvia Doe,* there are many inconsistencies that could happen because the characters come from different time periods. For example, the author had to figure out that Jorna would see the trees in Sylvia’s time at Highground as smaller, rather than larger, than the trees in his own time, because loggers had cut down the trees and they had had to re-grow. It would seem logical for Jorna to notice that the trees were bigger, but that would be *inconsistent* with the history of the place in which the story is set.

Authors have different ways of crafting their stories to avoid plot holes. Here is a process for you to try, as you write a story with characters from different time periods:

1. **Start with character profiles.** Make a list of traits for each of your characters, based on the time period they come from. What would they know and not know about? What kinds of tools would they use? What skills would they have and not have? What would their attitudes be about the other characters in the story? You may have to do a little research to answer these questions.
2. **Map your plot as “Somebody Wanted But So.”** Consult page 4 in this packet for a description of this technique. Plan your story through your characters, consulting your trait lists. What does a character (or characters) want that begins the plot? Is what they want consistent with their time period? What is the “but” that challenges that person’s getting what they want? Now, given what your different characters know and don’t know, and can do and not do, how will they try to overcome that challenge? Be sure the methods your characters choose are consistent with their time periods.

**Language Arts/Language: Cherokee and Other Writing Systems**

When you learned to read in English or any other language that uses an alphabet, you learned the different sounds that each letter could make. The word “alphabet” describes a writing system in which each individual written symbol stands for a specific vowel or consonant sound.

Not all writing systems work this way! Cherokee is a good example. Instead of an alphabet, the Cherokee writing system is called a syllabary. Instead of each symbol standing for a single consonant or vowel, each symbol stands for a whole syllable—a combination of consonants and vowels.

For example, the Cherokee name that we write in our alphabet as “Waya” is written in Cherokee as Ꮹ Ꮿ. It takes us four separate symbols—W-a-y-a—to write what the Cherokee syllabary can write in only two symbols—Ꮹ - Ꮿ. The Ꮹ stands for “wah” and the Ꮿ for “nah.”

Have you ever thought about where writing systems come from? Typically, they are borrowed from other languages and/or developed over time, but in the case of the Cherokee writing system, we know an actual person that invented it. You can read the story of Sequoyah’s syllabary [here](https://www.britannica.com/biography/Sequoyah), and learn more about the history of the Cherokee language from [this article](https://www.ncpedia.org/cherokee/language) or [this video](https://youtu.be/DgD5STNvKSw?si=trzOdxtVnrFmBCK9), in which you can hear Cherokee spoken.

If you’re interested in other writing systems—there are some in which a single symbol stands for a whole word!—check out the resources and examples [here](https://www.omniglot.com/writing/types.htm). See the next page to experiment with what it would be like to write in a language that uses a syllabary writing system.

**Activity:** **How would your name be written in Cherokee?**

Use [this link](https://language.cherokee.org/media/2qkmorwq/syllabary_handout.pdf) for a chart of the Cherokee syllabary with the pronunciation of each symbol. To figure out your name, you’ll need to **first break the sounds of your name into syllables**. Think about how many “beats” it takes to say your name out loud, and that will help you figure out what the syllables are. For example, Jorna’s first name is two syllables: Jor-na. You can make the “Jor” sound all at once with your mouth and to make the “na” sound, you have to change the position of your mouth.

**Once your name is broken into syllables,** look at the chart to find the closest match to the sound combination in each syllable. Not every language has every sound, so you might need to choose some sounds that are close. The bottom of the chart describes the vowel and consonant sounds represented in the chart. Here’s an example of the process with Jorna’s name:

Jor = no “J” sound in Cherokee, closest is maybe “tso”

The “tso” sound on the chart is written as Ꮶ

Na = is easier and there are some options: Ꮏ (hna) or Ꮐ (nah)

So, “Jorna” might be written as either ᏦᎿ or ᏦᏀ

|  |  |
| --- | --- |
| Syllables in your name: | Cherokee symbols that might match each syllable: |
| Ways to write your name in the Cherokee syllabary: | |

**Science: Using and Making Field Guides**

“Glancing over at Jorna to make sure he was still asleep, she quietly pulled out *The Field Guide to Rocks and Gemstones*….she scanned through the pages of the book but didn’t see any obvious matches or get any ideas about what this blue stone might be. So she turned to the identification key at the back….When she tried to scratch the blue stone with her fingernail like the book suggested, it didn’t make a mark at all, which meant the mystery object had a hardness of at least two point five. So she followed the chart to the next step. Gripping the blue stone firmly, she tried to mark a nearby hunk of granite with it. The blue stone cut right into it, scoring the granite deeper than a steel knife…. According to the chart, the blue stone was a nine out of ten on the Mohs hardness scale, which meant it was one of the hardest objects on earth…” (89-90)

This passage from *Sylvia Doe and the 100-Year Flood* describes how she uses a **field guide** to identify an unknown stone. Field guides provide a number of ways to identify elements in nature, such as birds, minerals, insects, mammals, and plants.

**Try using a field guide**. A good place to start is the Audubon Society’s [online field guide to North American birds](https://www.audubon.org/bird-guide). Here is some advice to get you started:

1. First you’ll need to notice a bird in your natural environment whose name you don’t know.
2. Next, go to the online field guide. Notice all the different ways the field guide gives you to identify the bird. (This is what a good field guide will do.)
3. Now try some of these ways to identify your mystery bird:
   1. Choose the “Region” option and select the region where you live. This narrows down the options to birds that are only seen in your area.
   2. Click the icon filter Vector Icons free download in SVG, PNG Format that displays the filters.
   3. Try using all of the filters—for size, color, habitat, and behavior—and see what results you get.

For example, if you choose the Mid-Atlantic region, “sparrow” size, and the color purple, you only get two results. They look pretty different from each other, so you might be able to identify your mystery bird right away. But if you can’t, select “coasts and shorelines” for habitat as well. Then you only get one result: the purple martin.

**Try Making a Sample of Your Own Field Guide**

When “S.R. Waya” wrote the field guides in the novel, they included a number of different ways to identify things in nature. Below are some categories of field guide. In each, some examples of things are listed that appear in *Sylvia Doe and the 100-Year Flood*.

**Instructions:**

1. Pick one of the categories below and choose two of the things in that category. (For example, if you choose gemstones, you might pick rubies and emeralds.)
2. Use some credible online sources to learn information about the two things you pick.
3. Now, think about how someone could use that information to distinguish between the two things you chose. What are all the different “filters” you might want to give someone using your field guide to tell one of those things from the other?
4. Design a field guide page for each of the two things you chose. Be sure to include visual and other information that capture all of your “filters.”
5. Now test it out. Show a classmate an example of one of the things you chose, without giving them the name for it. See if they can figure out which thing it is using your two field guide pages.

|  |  |  |
| --- | --- | --- |
| **Birds**  Sandhill Crane (p 12)  Great Horned Owl (p 16)  Cooper’s Hawk (Ch 4)  Mallard (Ch 8)  Harrier (Ch 8)  Peregrine Falcon (Ch 11)  Crow (Ch 11)  Bald Eagle (Ch 16)  Pileated Woodpecker (p 116)  Eastern towhee (Ch 17)  Yellow-shafted flicker (Ch 17)  Yellow-bellied sapsucker (Ch 17)  Carolina Parakeet (p 134)  Magnolia warbler (Ch 27)  Green warbler (Ch 27)  Blackburnian warbler (Ch 27)  Scarlet tanager (Ch 27) | **Trees and Shrubs**  Cedar (Ch 5)  Willow (Ch 8)  American chestnut (Ch 27)  Eastern hemlock (Ch 27)  Rhododendron (Ch 34)  Mountain laurel (Ch 34)  Hemlock (Ch 36) | **Gemstones**  Sapphire (Ch 13)  Emerald (Ch 17)  Amethyst (Ch 17)  Rose quartz (Ch 17)  Ruby (Ch 17) |

**Science: Bird Identification**

**Tools to Identify Bird Species**

If you tried the activity “Using and Making Field Guides,” you already know about one tool for identifying unfamiliar birds—a **field guide**. You can find these as [printed books](https://www.audubon.org/marketplace/field-guides), [online guides](https://www.audubon.org/bird-guide), or [apps](https://www.audubon.org/app).

Most field guides rely heavily on **visual** information about color, shape, and size. They might try to explain in words what a particular bird sounds like, but **sound-based tools** can also help you identify birds—even when you can’t see them! The Cornell University Ornithology Lab has an app called [Merlin](https://merlin.allaboutbirds.org/) that, in addition to giving you visual ways to identify birds, uses technology to identify the sounds of birds near you.

**Keeping a Life List**

Many people who like to identify birds keep a life list of all the different birds they’ve seen over the course of their lives. Sylvia Doe does this by noting where and when she saw each species in her field guide, but there are other ways to keep life lists. Some people purchase a [field diary](https://www.avinet.com/products/the-sibley-birders-life-list-and-field-diary-by-david-allen-sibley?srsltid=AfmBOopdqMdvdsWkBieJfxl2tJ-eIiCkkBY1SjRtYwxiAu3MJYBhnznh)  in which to keep their life list. Others might use the options in different bird identification apps to keep track of which birds they’ve seen, where, and when. A simple notebook works too—it can be fun to design your own.

**Doing a Bird Count**

Every year, people volunteer to participate in the [Christmas Bird Count](https://www.audubon.org/answers-your-top-questions-about-christmas-bird-count) of the [National Audubon Society](https://www.audubon.org). On a certain day, all the volunteers in a particular area count all the birds they identify in those 24 hours—which species and how many of each. All this information is compiled to keep track of the health of bird populations.

If you’d like to try a bird count on your own, consider participating in the [Great Backyard Bird Count](https://www.audubon.org/community-science/great-backyard-bird-count). For this event, held in February, you report only on the birds in your (or your school’s) backyard—in a time frame as short as 15 minutes—and report your findings [online](https://www.birdcount.org/). This [short video](https://youtu.be/6RdXDGcqHTg?si=uNoHNWQyv9fwBba6) will tell you more about the event.

**Science: Experimenting with Levers**

Science is Sylvia’s favorite subject, and she particularly enjoys Ms. Romerez’s Physics class. One reason is how practical physics can be in helping people figure out how to make difficult tasks easier:

“[A]s the ideas became clearer in Sylvia’s mind, her thoughts began to wander and she started sketching all the different ways she could use levers in the barn—pry bars, hay bale lifters, all sorts of things.” (115)

Once Sylvia understands how a lever gives a **mechanical advantage**—in this case, allows someone to lift or move something heavier than they can alone—she imagines all kinds of uses for this tool.

**Try Experimenting with Levers**

1. Watch [this video](https://youtu.be/YlYEi0PgG1g?si=kWfRd_U1ow-0d2u3) to get a basic understanding of levers and how they work. As you watch, take notes on the factors that affect how much a lever can lift.
2. Try the [experiments described here](https://serpmedia.org/scigen/e2.2.html) to play around with the concepts that determine how levers work.
3. Think of two different real-life situations in which you could use a type of lever to give yourself enough mechanical advantage to complete a difficult task. Like Sylvia, sketch these uses of a lever below.

**Investigate Causes and Solutions for Species Extinction**

A major theme of *Sylvia Doe and the 100-Year Flood* is the extinction or reduction of certain species. Sylvia and Mason believe climate change is one cause of the storm that strikes at the beginning of the book and affects the sandhill cranes. Climate change can be one cause of species extinction if the climate in a species’ habitat changes faster than that species can adapt to it.

The Audubon Society sees birds as a key species in [measuring the effects of climate change](https://www.audubon.org/our-work/why-birds). The society also has ideas about [possible solutions](https://www.audubon.org/our-work/climate) to climate change as a way of protecting species.

There can be other causes of species extinction, as well. [This article](https://abcbirds.org/blog/extinct-birds/) describes six extinct bird species and the reasons for their extinction, which include unsustainable hunting by humans; habitat destruction through logging, mining, or other means; and non-native species introduced by humans that either prey on certain birds or compete with them for food.

When many species become extinct over a short period of time, it’s called a “mass extinction.” Many scientists believe we are currently in [the sixth mass extinction](https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it) to have taken place, due to climate change and the other causes described here.

Read the articles at the different links above and note your answers to these questions:

1. What questions do you have about the causes of species extinction?
2. What other issues that are not mentioned in these articles might contribute to species extinction?
3. What is your opinion of the possible solutions to species extinction described in the articles linked above?
4. What other possible solutions can you think of to species extinction?
5. Why should we care about species extinction?

**Science Research Projects Inspired by *Sylvia Doe***

**Physics: Explore Ways to Think about Time Travel**

First, see [what scientists at NASA have to say](https://spaceplace.nasa.gov/time-travel/en/) about the possibility of time travel. Then, for a deep dive, consider researching some of the different physicists Ms. Romerez tells Sylvia about on pages 258-259 of *Sylvia Doe and the 100-Year Flood*.

One of these is Stephen Hawking. Watch [this video](https://pbsnc.pbslearningmedia.org/resource/hawking_genius_ep01_full/can-we-time-travel-full-episode-genius-by-stephen-hawking/#.WUg4F_n4-Uk) to see and hear Hawking explain the principles that would be involved in time travel. Write down the questions and ideas the video suggests to you for further research.

**Geology: Learn about Geologic Time in the Place Where You Live**

On page 172, Sylvia tells Jorna that the river in the story is over 300 million years old, and that the surrounding Blue Ridge Mountains are “one of the oldest mountain ranges on the planet.” Not every geographic feature is as old as Sylvia’s mountains. For example, geologists consider the current Rocky Mountains to be only 40-70 million years old. You can read more about “young” and “old” mountains [here](https://www.amnh.org/explore/ology/earth/power-of-plate-tectonics/mountains).

How old are the geographic features where you live? What caused them to form? Read this [geologic history of North America](https://www.livescience.com/31910-north-america-geology-through-time.html), then follow up on these questions for further research.

**Social Studies: The History of the Cherokee**

When Sylvia meets the Cherokee character Adawosga in chapter 22, she guesses from his clothing and his language that he comes from the past. There is another reason Adawosga might come from the past: Most of the Cherokee who lived in the areas around Western North Carolina were forced to move to Oklahoma as part of the Indian Removal Act of 1860. About 16,000 Cherokee went to Oklahoma, in a forced migration called “[The Trail of Tears](https://www.nps.gov/trte/learn/historyculture/index.htm).” Only 800-1,000 Cherokee remained in Western North Carolina. Today, the descendants of these groups are referred to as the Eastern Band of Cherokee in North Carolina and the Cherokee Nation in Oklahoma.

**Activity: Examining Primary Documents**

The Library of Congress maintains a digital collection of some of the original documents involved in the Indian Removal Act. Such documents are referred to by historians as “primary sources,” because they are the first, or original sources of information about an event. After you read the [introduction](https://guides.loc.gov/indian-removal-act/introduction) to the collection, explore some of the primary documents in the [digital collections](https://guides.loc.gov/indian-removal-act/digital-collections).

You might find the “historic newspapers” and “printed ephemera” sections as the most interesting places to start, before you explore some of the political and legal documents in the collection. As you explore the documents, answer these questions:

1. What is different about learning about this event from these primary sources instead of reading a description of the Indian Removal Act in a textbook?
2. When you read these primary documents, what questions do they raise for you about the Indian Removal Act?

**Social Studies: 100-Year Floods and Public Memory**

“‘I think we might be in the middle of what the old-timers would call a 100-year flood, the kind that’s so bad it only happens once in a century. And when a 100-year flood comes, a lot of strange things get churned up.’” (74)

100-year floods don’t actually happen once every hundred years—but the term is still used today to describe a flood that’s the worst people in a particular time can remember ever happening. [Officially](https://www.usgs.gov/special-topics/water-science-school/science/100-year-flood), it means a flood that only has a 1% chance of occurring in any given year.

Floods—and natural disasters in general—are events that people feel compelled to commemorate, remember, and communicate to future generations. There are [national flood memorials](https://www.nps.gov/jofl/index.htm), local [flood museums](https://www.jaha.org/attractions/johnstown-flood-museum/visitor-information/online-tour/), collections of [first-hand accounts of floods](https://digital.library.sc.edu/collections/the-2015-south-carolina-flood-oral-history-collection/), and [documentaries about floods](https://www.pbs.org/video/east-kentucky-flood-ath9v0/).

**Activity: Doing Public History**

“[Public history](https://ncph.org/)” is the practice of creating things like the memorials, museums, collections, and documentaries linked above to preserve first-hand memories and information about significant events from the people who experienced them.

1. Explore the “public history” links above commemorating floods. Take notes on the kinds of things communities collect to create these forms of public history. What kinds of people do they talk to? What kinds of objects do they collect? What kinds of documents? What kinds of images? What facts and information?
2. Now, identify a significant event in your local community—something that affected most or all of the people in your town or city. If you were going to create a museum, memorial, collection, or documentary, what would you want to collect about this event?
3. Write up a plan for how you would commemorate this event and communicate it to future generations, and explain why you made the choices you did.

**Social Studies: Researching the History of Your Place**

“[Sylvia] wondered about all the other people who had lived here in the many layers of time. She wondered how the people from the past affected her. Was she an entirely new thing walking upon the earth? Or was she—whether she knew it or not—a product of all that had come before her? Her parents, her people, whoever they were—were their layers in her now, even as disconnected as she was from them?” (187)

Have you ever thought about the people who lived in the past where you live now? Not just “your people,” or family, but everyone “who had lived here in the many layers of time”?

**Activity: Looking Backward, Looking Forward**

1. Investigate your [state](https://en.wikipedia.org/wiki/List_of_U.S._state_historical_societies_and_museums) or local historical society to see what resources they have to research the people who lived in your town, city, neighborhood, or region before you did.
2. Use the resources you find to understand how people lived in your place at a particular time before you were born. Depending on what information is available to you, you might choose a time 20, 50, 100 years ago—or more. How did people in that time go about their daily lives? What kinds of opportunities were open to them? What events affected how they lived?
3. Once you’ve learned enough details to be able to imagine the lives of people in that time, look forward to the present day. Do you see any echoes or consequences in your place today because of how people lived and what they did before? Are there ways in which you feel that you or your neighbors might be “a product of all that had come before?”

**Reading Quiz #1**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 1 – 6**

1. What kind of place is Highground Home for Children?
2. What knocked the sandhill cranes out of the sky?
3. Why is Sylvia’s last name *Doe*?
4. Where was Sylvia before she was at Highground?
5. Who is Mason?
6. Who is Miss Solomon?
7. Why does Mason tell Sylvia go back to the barn when they go looking for the horses in the flood?
8. Why is Sylvia surprised to see a jaguar?
9. Is Sylvia good at things the first time she tries them?
10. How does Sylvia try to revive the drowned boy?

**Reading Quiz #2**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 7 – 11**

1. Why is Sylvia worried about Kitty Hawk once they rescue the boy from the river?
2. Why does Sylvia think the boy doesn’t answer her at first?
3. What does Sylvia give the boy to stay warm?
4. Why are the forests around Sylvia not as healthy as they used to be?
5. What has trapped the horses in the flooded pasture?
6. What are the dogs Sylvia sees swimming in the river and why is she surprised to see them?
7. How does Sylvia get the gate open?
8. Where was Mason while Sylvia was rescuing the horses?
9. What is a 100-year flood?
10. Where does Sylvia go after Mason tells her to sleep in the barn?

**Reading Quiz #3**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 12 – 16**

1. Where did Jorna’s last name come from?
2. Where is the only place that Sylvia has ever felt at home?
3. What color is the river glowing?
4. What is the blue crystal that Sylvia finds?
5. What kind of book does Sylvia use to identify the crystal?
6. Why is Sylvia surprised that Jorna doesn’t have a phone?
7. What is Bainbridge?
8. What reason does Sylvia give Miss Solomon for running away from her foster home with the Glowermans?
9. Who is Mrs. Bingman?
10. Who is Madison?

**Reading Quiz #4**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 17 – 21**

1. What does Jorna say he was going to do for food if Sylvia hadn’t brought him any?
2. What kind of machine do Sylvia and Jorna find washed up by the flood?
3. Why is Sylvia surprised to find a Carolina parakeet in the river?
4. Why does Jorna know so much about gemstones?
5. Why is Jorna on the run?
6. What do Sylvia and Jorna wake up to after they sleep in the barn?
7. What has happened to Madison in the flood?
8. Why doesn’t Jorna understand what helicopters and planes and movies are?
9. Why are the trees now smaller than they were in Jorna’s time?
10. Where do Sylvia and Jorna go when they leave Highground?

**Reading Quiz #5**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 22 – 27**

1. Who helps rescue Valiant and Jorna?
2. Why is Adawosga making a cairn?
3. What does Adawosga use Sylvia’s sapphire to do?
4. What do Sylvia and Jorna find when they get to Sapphire Cove?
5. How do Sylvia and Jorna figure out how to get out of the whirlpool in Sapphire Cove?
6. What is engraved on Jorna’s bracelet?
7. What is equine therapy?
8. What are the brown creatures on the rocks by the Chutes?
9. What kinds of flying creatures do Sylvia and Jorna see when they go back in time through the Chutes?
10. How do Sylvia and Jorna figure out that they are back in Jorna’s time?

**Reading Quiz #6**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 28 – 33**

1. What has caused new holes to open in the Chutes?
2. Why does Sylvia block the tunnel leading to Jorna’s time?
3. What does Sylvia lose when she goes back through the Chutes to her own time at Highground?
4. Where did the cuts on Sylvia’s arms come from?
5. What does Sylvia realize about herself when she sees the cuts on her arms?
6. What does Sylvia figure out about Ms. Romerez?
7. Why can’t Miss Solomon stop Sylvia from being sent to Bainbridge?
8. How does Mason want to stop Sylvia’s being sent to Bainbridge?
9. How does Sylvia say goodbye to Mason when she leaves Highground before she can be taken to Bainbridge?
10. What is the “most important” object Sylvia takes with her when she runs away from Highground?

**Reading Quiz #7**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Chapters 34 – Epilogue**

1. How does Sylvia get past the waterfall to the Chutes?
2. What is Sylvia’s mantra as she tries to get back to her time?
3. How does Sylvia move the boulder blocking the tunnel that will take her to Jorna’s time?
4. Where does Sylvia go when she gets back to Sapphire Cove?
5. What is Sylvia’s real last name?
6. What language does Sylvia’s real last name come from?
7. What does Sylvia’s last name mean in that language?
8. Who were the horses at Highground named after?
9. Who comes riding to Sylvia’s family’s home after she is reunited with her family?
10. Who wrote Sylvia’s field guides?

**Quiz Keys**

**Quiz #1 Chapters 1 – 6**

1. It’s a sort of orphanage/school where kids live until foster homes can be found for them or they get adopted.
2. A big storm.
3. *Doe* is the last name given to people when no one knows their real last name.
4. No one knows where Sylvia was before she got to Highground (and Sylvia can’t remember).
5. Mason is Sylvia’s friend and the caretaker of the horses at Highground.
6. Miss Solomon is Sylvia’s social worker.
7. Mason wants Sylvia to go back to the barn to call the horses once he finds them and rescues them.
8. Jaguars don’t live in the Appalachian mountains where Sylvia is.
9. No, she is not.
10. She tries to give him CPR.

**Quiz Keys**

**Quiz #2 Chapters 7 – 11**

1. Kitty hawk is exhausted and lies down and closes her eyes.
2. She thinks he might not understand English or that he has hit his head.
3. Her barn jacket.
4. From wildfires.
5. A branch is blocking the gate.
6. They are wolves, which don’t live in the Appalachians anymore during Sylvia’s time.
7. She attaches her lasso to the branch blocking the gate and ties the other end to a piece of the barn floating down the river, and uses the power of the river to pull the branch loose.
8. He had been swept down the river in the flood.
9. A flood so big people believe it only happens once in a century.
10. She goes back to find the boy she pulled out of the river.

**Quiz Keys**

**Quiz #3 Chapters 12 – 16**

1. His grandfather chose the last name Grant after the Union General Grant in the Civil War.
2. Highground.
3. Blue.
4. A sapphire.
5. A field guide.
6. Because most kids their age either have a phone or would be worried if they lost their phone.
7. Bainbridge is where they send kids in the foster care system who keep running away. It’s sort of like a prison.
8. She didn’t feel like she belonged there.
9. The head of Highground.
10. Sylvia’s new roommate.

**Quiz #4 Chapters 17 – 21**

1. Snare/catch a rabbit.
2. A motorcycle.
3. Because Carolina parakeets are extinct.
4. His family owns a gem mine.
5. He has been falsely accused of murder.
6. Highground is flooding.
7. She is missing in the flood (and may be buried under a collapsed building).
8. Because he is from the past.
9. Because the trees in Jorna’s time were all cut down for lumber and have had to re-grow since then.
10. They go upriver to try to figure out how to get Jorna home.

**Quiz Keys**

**Quiz #5 Chapters 22 – 27**

1. A Cherokee boy/Adawosga.
2. He is making the cairn as a tombstone or memorial to his girlfriend who has died.
3. He uses it to write his girlfriend’s name on a rock/the cairn.
4. Sapphire Cove has been destroyed in the flood/is flooded.
5. They follow the rats.
6. Go and make something.
7. Using horses to help people with mental illness/difficult emotions.
8. Trilobites.
9. Pterodactyls.
10. Because the trees are much bigger.

**Quiz #6 Chapters 28 – 33**

1. The flood/the storm.
2. To protect her world from the flooding river.
3. Her field guides.
4. From the rocks when she went through the Chutes.
5. That she is from another time.
6. That Ms. Romerez is also from another time (and knows that Sylvia is from another time).
7. Because her bosses have taken Sylvia’s case away from her.
8. He wants to adopt Sylvia.
9. She writes him a letter.
10. A crowbar.

**Quiz Keys**

**Quiz #7 Chapters 34 – Epilogue**

1. She climbs up the rocks/the cliffs.
2. “Failure is my path to where I’m going.”
3. With the crowbar (and her sapphire hammer).
4. She goes to find her family.
5. Waya.
6. Cherokee.
7. Wolf.
8. Sylvia’s brothers and sisters.
9. Jorna.
10. Sylvia did.