

Teaching

STEM trailblazer BIOS

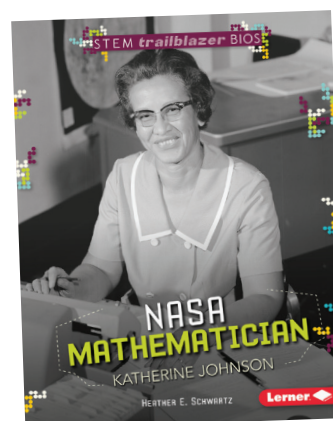
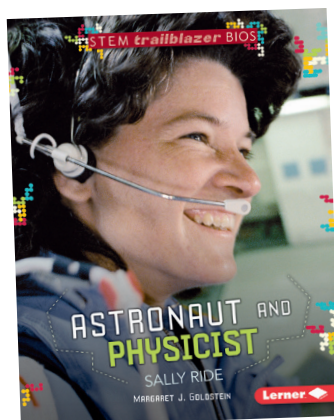
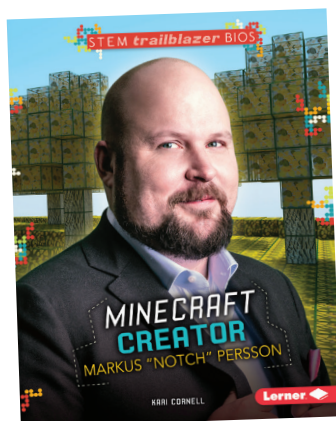
STEM Trailblazer Bios

Interest Level: Grades 2–5

Reading Level: Grade 4

Titles in this series:

Go to www.lernerbooks.com for a complete list of books in the *STEM Trailblazer Bios* series.



Standards

National Curriculum Standards for Social Studies

- Time, Continuity, and Change
- Individuals, Groups, Institutions
- Science, Technology, and Society

Common Core Reading (Informational Text)

- Key Ideas and Details
- Crafts and Structure
- Integration of Knowledge and Ideas

Common Core Writing

- Text Types and Purposes

Multiple Intelligences Utilized

- Intrapersonal, interpersonal, verbal-linguistic

Lesson 1

Firsthand and Secondhand

Purpose

Students will be able to identify the difference between firsthand and secondhand accounts.

Materials

- STEM Trailblazer Bios
- Firsthand, Secondhand p. 6
- Firsthand Practice p. 7
- whiteboard
- markers

Prepare

- Tell a personal story about a recent event in your life.
- Explain that you just gave a firsthand account of the event. Write *firsthand* on the board.
- Then ask a student to retell the story you just told.
- Explain that the student told a secondhand account of the event. Write *secondhand* on the board.
- Using these two examples, work with students to come up with definitions for each word.

Pretest

- What is a firsthand account?
- How is it different from a secondhand account?
- How can I tell the difference between a firsthand account and a secondhand account?
- Write the answers on the board.

Read

- Read aloud a STEM Trailblazer Bios book.

Model

- Ask: Is this biography a firsthand account or a secondhand account of this person's life? (*Secondhand*)
- Ask: How can you tell?
- On the board, write clues or strategies for identifying accounts as firsthand or secondhand.

Guided Practice

- As a class, complete Firsthand, Secondhand p. 6.
- Choose student volunteers to supply examples of firsthand or secondhand accounts.

Independent Practice

- Pair students and distribute Firsthand Practice p. 7.

Discuss

- Choose student volunteers to share firsthand or secondhand accounts.

Evaluate

- Evaluate students' responses on Firsthand Practice p. 7.

Lesson 2

Turning Point

Purpose

Students will write an opinion piece supported by facts and reasoning that identifies the turning point in a person's life.

Materials

- STEM Trailblazer Bios
- Opinion Outline p. 8
- whiteboard
- markers
- writing paper
- pencils

Prepare

- Tell a well-known fairy tale such as Cinderella or Red Riding Hood.
- On the board, create a timeline of major events in the story.
- What happened at the beginning of the story?
- What happened at the end of the story?
- One at a time, cover up an event on the timeline and ask how the story would be different if that event had not happened. If Cinderella has not lost her glass slipper, how would the story be different? What wouldn't have happened?
- Explain that some events are called turning points, or points that changes the story in an important way. Some stories have more than one turning point!

Pretest

- What is a turning point?
- What is an opinion?
- How can you persuade someone to agree with your opinion?
- How have people persuaded you in the past?

Read

- Read aloud a STEM Trailblazer Bio.

Model

- Ask students to help you identify the major events in the book.
- Create a timeline on the board using the identified events.
- Identify a turning point. Then share three reasons why you feel that event is a turning point. If you find it helpful, cover up the point on the timeline and speculate about how the subject's life would have been different without that event.

Practice

- Explain that stories can have more than one turning point. Whether an event is a turning point is often a matter of opinion.
- Ask students to identify aloud additional or alternate turning points and to support their opinions with reasoning.

Write

- Distribute and complete Opinion Outline p. 8.
- After students finish their outlines, ask them to use their outlines to write three paragraphs that support their opinions.

Evaluate

- Evaluate student writing for understanding of turning points and opinion writing.

Lesson 3

Character Traits

Purpose

Students will be able to identify character traits.

Materials

- STEM Trailblazer Bios

Prepare

- Choose a person that everyone in the class knows, perhaps the principal or the gym teacher.
- Lead your class in describing what that person is like.
- Explain that every person has character traits. Character traits describe the ways a person usually acts or feels.

Pretest

- What is a character trait?
- What is an example of a character trait?
- Describe the personality of someone in your family. What is that family member like? How does that person act?

Read

- Read aloud a STEM Trailblazer Bio.

Model

- Out loud, identify three or more character traits of the biography subject. Share examples from the biography that support your ideas.
- Consider and reject several physical traits as well. Share your reasoning aloud.

Practice

- Read another STEM Trailblazer Bio aloud.
- Call on students to identify two or three personality traits of the subject.
- Allow students to brainstorm additional personality traits on their own. After students have had a chance to work alone, ask students to pair with a partner

to share their ideas. Then have students share their ideas with the whole class.

Discuss

- What character traits did the first biography subject have? What traits did we see in the second?
- What traits did both of these people have?
- What traits helped these people become successful? How did these traits help?
- What character traits do you have?
- What character traits do you admire in your friends or family?

Lesson 4

Writing Biographies

Purpose

Students will write biographies of people they know.

Materials

- STEM Trailblazer Bios
- writing paper
- coloring utensils
- pencils

Pretest

- Who is an important person in your life?
- Why do people write biographies?
- What sort of information can you find in a biography?
- How does someone decide what to include in a biography?
- Do biographies include every single moment of someone's life? Every time that person drinks water, goes to the bathroom, and takes a walk? Why not?

Read

- Read aloud a STEM Trailblazer Bio.
- What sort of information does this biography include?
- Record major topics discussed in the book. For example, your list may include *birth*, *school*, *family*, *first job*, and *inventions*.

Model

- Explain that biographies usually cover the main events of a person's life.
- Go through the list of topics identified after the book was read aloud. Use the topics to verbally share your own biography. Using the examples from the previous section, you would share information about where you were born, what your school years were like, who your family members are, and so on.

Write

- Explain to students that they will be writing biographies about people they know.
- Give students time to think and brainstorm. Biography subjects might include classmates, friends, family members, or teachers.
- Distribute writing paper. Then, using the list of topics as a guide, brainstorm questions that students might ask their subjects. (For example: When were you born? Where did you grow up?) Students

should record questions they plan to use, leaving a few blank lines to record the answers as well. Note that their subjects will be firsthand sources of information.

- Next, brainstorm possible secondhand sources, such as friends or family members of the subjects who may be able to tell stories or describe their personalities. Aid students in writing these names and brainstorming possible questions.

Practice

- Allow students time to interview. You may restrict this to in-class work by limiting biography subjects to teachers or fellow students. Or you may allow students to conduct interviews at home.
- When students have finished their interviews, they should use their notes to write a brief biography of their subject.

Evaluate

- Read and evaluate students' biographies.

Name _____

Date _____

Firsthand, Secondhand

Decide if each of these stories is a firsthand or secondhand story. Explain your thinking.

This morning, I woke up, brushed my teeth, and got dressed. I put on jeans and my favorite sweater. My older brother made breakfast for me. It was delicious! After I ate breakfast, I got on the bus and went to school.

Is this a firsthand or secondhand story? _____

How do you know? _____

My sister had a terrible weekend. She went to her best friend's birthday party. At first, the party seemed like fun. There was cake to eat and lots of fun games to play. But the party was outside, and she got bitten by a lot of mosquitoes. Now she itches everywhere! She spent the whole weekend trying not to scratch her bites.

Is this a firsthand or secondhand story? _____

How do you know? _____

First grade was my favorite year of school. My teacher was really nice and really smart. She had a great library in her classroom, and I got to spend a lot of time reading books. We also played a lot of fun math games. I got to sit next to my friend Sophia, and we always played together during recess.

Is this a firsthand or secondhand story? _____

How do you know? _____

Now, write down a firsthand story about your morning.

Name _____

Date _____

Firsthand Practice

Below is a list of questions. First, write a firsthand story for the question. Then talk to your partner to get a secondhand story.

Example:

What did you do yesterday?

Firsthand: I went to the zoo with my dad. We saw the elephants and the tigers. I wanted to see the penguins, but they weren't out while we were there. They were visiting the zoo's doctor. I visited the toy shop before we left. I got a stuffed penguin instead.

Secondhand: Paul stayed at home. He watched TV with his little brother. Then he helped his parents make dinner. He set the table and made the salad. After dinner, he played a board game with his family.

What is one fun thing you did last summer?

Firsthand: _____

Secondhand: _____

What is the best field trip you've ever been on? What happened?

Firsthand: _____

Secondhand: _____

What was the best day of your life? What happened?

Firsthand: _____

Secondhand: _____

Name _____

Date _____

Opinion Outline

Write down the event that you think is a turning point. Then write down three reasons that you think this event was a turning point.

Turning point: _____

Reason 1: _____

Reason 2: _____

Reason 3: _____
