UF Center for Latin American Studies
UNIVERSITY of FLORIDA

GLOBAL EDUCATION LESSON PLAN

Student Name: Megan Fryman

Lesson Title: Experiencing Perspectives: Reading and Reacting to Nothing Stopped Sophie

Curriculum Area(s): ELA

Grade Level: 2nd

Time Frame: Two Reading Blocks

Book Information: Nothing Stopped Sophie, written by Cheryl Bardoe

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Content Standards:

LAFS.2.SL.1.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

- Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- Build on others' talk in conversations by linking their comments to the remarks of others.
- Ask for clarification and further explanation as needed about the topics and texts under discussion.

LAFS.2.SL.1.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

"I Can" Performance Outcomes for Students Aged 4-7:

Grade 2: Recognize Perspectives

I can share my personal perspective on an issue. This means I can explain what I think about the issue. I can also share one reason for my opinion.

Grade 2: Communicate Ideas

I can work with a partner or in a group. This means I can agree and disagree respectfully, I can add on to what my peers say, I can ask my peers to explain their thinking, and I can work with others to achieve a goal.

Brief overview of the lesson:

This lesson will begin with the reading of *Nothing Stopped Sophie*. The book makes several comparisons between math and poetry, and at the end of the book there is a discussion about whether Sophie was performing math or science.

After reading the book I will point out the comparisons between math and poetry and ask the students briefly what they think that might mean and if they agree with it. Then I will ask if they think Sophie's work was similar to science and what comparisons they can think of between the two off the top of their head. If they can't come up with any I will start them off by saying we used numbers to measure things in class, and we learned about vibrations and waves in science.

I will then ask students to stand up. I will designate one side of the room to be the side that thinks math is more like poetry, and the other to be the side that thinks math is more like science. I will then have the students go to the side they most agree with. I will then split the students into smaller groups on each side based on who will work well together.

Once the students are seated in their groups and I have recorded whether they chose poetry or science, I will explain that we are doing a group presentation. Students will have the rest of the reading block to work as a team to decide why math is like poetry, or why math is like science. They should have evidence from the book, as well as evidence from at least two other sources. They should also be able to explain their opinions and why they felt the way they did. I will emphasize that this is *not* a debate. Each side is not trying to prove the other wrong, you are only trying to explain your perspective to share it with the class.

The next reading block will be dedicated to each group sharing their findings and their perspective with the class. The group who is presenting will have to present their evidence and opinions clearly, while the other groups listen respectfully and ask clarifying questions if needed.

List of materials:

- A few copies of Nothing Stopped Sophie
- Computers
- Age appropriate books on math science and poetry
- Pencils
- Paper

Brief summary of selected book (Americas Award Winning Text):

Nothing Stopped Sophie follows the life of Sophie Germain as she discovers her love of Mathematics and learns that she has a gift. The book takes us through her childhood where she was discouraged from studying math at all, her young life where she wished to attend college but was unable to because she was a woman, her discovery as a female mathematician and acceptance into the math community, and finally her success at solving the impossible problem of how vibrations affect objects, her grand prize for her discovery and her impact on the world.

Essential Questions:

- What was Sophie's greatest achievement?
- Why did people try to stop Sophie from studying math?
- Why do you think the author might have compared math to poetry?
- How could math be similar to Science?
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Assessment Evidence:

I will have a checklist for the group project that I will fill out over the course of both days. I will check to make sure each person contributes their own ideas to the project, that the group has evidence from the book and also two other sources (either on the internet or from a book), that they share their own perspectives with the class and that their presentation focused on the perspective they chose rather than disproving the other perspectives.

I will also be collecting an exit slip where students will write a paragraph stating if their opinion changed or not and how it did or why it did not.

Procedures:

Day 1:

1. Ask students if they have ever heard of Sophie Germain. They probably will not have, so explain that she was the first female mathematician to win a grand prize for her work.
2. Explain that we are going to read a book about Sophie Germain and how she became such a great mathematician.
3. Read *Nothing Stopped Sophie*.
4. Point out the comparisons between math and poetry and ask the students briefly what they think that might mean and if they agree with it.

5. Ask students if they think Sophie's work was similar to science and what comparisons they can think of between the two off the top of their head.
6. Point out similarities between our class poetry activities and math and our class science activities and math.
7. Ask students to stand up.
8. Designate one side of the room to be the side that thinks math is more like poetry, and the other to be the side that thinks math is more like science.
9. Have the students go to the side they most agree with.
10. Split the students into smaller groups on each side based on who will work well together.
11. Have students sit down with their groups.
12. Record whether they chose poetry or science.
13. Explain that we are doing a group presentation. Students will have the rest of the reading block to work as a team to decide why math is like poetry, or why math is like science. They should have evidence from the book, as well as evidence from at least two other sources. They should also be able to explain their opinions and why they felt the way they did. Emphasize that this is *not* a debate. Each side is not trying to prove the other wrong, you are only trying to explain your perspective to share it with the class. Groups may design their presentation any way they like but everyone must have a role in the presentation.
14. Leave instructions up on the board to refer to.

Day 2:

1. Explain the rules of the presentations. Groups who are not presenting should sit quietly until the group's presentation is finished. There will be time at the end of each presentation to ask the group for clarification of any points they made. Groups who are presenting should have each person's role be an active part of the presentation.
2. Have students draw numbers to determine what order they will present in.
3. Allow each group to present and allow a few minutes for questions after each.
4. At the end of all the presentations, have students write a paragraph stating whether their opinion changed or not and how it did or why it did not.

Additional Comments:

Anticipated Difficulties:

It is entirely possible that everyone could pick the same subject comparison. I have decided that I am okay with this and will not ask anyone to change sides because it is about showing their own perspective, not proving a side they don't necessarily agree with.

There may also be struggles with group dynamics. I will help the group reach an agreement if this does occur, but I will leave it up to them to decide what that solution will be.

Differentiation:

When grouping students I will try to put a student who has good leadership skills, a student who is at a higher writing level in every group to help support students who need direction and may not be as skilled at explaining their thoughts in writing.

Additional Resources:

I said that it would be helpful to have multiple copies of the book since I am asking the groups to find evidence from the text. However, this could be in the form of a scanned copy of the book, a YouTube video, or any other format as I realize it is not economical to purchase that many copies of a book for each student. I just figured I would either raid the libraries or create or find a video recording or digital copy of the book for students.

Reflection:

I have to say, I didn't fully understand this assignment until I started doing it. It was just difficult for me to consider doing a lesson based on the "I Can" statements. But now that I have, I actually really want to do this lesson in class. Weirdly enough, writing this lesson makes me want to teach 2nd grade so that I can do more things like this in my class.

Open ended assignments like this are some of my favorite memories from school and my favorite lessons to implement in class. I love giving students the freedom to be creative with their work but not requiring it. An assignment like this allows students to take their presentation to the next level if they have an exciting idea, but won't lose them any points for just reading their information off a PowerPoint as long as they put in the effort I asked of them.

I am excited to plan lessons like this in my own classroom that allow students to think deeper about other people's experiences and opinions, to look more deeply into the text for information beyond the story, and to work as a group to create something that they hopefully enjoy.

I originally thought about doing a debate. But I steered away from that because the "I Can" statement I chose is about understanding other people's perspectives. Debating is pretty much the opposite of understanding other people's perspectives. So instead of

debating I just wanted the students to have a chance to choose a perspective, find some evidence to back it up and have a few minutes to stand in front of the class and share their thinking without anyone telling them they are wrong.

If I don't end up teaching 2nd grade, I may try to adapt this lesson to something appropriate for a younger classroom, but I don't really think it would work because of the level of comprehension required. But there will be other fun lessons to do that could give children these same opportunities in a developmentally appropriate way.

References

Bardoe, C., McClintock, B., & Cole, C. T. (2019). Nothing stopped Sophie: the story of unshakable mathematician Sophie Germain. Solon, OH: Findaway World, LLC.