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# Agents of Change: Pioneering Women Dentists

## Teacher Guide

Grades 6-12



Smithsonian Affiliate

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# Museum Overview

The Dr. Samuel D. Harris National Museum of Dentistry celebrates the past, present, and future of dentistry while sharing the importance of a healthy mouth in a healthy life. Our exhibitions, programming, and collections capture the often-overlooked history hidden behind your smile and the scientists, tradesmen, and professionals that have shaped the field throughout history.

Located on the site of the University of Maryland's first "Dental Infirmary and Laboratory Building," which was then part of the Dental Department in the School of Medicine in 1882, and housed in the University's second Dental School building erected in 1903, the NMD is located at the heart of the University System of Maryland's founding campus in Baltimore and at the epicenter of the beginnings of professional dentistry.

The NMD's extensive 40,000 object collection of dental instruments and equipment, pop culture and personal oral care items, artwork, and everything in between is one of the largest and oldest collections in the world related to dentistry, and one of the reasons Congress designated the museum as the official museum of the dental profession in the United States.

The Dr. Samuel D. Harris National Museum of Dentistry is also a proud Smithsonian Affiliate. To learn more about Smithsonian Affiliations, visit [affiliations.si.edu](https://affiliations.si.edu).

## **NMD Mission**

The National Museum of Dentistry inspires healthy choices about oral health by creating and sharing learning opportunities that celebrate the heritage and future of dentistry, the achievements of dental professionals, and the importance of oral health in a healthy life. \*

## **Museum Contact Information**

To learn more about the National Museum of Dentistry and the Agents of Change: Pioneering Women Dentists program, please email [pcutter@umaryland.edu](mailto:pcutter@umaryland.edu) or call 410-706-0600.

## **Acknowledgement**

The Agents of Change: Pioneering Women Dentist program was developed by Caitlin Cutrona, Education Intern.

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\*This information can also be found at "About Us," National Museum of Dentistry, University of Maryland School of Dentistry, last accessed July 15, 2020, <https://www.dental.umaryland.edu/museum/about-us/>.

## National Curriculum Standards for Social Studies: 6-12

National Social Studies Education Standards 6-12	
<b>NSSSES II: Time, Continuity, and Change</b>	<p>a. Demonstrate an understanding that different people may describe the same event or situation in diverse ways, citing reasons for the differences in views.</p> <p>d. Identify and use various sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and others.</p> <p>e. Demonstrate an understanding that people in different times and places view the world differently.</p> <p>f. Use knowledge of facts and concepts drawn from history, along with elements of historical inquiry, to inform decision-making about and action-taking on public issues.</p>
<b>NSSSES IV: Individual Development &amp; Identity</b>	<p>f. Explore factors that contribute to one’s personal identity such as interests, capabilities, and perceptions.</p> <p>h. Work independently and cooperatively to accomplish goals.</p>
<b>NSSSES V: Individuals, Groups, &amp; Institutions</b>	d. Identify and describe examples of tensions between and among individuals, groups, or institutions, and how belonging to more than one group can cause internal conflicts.
<b>NSSSES X: Civic Ideas and Practices</b>	j. Recognize and interpret how the “common good” can be strengthened through various forms of citizen action.

## Common Core ELA-Literacy Standards: 6

Grade	History/ Social Studies	History/ Social Studies	History/ Social Studies	Language	Writing	Writing	Speaking & Listening	Speaking & Listening	Speaking & Listening
<b>6</b>	<p><b>RH.6-8.2</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.</p>	<p><b>RH.6-8.6</b> Identify aspects of a text that reveal an author’s point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).</p>	<p><b>RH.6-8.7</b> Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.</p>	<p><b>L.6.4.A</b> Use context (e.g., the overall meaning of a sentence or paragraph; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase.</p>	<p><b>W.6.4</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p><b>W.6.10</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p><b>SL.6.1.C</b> Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.</p>	<p><b>SL.6.2</b> Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.</p>	<p><b>SL.6.4</b> Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.</p>

## Common Core ELA-Literacy Standards: 7-8

Grade	History/ Social Studies	History/ Social Studies	History/ Social Studies	Language	Writing	Writing	Speaking & Listening	Speaking & Listening	Speaking & Listening
7	<p><b>RH.6-8.2</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.</p>	<p><b>RH.6-8.6</b> Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).</p>	<p><b>RH.6-8.7</b> Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.</p>	<p><b>L.7.4.A</b> Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.</p>	<p><b>W.7.4</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p><b>W.7.10</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p><b>SL.7.1.C</b> Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.</p>	<p><b>SL.7.1.D</b> Acknowledge new information expressed by others and, when warranted, modify their own views.</p>	<p><b>SL.7.4</b> Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.</p>
								<p><b>SL.7.2</b> Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.</p>	

Grade	History/ Social Studies	History/ Social Studies	History/ Social Studies	Language	Writing	Writing	Speaking & Listening	Speaking & Listening	Speaking & Listening
8	<p><b>RH.6-8.2</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.</p>	<p><b>RH.6-8.6</b> Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).</p>	<p><b>RH.6-8.7</b> Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.</p>	<p><b>L.8.4.A</b> Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.</p>	<p><b>W.8.4</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p><b>W.8.10</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p><b>SL.8.1.C</b> Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.</p>	<p><b>SL.8.1.D</b> Acknowledge new information expressed by others and, when warranted, qualify or justify their own views in light of the evidence presented.</p>	<p><b>SL.8.4</b> Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.</p>

## Common Core ELA-Literacy Standards: 9-10

Grades	History/ Social Studies	History/ Social Studies	History/ Social Studies	Language	Writing	Writing	Speaking & Listening	Speaking & Listening	Speaking & Listening
9-10	<p><b>RH.9-10.2</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.</p>	<p><b>RH.9-10.6</b> Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.</p>	<p><b>RH.9-10.9</b> Compare and contrast treatments of the same topic in several primary and secondary sources.</p>	<p><b>L.9-10.4.A</b> Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.</p>	<p><b>W.9-10.4</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p><b>W.9-10.10</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</p>	<p><b>SL.9-10.1.C</b> Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.</p>	<p><b>SL.9-10.1.D</b> Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.</p>	<p><b>SL.9-10.4</b> Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.</p>
							<p><b>SL.9-10.2</b> Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.</p>		

## Common Core ELA-Literacy Standards: 11-12

Grades	History/ Social Studies	History/ Social Studies	History/ Social Studies	Language	Writing	Writing	Speaking & Listening	Speaking & Listening	Speaking & Listening
<b>11-12</b>	<b>RH.11-12.2</b> Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.	<b>RH.11-12.6</b> Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.	<b>RH.11-12.7</b> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.  <b>RH.11-12.9</b> Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.	<b>L.11-12.4.A</b> Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.	<b>W.11-12.4</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	<b>W.11-12.10</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	<b>SL.11-12.1.C</b> Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.	<b>SL.11-12.1.D</b> Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.	<b>SL.11-12.4</b> Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

## Program Overview

**Program Description:** From the Alaskan wilderness to the halls of America's dental colleges, women have had a significant impact on the dental profession. The Agents of Change: Pioneering Women Dentists program gives students the opportunity to learn about pioneering women in the dental field, the obstacles they faced and the accomplishments they achieved, through primary and secondary sources. Students will also be able to examine objects related to these pioneering women and create their own object to represent one pioneering woman dentist. Additionally, the program helps students to identify examples of gender bias, gender stereotypes, and gender discrimination experienced by the pioneering women dentists, it explores women dentists' role as change agents, and it helps students understand current experiences of female dentists through a Q&A session with a practicing women dentist or dental student. Come join us to learn about and celebrate women in dentistry!

**Learning Objectives:** Upon completion of this program, students will...

- Define the terms gender bias, gender stereotypes, and gender discrimination
- Identify examples of gender bias, gender stereotypes, and gender discrimination
- Analyze objects associated with pioneering women dentists in order to obtain information about the related female dentists
- Identify information about pioneering women in dentistry through both primary and secondary sources. The information students will be able to identify about the pioneering women dentists include the obstacles they faced, the examples of gender bias, gender stereotypes, and gender discrimination they experienced, the accomplishments they achieved, and their defining characteristics
- Present information about one pioneering woman dentist, such as the obstacles she faced, her accomplishments achieved, and her defining characteristics
- Create an object that best represents one of the pioneering women in dentistry and explain why that object best represents the pioneering woman dentist
- Participate in a whole-group discussion that collectively explores pioneering women dentists' obstacles faced, experiences with gender stereotypes, gender bias, and gender discrimination, accomplishments achieved, and defining characteristics
- Connect the characteristics the pioneering women dentists demonstrated as change agents (bravery, perseverance, etc.) to their own personal characteristics in order to better see how they too can act as change agents in their own communities
- Identify current experiences of female dentists through a Q&A session with a female dental student or female dental professional
- Identify the steps it takes to become a dentist through a Q&A session with a female dental student or female dental professional

### **Materials:**

- Digital copies of objects related to pioneering women dentists
- [Pioneering Women in Dentistry Chart](#)
- [Pioneering Women in Dentistry Readings](#)
- Craft materials/art supplies for students to make/draw an object related to their pioneering woman dentist (e.g. scissors, construction paper, markers, crayons, glue etc.)

## Curriculum Connections

Common Core	History/Social Studies	Writing	Speaking & Listening
6	RH.6-8.2, RH.6-8.7	W.6.10	SL.6.1.C, SL.6.2, SL.6.4
7	RH.6-8.2, RH.6-8.7	W.7.10	SL.7.1.C, SL.7.1.D, SL.7.2, SL.7.4
8	RH.6-8.2, RH.6-8.7	W.8.10	SL.8.1.C, SL.8.1.D, SL.8.4
9-10	RH.9-10.2	W.9-10.10	SL.9-10.1.C, SL.9-10.1.D, SL.9-10.2, SL.9-10.4
11-12	RH.11-12.2, RH.11-12.7, RH.11-12.9	W.11-12.10	SL.11-12.1.C, SL.11-12.4

National Social Studies Education Standards 6-12	
<b>NSES II</b>	<p><b>e.</b> Demonstrate an understanding that people in different times and places view the world differently.</p> <p><b>f.</b> Use knowledge of facts and concepts drawn from history, along with elements of historical inquiry, to inform decision-making about and action-taking on public issues.</p> <p><b>d.</b> Identify and use various sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and others.</p>
<b>NSES IV</b>	<p><b>f.</b> Explore factors that contribute to one’s personal identity such as interests, capabilities, and perceptions.</p> <p><b>h.</b> Work independently and cooperatively to accomplish goals.</p>
<b>NSES V</b>	<p><b>d.</b> Identify and describe examples of tensions between and among individuals, groups, or institutions, and how belonging to more than one group can cause internal conflicts.</p>

## Preparation Activities

To enhance students' ability to learn from the program information and activities, three preparation activities have been developed to introduce students to the key concepts and terms that will be discussed during the Agents of Change: Pioneering Women Dentists program. Below you will find a lesson overview for the preparation activities. Each lesson overview includes the activity's purpose, program link, learning objectives, materials needed, procedure, curriculum connections, and, when applicable, a bibliography. The bibliography encompasses sources that were used to create the lesson overview and that can also serve as additional resources. While these activities are designed as full lessons, they can be condensed into shorter activities. This could be done by skipping the warm-up and wrap-up parts of each lesson.

# Object Analysis:

## How Objects Tell Stories Too

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**Purpose:** This activity demonstrates to students that objects are important sources of knowledge, if the right questions are asked.

**Program Link:** As a part of the Agents of Change: Pioneering Women Dentists program, students will be asked to examine a few objects related to the pioneering women dentists they will be learning about and use these objects to collect information about these female dentists.

**Learning Objectives:** Upon completion of this activity, students will...

- Identify different sources of knowledge used to acquire information about people, places, and events
- Closely examine objects and glean information from these objects by asking and answering relevant questions
- Write in complete sentences a paragraph about the information they can gather about an object in the room by simply examining that object

**Materials:** Several objects, both ordinary and unusual, that can either be carried into the classroom, or that you can show a clear picture of.

### Procedure:

#### 1. Warm-Up:

- Have students answer the following question:
  - Think about your favorite object (book, toy, piece of clothing etc.). What might a stranger learn about you from this object?
- Review students' answers

#### 2. Object Analysis Activity:

- Ask students: How do we collect information about other people, places, and events?
- Explain to students that one way we can learn about people, places, and events is by examining objects related to the people, places, and events in question
- Bring multiple objects into the classroom for students to examine. To help students get comfortable with obtaining information from objects, make the first object the students examine an ordinary object that students are familiar with. To challenge students, other objects can be unusual objects that they are unlikely to identify right away.
- Have students examine the object(s) for information
- To show students how objects can tell multiple stories about people, places, and events, encourage students to ask and answer the following questions about the object(s):
  - What materials is the object made of?
  - What use does it have?
  - Why do you think the object was created?

- What does this object tell us about the people/civilization that made it?
- This is not an exhaustive list of questions, so feel free to add questions or have students create questions of their own.

**3. Wrap-Up:**

- Have students choose any object in the classroom (this object should not be one already examined)
- The students will write in complete sentences a paragraph (length of your choosing) about the information that they can gather from the object in question.

## Curriculum Connections

National Social Studies Education Standards 6-12	
<b>NSSES II</b>	<b>d.</b> Identify and use various sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and others.
<b>NSSES IV</b>	<b>h.</b> Work independently and cooperatively to accomplish goals.

Common Core	History/Social Studies	Writing	Speaking & Listening
<b>6</b>	RH.6-8.2	W.6.4, W.6.10	SL.6.1.C, SL.6.2
<b>7</b>	RH.6-8.2	W.7.4, W.7.10	SL.7.1.C, SL.7.1.D, SL.7.2
<b>8</b>	RH.6-8.2	W.8.4, W.8.10	SL.8.1.C, SL.8.1.D
<b>9-10</b>	RH.9-10.2	W.9-10.4, W.9-10.10	SL.9-10.1.C, SL.9-10.1.D
<b>11-12</b>	RH.11-12.2	W.11-12.4, W.11-12.10	SL.11-12.1.C, SL.11-12.1.D

# What is a Change Agent?

**Purpose:** This activity introduces students to the concept of a change agent, and it helps students identify agents of change in history and in their own communities.

**Program Link:** As a part of the Agents of Change: Pioneering Women Dentists program, students will be learning about pioneering women in dentistry who acted as change agents to overcome obstacles and break down barriers for women in the dental field.

**Learning Objectives:** Upon completion of this program, students will...

- Define the term change agent
- Identify historic examples of change agents, well-known, present-day examples of change agents, and change agents within students' local communities
- Identify and discuss change agents' defining characteristics
- Complete a CNN Heroes nomination form for a change agent in their personal lives

## **Materials:**

- [CNN Heroes Nomination Form](#)

## **Procedure:**

### **1. Warm-Up:**

- Have students answer the following questions:
  - How would you describe a hero?
  - Who is one of your heroes, and why?
- Review students' answers

### **2. Defining a Change Agent:**

- Explain to students that there are different actions that cause a person to be considered a hero. Many heroes, however, are viewed as change agents.
- Ask students: What do you think of when you hear the phrase change agent?
- Work with students to come up with a definition for this term.
- Sample change agent definitions:
  - Change agents are people who help bring about or are working toward bringing about change in the world
  - Change agents are people who often overcome obstacles/stand up for what they believe in to bring about positive change

### **3. Identifying Change Agents:**

- Tell students that now that they have a working definition for the term change agent, it is time to identify people who have been/are change agents
- Have students work together to brainstorm historic and well-known current examples of change agents
- Next, explain to students that while many historic and well-known people have acted as change agents, anyone can work to bring about positive change in the world

- To help students understand how ordinary people can act as agents of change, have students review profiles on [CNN Heroes](#). These profiles could either be printed out in advance, or if possible, the students could view these profiles as a class together digitally. Ideally, the profiles examined should include people from a range of backgrounds and age groups. For instance, CNN Heroes has a [Young Wonder](#) section that focuses on kids who are making a difference. Feel free to have students look through different profiles individually, in small groups, or as a class. Really, this activity's purpose is to give students a better idea of who might be considered a change agent in their own community based on what they read about in the profiles.
- After viewing the profiles, have students brainstorm examples of change agents from their own community/personal lives
- Once historic and local examples of change agents have been identified, have students think about and discuss the characteristics/actions these change agents showed/took to bring about change

#### 4. **Wrap-Up:**

- As a concluding activity, have each student select a change agent from their personal lives/local community who is particularly inspiring to them
- Have the students create a CNN Heroes nomination for their selected change agent
- To do this, students need to fill out the [CNN Heroes nomination form](#) which will require them to answer the following three questions about their chosen change agent:
  - Tell us about your nominee and what is special about his/her work
  - Accomplishments and Impact: How is his/her work making a difference?
  - Why do you view your nominee as a change agent?
- The first two questions come directly from the CNN Heroes' nomination form that can be found online at: <https://www.cnn.com/SPECIALS/cnn.heroes/2020/nominations/index.html>. The third question is a replacement question that helps students think through what makes a person a change agent.

#### 5. **Extension Activity:**

- Once students have identified change agents from their personal lives and have completed a CNN Heroes nomination form, consider having students make a video nomination for their selected change agents
- While the parameters of the video nomination can vary, students should share the information that they wrote for their CNN Heroes nomination form as a part of the video

## Curriculum Connections

National Social Studies Education Standards 6-12	
<b>NSES IV</b>	<b>h.</b> Work independently and cooperatively to accomplish goals.
<b>NSES X</b>	<b>j.</b> Recognize and interpret how the “common good” can be strengthened through various forms of citizen action.

Common Core	Writing	Speaking & Listening
<b>6</b>	<a href="#">W.6.10</a>	<a href="#">SL.6.1.C</a>
<b>7</b>	<a href="#">W.7.10</a>	<a href="#">SL.7.1.C, SL.7.1.D</a>
<b>8</b>	<a href="#">W.8.10</a>	<a href="#">SL.8.1.C, SL.8.1.D</a>
<b>9-10</b>	<a href="#">W.9-10.10</a>	<a href="#">SL.9-10.1.C, SL.9-10.1.D</a>
<b>11-12</b>	<a href="#">W.11-12.10</a>	<a href="#">SL.11-12.1.C</a>

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# Defining Gender Stereotypes/Bias/Discrimination

**Purpose:** This activity introduces students to the concepts of gender bias, gender stereotypes, and gender discrimination in order to help students understand and recognize examples of gender bias, gender stereotypes, and gender discrimination in the primary and secondary source documents that will be used during the Agents of Change: Pioneering Women Dentists program.

**Program Link:** In the Agents of Change: Pioneering Women Dentists program, students will be examining primary source and secondary source documents about pioneering women dentists to learn more about the obstacles they faced and the accomplishments they achieved. Many of these pioneering female dentists encountered gender bias, gender stereotypes, and gender discrimination, which will be evident in the sources the students read.

**Learning Objectives:** Upon completion of this program, students will...

- Define the terms stereotype, bias, and discrimination
- Define the terms gender stereotypes, gender bias, and gender discrimination
- Brainstorm examples of gender stereotypes, gender bias, and gender discrimination
- Model the relationship between gender stereotypes, gender bias, and gender discrimination by providing examples of gender stereotypes, gender bias, and gender discrimination that build off of one another
- Create two questions for the guest speaker Q&A session of the Agents of Change: Pioneering Women Dentists program. These questions should be about gender stereotypes/gender bias/gender discrimination in the dental profession or about the dental profession itself

## **Materials:**

- [Question Guide for Middle School Students](#)
- [Question Guide for High School Students](#)
- [Teacher Copy for Middle School Students](#)
- [Teacher Copy for High School Students](#)
- If doing the extension activity: case studies on gender discrimination/bias from Harvard University's Making Caring Common Project. **Link:** <https://mcc.gse.harvard.edu/resources-for-educators/gender-bias-case-study>

## **Procedure:**

### **1. Warm-Up:**

- Present students with the following phrase:
  - *Boys are good at math*
  - You do not have to use this specific phrase, but whatever phrase you use should be an example of a stereotype
- Have students answer the following questions about the statement:
  - Do you agree with this phrase?
  - If you agree with this phrase, why?

- If you disagree with this phrase, why?
- Review students' answers
  - As you review students' answers to the above questions, help spark discussion by asking these prompting questions:
    - Is the statement true? Why might you believe that the statement is true?
    - Is the statement false? Why might you believe that the statement is false (knowing boys who are not good at math)?
    - If you believe that boys are good at math, is the opposite also true for girls?
  - It is likely that students will struggle to provide a definite answer to the warm-up questions, because they know boys and girls who are both good and bad at math. This struggle will hopefully help students to better understand that stereotypes are generalizations of groups of people that do not account for individual differences.

## 2. Defining Gender Stereotypes:

- Explain to students that the statement in the warm-up is an example of a stereotype
- Ask students: What is a stereotype?
- Sample definition of a stereotype:
  - According to the *Cambridge English Dictionary*, a stereotype is “a set idea that people have about what someone or something is like, especially an idea that is wrong.”
  - <https://dictionary.cambridge.org/us/dictionary/english/stereotype>
  - A stereotype is essentially a broad statement/belief, typically inaccurate or oversimplified, about how groups of people should act/ behave
  - Stereotypes indicate that all members of a group share the same, oversimplified characteristics.
  - Remind students that stereotypes can be positive, but they can also be negative.
- Tell students that people can form stereotypes based on many different factors including a person's race, ethnicity, or sexual orientation. Many stereotypes are also based on a person's gender. So, for instance, there are gender stereotypes.
- Ask students: Based on our definition for stereotype, how would you define gender stereotypes?
- Sample gender stereotype definition:
  - Broad statements/beliefs about how men and women should act/ behave based on their gender. Gender stereotypes associate certain characteristics/traits with men or women.
- Ask students to brainstorm examples of gender stereotypes. Encourage them to think about examples from multiple sources like TV shows, movies, literature, and their own personal lives.
- Sample gender stereotypes include:
  - Girls are bad at sports
  - Boys love sports

- Girls like arts and crafts
- Boys like cars
- Girls are emotional
- Boys don't cry
- Boys are aggressive and rowdy

### 3. Defining Gender Bias:

- Explain to students that stereotypes often lead to people developing biases. One way to help students understand the connection between stereotypes and biases is to tell students that biases often form when people accept stereotypes as being accurate.
- Ask students: What does bias mean?
- Sample definition of bias:
  - According to *Psychology Today*, "A bias is a tendency, inclination, or prejudice toward or against something or someone"
  - <https://www.psychologytoday.com/us/basics/bias>
  - Biases lead people to prefer/not prefer one thing over another
  - Remind students that biases can be positive, but they can also be negative
- Explain to students that some people's biases are explicit, meaning that people clearly state/know what they believe about other groups of people. However, many people's biases are implicit, meaning that people believe stereotypes about other groups of people without recognizing that they hold these beliefs. Emphasize to students that all people have biases (including them and you) whether they realize it or not, and it is important to acknowledge both our explicit and implicit biases in order to correct inaccurate assumptions we may unknowingly have about others.
- Tell students that just like people say gender stereotypes, people have gender bias.
- Ask students: Based on our definition of bias, how would you define gender bias?
- Sample gender bias definition:
  - Preferring/favoring one gender over another.
  - Having preconceived thoughts, assumptions, or ideas about someone's abilities, behavior, and preferences because of his/her gender
- Have students identify examples of gender bias
- Sample gender biases include:
  - Preferring male political leaders over women political leaders
  - Preferring female childcare workers over male childcare workers
  - Someone assumes that a woman cooked dinner or a man is the head of a company

### 4. Defining Gender Discrimination:

- Explain to students that gender stereotypes and gender bias can lead to gender discrimination
- Ask students: What is discrimination?
- Sample definition of discrimination:
  - According to the *Cambridge English Dictionary*, discrimination is "Treating a person or particular group of people differently, especially in a worse way from the way in which you treat other people, because of their skin color, sex, sexuality"

- <https://dictionary.cambridge.org/us/dictionary/english/discrimination>
- Explain to students that stereotypes and biases are what people think and say about a particular group, but discrimination is an action that people take against a particular group. So, stereotypes and biases are what people think, and discrimination is what people do (actions) based on biases and stereotypes.
- Ask students: Based on our definition for discrimination, how would you define gender discrimination?
- Sample definition for gender discrimination:
  - Treating someone unequally/less favorably because of his/her gender
  - Again, remind students that discrimination involves someone doing something/taking action
- Have students provide examples of gender discrimination
- Sample gender discrimination examples:
  - Women earning less than men at the same job even though they have the same qualifications
  - Women/girls treated as less competent/less able to complete a task based on their gender
  - A woman being fired because of her gender
  - A teacher interrupting a female student or allowing a male student to interrupt a female student

#### 5. Identifying Gender Stereotypes, Gender Bias, and Gender Discrimination Activity:

- Explain to students that now that they have defined gender stereotypes, gender bias, and gender discrimination, they will be completing an activity in which they will have to use the knowledge they have gained to come up with examples of gender stereotypes, gender bias, and gender discrimination. These examples should show how gender stereotypes, gender bias, and gender discrimination build upon each other.
- Model the activity with students first
- Then have students complete an example either individually or in groups
- Sample Model:
  - **Gender stereotype:**
    - Men are aggressive, assertive, and self-confident
    - Women are emotional, nurturing, and accommodating
  - **Gender Bias:**
    - Because men are aggressive, assertive, and self-confident, men make better business leaders than women
  - **Gender Discrimination:**
    - An equally qualified female candidate is passed over for a promotion in favor of a male colleague

#### 6. Wrap-Up:

- **Note:** This wrap-up activity should only be done if you are planning to invite a female dentist guest speaker into your classroom. For more resources and tips on how to find a female dentist guest speaker see the [Guest Speaker Resource Guide](#).

- During the program, students will have the chance to hear from and ask questions to a current woman dental student or dental practitioner. The point of this Q&A activity is for students to interact with and hear about a current female dentist or dental student’s journey as a dental professional, including any possible instances of gender bias, gender discrimination, and/or gender stereotyping she has faced along with her general experience as a female dentist.
- To facilitate the Q&A portion of the presentation, have each student write down two questions in advance to ask the presenter. These questions should be about either gender bias, gender discrimination, and/or gender stereotypes in dentistry or about the dental profession itself, such as how to become a dentist.
- Explain to students that the purpose of their questions is to learn more about the speaker’s dental journey including what she does, what it took to become a dental student/dentist, and the challenges/opportunities she has encountered.
- The two questions should be collected from each student and given to the speaker in **advance** of her presentation.
- A resource guide for students and teachers on how to ask questions about gender bias, gender discrimination, and gender stereotypes can be accessed [here](#). As you are discussing with students how to ask questions about gender bias, gender discrimination, and gender stereotypes, emphasize to them that encountering any type of bias/discrimination is a painful and personal experience that should not be treated lightly by others. While it is important to hear about other people’s experiences with gender bias and gender discrimination, it is equally important to ask thoughtful questions about these experiences.

**7. Extension Activity:**

- Have students read through three case studies provided by Harvard University’s Making Caring Common Project (**access link provided in the Materials section**). The case studies primarily provide common examples of gender bias/discrimination in high school, but these case studies also contain some examples of gender stereotypes as well.
- As students read, they should be actively highlighting or underlining examples of gender bias, gender discrimination, and gender stereotypes given in the case studies
- Review students’ answers, focusing on why they believe the examples they have identified show gender stereotypes, gender bias, and/or gender discrimination (this would be a good time to review the definitions of gender stereotypes, gender bias, and gender discrimination that have already been discussed)

## Curriculum Connections

<b>National Social Studies Education Standards</b>	
<b>6-12</b>	
<b>NSES IV</b>	<b>f.</b> Explore factors that contribute to one’s personal identity such as interests, capabilities, and perceptions.

	<b>h. Work independently and cooperatively to accomplish goals.</b>
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Common Core	Language	Speaking & Listening
6	L.6.4.A	SL.6.1.C
7	L.7.4.A	SL.7.1.C, SL.7.1.D
8	L.8.4.A	SL.8.1.C, SL.8.1.D
9-10	L.9-10.4.A	SL.9-10.1.C, SL.9-10.1.D
11-12	L.11-12.4.A	SL.11-12.1.C

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## Terms to Know

Please review the following terms with students. These are terms that are likely to appear in readings done by the students during the program.

1. **Caries:** Another word for cavity; tooth decay
2. **Pedodontics:** A branch of dentistry that focuses on caring for children's teeth; pediatric dentistry
3. **Periodontics:** A branch of dentistry that focuses on the structures surrounding the teeth (i.e. gums, jawbone) and diagnosing and treating diseases that affect these supporting structures
4. **Prosthodontics:** A branch of dentistry that deals with restoring and replacing missing or damaged teeth and other structures in the mouth

# Women in Dentistry Program Outline

## 1. Introductory Activity:

- Explain to students that according to the American Dental Association (ADA), as of 2019, there are 200,419 dentists actively working in the United States
- Ask students: What percentage of dentists in the United States do you think are female?
- **Answer:** According to the ADA, 33.4% of dentists actively working in the United States are female.
- Ask students: What percentage of dentists do you think were female in 1970?
- **Answer:** 3.4%
- Ask students: What percentage of dentists do you think were female in 1930?
- **Answer:** 1.8%
- Ask students: What percentage of dentists do you think were female in 1900?
- **Answer:** 2.7%
- Ask students: What percentage of dentists do you think were female in 1870?
- **Answer:** 0.3%
- **Notes:**
  - It might be helpful to write these percentages down where all students can see the answers as they are given. This allows students to clearly visualize the differences in the percentage of female dentists over the decades.
  - If students are curious about the fluctuations in percentages, feel free to explain to them that the percentage of women dentists likely declined from the 1920s to the 1960s due to the development of dental hygiene programs beginning in 1914. Today, dental hygienists are still overwhelmingly (~98%) female. In contrast, the feminist movement of the 1960s and 1970s helped spark an increase in the number of female dentists.
  - More statistics can be found at:  
<https://static1.squarespace.com/static/5c59afe1ca525b1aa6c9eae/t/5d0ce1398a95f10001db9d46/1561125177722/Number+and+Percentage+of+Dentists+by+Sex+1870-2010.pdf>
- Tell students that while women represented a small number of dentists in the United States until relatively recently, women have had a significant impact on the dental profession. In fact, it is believed that the first dental extraction forceps were made for Sen-Hopet, an Egyptian society matron who lived in 2000 B.C. Today, we are going to be learning about several pioneering women dentists. The women dentists we will be learning about lived in a variety of decades and centuries, starting from the late-nineteenth century when females first entered the dental field. Since the pioneering women dentists we are studying both helped to advance the field of dentistry and break down traditional barriers faced by women in dentistry, we will be learning about the obstacles these women encountered and the accomplishments they achieved.
- Explain to students that though these women faced several different kinds of obstacles, many of the obstacles they encountered were because of their gender.

- Before proceeding, review with students the terms gender stereotypes, gender bias, and gender discrimination. Remind students of the definitions they created for these terms in the preparation activity and ask students to provide a few examples of each.
- Tell students that they should be on the lookout for examples of gender stereotypes, gender bias, and gender discrimination as they learn more about pioneering women dentists.

## 2. Object-Based Activity:

- Whole-group activity
- Explain to students that before they read about individual pioneering women dentists, they are going to have a chance to examine different objects associated with a few of these pioneering female dentists. Tell students that the purpose of this object analysis is to see what information they can gather about some of the pioneering female dentists they will be reading more about later.
- Collectively, the students will examine select objects related to the women dentists they will be learning more about as a part of the program.
- If possible, each student or small groups of students should receive copies of the objects being examined
- Possible questions to ask about the objects (these questions may not apply to each object):
  - What is it?
  - Why do you think this?
  - What is this object's purpose?
  - Who wrote/used this object? Who did this object belong to?
  - What can this object tell us about the person who wrote/used/owned the object?
  - What can this object tell us about the dental profession at the time?
- The point of this activity is to spark students' interest in the topic, provide basic background information for a select group of women dentists, and help students think about how objects can be used to provide information/tell stories

## 3. Pioneering Women in Dentistry Activity:

- Group activity
- Students will be split into small groups. For classrooms under 20 students, split into groups of 3 or 4. For classrooms over 20 students, split into groups of 5 or 6. It is likely that there will be more pioneering women dentist profiles than the number of student groups. If this is the case, feel free to look through the information provided about the different pioneering women dentists, and select the female dentists that best fit your class dynamic, interests, and ability levels.
- Each group will be responsible for learning about and sharing information on one pioneering woman dentist.
- To do this, students will be given readings ([Pioneering Women in Dentistry Readings](#)) for a specific female dentist and a [Pioneering Women in Dentistry Chart](#) to complete based on these readings.
- Students will be asked to list the woman dentist's accomplishments/obstacles she overcame, identify examples of gender stereotypes, gender bias, and gender

discrimination that are present in the readings, choose an object they think best represents her, explain why they chose this object, and list defining characteristics. Remind students to also think about the objects examined earlier, and the information they gleaned from these objects if applicable for their female dentist.

- Students will also be asked to create (draw or physically make) the object they have selected to represent the woman dentist they were assigned.
- Students will then briefly present their information and object to the rest of the groups.
- The activity will culminate with a whole group discussion on what has been learned. This is a time to focus collectively on the women dentists, their accomplishments, the obstacles they overcame, and their role as change agents. Possible questions/areas to focus on during this group discussion time:
  - What were some of the obstacles the women dentists faced?
    - Not being accepted to dental colleges
    - Having to learn in a non-native language
    - Deaths of parents and other family members
    - Natural disasters (e.g. San Francisco earthquake)
  - What examples of gender stereotypes, gender bias, and/or gender discrimination did you find in the readings?
    - Sample answers might include:
      - \* Lucy Beaman Hobbs Taylor:
        - Refused admission to the Eclectic Medical College-**Discrimination**
        - Refused admission to the Ohio College of Dental Surgery-**Discrimination**
        - Opposition and objections that Lucy Hobbs Taylor faced were based on gender stereotypes/gender bias about women not being fit for the dental profession. For instance, the stereotype that a woman's place is in the home-**Stereotype and Bias**
      - \* Henriette Hirschfeld:
        - Faced barriers entering a dental school in North America, which is an example of gender discrimination based on the gender stereotypes and biases of the day that believed women were unsuited for the dental profession.
        - She also was told by a male anatomy professor that he would not teach her anatomy-**Discrimination**
        - Male students hissed at her-**Discrimination**
      - \* Leonie von Zesch:
        - While doing emergency dental work for earthquake refugees, San Francisco's Board of Health tried to replace Dr. von Zesch with a male dentist. She was able to thwart their efforts.-**Discrimination**

- While providing dental care for the Navy's Great White Fleet, Dr. von Zesch was replaced by male dentists-  
**Discrimination**
  - Both of the above examples of discrimination are based on gender stereotypes/gender biases at the time that held that women were not capable dentists
    - There are just a few examples of the gender stereotypes, gender bias, and gender discrimination evident in the readings
    - Most students will likely find it easier to identify examples of gender discrimination in the readings. If this is the case, remind students that gender discrimination is caused by existing gender stereotypes and gender biases.
- What were some of the pioneering female dentists' accomplishments?
  - First woman in the U.S. to have a regular dental practice/first female dentist (Emeline Roberts Jones)
  - First woman to graduate dental school/graduate dental school fully (Lucy Beaman Hobbs Taylor/Henriette Hirschfeld)
  - First African American woman dentist (Ida Gray Nelson Rollins)
  - Focus on pedodontics and periodontics (M. Evangeline Jordan and Gillette Hayden)
  - First Chinese American female dentist (Faith Sai So Leong)
  - First licensed African American female dentist in California (Vada Watson Sommerville)
  - First female graduate from the Baltimore College of Dental Surgery (Emilie Foeking)
  - First female dean of a U.S. dental school (Jeanne C. Sinkford)
  - First female president of the American Dental Association (Geraldine Morrow)
- What characteristics did many of these women have in common?
  - Determination
  - Passion
  - Compassion
  - Perseverance
  - Agents of change—these women dentists brought about tangible changes in the dental profession
- In wrapping up the discussion, explain to students that the pioneering women dentists were agents of change.
- Ask students: What is an agent of change?-**this should be an answer that students can readily answer based on the completion of the preparation activity**
- While these pioneering women dentists faced many obstacles, including combatting gender stereotypes, gender bias, and gender discrimination, their determination, passion, bravery, and perseverance helped pave the way for other women dentists who would follow them.

- Share with students the following statistic to highlight how the dental profession has changed in terms of gender representation since the late-nineteenth century:
  - In 1866, only 1.27% of graduating US dental students were female. In 1978, only 11.2% of dental student graduates were female. In 2018, almost 50% (49.7%) of graduating US dental students were female
- Emphasize to students that just like Lucy Beaman Hobbs Taylor, Henriette Hirschfeld, and Ida Gray Nelson Rollins acted as agents of change to overcome obstacles, break down barriers, and advance the dental profession, they also can be agents of change in their own lives by showing perseverance, determination, and courage in standing up for what they believe in.

#### 4. Q&A Activity:

- Whole group activity
- Students will have the chance to listen to and interact with a current woman dentist or dental student
- The students will hear about current female experiences in the dental profession and have the chance to ask questions about the presenter's own dental journey
- To facilitate the Q&A activity:
  - Have students write down two questions in advance and provide the students' questions to the guest speaker beforehand
  - Use the [Question Guide](#) resources for middle and high school students respectively
  - Provide the guest speaker with a general question guide in advance ([see the Guest Speaker Resource Guide](#))

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## Guest Speaker Resource Guide

The culminating activity for the Agents of Change: Pioneering Women Dentists program is a Q&A presentation with either a current female dental student or dental professional. This activity is designed for students to hear firsthand about current female experiences in dentistry, ask thoughtful questions about gender bias, gender stereotypes, and gender discrimination in dentistry, and learn more about the presenter's own dental journey, including how/why she became a dentist. While we understand that finding a female dentist guest speaker may seem daunting, we believe that this Q&A activity will help students better understand the similarities and differences between historic and current female experiences in dentistry, and it will better engage them in learning about the different steps in the journey to becoming a dentist. As such, we strongly encourage you to consider keeping this aspect of the program. To help make the Q&A activity more feasible, we have provided a [So How Exactly do I find a Female Dental Student/Professional?](#) resource. This resource includes tips on how to find a female dental student/dental professional for a guest speaker as well as a general question guide that can be given to your guest speaker in advance to help her prepare for the presentation.

## **Post-Program Activity**

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The following activity is designed to reinforce the concepts learned during the Agents of Change: Pioneering Women Dentists program (e.g. gender bias, gender stereotypes, and gender discrimination), and introduce new concepts and information (e.g. how to combat gender bias, gender stereotypes, and gender discrimination) by using students' existing knowledge as a starting point.

# “Is Woman Adapted to the Dental Profession?”:

## A Primary Source Analysis of the Debate over Women Dentists

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**Purpose:** As women dentists like Emeline Roberts Jones, Lucy Beaman Hobbs Taylor, and Henriette Hirschfeld entered the male-dominated dental field in the late-nineteenth century, controversy erupted over whether women should be allowed to become dentists or were even capable of being dentists. That debate is the focus of this lesson. As a part of this lesson, students will define gender bias, gender stereotypes, and gender discrimination, analyze historic examples of gender bias, gender stereotypes, and gender discrimination in dentistry through primary sources from the late-nineteenth century, and discuss how they can counter gender bias, gender stereotypes, and gender discrimination in their own lives.

**Program Link:** This lesson is designed to further the discussion on gender stereotypes, gender bias, and gender discrimination in the dental profession introduced during the Agents of Change: Pioneering Women Dentists program.

**Learning Objectives:** During this lesson, students will...

- Review information learned from the Agents of Change: Pioneering Women Dentists program
- Define gender bias, gender stereotypes, and gender discrimination
- Generate current examples of gender bias, gender stereotypes, and gender discrimination from a variety of sources including movies, TV shows, and literature
- Analyze primary source documents to discover the historical arguments given for and against women in dentistry as well as historical examples of gender bias, gender stereotypes, and gender discrimination in dentistry
- Connect historic examples of gender bias, gender stereotypes, and gender discrimination in dentistry to current examples
- Compile a list of actions that can be taken to counter gender bias, gender stereotypes, and gender discrimination in school and the local community

### Materials:

- [Primary Sources on the Debate over Women in Dentistry \(3 Con and 3 Pro sources\)](#)
- [Primary Source Analysis Worksheet](#)

### Procedure:

#### 1. Warm-Up:

- Have students answer the following questions:
  - Who were some of the pioneering women dentists discussed during the Agents of Change: Pioneering Women Dentists program?
  - What were their accomplishments? What obstacles did they face?

- What examples of gender bias, gender stereotypes, and gender discrimination did they encounter?
  - The purpose of these questions is to activate students' prior knowledge related to their experience during the Agents of Change: Pioneering Women Dentists program and prepare them to further discuss historic examples of gender bias, gender stereotypes, and gender discrimination in the dental field using primary sources from the late-nineteenth century.
- 2. Reviewing Gender Bias/Gender Stereotypes/Gender Discrimination:**
- After finishing the warm-up, explain to students that as pioneering women dentists like Emeline Roberts Jones, Lucy Beaman Hobbs Taylor, and Henriette Hirschfeld entered the male-dominated dental field in the late-nineteenth century, a debate erupted over whether women should be allowed to become dentists or were even capable of being dentists. Today, they will examine arguments from both sides of the debate by looking at primary sources from the late-nineteenth century. Many of these primary sources contain examples of gender bias, gender stereotypes, and gender discrimination, so before they can begin looking at the primary sources, they need to review what these terms mean.
  - Work with students to define gender bias, gender discrimination, and gender stereotypes. Encourage students to remember the definitions of gender bias, gender stereotypes, and gender discrimination that were discussed during the Agents of Change: Pioneering Women Dentists program and the preparation activity.
  - Ask students to brainstorm examples of gender bias, gender stereotypes, and gender discrimination
  - Prompt them to give examples from multiple sources like TV shows, movies, literature, and their own personal lives
  - Have students think about and answer the following questions:
    - What is your initial response to these examples of gender bias, gender stereotypes, and gender discrimination?
    - Are there any common trends in these examples of gender bias, gender stereotypes, and gender discrimination?
    - Is there anything that surprises you about these examples of gender bias, gender stereotypes, and gender discrimination, or about where these examples of gender bias, gender stereotypes, and gender discrimination originate?
    - How is gender discrimination connected to gender bias and gender stereotypes?
    - What are some of the negative effects of gender bias, gender stereotypes, and gender discrimination?
    - Why do you think that gender bias, gender stereotypes, and gender discrimination can be hard to combat?
  - Remind students that as they read their primary sources regarding the debate over women in dentistry, they will encounter historic examples of gender bias, gender stereotypes, and gender discrimination in the dental field
- 3. Debate over Women in Dentistry:**
- While the historical debate over women in dentistry has already been introduced at this point, students will likely find it helpful to learn more about this debate before starting the primary source activity.

- See John M. Hyson’s article “Women Dentists: The Origins” for information on the debate over women in dentistry. The link to this article is provided below: ([https://www.cda.org/Portals/0/journal/journal\\_062002.pdf](https://www.cda.org/Portals/0/journal/journal_062002.pdf)).
- This activity can be completed individually or in groups
- Each individual/group should be given two primary source documents. One primary source document should express negative views about women in dentistry while the other should express positive views about women in dentistry. Available primary sources to choose from are included in the lesson plan [Materials](#).
- Each individual/group should complete the [Primary Source Analysis Worksheet](#) for both of the documents assigned. This means that by the end of the activity, students will have completed a total of **two** Primary Source Analysis Worksheets.
- The activity will culminate with a whole group discussion on what has been learned. This is a time to focus collectively on the arguments made for and against women in dentistry, how these arguments relate to current examples of gender bias, gender stereotypes, and gender discrimination, and how gender bias, gender stereotypes, and gender discrimination can be overcome.
- Possible Questions to pose during the discussion:
  - How did the author’s background (gender, age, career, etc.) impact his/her perspective?
  - What arguments are given for women being dentists?
  - What arguments are given against women in the dental profession?
  - What examples of gender bias, gender stereotypes, and gender discrimination did you find in the primary source documents?
  - Did only the authors against women dentists show gender bias, gender stereotypes, and/or gender discrimination? If not, how did the authors who supported women in the dental field still show gender bias, gender stereotypes, and/or gender discrimination?
  - Are similar arguments made today? If so, what are those arguments?
  - What is your initial response (feelings, thoughts, etc.) after reading the primary sources?
  - How might some of the information learned today about pioneering women dentists and the gender bias, gender stereotypes, and gender discrimination they faced in the dental field help us to overcome gender bias, gender stereotypes, and gender discrimination in our own lives?

#### 4. **Wrap-Up:**

- As a class, revisit the current examples of gender bias, gender stereotypes, and gender discrimination discussed earlier. Collectively, brainstorm and write down ways the students can tackle gender bias, gender stereotypes, and gender discrimination in their own school/local community. Remind students about the characteristics the pioneering women dentists showed as change agents in their profession, and prompt students to see that they too can be change agents in their own school and local community.

#### 5. **Extension Activity Ideas:**

- To extend the above activity further, have students choose a small number of the tangible actions already brainstormed that they would specifically like to implement. These actions

could be chosen individually or collectively. If chosen individually, have the students write down the actions that they have personally chosen to try to tackle gender bias, gender stereotypes, and gender discrimination in their own lives. If chosen collectively, as a class, write down the selected actions on a poster that can be hung somewhere visible in the room. With either option, opportunity should be given regularly to revisit these actions and discuss students' progress.

- Gender Bias/Gender Stereotypes/Gender Discrimination Role Play:
  - Have students select some of the actions to combat gender bias, gender stereotypes, and gender discrimination that were brainstormed earlier
  - Based on the actions chosen, students should role play scenarios in which these actions might need to be used. These role plays can be created by the students themselves or by the teacher.

## Curriculum Connections

National Social Studies Education Standards 6-12	
<b>NSES II</b>	<p>a. Demonstrate an understanding that different people may describe the same event or situation in diverse ways, citing reasons for the differences in views.</p> <p>e. Demonstrate an understanding that people in different times and places view the world differently.</p> <p>f. Use knowledge of facts and concepts drawn from history, along with elements of historical inquiry, to inform decision-making about and action-taking on public issues.</p> <p>d. Identify and use various sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and others.</p>
<b>NSES IV</b>	h. Work independently and cooperatively to accomplish goals.
<b>NSES V</b>	d. Identify and describe examples of tensions between and among individuals, groups, or institutions, and how belonging to more than one group can cause internal conflicts.

Common Core	History/Social Studies	Writing	Speaking & Listening
6	RH.6-8.2, RH.6-8.6	W.6.10	SL.6.1.C, SL.6.4
7	RH.6-8.2, RH.6-8.6	W.7.10	SL.7.1.C, SL.7.1.D, SL.7.4
8	RH.6-8.2, RH.6-8.6	W.8.10	SL.8.1.C, SL.8.1.D, SL.8.4
9-10	RH.9-10.2, RH.9-10.6, RH.9-10.9	W.9-10.10	SL.9-10.1.C, SL.9-10.1.D, SL.9-10.4
11-12	RH.11-12.2, RH.11-12.6, RH.11-12.9	W.11-12.10	SL.11-12.1.C, SL.11-12.1.D, SL.11-12.4

### Bibliography:

Hyson, John M. "Women Dentists: The Origins." *Journal of the California Dental Association* 30, no. 6 (June 2002): 444-451. [https://www.cda.org/Portals/0/journal/journal\\_062002.pdf](https://www.cda.org/Portals/0/journal/journal_062002.pdf).