



TEACH  
GEOCIVICS

### GeoCivics Lesson:

### *The Three Sisters: Corn, Beans and Squash*

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<b>Teacher(s):</b> Gregory Holder	<b>Unit Title:</b> The Changing Agricultural Landscape of Indigenous Peoples  <b>Lesson Title:</b> The Three Sisters: Corn, Beans and Squash	<b>Grade Level:</b> HS Grades 11 & 12
<b>Notes:</b> This is lesson 1/3.		
<b>Pre-existing Knowledge:</b> Students will need some basic knowledge of the Westward Expansion/forced relocation of Indigenous peoples. Students will need knowledge of how to create a Venn diagram.		
<b>Overview of Content:</b> <u>Poly and monoculture agriculture:</u> “Monoculture farming are a form of agriculture that is based on growing only one type of a crop at one time on a specific field. In contrast, a polyculture system assumes that a field is sown with two or more crops at a time. It should be noted that the concept of monoculture does not only apply to crops, but to farm animals as well: it consists of breeding only one species of animals on a given farm, be it dairy cows, sheep, pigs, chicken, etc.”  <u>The Three Sisters:</u> “Think of the Three Sisters as the Holy Trinity of some Indigenous cultures, a trifecta of agricultural sustainability, and as the base of a really good soup. The Three Sisters are represented by corn, beans, and squash and they’re an important facet of Indigenous culture and foodways. They’re planted in a symbiotic triad where beans are planted at the base of the corn stalks. The stalks offer climbing bean vines support as they reach for sunlight from the earth. The beans, in turn, pump beneficial nitrogen back into the soil, fertilizing the corn and squash, while the squash's broad, spiny leaves protect the bean plants from predatory animals. The Three Sisters also offer spiritual connection and appear in mythology across tribes, from the Hopis of the Southwest to the Oneidas of the Midwest and the Iroquois in the Northeast...” -- PBS		

**Purpose: *What students will learn:*** Students will learn about the important role of the Three Sisters (corn, beans, and squash) in Indigenous Peoples' food culture and will research and learn about mono cultural and poly cultural farming. They will also learn how The Westward Expansion impacted Indigenous Peoples' food culture.

**National & State Social Studies Standard(s):**

**National Social Studies Standards -Themes:**

- Culture: Human beings create, learn, share, and adapt to culture. The study of culture examines the socially transmitted beliefs, values, institutions, behaviors, traditions and way of life of a group of people; it also encompasses other cultural attributes and products, such as language, literature, music, arts and artifacts, and foods.
- Time, Continuity, and Change: Studying the past makes it possible for us to understand the human story across time. The historical experiences of societies, peoples, and nations reveal patterns of continuity and change. Historical analysis enables us to identify continuities over time in core institutions, values, ideals, and traditions, as well as processes that lead to change within societies.

**Wisconsin State Social Studies Standard(s): Social Studies Inquiry Practices and Processes (Inq):**

- Inq2.a: Gather diverse sources (electronic, digital, print, and other mass media) applicable to the inquiry
- SS.Inq2.a.h 9-12 (h): Explore evidence discovered through personal research through a variety of disciplinary lenses (e.g., economics, history, political science) and multiple perspectives (e.g., race, gender, ethnicity, language, ability, sexual orientation, family background, and/or family income) with a variety of sources including primary and secondary sources and media resources.

**National & State Geography Standard(s):**

**National:**

- Geography Standard 13: How the forces of cooperation and conflict among people influence the division and control of Earth's surface.

**Wisconsin State Geography Standards:**

- Geog2.c:9-12 (h): Impact of movement (SS.Geog2.c.h.):  
Analyze the social impact of movement of people to different locations in a variety of time periods and locations throughout the world.

**ELA Standards**

**Wisconsin ELA Standards**

- Writing 7 - Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- Reading 7 - Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

**ISTE Teacher and/or Student Standard:**

**Student Standard: 1.3 Knowledge Constructor**

- **1.3c** - Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.
- **1.3d** - Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

**Language Functions:**

- **Comparing and contrasting:** Students use language to describe similarities and differences in objects or ideas.
- **Inquiry/Seeking information:** Students use language to observe and explore the environment, acquire information, inquire.
- **Summarizing and Informing:** Students use language to identify, report, or describe information.
- **Analyzing:** Students use language to separate whole into parts, identify relationships and patterns.

**Culturally Responsive Lesson Strategies:**

- **Connection:** Lesson/Activity incorporates real-life connections and representations from various cultures and life experiences. (Highly Effective) More than one real-life connection made or represented but mostly from the experiences of the dominant culture.
- **Voice:** Lesson/Assignment allows places for students to work together cooperatively or share their learning. (Highly Effective) Several places for working together cooperatively or sharing, somewhat connected to the topic of the lessons – mostly student-centered.

**Objective(s):**

1. SWBAT describe and discuss the policies toward Indigenous Peoples during Westward Expansion that impacted their traditional agricultural practices by conducting research.
2. SWBAT describe how the forces of cooperation and conflict among people influence the division and control of Earth's surface by examining impacts of Westward Expansion on indigenous Peoples.

**SIOP**

**SIOP Elements**

<b>Preparation</b> Adapting content <b>Linking to background</b> <b>Linking to past learning</b> Strategies used	<b>Scaffolding</b> Modeling <b>Guided practice</b> Independent practice Comprehensible input	<b>Grouping Option</b> <b>Whole class</b> <b>Small groups</b> Partners <b>Independent</b>
<b>Integrating Processes</b>  <b>Reading</b> <b>Writing</b> <b>Speaking</b> <b>Listening</b>	<b>Application</b> Hands-On <b>Meaningful</b> <b>Linked to objectives</b> <b>Promotes engagement</b>	<b>Assessment</b>  <b>Individual</b> Group <b>Written</b> <b>Oral</b>

### Evidence of Mastery (Measurable):

**Formative** - Students will complete a Venn Diagram that shows the similarities and differences between polyculture and monoculture agriculture. Students will then contribute to a word wall based on their responses, and participate in a whole-group discussion to compare and contrast poly and mono cultural crops and other types of agriculture and their knowledge of the lesson vocabulary words.

**Summative** - Using [Piktochart](#), students create an infographic to demonstrate their knowledge of the Three Sisters, including types of indigenous agriculture. **Rubric located in Lesson Materials Document.**

### Key vocabulary:

- **Monoculture agriculture:** the growing of a single crop using the majority or whole of the land
- **Polyculture agriculture:** a multitude of different crops grown on a given expanse of land, either through crop rotation or planting rows of different crops side-by-side
- **Migration:** the movement of a person or people from one country, locality, place of residence, etc. to settle in another
- **Three Sisters:** Many native cultures called corn, bean, and squash “the three sisters” because they nurture each other like family when planted together

### Materials:

- Three Sisters Picture (1st slide of the PowerPoint Presentation: *Three Sisters & Western Expansion*) (A Separate PowerPoint document)
- Video: [An Oneida Elder Speaks About the Three Sisters Garden](#)
- Sheets of paper or journals for students to write down notes from their observations
- Computer, Internet, and projector access for Teacher
- 1 Venn Diagram Worksheet for each student (In Lesson Materials Document)
- Three Sisters & Western Expansion PowerPoint Presentation (Separate PowerPoint document)
- Devices such as Chromebooks, computers, etc. for students to conduct research and access to Credible Sources to use for their research (See Credible Source link below)
- 1 Agriculture Data Collection Worksheet for each student (In Lesson Materials Document)
- Agriculture Data Collection Worksheet Answer Key (In Lesson Materials Document)
- Whiteboard (to use in creating a word wall)
- Video: [The Loss of Native American Lands Within the U.S.: Every Year.](#)

- Video: [The \(R\)Evolution of Indigenous Foods | Sean Sherman | TEDxSiouxFalls](#)
- Rubric for Piktochart (Summative Assessment) (In Lesson Materials Document)
- Student access to Piktochart (Link in Sources)

**Sources:**

- Teacher Resource about monoculture farming: <https://eos.com/blog/monoculture-farming/>
- Video: *An Oneida Elder Speaks About the Three Sisters Garden: (7 min.)*  
<https://www.youtube.com/watch?v=lSwGxJe4bVs&t=306s>
- Credible source for student research: USDA National Agricultural Library:  
<https://www.nal.usda.gov/collections/stories/three-sisters>;
- Video: *The (R)Evolution of Indigenous Foods: (18.27 min.)*  
<https://www.youtube.com/watch?v=RhkJ-tSLUKk>
- Video: *The Loss of Native American Lands Within the U.S.: Every Year (1.49 min.)*  
<https://www.youtube.com/watch?v=Zadq5dl2G8Q>
- Piktochart Website Link: <https://piktochart.com/>

**Engage:**

**Teacher Will: (Hook).**

1. Intentionally group students to provide language and/or learning support as needed.
2. In table groups, the teacher will ask students to observe the Three Sisters picture (this is the first slide of the PowerPoint presentation located in the separate PowerPoint document), take notes of what they observe, and discuss what they observe and feel about the picture, responding to the question: “*What does this mean to you?*”
3. Show [An Oneida Elder Speaks About the Three Sisters Garden](#) video (7 minutes) and have students take notes. The teacher will then lead the students in a discussion about their thoughts and feelings about the Three Sisters image and the video.

**Student Will:**

2. In table groups, students observe the Three Sisters picture and discuss what they observed and felt about it and answer the question, “What does this mean to you?” **(Preparation: Linking to Background) (Grouping: Small groups)**
3. Students will view the video, take notes, and engage in table group discussions. They will then engage in a class discussion sharing out their thoughts and feelings about what they observed in both the picture and the video. **(Integrating Processes: Listening/Speaking/Writing) (Grouping: Small groups/Whole class)**

**Explore:**

**Teacher Will:**

**IQ #1 - *What are the various types of agricultural methods used by indigenous people?***

1. Teacher will intentionally group students, providing language and/or learning support as needed, and inform students that they will be creating a Venn diagram to categorize information learned from the following presentation.

**(Scaffolding: Guided Practice)**

2. The teacher will lead students into a deeper discussion about the Three Sisters by showing the Three Sisters & Western Expansion PowerPoint Presentation (separate PowerPoint document) and by introducing the key vocabulary words: monoculture agriculture, polyculture agriculture, migration, and three sisters. The teacher will then engage in dialog with the students about the Three Sisters' method of growing food and the agricultural design observed in the PowerPoint.
3. The teacher will then Introduce and discuss the idea of poly and monocultural agriculture, making a strong connection between the Three Sisters and the type of agriculture it represents.
4. Using their devices and credible sources (either supplied by the teacher or located by the students), the teacher will have student groups research poly and mono culture crops *and* other types of agriculture, recording characteristics of all types on the handout, Agriculture Data Collection Worksheet.

**Student Will:**

2. Engage with the teacher and classmates in a whole class discussion of the Three Sisters method of growing food and the agricultural design as they view the Three Sisters & Western Expansion PowerPoint Presentation.  
**(Grouping: Small Group /Whole Class)**  
**(Integrating Processes: Listening / Speaking/Reading/Writing)**
3. Students will discuss with the teacher the idea of poly and monocultural agriculture and connect this to what they know about the Three Sisters.
4. Students will work with their group members to use their devices and credible sources to research poly and mono culture crops, *and* other types of agriculture, recording characteristics of all types on their copies of the Agriculture Data Collection Worksheet.  
**(Grouping: Small Group/Whole Class)**  
**(Integrating Processes: Listening/Speaking/Reading/Writing)**

**Explain - Formative Assessment**

<p><b>Teacher Will:</b></p> <ol style="list-style-type: none"> <li>1. Intentionally group students to provide language/learning support as needed</li> <li>2. The teacher will pass out Venn Diagram handouts to the students and assign them to create a Venn Diagram that shows how they comprehend the similarities and differences between polyculture and monoculture agriculture.</li> <li>3. The teacher will then engage the students in creating a word wall on the whiteboard based on student responses, and lead the students in a whole-group discussion to compare and contrast poly and mono cultural crops and other types of agriculture and also their knowledge of the lesson vocabulary words. <b>(Scaffolding: Guided Practice)</b></li> </ol>	<p><b>Student Will:</b></p> <ol style="list-style-type: none"> <li>2. Work to create a Venn Diagram using the handout provided by the teacher to show what they know about the similarities and differences between polyculture and monoculture agriculture. <b>(Assessment: Individual/Oral)</b> <b>(Application: Promotes Engagement)</b> <b>(Grouping: Independent)</b></li> <li>3. Students will participate in helping the teacher create a word wall and then engage in a whole class discussion to summarize their learning and understanding of poly and mono cultural crops as well as other types of agriculture. <b>(Grouping: Whole class)</b> <b>(Application: Meaningful/Promotes engagement)</b></li> </ol>
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**Elaborate:**

<p><b>Teacher Will:</b> <b><i>IQ #2 - In what ways did Westward Expansion impact the agricultural practices of indigenous people?</i></b></p> <ol style="list-style-type: none"> <li>1. Teacher will support ELL/SPED students by Intentionally pairing students to provide support and by using technology for language translation when needed to support ELLs. The teacher will also reinforce or support inclusion of SPED and ELLS in all lesson engagements &amp; activities.</li> <li>2. The teacher will have students first discuss, in teams, their response to Inquiry question #2, then participate in a whole class conversation to share out their responses.</li> <li>3. The teacher will tell students: <i>Let's review a bit! What happened to indigenous people during the Westward Expansion? Do you think the Expansion affected their</i></li> </ol>	<p><b>Student Will:</b></p> <ol style="list-style-type: none"> <li>2. Engage with group members to reflect on their prior knowledge/learning about Westward Expansion and its impact on Indigenous Peoples and then discuss how they think this would have impacted the agricultural practices of Indigenous people. <b>(Preparation: Linking to past learning)</b> <b>(Grouping: Small groups/Whole group)</b> <b>(Integrating Processes: Listening/Speaking)</b></li> </ol>
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*agricultural practices? Why or why not? What is your evidence for either response?*

4. The teacher will have students take notes while watching the video: [The Loss of Native American Lands Within the U.S.: Every Year](#). Students may also choose to draw pictures to represent their learning, and review/discuss the basics of Westward Expansion.
5. Set students up for a think-pair-share; then show the video again: [The Loss of Native American Lands Within the U.S.: Every Year](#) (a few times). Ask students to think/pair/share their responses to the questions: “What do you observe?” “What does the video tell us?” “What questions do you have?”
6. Ask students: “How do you think this loss of land, and physical relocation, affected how the indigenous people grew their food?” “Do you think they could practice agriculture in the same way as before? Grow the same foods?” The teacher will then show students the video: [The \(R\)Evolution of Indigenous Foods | Sean Sherman | TEDxSiouxFalls](#) and engage the whole class in a discussion of what they learned about the change of Indigenous Foods.

3. Students will engage in a whole class discussion, sharing out their thoughts with the teacher and the whole class and presenting their evidence for their thoughts and opinions for how Westward Expansion might have impacted the agricultural practices of Indigenous people.  
**(Grouping: Whole class)**  
**(Application: Meaningful/Promotes engagement)**
4. Students will take notes and/or draw pictures to represent their learning as the teacher shows them the video about the loss of Native American lands.  
**(Integrating Processes: Listening/Writing)**
5. Students will then work together in small groups to review the video: [The Loss of Native American Lands Within the U.S. Every Year](#), a few more times and will think-pair-share what they observe and understand and what questions they may have.  
**(Grouping: Small groups)**  
**(Integrating Processes: Listening/Speaking)**  
**(Application: Meaningful)**
6. Students will reflect on and discuss in their groups how they think the loss of their lands could have affected ways Indigenous people grew their food and practiced agriculture compared to how it was done before the Westward Expansion. The students will then watch the video: [The \(R\)Evolution of Indigenous Foods | Sean Sherman | TEDxSiouxFalls](#) and discuss with the class what they learned from it.  
**(Grouping: Small groups/Whole class)**  
**(Integrating Processes: Listening/Speaking)**  
**(Application: Linked to Objectives)**

**Evaluate - Summative Assessment:**



**Teacher Will:**

1. The teacher will select students to provide assistance to EL/SPED classmates as needed.
2. Provide students with a copy of the [Rubric for Piktochart](#) to clarify expectations for the Summative Assessment, and discuss how they will be using the free software, [Piktochart](#), to create an infographic to demonstrate their knowledge of the Three Sisters, and types of indigenous agriculture.
3. The teacher will provide time for students to create their infographic and when completed, will use the [Rubric for Piktochart](#) (found in the Lesson Materials Document) to assess students' learning. (A score of 10 or higher will show mastery)

**Student Will:**

2. Study the [Rubric for Piktochart](#) to clarify expectations and then use the Piktochart software to create their infographic showing what they have learned about the Three Sisters and types of indigenous agriculture. Students will have an opportunity to work with partners for support when needed.

**(Assessment: Individual/Written)**

**(Grouping: Independent or partners if needed)**

**Extensions:** Students can build on their learning by doing an interview with people who work in the food industry, such as farmers, food distributors, etc.