

Quality Education

Objectives

Students will be able to:

- **Synthesize** research in order to understand the various perspectives associated with different aspects of Petty's Island.
- **Design** a museum exhibit to educate the public about Petty's Island and bring global awareness.
- **Evaluate** the work of their peers in order to provide feedback on their museum exhibit.

Lesson Overview

In this digital lesson bundle, students will assume the role of museum curators at the future Petty's Island Exhibit Hall who, are assigned to create a museum exhibit to educate the community and promote lifelong learning. As such, students will explore the inner connectedness of the nature wildlife preserve, the ecological balance of the island, and the need to educate the community about their region and the larger world. Using the framework of the United Nations Quality Education Sustainability Development Goal (SDG), Students will work collaboratively to design a museum exhibit that seeks to educate the community and bring global awareness to lifelong learning.

The accompanying presentation was created with PowerPoint so that it can be used in a variety of classrooms. If you are using a laptop with an LCD projector, simply progress through the PowerPoint by clicking to advance. All interactive aspects in the presentation are set to occur on click. This includes images, text boxes, and links which will appear in your web browser. If you are using an interactive whiteboard, tap on each slide with your finger or stylus to activate the interactive aspects of the presentation. There will be information on how to proceed in the notes section for each slide.

Activity Duration

Three class sessions (45–60 minutes each)

Grade Level

Grades 5–8

Essential Questions

- What are the natural characteristics of the Petty's Island ecosystem preserve?
- Why is the history of Petty's Island so unique?
- What can scientists learn about Petty's return to an ecological preserve?
- How can preserves like Petty's Island serve as quality educational experiences?

Materials

All days

- Device with the ability to project, one for the instructor

Day 1

- [What Do We Mean by a Quality Education?](#) article, one per student
- Handout 1: Quality Education is Needed for All, one per student
- CITGO: Quality Education Video
- Handout 2: Virtual Tour, one per student
- Devices with internet access, one per student (or as many as are available)
- [The Unique History of Petty's Island](#) video
- Handout 3: Gaining Perspective

Day 2

- Handout 4: Museum Exhibit Research Notes (two pages), one per student
- Devices with internet access, one per student (or as many as are available)*

Optional: If devices are not available, copies of the following articles may be printed from the links below. See the lesson instructions for Day 2 for additional details.

- Articles that address **Research Topic #1:** The beginning of Petty's Island
 - ◆ [Petty Island](#)
 - ◆ [Philadelphia History](#)
 - ◆ [Historical Society of Pennsylvania](#)
- Articles that address **Research Topic #2:** The natural wildlife preserve
 - ◆ [The Unique History of Petty's Island](#)
 - ◆ Petty's Island Preserve New Jersey Land Trust
 - ◆ Petty's Island Preserve New Jersey Audubon
- Articles that address **Research Topic #3:** The ecological preserve
 - ◆ [Petty's Island Plant and Wildlife Inventory](#)
 - ◆ [Petty's Island State of the Birds Report: 2018-2019 Biodiversity Monitoring Results](#)
- Handout 5: Exhibit Model and Design, one per student

Day 3

- Handout 6: Museum Exhibit Feedback

Background

Located in the Delaware River between the cities of Philadelphia and Camden, Petty's Island has come full circle. Once "...a place where people hunted, fished, gathered herbs, farmed, built and repaired boats, operated blacksmith shops and sawmills, manufactured wagons and chains..."¹ Petty's Island transitioned into an industrialization site for nearly a century and is now making its way back to a restored, reclaimed naturally preserved urban park. Despite competing perspectives regarding the island, it now serves as an ecological preserve where wildlife is thriving. Since its donation back to New Jersey, Petty's Island has served as a place where community members can visit and experience the unique natural habitats for native species.

The National Council for the Social Studies states that "students learn to think critically, and make personal civic decisions based on information from multiple perspectives."² In providing students with a quality education, they most benefit from evaluating situations that have various perspectives." Petty's Island provides an interesting opportunity for students to see how science and social studies work hand in hand to shape the environmental solutions by focusing on quality education and a commitment to understanding diverse perspectives.

This guide strives to give educators a resource to promote awareness about the importance of United Nations quality education SDG, and to share about Petty's Island. It provides slide-by-slide details to help educators prepare to explain, discuss, and facilitate the hands-on content in the presentation. The presentation is designed to cover three class sessions, but it is flexible depending on the students' needs and the time available. Ideas for additional extensions are included at the end of this manuscript.

This lesson plan follows an inquiry-driven 5E instructional model: Engage, Explore, Explain, Elaborate, and Evaluate. The lesson begins as students watch a video that provides a broad overview of the importance of education, and they will briefly reflect on their initial reactions. The students will then be commissioned to create museum exhibits for Petty's Island that explain and document its history and impact upon society. These exhibits will serve to educate the community by bringing greater awareness of Petty's Island, create awareness for the unique ecosystem, and contribute to the enjoyment of those who visit. "Just as a museum curator selects artifacts for display from among their collections, "student curators" organize information into compelling storylines that convey simple, but important points. They must do so selectively and with clear purpose in order to reach their audience."³ For additional information about the effectiveness of students taking on the responsibility of museum curators visit: <http://kidcurators.com/wp-content/uploads/2015/02/Students-as-Knowledge-Curators.pdf>.

Students will ultimately design a museum exhibit with a museum curator team to educate others. However, to gain important background knowledge, students will first explore descriptors used to define quality education. Next, watch a video to understand the background information associated with Petty's Island. They will then take a virtual field trip to explore museum exhibits. Students will be asked to pay particular attention to the design aspects of the exhibits.

In the second session, students will first individually perform research on one of three topics in order to more completely understand and educate others about Petty's Island. Then, small groups will share what they learned and the ideas they brainstormed for designing an exhibit on their topic. Additionally, as curator teams, students will collaborate and start to design their exhibit.

In the final session, students will finish their museum exhibit with their curator team members. The class will evaluate each other's exhibits and share feedback to provide teams with input on their work. Additionally, they may choose to vote on the best museum exhibit.

Sources

1. "A Vision of Powerful Teaching and Learning in the Social Studies." Social Education.
<https://www.socialstudies.org/publications/socialeducation/may-june2016/vision-of-powerful-teaching-and-learning-in-social-studies>
2. "Quality Education: Why it Matters." Sustainable Development Goals.
<https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/02/4.pdf>
3. "Students as Knowledge Curators: An Apt Metaphor for Today's Learner" Kid Curators.
<http://kidcurators.com/wp-content/uploads/2015/02/Students-as-Knowledge-Curators.pdf>.

Engage | Slide 1

Overview

Students will watch a video that introduces the importance of education, and they will briefly reflect on their initial reactions.

Day 1, Slide 1

- Begin class by asking students to think about their own schooling and educational experiences. Encourage them to close their eyes, if that helps them generate their thoughts. Ask them to write down any characteristics that come to their mind that describe what a quality education looks like.
- Next, click on the image and play the *CITGO: Quality Education video*.
- When the video is complete, click once and instruct students to participate in a two-minute Quick Write in which they jot their immediate reactions (thoughts, questions, etc.) to the content they just viewed.
- As students finish, ask students to share thoughts on the meaning of quality education? What does it look like or feel like?
- If you are having trouble playing the video, you may see a security warning at the top of your screen. Click "Enable Content" to view the embedded video in presentation mode. You can also watch the video at <https://www.fuelingeducation.com/classroom-resources>

Explore | Slides 2–8

Overview

Students will ultimately design a museum exhibit with a museum curator team to educate others. However, to gain important background knowledge, students will first explore descriptors used to define quality education. Next, they will take a virtual field trip to explore museum exhibits. Students will pay particular attention to the design aspects of the exhibits they saw.

Day 1, Slide 2

- Instruct the students to turn to *Handout 1: Quality Education is Needed for All*.
- Click once to display, “The SDG reflects a global consensus that education is a right and a public good that is critical to the health and future of the world”.
- Explain to the students that knowing this information helps to explain the significance of the Quality Education Sustainable Development Goal. Ask the student to write down why they think education matters. Invite 2–3 students to share their responses. Next explain that students will discuss a few reasons why Education is an important Sustainable Development Goal.
- Click again to reveal “Ensure that all learners acquire knowledge and skills to build a better world.” Instruct the students to provide a quick summary of what they believe this statement means.
- Click again to show the second statement “Ensure inclusive and equitable education to promote lifelong learning for all.” Again, instruct students to provide a quick summary of what they believe this statement means.
- Click one last time to reveal “Education is necessary for achieving many other goals. Ask students to complete the final box by explaining what this statement means for the U.S. and the world.

Day 1, Slide 3

- Tell students that they will be asked to be a part of a museum curator team to design an exhibit that will educate others in the community.
- In order to become a contributing team member and quickly get to work on this important project, they must first fully understand the key aspects to quality education.
- Distribute one “What Do We Mean by a Quality Education?” article to each student.
- Click once and instruct students to complete the following with a partner:
 - Read the article aloud once to get the gist of the text.
 - Read the article a second time and annotate the text by identifying what IS and what IS NOT quality education.

Day 1, Slide 4

- Once students have finished annotating the text, click once and reiterate what students have just read: A quality education is needed for all!
- Ask students to turn to side two of *Handout 1: Quality Education is Needed for All* and instruct student pairs to use the article and their annotations to complete the handout.
- After about 10 minutes have passed, facilitate a discussion about what IS and what IS NOT quality education. Ask students to volunteer to share the characteristics that they identified.
- Then, click once to reveal the characteristics of what quality education IS. Discuss whether or not they mentioned most of the ideas listed here.
- Now click another time to display what quality education IS NOT, and again check together to see that each of these ideas were previously mentioned by the students.
- Emphasize any characteristics that the students did not identify in either column.

Day 1, Slide 5

- Before moving on, ensure students understand that quality education is needed for all students!
- Instruct students to close their eyes and imagine that they are flashing forward in time.
- Then, click once and instruct students to open their eyes. Inform the class that they are a part of a museum curator team. Explain that a museum curator is someone who manages and designs what is inside a museum.
- Explain to students that they have been placed on this team to help educate the community about Petty's Island!
- Click again and explain that in an effort to educate the community about their region, the team's current project will specifically explore the following aspects of Petty's Island:
 - The beginnings of Petty's Island
 - The natural wildlife preserve
 - The ecological balance of Petty's Island

Day 1, Slide 6

- Tell students that they are about to take a virtual tour of the National Museum of Natural History: <https://naturalhistory.si.edu/visit/virtual-tour>
- Distribute a copy of *Handout 2: Virtual Tour* to each student.
- Remind the students that they will be designing their own exhibits for Petty's Island, so this activity is intended for them to explore other exhibits and gather ideas.
- Before they begin, explain that as students visit each exhibit, they should jot notes and sketches to record what they see in the corresponding diagrams on *Handout 2: Virtual Tour*.
- Ask students to visit and explore two to three different exhibits, examine them closely, and pay particular attention to the design of each exhibit. After visiting three exhibits, students will be asked to select their favorite exhibit and identify three reasons why they select this exhibit as their favorite.
 - Please note: This museum offers a Simulated WebVR (virtual reality) model. This can be done using a WebVR-capable browser and headset or a mobile device with a VR headset.

Day 1, Slide 7

- After students have finished exploring three exhibits, click once to explain that you would like the students to turn to a partner and do the following:
 1. Share their favorite exhibit and why.
 2. Share the interesting design aspects they saw.
- When students have finished sharing with their partner, click again to display the following questions: What are some connections you noticed between the museum you toured and the key aspects of quality education that we previously discussed? What aspects of the exhibits' design did you find most interesting?
- Briefly discuss, as a group, their responses to this question. This will allow students to hear others' ideas about the exhibits' design.

Day 1, Slide 8

- Click once to reveal the word Petty's Island.
- Click again to show a picture of the island.
- Explain that they will now watch *The unique history of Petty's Island* video:
<https://www.youtube.com/watch?v=o9ooLbSpMeY&feature=youtu.be&t=1>.
- Tell the students that as they watch the video to consider various groups' perspectives and positions of the Petty's Island, they should debate on each of the corresponding boxes on Handout 3.
- Click the picture of Petty's Island to begin the video.
- When the video is complete, conclude the class session by explaining that tomorrow they will be designing a museum exhibit for Petty's Island with their museum curator team.

Explain | Slides 9–11

Overview

First, students will individually perform research on one of four topics in order to more completely understand and educate others about Petty's Island. Then, small groups will share what they learned and the ideas they brainstormed for designing an exhibit on their topic. Additionally, as curator teams, students will collaborate and start to design their exhibit.

Day 2, Slide 9

- Begin class by welcoming everyone back to the second day and tell them that today they will design an exhibit with their museum curator team.
- Tell students that the State of New Jersey had commissioned them to create a Petty's Island exhibit to provide quality education for the community.
- Explain that the state legislators informed you that they would like our curator teams to design four exhibits to be added to the proposed Petty's Island Museum Exhibit Hall.
- Click once to display the proposed museum.
- Click again three times to reveal the titles of the three exhibits:
 - The beginning of Petty's Island
 - The natural wildlife preserve
 - The ecological balance of Petty's Island
- Direct students to think about which of the three topics they would prefer.

DAY 2, Slide 10

- Tell the “curators” that their mission is to provide a quality education for the community and promote global awareness of Petty’s Island.
- Distribute one *Handout 4: Museum Exhibit Research Notes* to each student, and then place students into interest groups of three to six students. Each group will focus on one of the three key topics.

Note: Some groups may have the same topic. Students will be responsible for performing research independently. If students need additional support or if technology is not available for independent research, students may research in pairs.

Day 2, Slide 11

- In order to better understand their topic, students will first individually conduct research.
- Explain that it will be each student’s responsibility to contribute to their exhibit curator team to design an engaging and informative exhibit.
- At the end of the research time, students will reconvene with their team members and share what they have learned.
- Direct students’ attention to page two of *Handout 4: Museum Exhibit Research Notes*, and instruct students to begin their research with these articles before searching for additional sources.*
- Set the timer for 30 minutes. Then click start on the timer and encourage students to begin their research!

Note: If technology is not available, links to every article are provided in the Materials Section so they can be printed in advance.

Day 2, Slide 12

- Instruct groups to reconvene and share their research and brainstormed ideas for their exhibit.
- Click once and explain that as students share what they have learned and exhibit ideas, the other group members should listen closely and jot down any ideas as they listen.
- The goal is for students to gain a more thorough understanding of the topic so they can create an engaging and informational exhibit.

Elaborate | Slides 13–14

Overview

Students will consider what they have learned from their research and will collaborate as a curator team to design an exhibit for their Petty's Island topic.

Day 2, Slide 13

- Congratulate the class and tell them that, as a result of their research and hard work, they have been commissioned by the state of New Jersey to design an engaging, inclusive, and informational exhibit for Petty's Island.
- Before students get to work, take a moment to remind them of the different types of exhibits that they saw during their virtual museum tour. Encourage them to consider inclusive and meaningful learning experiences as they plan and design their own exhibit.
- Discuss with the students that as they saw in the virtual museum tour, exhibits often include objects, images and information.
- Together, brainstorm some specific examples of each category.
- Afterwards, click once to display that an object can be in the form of artifacts (real or created), models, and interactive displays.
- Click again to show that images can be in the form of pictures, graphics, charts, diagrams, timelines, videos, or even maps.
- Distribute one *Handout 5: Exhibit Model and Design* to each student and explain that they will design their exhibit with their curator team using this template. Review each of the handout's steps with the class before they begin. It will be helpful to remind students that to create the most inclusive exhibit that they need to consider needs of all students. This may include wheelchair access or translated educational material.
- Finally, tell the groups that they will have all the time remaining in class today, as well as a little more than half of the following class session to create and design their exhibit.
- When class wraps up, ensure students save their work so they can continue the following period.

DAY 3, Slide 14

- As students enter the classroom, encourage them to immediately regroup and continue working on their exhibit design.
- Click once to project the exhibit information from yesterday as a reminder for the students as they are working.
- Deduct about 25 minutes from the end of the period and tell students that they have this much time left to complete their exhibit design.

Evaluate | Slides 15–17

Overview

Students will share their museum exhibit ideas with the other curator teams. The class will evaluate each other's exhibits based upon interesting aspects, takeaways, and comment(s)/suggestion(s). Also, the students can vote on the best exhibit idea.

Day 3, Slide 15

- When there are 25 minutes left in the class period, tell students that the next step will be to observe and evaluate each other's museum exhibits.
- Click once and explain that each group will transition around the room in a gallery walk fashion. The goal of evaluating one another's work:
 - Identify interesting aspects of the exhibit
 - Share educational takeaways from the proposed exhibit
 - Comment or question something about the exhibit
- Instruct students to use Handout 6: Museum Exhibit Feedback to share feedback with each of the museum curator teams.
- Each student should provide feedback on a minimum of three other exhibits.

Day 3, Slide 16

- Assemble students back together and provide the curator teams with some time to read through the feedback forms from the other students.
- Provide students with an opportunity to ask questions about the feedback they received.

Day 3, Slide 17

- Conclude by reiterating that the significance of this activity was to promote awareness about the importance of quality education and share about Petty's Island.
- As the class session wraps up, ask every student to share the most significant takeaway that they had from this experience.

Optional Extension Activities

- Students can vote on the best museum exhibit, if time allows.
- After creating the exhibit design, students can actually create 3D models of their exhibit.

Standards Addressed

Next Generation Science Standards

- MS-LS2-5 Ecosystem Dynamics, Functioning, and Resilience
- Science and Engineering Practices
 - Practice 2: Developing and Using Models
 - Practice 6: Constructing Explanations and Designing Solutions
 - Practice 8 Obtaining, Evaluating, and Communicating Information

C3 Framework for Social Studies Standards

- Dimension 2: Perspectives
- Dimension 2: Historical Sources and Evidence
- Dimension 3: Gathering and Evaluating Sources

Common Core English Language Arts Standards

- Reading: Science and Technical Subjects
 - RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.
- Speaking and Listening
 - SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- Writing
 - W.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Texas Essential Knowledge and Skills

- 112.18. Science, Grade 6
 - Knowledge and skills: Scientific investigation and reasoning. The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions and knows the contributions of relevant scientists.
 - Organisms and environments: The student knows that there is a relationship between organisms and the environment.
 - Organisms and environments: The student knows that a living organism must be able to maintain balance in stable internal conditions in response to external and internal stimuli.

Why do you think education matters?

3 Key Goals for Quality Education:

**ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION
AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL**

After reading the article, “*What Do We Mean by a Quality Education?*” complete the following graphic organizer and answer these questions.

Quality Education IS...	Quality Education IS NOT...
<ul style="list-style-type: none">••••••	<ul style="list-style-type: none">••••••

What is the central goal of education?

What quality learning experiences do you remember? Why?

As you take the virtual tour, jot notes and sketches to record what they see at each exhibit. Try to visit a minimum of two to three exhibits, then complete the two follow up questions.

Exhibit Title:	Exhibit Sketches:
Exhibit Facts Learned:	

Exhibit Title:	Exhibit Sketches:
Exhibit Facts Learned:	

Exhibit Title:	Exhibit Sketches:
Exhibit Facts Learned:	

My Favorite Exhibit: _____

Reasons why:

- 1.
- 2.
- 3.

Interesting design aspects of the exhibits that I saw:

- 1.
- 2.
- 3.

As you watch the video, identify various perspectives on Petty's Island and capture notes of these various groups' perspectives and positions of the Petty's Island debate.

Perspective #1 _____

Perspective #2 _____

Perspective #3 _____

Perspective #4 _____

Why is the discussion around Petty's Island so complex?

Research Topic: _____

List 5-6 Main Content Ideas

Blank space for listing 5-6 main content ideas.

List 5-6 Exhibit Ideas

Blank space for listing 5-6 exhibit ideas.

Miscellaneous: Any additional notes that could be beneficial as you design your exhibit.

Blank space for miscellaneous notes.

Directions: Begin your research using the articles below.

Research Topic #1: The beginning of Petty's Island

- *Petty Island:* <https://philadelphiaencyclopedia.org/archive/petty-island/>
- *Philadelphia History:* <https://www.ushistory.org/philadelphia/petty.htm>
- *Historical Society of Pennsylvania:* https://hsp.org/sites/default/files/legacy_files/migrated/dukerileypressrelease.pdf

Research Topic #2: The natural wildlife preserve

- *The Unique History of Petty's Island:* <https://www.njtvonline.org/news/video/unique-history-pettys-island/>
- *New Jersey Natural Lands Trust:* <https://nj.gov/dep/njnlt/pettysisland.htm>
- *Petty's Island Preserve:* <https://njudubon.org/centers/pettys-island-preserve/>

Research Topic #3: The ecological balance of Petty's Island

- *Petty's Island Plant and Wildlife Inventory:* <https://nj.gov/dep/njnlt/pdf/pettys-island-plant-and-wildlife-inventory-final-report.pdf>
- *Petty's Island State of the Birds Report: 2018-2019 Biodiversity Monitoring Results:* <https://nj.gov/dep/njnlt/pdf/pettys-island-2018-2019.pdf>

As you take the virtual tour, jot notes and sketches to record what they see at each exhibit. Try to visit a minimum of two to three exhibits, then complete the two follow up questions.

Exhibit Title:	
Object(s):	Image(s):
Information:	

How does the exhibit contribute to quality education?	How is the exhibit inclusive for students?
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As you visit each exhibit, jot notes on the following:

3 Interesting Aspects You Most Enjoyed: <ul style="list-style-type: none">•••	2 Takeaways to Remember: <ul style="list-style-type: none">•••
Question or Comment for the Group	



3 Interesting Aspects you Most Enjoyed: <ul style="list-style-type: none">•••	2 Takeaways to Remember: <ul style="list-style-type: none">•••
Question or Comment for the Group	



3 Interesting Aspects you Most Enjoyed: <ul style="list-style-type: none">•••	2 Takeaways to Remember: <ul style="list-style-type: none">•••
Question or Comment for the Group	