



Brooklyn Navy Yard
Development Corporation
BrooklynNavyYard.org

Building 77
141 Flushing Avenue, Suite 801
Brooklyn, NY 11205

Brooklyn Navy Yard Field Trip Lesson Plan Summary for Grades 1 – 5

Introduction

School Programs at Brooklyn Navy Yard promote curiosity, skill-building, and knowledge about innovation, industry, and manufacturing for students of all ages. Emphasis is placed on illustrating connections between human ingenuity, materials, and tools, as well as providing students with opportunities to see how products, goods, objects, and architecture paired with infrastructure impact their everyday lives.

Our 60-minute field trips for students in grades 1 – 5 utilize our exhibition “Brooklyn Navy Yard: Past, Present & Future” as a starting point for object-based learning. Teachers can choose from two exciting curricula tracks to explore on their visit: “Rethink & Reuse” and “People, Tools & Design.” Both experiences provide real-world examples to support classroom English Language Arts and Social Studies standards and give students access to living history in their own neighborhoods and help them to gain more awareness of the impact of industry, manufacturing, design, technology, and innovation in Brooklyn.

Rethink & Reuse Lesson Plan

Lesson Description:

With over 70 buildings on-site, the Brooklyn Navy Yard is a treasure trove of history for examining adaptive reuse and sustainability in the modern age. This lesson gives students an introduction to the concept of adaptive reuse, focusing on Building 92 and other selected projects drawn from the Yard’s archive. Students will then shift from sustainable architecture to sustainable product design by learning about ways companies at the Yard today integrate reuse, recycling, upcycling, and other eco-friendly materials and processes into their work.

Learning Objectives:

- Understand the concept of adaptive reuse and be able to give examples of how the Yard has adaptively reused several buildings on-site as well as giving examples of why adaptive reuse has benefitted the local community
- Understand the concept of sustainability in architecture and design, and be able to give several examples of sustainable features in Building 92 or Building 77
- Understand the concept of sustainability in product development, namely recycling and using eco-friendly materials. Students will be able to name several businesses that make sustainable products with examples on why they are sustainable
- Gain a better understanding of why reuse, recycling, and sustainable practices are important for a healthy planet and leave with ideas to be more sustainable at-home



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People, Tools & Design Lesson Plan

Lesson Description:

Explore how people have come together and used their heads, hands, and hearts at the Brooklyn Navy Yard to design and make things—from ships and sails in the past, to clothing, furniture, and robots today. Students will engage with drawings, models, and artifacts from the Yard's past and present to examine how ideas are turned into designs, prototypes, and physical objects. This interactive program is rooted in observation and looking at actual products and sample materials tied to games and activities.

Learning Objectives:

- Understand how an idea for a product becomes a design, a prototype, and a finished product
- Use deductive problem-solving skills and context clues to understand how different tools and machines are used in a range of industries that incorporate both traditional (manual) techniques and contemporary methods and technologies
- Identify three things that have been made at the Brooklyn Navy Yard over time and at least one tool or machine that was used to make each of them

Connections to Classroom Standards

Support ELA standards that promote comprehension and collaboration and the presentation of knowledge and ideas. Across all grades, this includes facilitating collaborative conversations that follow agreed-upon rules, helping students increasingly engage and respond to their peers and build on their ideas, and promoting critical thinking skills that result in asking questions and making thoughtful comments. For older students, this also includes asking critical questions to further understanding, considering different points of view, and making concrete connections between visual evidence to apply inductive and deductive reasoning skills.

Additionally, for older students, they are exposed to new vocabulary words and to see examples of concepts and words they are learning in their vocabulary lists such as reuse, recycling, and upcycling. In this regard, experiences help students apply new words and vocabulary to real-world situations and to determine the meaning of a new word formed when a known affix is added to a known word (e.g. agreeable/disagreeable).

Support Social Studies standards through the activation of objects and artifacts that help students to interpret and use evidence in their analysis. For younger students, this starts with recognizing, identifying, and having opinions that build into understanding the past by using primary and secondary sources. As students begin exploring the specifics of New York State history by 4th grade, the Yard is a great historic site to make connections to standards tied to westward movement and industrialization in several areas: exploring the advancements of



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industrial technology, learning about entrepreneurs and inventors from Brooklyn, and the shift from traditional technologies to modern industry.

Unlike many other sites in Brooklyn, our experiences provide students with concrete examples to support their learning about economics and economic systems. This includes understanding the role of a producer and the goods and resources needed to work through the design and manufacturing processes as well as deepening understandings of businesses and trades both past and present. For older students, this also supports them having a better understanding of chronological reasoning through the lens of technology and the application in various industries in Brooklyn.