



Home on the Canal: Past and Present



Spanning across the state of Maryland and bordering the Potomac River, the Chesapeake and Ohio Canal National Historical Park has an estimated 1,000,000 school-aged children within a 45-minute drive. In Canal Classrooms students explore natural and historical resources in a setting that provokes thought, inspires wonder and ignites understanding.

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Need to reach us? Call 301-714-2213 (the park’s education line) or 301-722-8226 (visitor center desk in Cumberland) or email cocanaleducation@nps.gov

Go digital. Find teacher resources including field trip reservations and pre- and post-visit classroom activities at www.nps.gov/choh/forteachers

Like us. Find us on Facebook at *Chesapeake and Ohio Canal National Historical Park*.

Home on the Canal: At a Glance

Students develop an understanding of the C&O Canal’s purpose and function. Students will differentiate between man-made and human features and how they affect the environment, compare the past and present to understand what life was like for a child on the C&O Canal, and explore the function and design of toys from the past.

At the end of the activity, students should be able to...

1. Design and create a toy
2. Identify with the life of a canal child
3. Compare natural and man-made features

The park partnered with Allegany County Public Schools to develop this field trip along with pre- and post-visit activities for your classroom. Completing the classroom activities will enhance student learning. The lessons include a canal orientation and a STEM activity. Jump to the end of this guide or visit our website for the materials:

<http://www.nps.gov/choh/forteachers/classrooms/kcumberland.htm>.

Duration	4 hours
Arrival Time	9:15 (or call us to schedule another time)
Best Time to Plan Trip	Spring or Fall
Cost	Free
Group size	up to 60 in two groups of 30
Rotations	Four (Museum, Canal Boat, Canal Classroom, Festival Grounds) plus lunch
Grade	Kindergarten
Chaperone to Student Ratio	1 to 4 (maximum); 1 to 6 (minimum)
Maryland Common Core Standards	<p>CCSS.ELA.Literacy (W.K.1): Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book</p> <p>CCSS.Math.Content.K.G.A.3: Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).</p> <p>CCSS.Math.Content.K.G.B.4: Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and</p>

	<p>vertices/“corners”) and other attributes (e.g., having sides of equal length).</p> <p>CCSS.Math.Content.K.G.B.5: Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.</p>
<p>Maryland State Curriculum Standards</p>	<p>Social Studies (SS.5.2.A): Compare tools and toys of the past with those of today</p> <p>Social Studies (SS.5.A.2.C): Observe and discuss photographs of the past and compare with photographs of similar images, such as old photographs of the school and community</p> <p>Social Studies (SS.5.A.1.B): Describe daily events in terms of yesterday, today, and tomorrow</p> <p>Social Studies (SS.3.B.1): Describe places in the immediate environment using natural/physical and human-made features</p> <p>Science (S.6.B.1): Identify aspects of the environment that are made by humans and those that are not made by humans.</p>

There are many indoor and outdoor activities at the C&O Canal in Cumberland, Maryland for kindergarteners to explore the canal by comparing and contrasting man-made and natural, past and present.

Welcome (15 minutes)

Children will meet the ranger by Daisy the Mule to explore the plaza, where we will learn a canal song. They will be assigned into smaller groups for later activities.

Canal Museum: Scavenger Hunt (45 minutes)

In groups with the assistance of an adult, students will complete a scavenger hunt in the canal museum. As students locate items on their list, the accompanying adult will read the historical information noted in the museum. Students will have an opportunity to ask questions and discuss items as they explore the museum.

Festival Grounds: Where Did That Come From? (45 minutes)

We will lead students in a walk around the Canal Place festival grounds and students will locate and discuss man-made and natural features of the environment. Then, working in small groups, students will use photographs to discern man-made and natural resources, and then sort picture cards into two groups.

Canal Boat Replica: Story Time (45 minutes)

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Children come aboard *The Cumberland*, our canal boat replica, for a tour where they will identify ways canal families lived and worked on the canal boats. Then we have story time featuring historic canal photographs and characters. Our traveling trunk will give students some “hands-on” time with historic objects as well.

Canal Classroom: Toy Time! (45 minutes)

In our Canal Classroom, children will discuss different ways people designed toys in the past and the present. Then, they will design a toy using paper, crayons, markers, and pencils. Students have an opportunity to extend this activity in their school classroom with the follow-up STEM activity.

Closing Activity (15 Minutes)

Students will share what they have learned and be sworn-in as C&O Canal Junior Rangers.

Itinerary	
9:30 Arrive at the Cumberland Visitor Center, Welcome	
Group A (30 students maximum)	Group B (30 students maximum)
9:45 Museum	9:45 Canal Boat
10:30 Canal Boat	10:30 Festival Grounds
11:15 Lunch	11:15 Lunch
11:45 Festival Grounds	11:45 Canal Classroom
12:30 Canal Classroom	12:30 Museum
1:15 Junior Ranger Ceremony (optional)	
1:30 Departure	

A Letter to Students

Teachers, please distribute or read to your students

Dear Students,

We rangers, teachers, and volunteers in the Canal Classroom Corps look forward to meeting you and spending a few hours exploring the C&O Canal together. We will learn to compare things like past and present and man-made and natural.

A canal is a manmade channel of water that is long and skinny, like a river. People used to ride on the canal in big boats. The boats were pulled by mules and carried lots of things like coal, wood, and food to eat. You will go on one of these boats on your field trip.

You will also visit the canal museum and our classroom, where you will watch videos, go on a scavenger hunt, and play with canal toys.

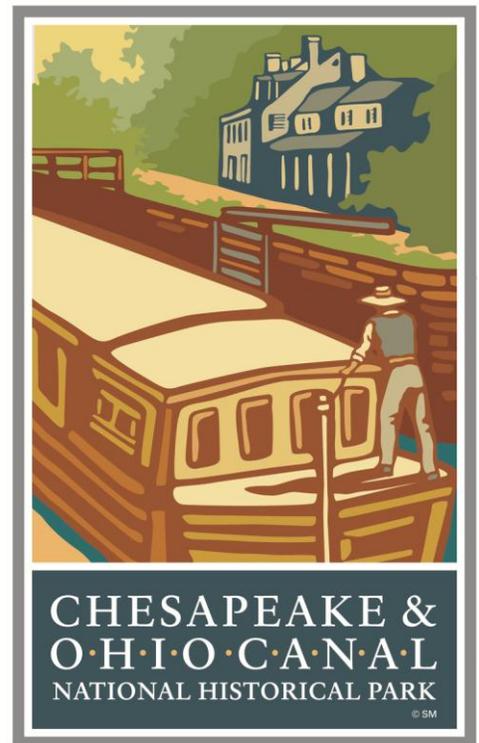
We will be outside for some of the day. Please dress for the weather and wear a hat. Because we will be playing games outside, wear sneakers or boots.

We know it will be a fun day, and we can't wait for your visit!

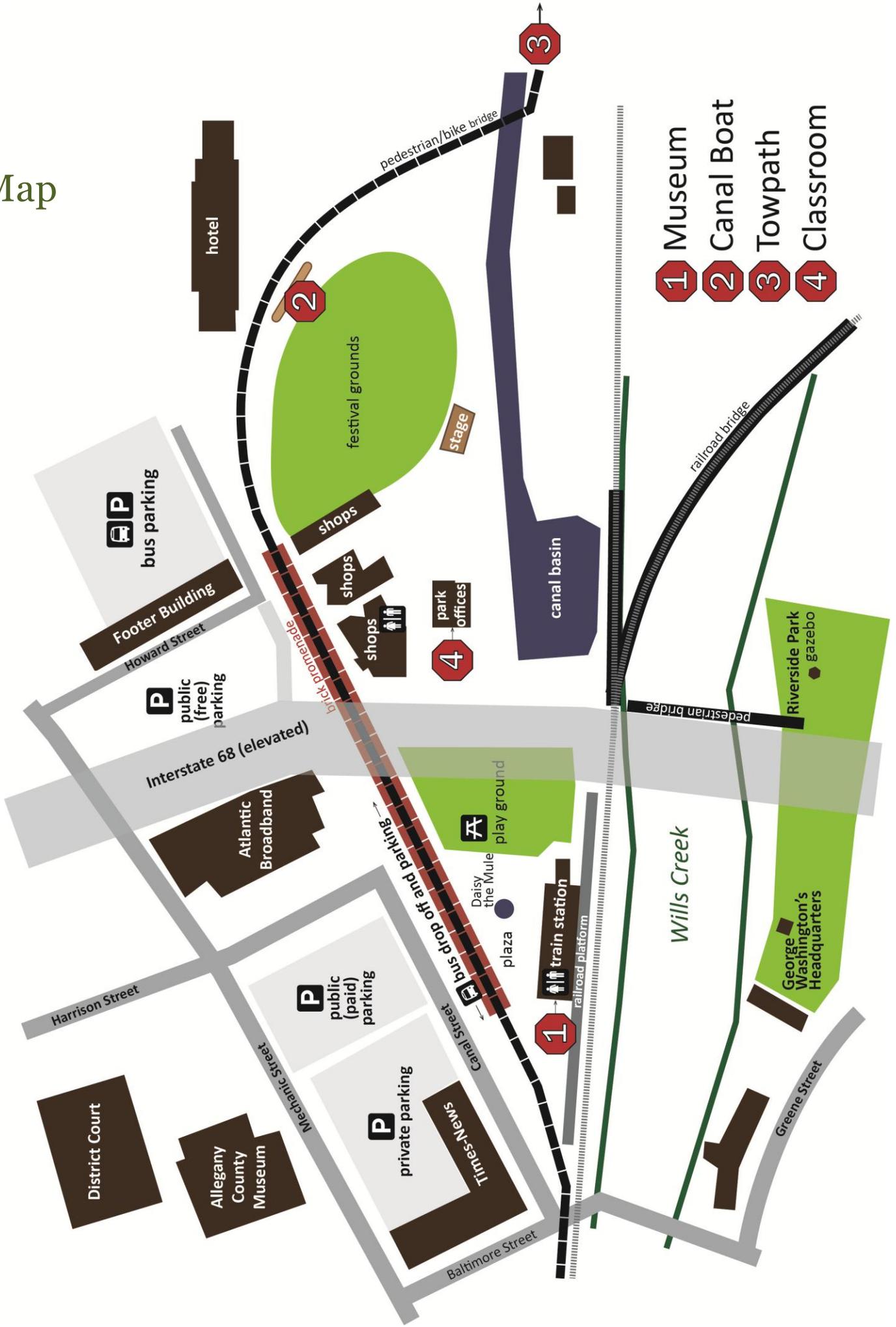
Happy Trails,

Hollie

Ranger Hollie



Map



- 1 Museum
- 2 Canal Boat
- 3 Towpath
- 4 Classroom

Planning a Successful Visit

What to Wear

- We will be both inside and outside for our activities. We suggest wearing long pants and layers. Pants are the best precaution against cool temperatures, bee stings, and the usual outdoor hazards.
- Remind students to wear appropriate footwear for this outdoor experience. Flip flops, slip-on shoes, or sandals are not appropriate.
- Students may wear hats for sun protection and/or warmth.
- Programs will go on in light rain or snow. Encourage everyone to have proper outer wear such as a rain or warm coat.
- When they arrive, we will provide a necklace assigning them to a small group. Name tags are optional.

Communication

- There is good cell phone coverage in Cumberland. Please ask all teachers and chaperones to silence their mobile devices upon arrival.
- For non-emergencies, call (301) 722-8226 (the C&O Canal visitor center at Cumberland). For emergencies, call 911 or (866) 677-6677 (this is the National Park Service dispatch center).

Chaperones

- At minimum, please have one chaperone (teacher or other adult) for every six students. In order to keep programs manageable, do not exceed one chaperone for every four students.
- Chaperones will be an active part of the activities. They will lead groups through the museum and help in the canal classroom.
- During programs, refrain from holding conversations with other chaperones or using a cellular phone.
- No smoking during the trip.

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Directions

The Cumberland Visitor Center is at Canal Place, 13 Canal Street, Cumberland, Maryland 21502.

Arrival

- Please arrive on time at 9:15.
- Our Canal Classroom Corps staff will be waiting for your bus by Daisy the Mule, near the visitor center.
- Buses may parallel park along the red brick promenade or in the Footer Building lot, as shown on the map.
- The train station and shops at Canal Place have large, public restrooms.

Special Needs

Let us know if any of your students have special needs. Please note that while a student with mobility impairment can get on the boat via a ramp, the steps to the captain's cabin are steep.

Protect Your Park

- The Chesapeake & Ohio Canal National Historical Park is a federally protected public use area. Please be good stewards during your visit. Do not pick the plants or take anything from the park.

Cancellations

Field trips may be cancelled in very cold weather or heavy downpours or storms. If flooding or severe inclement weather is predicted, a Canal Classroom Corps member will call to reschedule your field trip.

If you need to cancel, let us know as soon as possible by calling (301) 722-8226 (the C&O Canal visitor center).



Safety Considerations

A Busy Terminus

The area around the C&O Canal Cumberland Visitor Center is an active place filled with moving cars, buses, trains, fishermen, hikers, bikers, and dogs. Please ask students to walk in a single file. There is water in the canal basin. Stay alert and diligent.

Nature Hazards

We will stay in the paved and grassy developed areas around Canal Place. Because we are adjacent to the river, nature comes to visit too. We might encounter ticks, snakes, and wild animals such as raccoons and deer. Staying on the paved areas and trails will prevent any exposure to poison ivy. Be mindful of these usual outdoor hazards.

Stinging insects

You will be in areas with hornets, wasps, and bees, which can cause severe allergic reactions in sensitive individuals. Chaperones should carry epinephrine pens with them.

Sun and Heat Exposure

Remind students to wear sunscreen and a hat to avoid exposure to sun.

Wind and Inclement Weather

If the predicted high temperature is less than 40°, we will stay inside the canal classroom and museum. If there is lightning at any distance, programming will continue in the canal classroom.

Additional On-line Resources about the C&O Canal and the National Park Service

Description		Website URL
C&O Canal NHP	The park's website for teachers hosts classroom materials and on-line resources	www.nps.gov/choh/forteachers
C&O Canal Trust	The park's partner in education provides 50 short stories about places along the C&O Canal for students to read	www.canaltrust.org
National Park Service	Learn more about the NPS mission, history, and organization	www.nps.gov/aboutus/index.htm
National Park Service America's Best Idea	More facts about the NPS, including an excellent timeline and movies	http://www.nps.gov/americasbestidea/

Pre Visit Activity: Meet the C&O Canal

Use this lesson as a pre-visit classroom activity, which introduces the canal to the students through stories of Cumberland and historic images of boats and people.

- 1) Share the “Let’s Play!” illustrated PowerPoint Presentation with your students focusing on toys, past and present. Ask students to identify toys, how they would be/are still used, and make comparisons from past and present. To download, visit <http://www.nps.gov/choh/forteachers/classrooms/kcumberland.htm>.

- 2) Have students color the drawing of the canal boat (see Appendix section of this document).

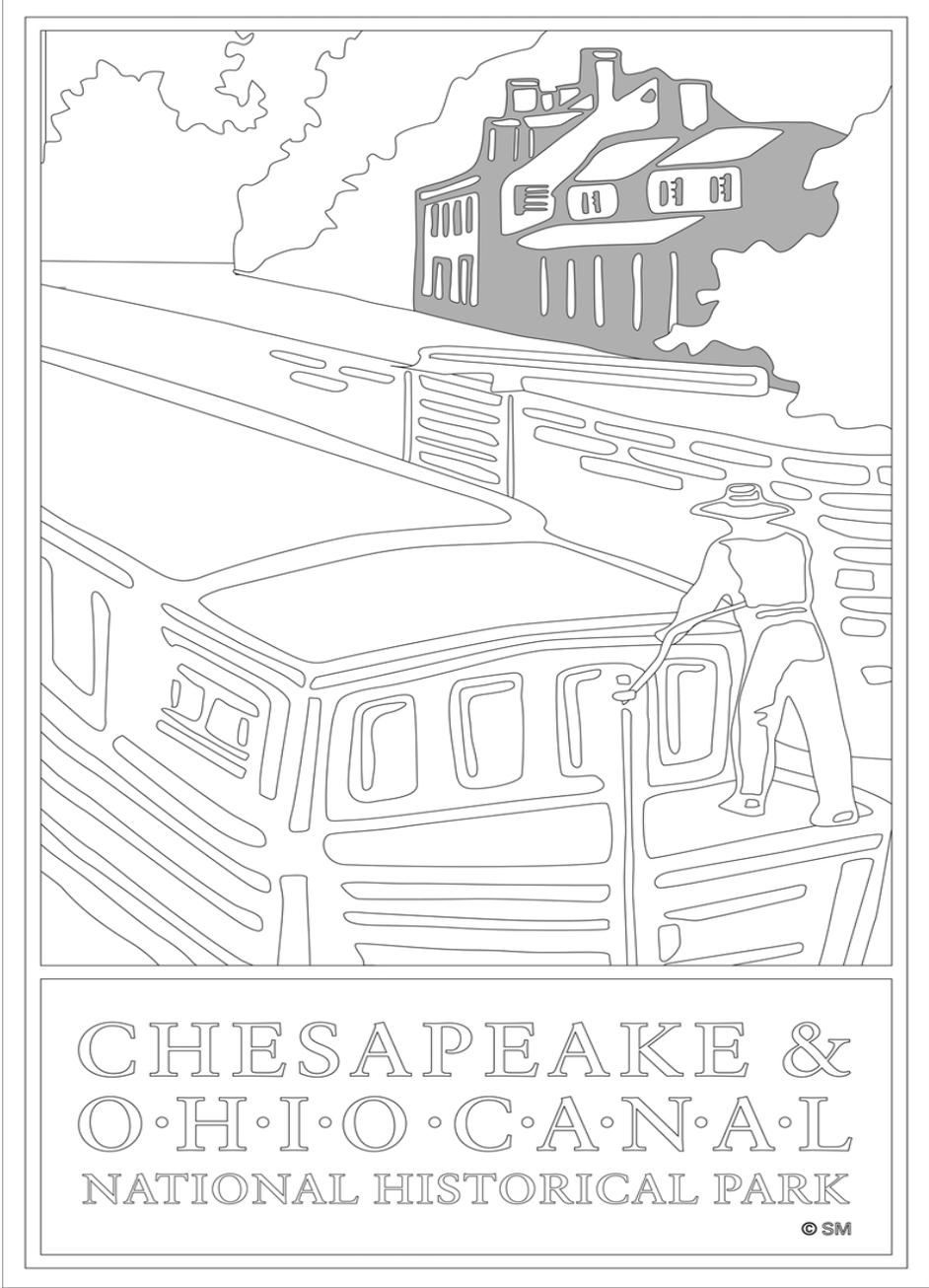
- 3) Review following vocabulary
Artifact: an object made by human beings
Canal: man-made waterway for transportation or irrigation
Environment: the sum of everything that surrounds animals and humans in the natural world, including the air, the water, and the soil
Man-Made: constructed by human beings
Museum: an institution or building where collections of valuable historical or artistic objects are reserved and displayed
Natural: produced by or existing in nature

Post Visit Activity: Let's Play! STEM and Writing

Upon returning to the classroom, teachers can utilize the following options for post-visit activities.

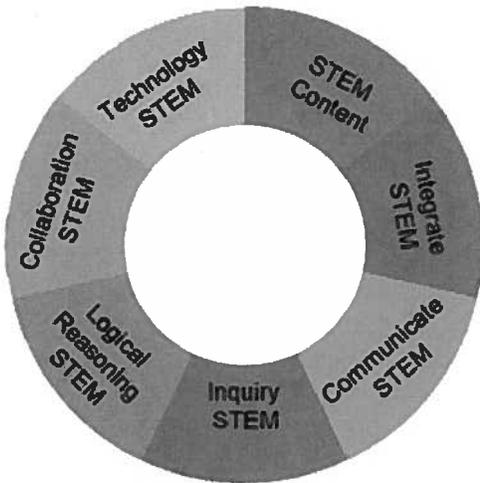
- 1) **STEM Activity:** Students use simple materials available in the classroom to design their toy based on their drawing. See attached STEM Centric Planning Guide with lesson details in the Appendix section of this document.
- 2) **Writing Opinion Piece:** Ask students to write a short summary of their toy including its name, purpose, what it's made of and why they think kids would like to play with it. Details including sample writing option paper is available in STEM Centric Planning Guide, see Appendix section below.

Appendix A: Pre-visit Coloring Sheet



Appendix B: Post-visit STEM Activity and Writing

Allegany County Public Schools - STEM Centric Planning Guide



Teacher: CASSIE MALLOW
Plan Title: Let's Play!
Grade: K
Marking Period: 1
Subject: Grade K

Overview:

Students will compare toys from the past to present, looking for similarities and differences in design and function. Students will research the development of toys. Next, students will design and construct a toy. Finally, students will write an opinion piece about their toy.

Real World Problem:

Students will design and create a toy from basic materials.

Product/Prototype/Model:

Students will design and create a toy.

Content Standards

Science Content Standards for K-8

Skills And Processes

- Constructing Knowledge
- Design And Systems
- Technology

Physics

- Mechanics

Transdisciplinary Connections:

Social Studies, Writing, Reading, Math, Art, Science

Enduring Understanding:

Students develop an awareness of change over time that prepares them to think historically about life in the past. They will examine the mechanics of toys from the past and present, then create a toy that moves.

Connection to STEM Careers:

Engineer

Essential Questions

Describe the differences between toys now and in the past. How do objects move?

5E Components

Component	Suggested Activities	STEM Standards
<p>Engagements (Repeated process) Did you design an activity that...</p> <p><input checked="" type="checkbox"/> captures students' attention?</p> <p><input checked="" type="checkbox"/> activates students' prior knowledge?</p>	<p>Students will watch and discuss the power point presentation Let's Play. They will have an opportunity to make connections and develop questions about toy design and purpose.</p>	<p><input type="checkbox"/> STEM Content</p> <p><input type="checkbox"/> Integrate STEM</p> <p><input type="checkbox"/> Communicate STEM</p> <p><input checked="" type="checkbox"/> Inquiry STEM</p> <p><input type="checkbox"/></p>

connects to a complex question, global issue, or real world problem?

Explorations

Did you design an activity that allows students to...

analyze the science, technology, engineering, mathematics, and other disciplines as appropriate in a complex questions, global issue, or real world problem?

apply the engineering design process, scientific investigation, and/or mathematical practices?

select and employ technological tools that are relevant to answering a complex question, investigating a global issue, or developing solutions to a real world problem?

Explanations

Did you design an activity that allows students to...?

analyze information, data and draw conclusions?

communicate understandings and possible solutions?

Extensions / Elaborations

Did you design an activity that allows students to... ?

modify experimental procedures, prototypes, models, or solutions?

analyze STEM careers taht relate to the learning activity?

Evaluations

Did you design an activity that allows students to...

demonstrate understanding of concepts through rubric-based performance assessments?

participate in peer review?

Students will design and construct a toy from available items. After they have explored the materials, they will illustrate and label their toy invention. Finally, students will build a toy. Emphasis should be placed on how the toy moves and its purpose. Students may use: cotton balls, pipe cleaners, plastic lids, popsicle sticks, film canisters, note cards, rubber bands, and any other material available.

Students will model how their invention is utilized. They will explain how the toy was constructed and if the toy was given a name.

Students will write an opinion piece about why kids would like their toy or why Toys R Us may want to sell their toy. Sentence frame may be provided. The toy_____ is_____ because.

Students should produce an illustration of a toy then construct a toy. Students will write one opinion sentence about their toy.

Logical Reasoning STEM

Collaboration STEM

Technology STEM

STEM Content

Integrate STEM

Communicate STEM

Inquiry STEM

Logical Reasoning STEM

Collaboration STEM

Technology STEM

STEM Content

Integrate STEM

Communicate STEM

Inquiry STEM

Logical Reasoning STEM

Collaboration STEM

Technology STEM

STEM Content

Integrate STEM

Communicate STEM

Inquiry STEM

Logical Reasoning STEM

Collaboration STEM

Technology STEM

STEM Content

Integrate STEM

Communicate STEM

Inquiry STEM

Logical Reasoning STEM

Collaboration STEM

Can you design a new toy?
Draw and label your idea below.

Name _____

Appendix C: Transportation Scholarship Application



Canal Classrooms Transportation Scholarship Fund

This grant is made possible through the park's partners in education, the C&O Canal Association and the C&O Canal Trust, by their generous members and donors. In addition, the National Park Foundation provided funding through the Ticket to Ride Grant Program. If you have questions, please contact cocanaleducation@nps.gov or call (301) 714-2213.

Eligibility

- Public, private, and charter schools.
- Students may be pre-kindergarten through grade 12. University and colleges are not eligible.
- Field trips must take place within the boundary of the C&O Canal National Historical Park and students must participate in curriculum-based (Canal Classrooms) programs or Bridging the Watershed (BTW) programs. Independent Teacher-led field trips are not eligible for funding.
- Schools will be required to complete pre-visit activities and/or post-visit activities to receive funding.
- Schools will be required to send a thank you letter, addressed to partner organizations (more details provided upon confirmation of funding).
- Funding is prioritized for Title I schools.
- Classes are eligible for reimbursement once per school year.

Deadlines

- Requests for reimbursement must be received at least two weeks prior to your field trip date. Confirmation of your application status will be sent via email within one week of submitting the application request.

Other information

- An invoice from the bus company, the district transportation office, the principal's office, or the school board is required as part of the reimbursement request.
- Reimbursement checks will be mailed within 30-days following the field trip and upon receiving the completed reimbursement request and invoice.
- As a condition of funding, park staff and partners may photograph students in the park. Park staff will contact you in advance of the field trip and send a photo release form.

Instructions

1. Complete the reimbursement request form before your field trip.
2. Attach an invoice.
3. Submit the form and invoice via email to cocanaleducation@nps.gov.
4. We will respond via email confirming or denying the reimbursement request within 5 business days.



Office Use Only

Date rec'd: _____
 Reviewed by: _____
 Approved by: _____
 CT
 CA
 NPF
 Check mailed: _____

Transportation Scholarship Application

Today's date _____

School name _____

Type Public school Private school Charter school

Title I? Yes No

Grade(s) _____

e-mail for bus reimbursement _____

Sponsoring teachers _____

(list all homeroom or subject teachers participating in the field trip)

Program date _____

(if the date is dependent on funding or has not been finalized, please provide the anticipated date)

Program location _____

(must be in the park)

of students _____

	\$		=	\$	
--	----	--	---	----	--

of buses X Cost per bus = Amount of reimbursement requested

(Contact your bus company or district transportation coordinator for an invoice. You must attach an invoice to this application.)

Check payable to _____

Mail check to _____

For marketing purposes only:

Has your school received a C&O Canal bus reimbursement in the past year?

Yes No

How did you hear about this grant?

Previous user NPS website Partner website Ranger
 Other: