

# Understanding Life in Jamestown



**Background:** You have been studying Jamestown and its place in history as the first permanent English settlement in America. Learn why and where the colony was built, what was used to build the fort, how the buildings were constructed, and what kind of tools were used. Take notes on the important things you learn. Be able to compare the technology of the time to the technology of present-day Virginia. Use a KWL format to help guide your research.

**Design Challenge:** Design and build a model of the first Jamestown settlement. Your model should represent the original design of the fort with walls, a main gate facing the correct direction, and bulwarks. There should be room inside for appropriate buildings as well as the tools and other belongings the settlers used in their day-to-day life. The base of the model should be no larger than three square feet. Include the use of simple machines (wheel and axle, inclined plane, lever, wedge, pulley, and screw) in your design. This may be done by building working miniatures of items that may have been found at the original fort.

## Criteria:

Your model should

- sit on a base no greater than 3 feet by 3 feet
- represent the design of the original fort
- contain at least one building inside the fort
- have simple machines incorporated into the building of the fort or represented by miniatures that you build.

**Materials:** You may select from the items below.

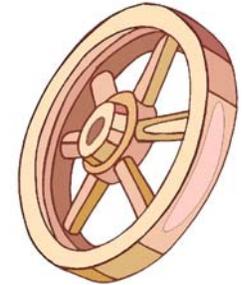
- cardboard
- construction paper
- card stock
- poster board
- brads
- paper clips
- craft sticks
- straws
- pipe cleaners
- 3 feet of string
- 12 inches of tape
- general art supplies (markers, colored pencils, crayons, scissors, rulers, paint, and glue)

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Targeted Standard of Learning: History and Social Science VS.3  
Supporting Standards of Learning: History and Social Science VS.1  
Science 4.1  
Mathematics 4.11  
English 4.1, 4.2, 4.5, 4.6

Targeted Standard for Technological Literacy: 9  
Supporting Standards for Technological Literacy: 8, 10, 11

# Understanding Life in Jamestown



**Targeted Standard of Learning: History VS.3**

- The student will demonstrate knowledge of the first permanent English settlement in America by
  - a) explaining the reasons for English colonization;
  - b) describing how geography influenced the decision to settle at Jamestown;
  - c) identifying the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;
  - d) identifying the importance of the Virginia Assembly(1619) as the first representative legislative body in English America;
  - e) identifying the importance of the arrival of Africans and women to the Jamestown settlement;
  - f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival;
  - g) describing the interactions between the English settlers and the Powhatan people, including the contributions of the Powhatans to the survival of the settlers.

**Targeted Standard for Technological Literacy: Standard 9**

- Students will develop an understanding of engineering design.

Prior Knowledge & Skill	Materials & Preparation	Safety Issues	Class Management	Materials Provided	Time Management
<ul style="list-style-type: none"> <li>• Exposure and on-going involvement in targeted History and Social Science Standard of Learning VS.3</li> <li>• Knowledge of simple machines</li> <li>• Some understanding of the design process</li> </ul>	<ul style="list-style-type: none"> <li>• Check Design Brief for recommended materials. Teachers may substitute materials.</li> <li>• Special Hint: Groups should create a plan as a team and then divide the construction work among them. For example, two members of the group might work on the fort while the others work on the miniatures to go inside the fort. As each team member finishes up a job, he or she helps other group members.</li> </ul>	<ul style="list-style-type: none"> <li>• Supervise cutting of craft sticks and pipe cleaners.</li> </ul>	<ul style="list-style-type: none"> <li>• Small groups of four or fewer</li> <li>• Each child keeps own Guided Portfolio.</li> </ul>	<ul style="list-style-type: none"> <li>• Design Brief</li> <li>• Guided Portfolio</li> <li>• Rubric Assessments</li> </ul>	<ul style="list-style-type: none"> <li>• Session 1: Introducing Design Brief and Portfolio (60 min.)</li> <li>• Sessions 2 and 3: Building (45 min. each)</li> <li>• Session 4: Sharing and evaluating (60 min.)</li> </ul>

Guided Portfolio—1

Name \_\_\_\_\_

# Understanding Life in Jamestown



Group Members: \_\_\_\_\_

\_\_\_\_\_

**1. What is the problem?** State the problem in *your own words*.

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Targeted Standard of Learning: History and Social Science VS.3  
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Targeted Standard for Technological Literacy: 9  
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Name \_\_\_\_\_



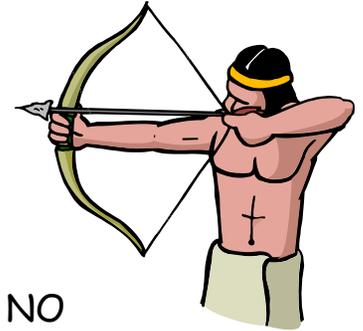
## 2. Brainstorm solutions.

Draw or describe some possible solutions.

A large graphic organizer consisting of four rounded rectangular boxes arranged in a 2x2 grid. The boxes are connected by lines to a central lightbulb icon. The lightbulb is drawn with radiating lines, indicating it is lit. The boxes are empty, intended for students to draw or describe solutions.



Name \_\_\_\_\_



#### 4. Test your solution.

- Is the base of your model no greater than 3 feet by 3 feet? YES NO
- Does your model represent the design of the original fort? YES NO
- Does your model contain at least one building inside? YES NO
- Does your model have examples of simple machines incorporated into the building of the fort or represented by miniatures that you built? YES NO



Name \_\_\_\_\_

### 5. Evaluate your solution.

Was it the best solution? Would one of your other ideas have been better? Why or why not?



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What would you have done differently?

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Could you add to it to make it better? What would you add to it?

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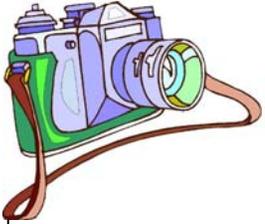
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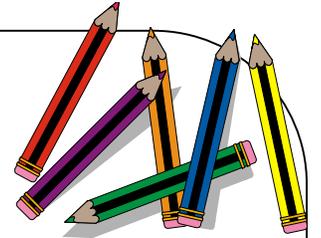
Guided Portfolio—6

Name \_\_\_\_\_

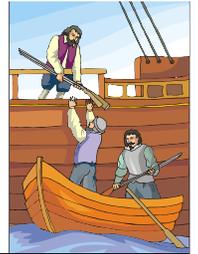
Attach a photograph of your final project here. If you do not have a photograph, draw a picture of your final project.



How would you make your project better? Draw a picture showing how it would look after you have made changes to it.



Name \_\_\_\_\_



# KWL: Understanding Life in Jamestown

What we <u>K</u> now.	What we <u>W</u> ant to know.	What we <u>L</u> earned.
	<p>Note: The teacher should make sure that all required information is listed in question form on the "W" (what we want to learn) section of the KWL. Use your <i>Virginia SOL Teacher Resource Guide</i> to check what knowledge, skills, and processes are considered essential for supporting the History and Social Science Standards of Learning VS1 and VS3. When necessary refer to the Resource Guide for previous grade levels.</p>	

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Targeted Standard for Technological Literacy: 9  
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# Rubric for *Understanding Life in Jamestown*

Name \_\_\_\_\_

Date \_\_\_\_\_



Design Brief Rubric	no evidence	limited understanding	some understanding with room for improvement	good understanding with room for improvement	substantial understanding
	0	1	2	3	4
The student restated the problem in his/her own words.					
The student brainstormed more than one idea.					
The student created and labeled a sketch to use as a "blueprint."					
The student included notes about problems that occurred and their solutions.					
<b>The student tested the model to make sure</b> <ul style="list-style-type: none"> <li>it sat on a base no greater than three feet square</li> <li>it was modeled after the design of the original fort</li> <li>it contained at least one building inside.</li> </ul>					
<b>The student tested the model to make sure it had a/an</b> <ul style="list-style-type: none"> <li>wheel and axle</li> <li>inclined plane</li> <li>lever</li> <li>wedge</li> <li>pulley</li> <li>screw.</li> </ul>					
The student evaluated how he/she could make it better next time.					

# Rubric for *Understanding Life in Jamestown*

Name \_\_\_\_\_

Date \_\_\_\_\_

<p style="text-align: center;"><b>Oral Communication Rubric</b></p>	<p style="text-align: center;">no evidence  0</p>	<p style="text-align: center;">limited understanding  1</p>	<p style="text-align: center;">some understanding with room for improvement  2</p>	<p style="text-align: center;">good understanding with room for improvement  3</p>	<p style="text-align: center;">substantial understanding  4</p>
<p><b>4.1 The student will use effective communication skills in a variety of settings.</b></p> <p>a) Present accurate directions to individuals and small groups.</p> <p>b) Contribute to group discussions.</p> <p>c) Seek ideas and opinions of others.</p> <p>d) Use evidence to support opinions.</p> <p>e) Use grammatically correct language and specific vocabulary to communicate ideas.</p>					
<p><b>4.2 The student will make and listen to oral presentations and reports.</b></p> <p>a) Use subject-related information and vocabulary.</p> <p>b) Listen to and record information.</p> <p>c) Organize information for clarity.</p>					



# Standards of Learning

## English (2002)

### Oral Language

- 4.1 The student will use effective oral communication skills in a variety of settings.
- a) Present accurate directions to individuals and small groups.
  - b) Contribute to group discussions.
  - c) Seek the ideas and opinions of others.
  - d) Use evidence to support opinions.
  - e) Use grammatically correct language and specific vocabulary to communicate ideas.
- 4.2 The student will make and listen to oral presentations and reports.
- a) Use subject-related information and vocabulary.
  - b) Listen to and record information.
  - c) Organize information for clarity.

### Reading

- 4.5 The student will read and demonstrate comprehension of nonfiction.
- a) Use text organizers, such as type, headings, and graphics, to predict and categorize information.
  - b) Formulate questions that might be answered in the selection.
  - c) Explain the author's purpose.
  - d) Make literal inferences using information from texts.
  - e) Draw conclusions using information from texts.
  - f) Summarize content of selection, identifying important ideas and providing details for each important idea.
  - g) Describe relationship between content and previously learned concepts or skills.
  - h) Distinguish between cause and effect and between fact and opinion.
  - i) Identify new information gained from reading.
- 4.6 The student will demonstrate comprehension of information resources to research a topic.
- a) Construct questions about a topic.
  - b) Collect information using the resources of the media center, including online, print, and media resources.
  - c) Evaluate and synthesize information.

## Science (2003)

### *Scientific Investigation, Reasoning, and Logic*

- 4.1 The student will plan and conduct investigations in which
- distinctions are made among observations, conclusions, inferences, and predictions;
  - hypotheses are formulated based on cause and effect relationships;
  - variables that must be held constant in an experimental situation are defined;
  - appropriate instruments are selected to measure linear distance, volume, mass, and temperature;
  - appropriate metric measures are used to collect, record, and report data;
  - data are displayed using bar and basic line graphs;
  - numerical data that are contradictory or unusual in experimental results are recognized; and
  - predictions are made based on data from picture graphs, bar graphs, and basic line graphs;

## Mathematics (2001)

### *Measurement*

- 4.11 The student will
- estimate and measure length, using actual measuring devices, and describe the results in both metric and U.S. Customary units, including part of an inch ( $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$ ), inches, feet, yards, millimeters, centimeters, and meters;
  - identify equivalent measurements between units within the U.S. Customary system (inches and feet; feet and yards; inches and yards) and between units within the metric system (millimeters and centimeters; centimeters and meters; and millimeters and meters); and
  - estimate the conversion of inches and centimeters, yards and meters, and miles and kilometers, using approximate comparisons (1 inch is about 2.5 centimeters, 1 meter is a little longer than 1 yard, 1 mile is slightly farther than 1.5 kilometers, or 1 kilometer is slightly farther than half a mile). \*
- \* The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. Customary and metric units.*

## History and Social Science (2001)

### Virginia Studies

#### *Skills*

- VS.1 The student will develop skills for historical and geographical analysis including the ability to
- identify and interpret artifacts and primary and secondary source documents to understand events in history;
  - determine cause and effect relationships;
  - compare and contrast historical events;
  - draw conclusions and make generalizations;
  - make connections between past and present;
  - sequence events in Virginia history;
  - interpret ideas and events from different historical perspectives;

## History and Social Science (2001) continued

### Virginia Studies

#### *Skills*

- h) evaluate and discuss issues orally and in writing;
- i) analyze and interpret maps to explain relationships among landforms, water features, climatic characteristics, and historical events.

#### *Colonization and Conflict: 1607 through the American Revolution*

VS.3 The student will demonstrate knowledge of the first permanent English settlement in America by

- a) explaining the reasons for English colonization;
- b) describing how geography influenced the decision to settle at Jamestown;
- c) identifying the importance of the charters of the Virginia Company of London in establishing the Jamestown settlement;
- d) identifying the importance of the Virginia Assembly(1619) as the first representative legislative body in English America;
- e) identifying the importance of the arrival of Africans and women to the Jamestown settlement;
- f) describing the hardships faced by settlers at Jamestown and the changes that took place to ensure survival;
- g) describing the interactions between the English settlers and the Powhatan people, including the contributions of the Powhatans to the survival of the settlers.

## Standards for Technological Literacy

Standard 8: Students will develop an understanding of the attributes of design.

Standard 9: Students will develop an understanding of engineering design.

Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

Standard 11: Students will develop the abilities to apply the design process.