

# Famous Americans

## Katie Plemeons



**Context:** This is a 5<sup>th</sup> grade STEM activity for Social Studies. We have been studying famous Revolutionary War individuals and their impact on history. Students have researched and found 5 accurate facts about their famous American. This is a fun way to keep students interested and engaged throughout the research process.

**Skills Needed:** The ability to use scissors, glue, crayons, markers, and additional materials deemed necessary to creatively represent their famous American. Students also need to understand and apply the concept of motion, pneumatics and force.

**Goals of Activity:** To create an accurately and historically correct representation of their famous American as a “Bottle Buddy” with a pneumatic and a moveable component.

**Literature:** Non-fiction books provided by the library at school on their specific famous American used for research and their textbook.

**Time Frame:** Five 30 minute class periods to complete

**Group Size:** Individual project

**Materials:** 2L soda bottle, construction paper, Styrofoam ball, glue sticks, popsicle sticks, rocks/sand, recycled materials, paper fasteners/brads, index cards, tooth picks, yarn, and additional unlimited craft supplies

**Tools:** Scissors, hot glue gun, hole punch, markers, crayons, colored pencils, stapler, Crop-O-Dile, safety goggles, exacto knife

**Safety Measures:** Review use of safety procedures for provided materials

**Classroom Set-Up:** Tables/desks, hot glue station and exacto knife (teacher only), student-safe tools and materials in a central location. Teacher will be assisting students and walking around to provide support.

### QUICK VIEW

**Grade:** 5

**Time:** Five 30 minute sessions

**Group:** Individual

**Safety:** Review skills for materials provided

**Goals:**

- Critical thinking skills
- Research skills
- Problem solving skills
- Science – force, energy, motion

**Standards:**

Virginia SOL

Social Science: USI6, USI7

Science: 4.2, 5.1, 5.4

Standards for Technological Literacy

STL8, STLII, STL16

## Famous Americans

**Background:** You are a member of Greenville Elementary School's Historical Society. The other students in the school would like to know more about famous Americans during the American Revolution.



**Challenge:** Your challenge is to design and create a historically correct representation of your famous American using a 2 liter bottle. It must include time era appropriate attire and accessories. It will also have one moveable part AND one pneumatic feature. Your famous American's name and five historically accurate facts (taken from your research) must be neatly written on a 5x7 index card to be displayed with your bottle buddy. Your design must be neat and creative. You will present your famous American bottle buddy and facts to the class.

### Criteria:

- 2 Liter soda bottle
- Historically accurate attire/clothing of your famous American
- Rocks/weights in bottom of bottle/stand on its own
- One moveable part
- One pneumatic feature
- Name and five historically accurate facts on 5x7 index card
- Neat and creative

### Materials:

2L soda bottle, construction paper, Styrofoam ball, glue sticks, popsicle sticks, rocks/sand, recycled materials, paper fasteners, index cards, tooth picks, yarn, and additional unlimited craft supplies

### Tools:

Scissors, hot glue gun, hole punch, markers, crayons, colored pencils, stapler, Crop-O-Dile, brads, safety goggles, exacto knife

STL Standards 8, II, I6  
SOL Social Science  
SOL Science

Elements of Design, Technology, and Engineering  
American Revolution  
Force, Motion, Energy

Created by Katie Plemons  
5<sup>th</sup> grade Design Brief  
Greenville Elementary

**Portfolio: Famous American Bottle Buddy**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**1. What is the problem?**

State the problem in your own words.

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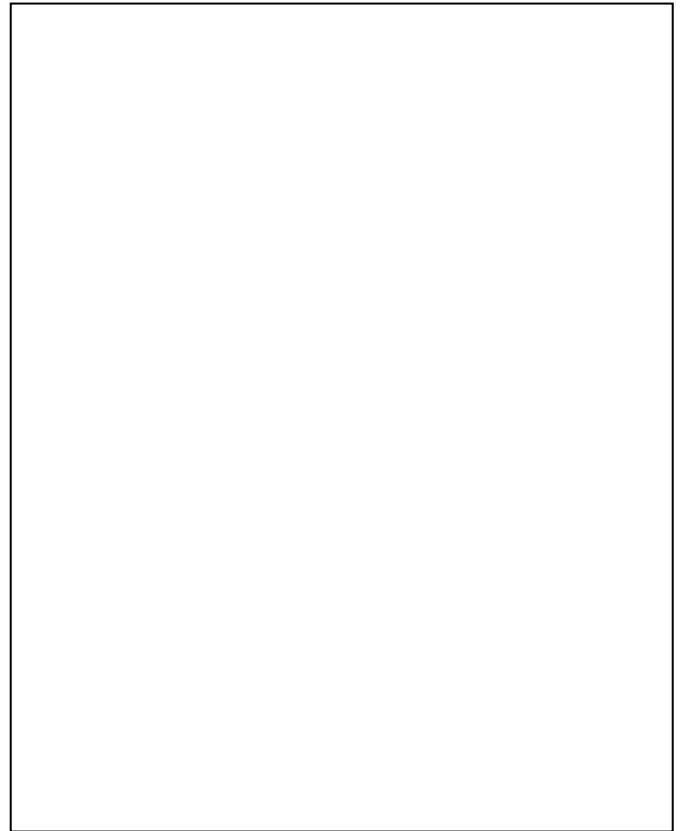

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**2. Brainstorm solutions.**

Sketch or describe possible ideas and solutions.



3. **Build your famous American.**

4. **What is your moveable part?**

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5. **What is your pneumatic feature and what was your design choice?**

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6. **What issues did you come across while building your bottle buddy and how did you solve them?**

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Rubric for: Famous American Bottle Buddies**

<b>Criteria Assessed</b>	<b>Beginner</b>	<b>Apprentice</b>	<b>Master</b>	<b>Expert</b>
<b>Portfolio</b>				
<b>Completion</b>	3 or more incomplete sections, lacking detail, complete sentences and understanding of project	No more than 2 sections incomplete, lacking some detail and some complete sentences	All questions answered, but lacking details and some complete sentences	All questions answered in detail and in completed sentences
<b>Bottle Buddy</b>				
<b>Structure</b>	Did not use a 2L bottle or weighted material	Use of a 2L bottle, but no weighted material	Use of a 2L bottle, but insufficient weighted material	Use of a 2L bottle and sufficient weighted material
<b>Clothing/ Accessories</b>	Did not demonstrate understanding of era appropriate attire	Showed limited understanding of era appropriate attire	Showed understanding of era appropriate attire	Showed understanding of era appropriate attire and included era appropriate accessories
<b>Moveable Part</b>	Did not include a moveable part	Moveable part included, but did not function properly	Moveable part included and functioning	Moveable part included, functioning, and creatively designed
<b>Pneumatic Part</b>	Did not include a pneumatic part	Pneumatic part included, but did not function properly	Pneumatic part included and functioning	Pneumatic part included, functioning, and creatively designed
<b>Research Card</b>	Missing criteria and has more than 4 grammatical errors	Most criteria is met and has more than 2 grammatical errors	All criteria included and 2 or fewer grammatical errors	All criteria included and zero grammatical errors
<b>Creativity</b>	Lacking in creativity and little effort shown	Shows some creativity but lacks neatness	Shows creativity and neatness	Shows a higher level of creativity and neatness