

2020 SAMPLE Three-Day Seminar Schedule



Apprenticeships, STEM, and Colonial Daily Life

This seminar explores the interdisciplinary links between colonial history and STEM in trades, specifically applied sciences and engineering. Through a hands-on, Project Based Learning (PBL) approach, participants engage with trade experts, investigate applied science principles such as the use of simple machines, chemical reactions, engineering, and combine these experiences into dynamic classroom lesson plans that incorporate primary sources and PBL.

As a result of this seminar, teachers will be able to:

- Identify scientific processes and theories that were necessary for tradespeople to create tools and equipment for daily life.
- Investigate the importance of the scientific method in the workplace for tradespeople.
- Create interdisciplinary lesson plans that use trades as a lens to demonstrate STEM principles and consult tradespeople to gather primary source information to share with their students.
- Experience 19 contact hours.

Compelling Question:

- How can you apply scientific principles and 18th-century technology to provide the necessities of daily life past, present, and future?

Travel / Arrival Day

All Day	Teachers arrive and check in	Williamsburg Woodlands Hotel
7:00 p.m.	Orientation	Woodlands Conference Center
8:00 p.m.	Dinner on Own	

Education Resource Library

Please take a few minutes this afternoon or evening to create an account on the Colonial Williamsburg Education Resource Library. This is our repository for the educational videos, primary sources and lesson plans we use throughout our Teacher Institute Programs.

Visit: <http://resourcelibrary.history.org>

Use **Registration Code:** To be shared with participants

Please do not make dinner or evening program reservations that conflict with Orientation. Consider travel time to different parts of the historic area can be 15-30 minutes on foot or by shuttle.

Day 1

Supporting Questions:

- What were tradespeople's role and contributions in the eighteenth-century community?
- How did tradespeople play a role in the eighteenth-century Virginian and British economy?
- What do primary sources tell us about the lives of eighteenth-century tradespeople?
- What are the scientific principles behind eighteenth-century technology?
- How can we use an eighteenth-century structure to investigate the past?

7–8:00 a.m. Breakfast

8:00 a.m. Travel by Bus to Historic Area Woodlands Hotel Departure Area

8:15 a.m. Overview of the Historic Area
On this short walk through town, learn about the role and context of historic trades in the eighteenth century.

9:15 a.m. Agriculture Prentis Farm Site

10:00 a.m. Break & Travel to Session Location

10:15 a.m. A Scientific Toolbox Classroom
Teachers will have an opportunity to identify the scientific principles behind eighteenth-century technology and describe how these scientific principles work. Topics to be explored are chemical and physical changes, states and properties of matter, and simple machines, i.e. levers, pulleys, incline plane, and wheel and axle.

11:15 a.m. Travel

11:30 a.m. Lunch Tavern

1:30 p.m. Visit Special Collections Rockefeller Library
Analyze a selection of primary documents pertaining to eighteenth-century trades and use them to investigate the duties, work, and processes of eighteenth-century tradespeople.

2:30 p.m. Break & Travel

2:45 p.m. Colonial Williamsburg Education Resource Library Classroom
Explore the rich resources on historic trades and daily life that are available through the Colonial Williamsburg Education Resource Library and learn how they can be used to supplement your curriculum.

SAMPLE SCHEDULE

Subject to Change

3:15 p.m.	End of Seminar Project: Creating a Project Based Lesson	Classroom
3:45 p.m.	Debrief and Conclude	Classroom
4:00 p.m.	Exploration Time	
5:00 p.m.	Dinner on Own	

Day 2

Supporting Questions:

- Where would you live, work, and govern in the eighteenth century?
- What were eighteenth century building methods like?
- How can we apply scientific principles through the building trades?

7–8:15 a.m. Breakfast

8:15 a.m. Travel by bus to Historic Area

8:30 a.m. Surveying

Owning land was an important goal for many who settled in the new British colonies. But once land was purchased, whether in town or on the western frontier, how did you know where your land ended and your neighbors' began? Explore how land in the eighteenth century was divided and how surveying techniques can teach math and science concepts in the classroom.

9:00 a.m. Brickmaking

Brickyard

9:45 a.m. Break and Walk

10:00 a.m. Carpentry

Carpenter's Yard

10:45 a.m. Break & Travel

11:00 a.m. Joiner's

Joinery Shop

11:45 a.m. Debrief & Afternoon Assignment

Classroom

Teachers will have time to investigate various trade shops of their choice to develop project-based lessons on travel, clothing, foodways, agriculture, etc. focused on the use of chemical reactions, forces and motion, matter, growth of plant materials, or engineering design.

12:15 p.m. Lunch & Exploration in Historic Area

Teachers will have time to investigate various trade shops of their choice to develop project-based lessons on travel, clothing, foodways, agriculture, etc. focused on the use of chemical reactions, forces and motion, matter, growth of plant materials, or engineering design

4:00 p.m. Debrief, Checkout & Departure Procedures

Classroom

4:45 p.m. Donor Recognition

Classroom

5:15 p.m. Tavern Dinner

Tavern

Day 3

Supporting Questions:

- How will you implement project based learning using scientific principles and 18th – century technology in your classroom?

7–8:15 a.m. Breakfast

8:00 a.m. Travel by Bus to Historic Area

8:30 a.m. Investigating the Past Robert Carter House

9:30 a.m. Break & Travel

9:45 a.m. Panel Discussion with Tradespeople Classroom
Tradespeople will discuss their work in backwards engineering in their trade.

10:15 a.m. Debrief Project Based Learning Lessons Classroom
Teacher Institute staff and tradespeople will review participant’s project-based lesson plans and share ideas for the classroom.

11:00 a.m. Break

11:15 a.m. Reflections and Sharing Classroom
How will scientific principles and eighteenth-century technology help to build collaboration, innovation and creativity?

11:45 a.m. Graduation & Wrap-Up Classroom

12:00 p.m. Group Photo

12:15 p.m. Departure (Lunch on Own)