



**New England Electric Railway Historical Society
Seashore Trolley Museum
195 Log Cabin Road, PO Box A, Kennebunkport, ME 04046
Trolleymuseum.org**

History in Motion: Public Transportation Connecting Maine Communities Lesson Plans and Bridging Documents

Unit Objectives

Essential Understandings:

- Public transportation has been a vital part of the social structure of the United States for most of our nation's history
- Transportation strategies and technologies overcome geographic obstacles and enable communities and cultural groups to connect with one another, enabling economic growth and sometimes cultural conflict
- Industrialization, in general, and the invention of electric railways, buses, and automobiles, in particular, changed the diversity of Maine and the social mobility of its population
- Natural resources, such as rivers, coal, and timber, were used to power trolleys and factories with steam power and electricity.

Essential Questions:

- What types of public transportation have existed in Maine history?
- How do electric railways differ from railroads?
- Who used electric railways and why?
- How and why were buses invented?
- How did diverse cultural groups use, or were prevented from using, public transportation in Maine and beyond?

BRIDGING DOCUMENT: Trolley Museum Educational Programming to Maine Learning Results

Maine Learning Results and History in Motion learning outcomes:

Social Studies - Science and Technology - Language Arts

Social Studies

- A1-3. Researching, Developing Positions, Making Decisions, and Taking Action on Current Social Studies Issues using Social Studies Knowledge and Skills
 - Students will learn about the current economic challenges surrounding our predominantly automobile-centered transportation system in the United States (changing price of, insecurity of, and economic consequences of petroleum).
 - Students will identify and research questions and seek multiple perspective from multiple sources, identifying key words and concepts and distinguishing between facts and opinions.
 - Students will research and consider some of the current proposals involving public transportation and energy efficiency, collaboratively discussing and examining alternative ideas and making a real or simulated decision, e.g., light rail transportation or solar and wind alternative energy.
- Students will take a civic action or service-learning project to address these issues, using social studies skills.

- C1. Economic Knowledge, Concepts, Themes, and Patterns
 - Students understand personal economics and the basis of the economies of the community, Maine, the United States, and various regions of the world.
 - Students will learn how goods, such as mohair plush, were produced in textile mills and how trolleys were involved in the distribution of workers and raw materials.
 - Students will learn how streetcar trolley companies served entrepreneurs, such as owners of amusement parks, casinos, and resorts, by providing transportation for community members and tourists seeking entertainment and leisure.
 - Students will learn how natural resources, such as rivers and coal, were used as power sources for the production of electricity (or steam) that powered trolleys and factories.
 - Students will learn how trolleys provided affordable transportation for members of the working class, particularly French Canadian and Greek immigrants, to reach their jobs and schools.
- D2. Individual, Cultural, International, and Global Connections in Geography
 - Students understand geographic aspects of unity and diversity in the community, Maine, and regions of the United States and the World, including Maine Native American communities.
 - Students will learn how geographic features such as river courses and coastlines unite communities and regions and support diversity by providing locations for transportation routes or transportation breaks.
 - Students will discover the impact of a geographic feature, such as a river, upon the daily life of a community, particularly with respect to hydropower and textile manufacturing mills.
 - Students will discover how transportation strategies and technologies overcome geographic obstacles and enable communities to connect with one another, enabling economic growth.
- E1. Historical Concepts, Themes and Patterns
 - Students understand various major eras in the history of the community, Maine, and the United States.
 - Students learn that mass transportation has been a vital part of the social structure of the United States for most of our nation's history.
 - Students learn about how Maine experienced the development of the industrial United States, 1865-1914.
 - Students analyze past human experience based upon various historical evidence, print and non-print.

Science and Technology

- A1. Unifying Themes - Systems
 - Students explain interactions between parts that make up whole man-made and natural things
 - Students will learn how the Atlantic Shore Line trolley system connected towns and cities in Maine with those in New Hampshire, Massachusetts and beyond using an intricate system of rails, signals, power sources, schedules, and standardized operating systems.
 - Students will also learn how failure in these systems could and did lead to unpredictable or sometimes deadly consequences

- Students will learn how the Kennebunks were a hub or transportation break for connections between horse-drawn carriages, trains, electric streetcars, and shipping.
- B1. Skills and Traits of Scientific Inquiry
 - Students plan, conduct, analyze data from, and communicate results of investigations, including fair tests
 - Pose investigable questions and seek answers from reliable sources of scientific information and from their own investigations;
 - Use simple equipment, tools, and appropriate metric units of measurement to gather data and extend the senses;
 - Use data to construct and support a reasonable explanation;
 - Communicate scientific procedures and explanations;
- B2. Skills and Traits of Technological Design
 - Students use a design process, simple tools, and a variety of materials to solve a problem or create a product, recognizing the constraints that need to be considered.
 - Identify and explain a simple design problem and a solution related to the problem;
 - Propose a solution to a design problem that recognizes constraints including cost, materials, time, space, or safety;
 - Use appropriate tools, materials, safe techniques, and quantitative measurements to implement a proposed solution to a design problem;
 - Balance simple constraints in carrying out a proposed solution to a design problem;
 - Evaluate their own design results as well as those of others, using established criteria;
 - Modify designs based on results of evaluations;
 - Present the design problem, process, and design or solution using oral, written, and/or pictorial means of communication.
- C2. Understandings About Science and Technology
 - Students describe why people use science and technology and how scientists and engineers work
 - Students will learn how inventions, such as the horse trolley, the electric trolley and the automobile, were scientific designs intended to solve economic and geographic challenges of their day.
- C3. Science, Technology, and Society
 - Students identify and describe the influences of science and technology on people and the environment.
 - Students will learn how industrialization, in general, and the invention of railroads, steamboats, and automobiles, changed life in Maine with a particular emphasis on social mobility and the resource extraction associated with trolleys (e.g., effects of damming rivers and burning coal).

Language Arts

- A1. Reading - Interconnected Elements
 - Students read and draw conclusions from texts, within a grade appropriate span of text complexity, by applying their knowledge and strategies of comprehension, vocabulary, alphabets, and fluency.
 - Students read age-appropriate historic essays texts provided and use the Vocabulary Worksheet.
- A3. Reading - Informational Texts

- Students read, paraphrase, and summarize information texts, within a grade appropriate span of text complexity, for different purposes.
 - Students read primary sources, including historic articles from turn-of-the-century Maine newspapers.
- B1. Writing – Interconnected Elements
 - Students use a writing process with an emphasis on the development of a central idea, for a variety of audiences and purposes.
 - Students use the Graphic Organizer provided to pre-write their own newspaper article about trolley travel in Maine.
- B2. Writing Narrative
 - Students write narratives that relate events, ideas, observations, or recollections.
 - Students draft their own newspaper article.
- C1. Research
 - Students create, identify, and answer research questions by gathering information from print and non-print sources and documenting sources and communicating findings.
 - Students investigate primary resources using the Investigative Inquiry Sheet during their field trip or library research.