

Elijah McCoy

Lesson Plan

Overview:

Elijah McCoy was a prolific inventor and innovator, the holder of 57 patents, mostly on designs related to locomotives. Born in Canada and educated in Scotland, he spent most of his professional life in and around Detroit, Michigan, working in the railroad industry while also continuing to produce new inventions. The son of escaped slaves, McCoy overcame early discrimination to become an internationally respected authority in his field. His innovations in automated lubrication systems for trains are credited with helping to radically improve efficiency and travel time, and he was widely celebrated by his contemporaries as a leader and model for Black America in the first generation after Emancipation.

This is an appropriate lesson for Black History Month, studies on the Civil War or Underground Railroad, the Fugitive Slave Act, Westward Expansion, railroads, internal American migration, the Industrial Age, inventions, patents, and technology advancements.

Lesson Prompt:

Have you ever wondered where many of the inventions we take for granted came from, and who created them? Here is the story of one very prolific and financially successful inventor who became a role model for other Black Americans in the years after emancipation. His name became synonymous with real quality.

Share the prepared Powerpoint presentation on the life of Elijah McCoy.

Select activities from the accompanying Activity Pack according to your time allowance and student appropriateness. Included in the Activity Pack are:

Multiple Choice Questions (Grades 2-8)

Critical Thinking Exercises (Grades K-5 with guidance; Grades 6-8 unassisted)

Coloring Page (Grades K-3)

Crossword Puzzle (Grades K-5)

Additional Reading/Viewing (Grades K-8 - varies by video)

Vocabulary:

Students can look up and define the following vocabulary words:

Underground Railroad

Apprenticeship

Mechanical Engineering

Locomotive

Discrimination

Lubricate

Patent

Bearings

Genuine

Authentic

Quality

Consultant

Character

Standards and Learning Objectives

Mapped to the College, Career and Civic Life (C3) Framework for Social Studies State Standards published by the National Council for the Social Studies

Grades K-2

English Language Arts:

D1.3.K-2. Identify facts and concepts associated with a supporting question.

Economics:

D2. Eco.1. K-2. Explain how scarcity necessitates decision making.

D2. Eco.2. K-2. Identify the benefits and costs of making various personal decisions.

D2. Eco.3. K-2. Describe the skills and knowledge required to produce certain goods and services.

Geography:

D2 Geo.1.K-2. Construct maps, graphs, and other representations of familiar places.

D2. Geo.5.K-2. Describe how human activities affect the cultural and environmental characteristics of places or regions.

D2. Geo.7.K-2. Explain why and how people, goods, and ideas move from place to place.

History:

D2. His.1. K-2. Create a chronological sequence of multiple events.

D2. His.2. K-2. Compare life in the past to life today.

D2. His.3. K-2. Generate questions about individuals and groups who have shaped a significant historical change.

Communicating and Critiquing Conclusions:

D4.2.K-2. Construct explanations using correct sequence and relevant information.

D4.5.K-2. Ask and answer questions about explanations.

D4.6.K-2. Identify and explain a range of local, regional, and global problems, and some ways in which people are trying to address these problems.

D4.7.K-2. Identify ways to take action to help address local, regional, and global problems.

Grades 3-5

English Language Arts:

D1.4.3-5. Explain how supporting questions help answer compelling questions in an inquiry.

Economics:

D2. Eco.1.3-5. Compare the benefits and costs of individual choices.

D2. Eco.2.3-5. Identify positive and negative incentives that influence the decisions people make.

D2. Eco.3.3-5. Identify examples of the variety of resources (human capital, physical capital, and natural resources) that are used to produce goods and services.

D2. Eco.4.3-5. Explain why individuals and businesses specialize and trade.

Geography:

D2. Geo.1.3-5. Construct maps and other graphic representations of both familiar and unfamiliar places.

D2. Geo.4.3-5. Explain how culture influences the way people modify and adapt to their environments.

D2. Geo.7.3-5. Explain how cultural and environmental characteristics affect the distribution and movement of people, goods, and ideas.

History:

D2. His.2.3-5. Compare life in specific historical time periods to life today.

D2. His.3.3-5. Generate questions about individuals and groups who have shaped significant historical changes and continuities.

D2. His.14.3-5. Explain probable causes and effects of events and developments.

Communicating and Critiquing Conclusions:

D4.2.3-5. Construct explanations using reasoning, correct sequence, examples, and details with relevant information and data.

D4.4.3-5. Critique arguments.

D4.5.3-5. Critique explanations.

D4.6.3-5. Draw on disciplinary concepts to explain the challenges people have faced and opportunities they have created, in addressing local, regional, and global problems at various times and places.

D4.7.3-5. Explain different strategies and approaches students and others could take in working alone and together to address local, regional, and global problems, and predict possible results of their actions.

D4.8.3-5. Use a range of deliberative and democratic procedures to make decisions about and act on civic problems in their classrooms and schools.

Grades 6-8

English Language Arts:

D1.4.6-8. Explain how the relationship between supporting questions and compelling questions is mutually reinforcing.

Economics:

D2. Eco.1.6-8. Explain how economic decisions affect the well-being of individuals, businesses, and society.

D2. Eco.2.6-8. Evaluate alternative approaches or solutions to current economic issues in terms of benefits and costs for different groups and society as a whole.

D2. Eco.7.6-8. Analyze the role of innovation and entrepreneurship in a market economy.

Geography:

D2. Geo.4.6-8. Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

History:

D2. His.3.6-8. Use questions generated about individuals and groups to analyze why they, and the developments they shaped, are seen as historically significant.

D2. His.1.6-8. Analyze connections among events and developments in broader historical contexts.

D2. His.2.6-8. Classify series of historical events and developments as examples of change and/or continuity.

D2. His.14.6-8. Explain multiple causes and effects of events and developments in the past.

D2. His.15.6-8. Evaluate the relative influence of various causes of events and developments in the past.

Communicating and Critiquing Conclusions:

D4.2.6-8. Construct explanations using reasoning, correct sequence, examples, and details with relevant information and data, while acknowledging the strengths and weaknesses of the explanations.

D4.4.6-8. Critique arguments for credibility.

D4.5.6-8. Critique the structure of explanations.

D4.6.6-8. Draw on multiple disciplinary lenses to analyze how a specific problem can manifest itself at local, regional, and global levels over time, identifying its characteristics and causes, and the challenges and opportunities faced by those trying to address the problem.

D4.7.6-8. Assess their individual and collective capacities to take action to address local, regional, and global problems, taking into account a range of possible levers of power, strategies, and potential outcomes.

D4.8.6-8. Apply a range of deliberative and democratic procedures to make decisions and take action in their classrooms and schools, and in out-of-school civic contexts.