

STEAMS Labor Day Project-Based Lesson Plan (Grades 7-12)

Objective: The objective of this interdisciplinary lesson plan is to explore the historical significance, technological advancements, engineering innovations, artistic expressions, and socioeconomic impacts related to Labor Day. Through a STEAMS (Science, Technology, Engineering, Arts, Mathematics, and Social Studies) approach, students will engage in activities that highlight the contributions of labor movements, the evolution of work, and the ongoing importance of labor rights.

Key Components

Science (S): The Impact of Industrialization on Public Health

- ❖ **Topic:**
Examine how the rise of industrialization during the late 19th and early 20th centuries affected public health and the environment.
- ❖ **Projects:**
 - Industrialization and Health:** Research the health issues faced by workers during the Industrial Revolution, such as respiratory problems from factory work, and how these conditions led to the push for labor rights and better working conditions.
 - Environmental Impact of Industry:** Design a project that explores the environmental impact of early industrialization, such as pollution and resource depletion, and compare it to modern efforts to create sustainable and worker-friendly industrial practices.

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| <p>Technology (T): The Role of Technology in Labor Movements</p> | <ul style="list-style-type: none"> ❖ Topic: Explore how technological advancements have both improved and challenged labor conditions from the Industrial Revolution to the present day. ❖ Projects: <ul style="list-style-type: none"> Labor-Saving Devices: Create a digital presentation or video project that examines the evolution of labor-saving devices and machinery, and how these technologies have transformed the workforce over time. Technology and Worker Rights: Develop a project that analyzes how modern technologies are affecting labor markets and worker rights today, and propose ways technology can be harnessed to improve labor conditions using tools such as automation or artificial intelligence. |
| <p>Engineering (E): Innovations in Workplace Design</p> | <ul style="list-style-type: none"> ❖ Topic: Investigate how engineering innovations have improved workplace safety, efficiency, and comfort over the years. ❖ Project: <ul style="list-style-type: none"> Ergonomic Design: Create a concept for an ergonomic workspace that promotes health, productivity, and addresses MSDs, inspired by the ongoing push for better working conditions and the science of ergonomics. |

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| <p>Arts (A): Artistic Expression of Labor and Work</p> | <ul style="list-style-type: none"> ❖ Topic: Explore how labor and work have been depicted in various forms of art throughout history, from the early 20th century to the present day. ❖ Projects: <ul style="list-style-type: none"> Labor in Visual Art: Create a piece of visual art, such as a painting, mural, or digital artwork, that captures the struggles and triumphs of labor movements, drawing inspiration from historical labor art like Diego Rivera’s murals. Performance Art and Labor: Write a poem, song, or short play that reflects the themes of labor, work, and rights, connecting historical labor struggles with modern-day issues facing workers. |
| <p>Math (M): Analyzing Labor Statistics</p> | <ul style="list-style-type: none"> ❖ Topic: Use mathematical tools to analyze data related to labor markets, wages, and employment trends over time. ❖ Projects: <ul style="list-style-type: none"> Historical Wage Analysis: Analyze statistical data on wages, working hours, and employment rates from the late 19th century to the present day, creating graphs and charts to visualize changes over time and the impact of labor movements. Economic Impact of Labor Movements: Develop mathematical models that show the economic impact of major labor movements, such as strikes and unionization, on industries and the broader economy, and use this data to predict future trends in labor markets. |

Social Studies (SS): Historical and Societal Impact of Labor Day

- ❖ **Topic:**
Explore the historical context of Labor Day and its significance in the broader history of labor movements and workers' rights.
- ❖ **Projects:**
 - Labor Day Timeline:** Create a timeline that traces the key events leading up to the establishment of Labor Day, placing it within the broader context of the labor movement in the United States.
 - Global Perspective on Labor Rights:** Develop a presentation or research paper comparing Labor Day and similar holidays in other countries, analyzing how labor rights movements have developed globally and their ongoing relevance in today's world.

Assessment Criteria

Students will be assessed on their ability to integrate and apply knowledge from various disciplines, their creativity and critical thinking skills, and their engagement with the historical, technological, and social dimensions of Labor Day. The final assessment should include a comprehensive project that ties together the different STEAMS components, demonstrating a well-rounded understanding of the labor movement's legacy and the broader context of workers' rights.