

STEAMS National Hispanic Heritage Month Project-Based Lesson Plan (Grades 7-12)

Objective: The objective of this interdisciplinary lesson plan is to explore the rich cultural heritage, scientific contributions, technological advancements, architectural innovations, artistic expressions, and historical significance of Hispanic and Latino communities. Through a STEAMS (Science, Technology, Engineering, Arts, Mathematics, and Social Studies) approach, students will engage in activities that celebrate and deepen their understanding of the diverse contributions of Hispanic and Latino individuals to society, with a focus on the significance of National Hispanic Heritage Month and key historical dates.

Key Components

Science (S): Environmental and Agricultural Contributions

- ❖ **Topic:**
Examine the environmental and agricultural contributions of Hispanic and Latino communities, particularly in Latin American countries, and their impact on global food systems.
- ❖ **Project:**
Environmental Science Exploration:
Design a project that explores the impact of environmental conservation efforts in Latin American countries, focusing on how indigenous knowledge and scientific research have contributed to preserving biodiversity and natural resources.

<p>Technology (T): Technological Innovations by Hispanic and Latino Innovators</p>	<ul style="list-style-type: none"> ❖ Topic: Investigate technological innovations and inventions created by Hispanic and Latino individuals, and their impact on society. ❖ Projects: <p>Innovation Research Project: Students will research a technological innovation by a Hispanic or Latino innovator, such as color television by Guillermo González Camarena, and create a digital presentation showcasing the invention's development and societal impact.</p> <p>Future Technologies Concept: Develop a project proposing a new technological innovation inspired by the work of Hispanic and Latino inventors, with a focus on addressing challenges in Latin American countries, such as access to clean water or renewable energy.</p>
<p>Engineering (E): Architectural Heritage and Modern Design</p>	<ul style="list-style-type: none"> ❖ Topic: Study the architectural heritage of Latin American countries and how modern engineering practices are influenced by traditional designs. ❖ Projects: <p>Architectural Design Project: Research the architectural styles of historic buildings in Latin America, such as those from the colonial era, and create a blueprint inspired by these designs. Discuss how these styles have influenced modern architecture in Hispanic and Latino communities.</p> <p>Urban Planning and Sustainability: Develop a project that examines how urban planning in Latin American cities addresses modern challenges like population growth and climate change,</p>

	incorporating traditional knowledge and modern engineering practices.
Arts (A): Celebrating Hispanic and Latino Art and Culture	<ul style="list-style-type: none"> ❖ Topic: Explore the rich traditions of Hispanic and Latino art, including visual arts, music, dance, and literature. ❖ Projects: Cultural Art Project: Create a piece of visual art, such as a painting or mural, that celebrates the independence of Latin American countries. Draw inspiration from Hispanic artists, and include elements that reflect the cultural and historical significance of these dates. Performance Art and Cultural Expression: Choreograph a dance, perform a piece of music, or write a poem that reflects the themes of independence and identity in Latin American cultures, connecting the artistic expression to the historical context of Independence Day in the Latin America on the following dates; September 15, September 16, and September 18.
Math (M): Analyzing Demographic and Economic Data	<ul style="list-style-type: none"> ❖ Topic: Use mathematical tools to analyze demographic and economic data related to Hispanic and Latino populations, particularly in Latin American countries celebrating independence during this period. ❖ Projects: Demographic Analysis: Analyze data on population growth, migration patterns, and economic development in countries like Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Mexico, and Chile. Create graphs and

	<p>charts to visualize these trends over time.</p> <p>Economic Impact Study: Develop mathematical models to study the economic impact of independence movements in Latin America, focusing on how these countries' economies have evolved since gaining independence.</p>
<p>Social Studies (SS): Historical Significance of Independence Days</p>	<ul style="list-style-type: none"> ❖ Topic: Explore the historical and cultural significance of the independence days celebrated on September 15, September 16, and September 18. ❖ Projects: <p>Historical Timeline Project: Create a timeline that traces key events leading up to the independence of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua (September 15), Mexico (September 16), and Chile (September 18). Include significant milestones in their fight for independence and their impact on modern national identities.</p> <p>Global Impact and Cultural Influence: Develop a presentation or research paper that examines how these independence movements influenced other countries and how Hispanic and Latino culture has been celebrated globally, especially during National Hispanic Heritage Month.</p>

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 cultural, scientific, and historical dimensions of Hispanic and Latino heritage. The final assessment should include a comprehensive project that ties together the different STEAMS components, demonstrating a well-rounded understanding of the contributions and significance of Hispanic and Latino communities, especially in relation to the key dates celebrated during National Hispanic Heritage Month.