

Diabetes Awareness Project-Based Lesson Plan (Grades 7-12)

Objective: This lesson plan aims to educate students on diabetes, focusing on types, causes, prevention, and management through a STEAMS (Science, Technology, Engineering, Arts, Mathematics, and Social Studies) approach. Students will analyze real-world data, create awareness campaigns, and engage in community outreach to advocate for diabetes awareness and prevention.

Key Components

Science (S): Understanding Diabetes	<ul style="list-style-type: none">❖ Topic: Investigate Type 1, Type 2, and gestational diabetes, exploring their biological causes, risk factors, and management.❖ Project: Understanding Diabetes Biology: Create an informational pamphlet on the biology of diabetes, including how it affects the body and preventive measures.
Technology (T): Digital Health and Monitoring Tools	<ul style="list-style-type: none">❖ Topic: Examine the role of digital tools (e.g., blood glucose monitors, health apps) in managing diabetes.❖ Project: Design Health Tools: Design a mock-up for an app that helps users monitor glucose levels, track dietary habits, or manage physical activity, emphasizing ease of use for young adults.

<p>Engineering (E): Healthy Living and Accessibility</p>	<ul style="list-style-type: none"> ❖ Topic: Explore the role of interactive kiosks or booths as health awareness tools in public spaces. Project: Kiosk Design Challenge: Design a portable kiosk or booth that can be set up in schools, community centers, or events to promote Movember and men’s health awareness.
<p>Arts (A): Creative Awareness Campaign</p>	<ul style="list-style-type: none"> ❖ Topic: Use art to communicate the importance of diabetes awareness through posters, infographics, or short videos. ❖ Project: Poster Design: Create a visual campaign with slogans like “Prevent Diabetes Before It Starts” or “Healthy Living Starts with Awareness.” This could include posters, short animations, or social media graphics.
<p>Math (M): Diabetes Statistics and Health Economics</p>	<ul style="list-style-type: none"> ❖ Topic: Analyze diabetes prevalence statistics and the economic impact of diabetes on individuals and healthcare systems. ❖ Project: Data Presentation: Use data visualization (e.g., bar graphs, pie charts) to show trends in diabetes rates across age groups and regions, as well as the cost implications for healthcare systems.

Social Studies (SS): The Societal Impact of Diabetes

- ❖ **Topic:**
Discuss how diabetes awareness impacts public health policies and community health programs.
- ❖ **Project:**
Historical Comparison Essay: Write an essay or create a presentation on diabetes as a public health issue, including the societal challenges and the role of government and NGOs in supporting diabetes awareness and care.

Assessment Criteria

This lesson will be assessed using the **8-Step PBLP Framework**:

1. **Round Table:** Begin with a discussion on the importance of diabetes awareness and its impact on society.
2. **Reflection Point:** Students reflect on the importance of diabetes prevention and management in reducing overall healthcare costs and improving quality of life.
3. **Knowledge Setting:** Research specific STEAMS topics to build foundational knowledge of diabetes.
4. **Project:** Students or groups create an awareness project incorporating at least one STEAMS discipline.
5. **Community Involvement:** Engage local health organizations or diabetes advocacy groups to support awareness projects.
6. **Assessment:** Evaluate based on creativity, relevance, research quality, and impact of their awareness campaign.
7. **Feedback Loop:** Receive feedback from peers and stakeholders.
8. **Resume Integration:** Encourage students to document their project experiences, focusing on teamwork, research, and community engagement skills on resume.