

# TeachME Professional Development

## Developing STEM Education for Disadvantaged Students

**1. What is one major barrier faced by women pursuing STEM careers, despite the high growth and earnings potential in these fields?**

- A. Access to mentorship programs
  - B. Gender bias and stereotypes
  - C. Insufficient math skills
  - D. Limited job opportunities
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**2. How does STEM education contribute to social mobility?**

- A. By reinforcing social barriers
  - B. By narrowing opportunities
  - C. By providing skills for upward mobility
  - D. By discouraging higher education
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**3. At what educational level do inequities in science and math achievement typically begin, as highlighted by research?**

- A. High school
  - B. Middle school
  - C. Elementary school
  - D. Preschool
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**4. How does adopting standards like the Next Generation Science Standards (NGSS) benefit disadvantaged learners in STEM education?**

- A. By providing a structured and comprehensive approach
  - B. By emphasizing memorization over critical thinking
  - C. By focusing exclusively on science and engineering practices
  - D. By reducing collaboration opportunities among students
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**5. How does consequential learning benefit disadvantaged students in STEM?**

- A. By reinforcing traditional hierarchical structures
  - B. By limiting access to hands-on activities
  - C. By promoting passive learning experiences
  - D. By empowering students to explore meaningful topics
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**6. How can investing in STEM education benefit students from low-income school districts?**

- A. By increasing their chances of accessing higher education
  - B. By perpetuating the cycle of poverty
  - C. By limiting their career options
  - D. By reducing their access to technology
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**7. How does socioeconomic status impact access to STEM resources in high-poverty schools?**

- A. It leads to excessive availability of advanced STEM coursework
  - B. It results in an overabundance of extracurricular STEM activities
  - C. It correlates with disparities in teacher qualifications
  - D. It causes a shortage of science lab supplies
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**8. How can educators promote increased engagement and comfort among disadvantaged students in STEM classrooms?**

- A. By standardizing learning activities to ensure consistency
  - B. By adapting assessments to recognize diverse forms of achievement
  - C. By increasing competition among students to boost performance
  - D. By extending classroom hours to provide extra practice time
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**9. Mr. Filo incorporates diverse examples of indigenous ecological knowledge into the curriculum, highlighting their relevance to current scientific research. What teaching strategy is being effectively implemented?**

- A. Universal Design for Learning (UDL)
  - B. Action-Based Learning
  - C. Cultural Competency
  - D. Stereotype threat and bias
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**10. What is a significant consequence of the shortage of teachers with STEM-specific degrees in high-poverty schools?**

- A. Increased availability of advanced STEM coursework
  - B. Higher student engagement in STEM subjects
  - C. Enhanced professional development opportunities for teachers
  - D. Lower academic achievement in math and science
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**11. In schools with high levels of poverty, what is a common challenge reported by teachers that affects the quality of STEM education?**

- A. Lack of qualified STEM teachers
- B. Insufficient amount of time to teach STEM subjects

- C. Limited access to teaching materials
  - D. Overcrowded classrooms
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**12. What is a significant challenge faced by students from low-income students in accessing quality STEM education?**

- A. Lack of parental involvement in STEM activities
  - B. Excessive availability of extracurricular
  - C. Limited availability of advanced STEM coursework
  - D. Overemphasis on non-STEM subjects in curriculum
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**13. How does STEM education prepare students for addressing global challenges?**

- A. By equipping them with skills to tackle complex challenges
  - B. By discouraging innovation and creativity
  - C. By limiting exposure to real-world problems
  - D. By narrowing their understanding of societal issues
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**14. During a physics class, Ms. Suet reframes a student's misconception about electrical circuits into a positive learning opportunity, highlighting the importance of trial and error in scientific inquiry. What teaching strategy is being effectively implemented?**

- A. Authentic, hands-on learning
  - B. Microaggression intervention
  - C. Reinforcing stereotypes through educational content
  - D. Decriminalizing classrooms
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**15. Mrs. Kifli adopts project-based learning (PBL) for her STEM classroom, to engage students in solving real-world problems. This method is effective in promoting which educational principle?**

- A. Student-centered pedagogy
  - B. High expectations for all
  - C. Universal Design for Learning (UDL)
  - D. Microaggression intervention
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**16. How can high-quality STEM education impact students from disadvantaged backgrounds?**

- A. It perpetuates the decline in interest in STEM fields over time.
  - B. It provides opportunities that encourage pursuit of STEM careers.
  - C. It limits access to STEM fields for underrepresented groups.
  - D. It restricts innovation and economic growth.
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**17. Summarize how hands-on, experiential learning benefits disadvantaged students in STEM.**

- A. By promoting passive learning experiences
  - B. By limiting access to scientific equipment
  - C. By discouraging exploration of real-world problems
  - D. By engaging students in practical applications of STEM concepts
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**18. How does nurturing a diverse group of STEM professionals from low-income school districts contribute to problem-solving?**

- A. By incorporating a variety of experiences for comprehensive solutions
  - B. By limiting perspectives and experiences in solution development
  - C. By ensuring that only privileged communities benefit from solutions
  - D. By narrowing the scope of innovation and creativity
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**19. What is a critical aspect of teacher agency in fostering equity in STEM education?**

- A. Maintaining traditional power dynamics in the classroom
  - B. Disregarding students' cultural backgrounds
  - C. Shaping classroom climate and policies
  - D. Limiting students' access to educational resources
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**20. What challenge do students with disabilities commonly face in STEM education?**

- A. Inadequate access to specialized learning materials
  - B. Excessive support from school administration
  - C. Overrepresentation in STEM achievement awards
  - D. Limited options for extracurricular STEM activities
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