PHYSICS
& Today’s Students

Physics is uniquely positioned to increase diversity in the STEM pipeline based on a national survey of 19,129 high school students in STEM classrooms. The survey was conducted by the Student Research Foundation in Fall 2017.

Of all STEM subjects, only physics was equally likely to be a favorite subject of students from groups historically underrepresented (URGs) and overrepresented (ORGs) in STEM.

This infographic looks closely at these “Physics Fans.”

Small steps can help realize the promise of diversity.

Physics Fans Are Diverse
Cutting across gender, race & ethnicity

6% of students chose physics as a favorite subject regardless of gender, race, or ethnicity.

Call to Action: Sustain Your Success
Teachers are creating educational environments that make physics appealing to all students – URGs and ORGs alike.
Encourage Physics Fans to see that their favorite subject can be their life’s work – and change the face of physics.

Challenge to Sustained Success: Aspirations
Fewer URGs aspire to STEM careers

Call to Action: Build Confidence
Students with higher STEM confidence are more likely to aspire to STEM careers. Change the face of physics by closing STEM confidence gaps through:
- Cultivating growth mindsets among students.
- Reminding students of past successes.
- Encouraging persistence & progressions – e.g. advanced courses, competitions, and leadership.

Build Confidence Plus
At each level of STEM confidence, URGs are less often aspire to STEM careers.

Call to Action: Solutions
Gender differences disappear when we compare aspirations for STEM and health science careers combined.
Use interdisciplinary lessons to highlight the role of physics in health science. AAPT has resources to help you do so in the collections posted at Compadre.org.

For racial/ethnic URGs, the greatest STEM aspiration gap is among those with high STEM confidence. Because this gap is concentrated largely among African Americans (not shown), examples of physicists with whom they can identify may boost aspirations.

Call to Action: Empower & Inspire
Aspiration gaps narrow when students see examples of themselves reflected in the curriculum.
Consider your classroom examples of who physicists are and what physicists do!
AAPT’s and APS’s STEP UP 4 WOMEN campaign resources can expand your portfolio.

Small adaptations in your lessons today will drastically change the face of physics tomorrow!