Careers in Physics

LESSON PLAN
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Help students **assess their personal values** in relation to a career in physics, **examine profiles** of professionals with physics degrees, and **envision themselves** in a physics career.

1. Students brainstorm careers that one can have with a physics degree.

2. Students complete a brief survey to determine areas of interest for their future careers.

3. Using data from their surveys and a matrix, students are matched to relevant physicist profiles to research and discuss.

4. Students discuss new careers in physics they learned about, and reflect on how their perceptions of careers in physics have changed.

5. Students complete a personal career profile in which they envision themselves as a future physicist.

6. Students discuss data presented by the teacher on careers and salaries in physics.

Learn more at [STEPUPphysics.org](http://STEPUPphysics.org) and register to access instructional support & FAQs.
Lesson Topic: In this lesson, students will explore profiles of individuals with a degree in physics and identify goals that can be accomplished with a physics degree. They will also create their own future career profiles. The goal of the lesson is to help students realize the breadth of careers available with a physics degree and envision how a physics degree would help accomplish many goals.

Lesson Evidence: This lesson has been shown to improve students’ future physics intentions (e.g. majoring in physics in college or intending physics-related careers) in classes across the US (N=823). Figure 1 shows that both female and non-female students have positive gains from the lesson. In addition, the overall gains from the lesson across all students are positive (Cheng et al., 2018).

Teacher Motivations: Quotes about why physics teachers did the lesson.
- “Students don’t realize all the things they can do with a physics degree.”
- “It helps students see that physicists can help the world and work with others.”
- “As a student, I wish I had the opportunity of envisioning my future with physics.”
- “The posters students make as part of the lesson helps recognize students and who they are.”

Implementation Timing: Physics teachers suggested the optimal timing for implementation is before college applications are due.

Figure 1. Percentage gains in female and non-female students’ future physics intentions (towards majoring/pursuing a career) due to the lesson.