

Self-Efficacy in Physics (SEP)

Version P



PhysPort

Supporting physics teaching
with research-based resources

downloaded from [PhysPort.org](https://www.physport.org)

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Format: Agree/disagree

Duration: 5 minutes

Focus: Beliefs / Attitudes (self-efficacy)

Level: Intro college

How to give the assessment

- Give it as both a pre- and post-test. This measures student learning.
 - Give the pre-test before you cover relevant course material.
 - Give the post-test at the end of the term.
- Use the whole test, with the original wording and question order. This makes comparisons with other classes meaningful.
- Make the test required, and give credit for completing the test. This ensures maximum participation from your students.
- Tell your students that the test is designed to evaluate the course (not them), and that knowing how they think will help you teach better. Tell them that correctness will not affect their grades (only participation). This helps alleviate student anxiety.
- Refer to the test by a generic title like "Physics attitudes test" to prevent students from looking up the answers.
- For more details, read the **PhysPort Guides** on implementation:
 - **PhysPort Expert Recommendation on Best Practices for Administering Concept Inventories**
(www.physport.org/expert/AdministeringConceptInventories/)

How to score the assessment

- Each student's score is sum of their points for each question, where strongly disagree is 1 point, strongly agree is 5 points, and disagree, neutral and agree are 2-4 points respectively. Possible range of scores is 8 to 40.

Self-efficacy in Physics Survey (SEP)

Directions: Indicate your agreement with each of the following statements using the scale below:

strongly disagree disagree neutral agree strongly agree

1. I am very comfortable when I use a computer.
2. I can solve for the variable r in the expression $F = Gm_1m_2/r^2$
3. I have a good intuition about how nature behaves.
4. I consider myself very good at math.
5. I have a very difficult time solving word problems.
6. I consider myself very poor at science.
7. I have a hard time using math in science classes.
8. I can figure out how long it will take to travel from Detroit to Chicago at 55 miles per hour.