

Common Instrument Suite-Student (CIS-S) Retrospective Self-Change

SAMPLE

The Common Instrument Suite-Student (CIS-S) is a youth self-report survey that measures a variety of STEM-related attitudes, including STEM interest, STEM career knowledge, and STEM identity. PEAR is happy to offer three different survey designs: (1) traditional pretest-posttest, (2) retrospective change, and (3) retrospective pretest-posttest.

The **retrospective self-change** method asks students to reflect on how much they feel they have changed over the period of programming, and is only administered once at the end of the program (though can be paired with a pre/baseline survey). Specifically, students are shown a sentence and are asked to think back to the beginning of the program and rate whether they do/feel things less or more because of the program. The concept of reflecting back and thinking about change can be cognitively challenging for younger students. Thus we recommend the retrospective designs for older students (Grades 4 and above). This survey is typically on a 5-pt Likert scale from “Much Less Now – About the Same – Much More Now.” For example:

Practice Question:

Please circle the number that matches what you think about the sentence below.

Thinking about how you feel TODAY compared to the BEGINNING of this program

Much
less
now

Less

About
the
same

More

Much
More
Now

1. I get excited about STEM

1

2

3

4

5

Sample Survey Items

<i>Scale</i>	<i>Outcome Measure</i>	<i>Sample Items</i>
Common Instrument Grades 1+	<ul style="list-style-type: none"> Measures how interested and enthusiastic a student is about STEM and STEM-related activities 	<ul style="list-style-type: none"> “I get excited about STEM.” “I get excited to learn about new discoveries.” “I would like to have a STEM job in the future.” “I like to make things.”
<i>Additional Subscales:</i>	<i>Outcome Measures</i>	<i>Sample Items</i>
Science Identity Grades 4+	<ul style="list-style-type: none"> How much a student sees themselves as a STEM person 	<ul style="list-style-type: none"> “I think of myself as a STEM person.” “My teacher thinks I’m good at STEM.”
HSA Grades 4+ <i>Holistic Student Assessment items</i>	<ul style="list-style-type: none"> Positive connections and attitudes toward interactions with adults Positive and supportive social connections with friends and classmates Persistence in work and problem-solving despite obstacles Examination of information Exploration of ideas, and independent thought 	<ul style="list-style-type: none"> “There is at least one adult I can talk to about my problems.” “I keep going with work even if it takes longer than I thought it would.” “If the way I'm doing something isn't working, I try to think of different ways to do it.”
PISA Grades 6+ <i>Items inspired by the Program for International Student Assessment</i>	<ul style="list-style-type: none"> How motivate a student is to get a career in STEM How knowledgeable a student is about obtaining a career in STEM How much a student enjoys participating in STEM- related activities How often a student seeks out STEM activities. 	<ul style="list-style-type: none"> “Working hard now will help me do STEM later.” “I know where to find information about STEM jobs.” “I have fun learning STEM.” “I watch STEM TV shows.”