

Common Instrument Suite-Student (CIS-S) Retrospective Pre-Posttest

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 (two administrations one at beginning and one at end)
2. Retrospective change (one administration at end)
3. Retrospective pretest-posttest (one administration at end)

The **retrospective pretest-posttest** method is similar to a traditional pretest-posttest, but students answer each question twice (in one sitting) from two different frames of reference: “before the program” and “at this time,” respectively. The survey is only administered once at the end of the program (but can be paired with a pre/baseline survey), and students reflect essentially on the level of change they experienced “then” compared to “now.” This survey is on the same 4-pt Likert scale as the traditional pretest-posttest. The response scales are presented on the left and right sides of the page (i.e., “Before Program” and “Today”) with the survey items in the middle. For example:

Practice Question:

For each sentence below, please pick the bubble that matches how you felt BEFORE your program. Then pick the bubble that matches how you feel TODAY.

BEFORE PROGRAM					TODAY			
Strongly Disagree	Disagree	Agree	Strongly Agree	How do you feel about STEM?	Strongly Disagree	Disagree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I get excited about STEM.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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.”