2700-0150

Appendix 6: Item-by-Item Justification of Youth Follow-up Survey Items

Item #	Question	Research Question	Source	Answer Options	Scale	Purpose of Item	Justification Notes
1	Your first name and last name	N/A	SoI student survey 2011	First name, Last name	N/A	A	Information is used to confirm match in dataset
2	What is your birthday?	N/A	SoI student survey 2011	Month Day Year	N/A	A	Information is used to generate a unique identifier in dataset for matching purposes
3	What grade level will you enter in fall 2013? Please check one only.	4	SoI student survey 2011	4th 5th 6th 7th 8th 9th Other	N/A	A	Information is used to confirm match in dataset
4	What did you like best about Summer of Innovation?	9	Adapted from the AWE Immediate Post-Activity Survey for Middle School-Aged Participants - Science	Open-ended	N/A	D	Student perception of SoI used to inform the interpretation of the findings for Research question 9.
5	If you were in charge, how would you change your Summer of Innovation experience?	9	Adapted from the AWE Immediate Post-Activity Survey for Middle School-Aged Participants - Science	Open-ended	N/A	D	Student perception of SoI used to inform the interpretation of the findings for Research question 9.
6	Would you recommend that your friends participate in Summer of Innovation? Please explain why or why not.	9	Adapted from the AWE Immediate Post-Activity Survey for Middle School-Aged Participants - Science	Yes No Open-ended	N/A	D	Student perception of SoI used to inform the interpretation of the findings for Research question 9.

7	How much did participating in Summer of Innovation impact you?	9	Adapted from the AWE Immediate Post-Activity Survey for Middle School-Aged Participants - Science	Increased my knowledge of NASA and space Increased my interest in studying science or engineering in college Helped me understand science better Led me to a better understanding of my own career goals Made me decide to take different classes in school (including college) than I had planned Made me more confident in my ability to succeed in science Increased my confidence in my ability to participate in science projects or activities Helped me connect with others who have similar interests	N/A	D	Student self-reported SoI impacts will assist in triangulation of outcome findings and also offers an exploration of possible outcomes that are not the focus of this evaluation study.
8	What science class are you currently taking?	9	Adapted from HSLS of 2009, Student Baseline Survey; science class titles drawn from CCSSO, State Indicators of Science and Mathematics Education 2007, Table 1.6 (http://programs.ccsso.org/content/pdfs/SM%2007%20report%20part%201.pdf)	Science or General Science Life Science Earth Science Physical Science, Integrated or Coordinated Science Other science course I don't know None	N/A	C	This question is one of two questions intended to identify student interest in past science class at school. Class subject is identified in order to control for this variable in the analysis of change in student interest.
9	How much do you agree or disagree with the following statements about your current science class?	9	Adapted from HSLS of 2009, Student Baseline Survey	I enjoy this class very much I think this class is a waste of my time I think this class is boring	Never Rarely Sometimes Often	D	This question is intended to identify student engagement in past science class at school, which is a

							dependent variable for this study.
10	Which of the following activities are you participating in during this school year (2013-2014)?	9	Adapted from HSLS of 2009, Student Baseline Survey	Science club Science competition Science camp Science study groups or a program where you were tutored in science None of these	N/A	D	This question is intended to identify student engagement in extracurricular science activities, which is a dependent variable for this study.
11	Since you participated in the Summer of Innovation, how often have you done the following science activities?	9	Adapted from HSLS of 2009, Student Baseline Survey; Last two answer options from the Noyce Enthusiasm for Science scale and the AWE Rating Scale for Sense of Community (2009)	Read science books and magazines Access web sites for computer technology information Visit a science museum, planetarium, or environmental center Play games or use kits or materials to do experiments or build things at home Watch programs on TV about nature and discoveries	Never Rarely Sometimes Often		This question is intended to identify student engagement in outside of school time science activities, which is a dependent variable for this study.
12	Please indicate the extent to which you agree or disagree with each of the following statements. Select one in each row.	9	Noyce Enthusiasm for Science scale/Common Instrument	Science is something I get excited about	Strongly Disagree Disagree Agree Strongly Agree	D	This question is part of a validated scale intended to ascertain student enthusiasm/interest in science, which is a dependent variable for this study.
			Noyce Enthusiasm for Science scale/Common Instrument	I like to take things apart to learn more about them			
			Noyce Enthusiasm for Science scale/Common Instrument	I like to participate in science projects			

			Noyce Enthusiasm for Science scale/Common Instrument	I'd like to get a science kit as a gift (for example, a microscope, magnifying glass, a robot, etc.)			
			Noyce Enthusiasm for Science scale/Common Instrument	I like to see how things are made (for example, ice-cream, a TV, an iPhone, energy, etc)			
			Noyce Enthusiasm for Science scale/Common Instrument	I like to watch programs on TV about nature and discoveries			
			Noyce Enthusiasm for Science scale/Common Instrument	I am curious to learn more about science, computers or technology			
			Noyce Enthusiasm for Science scale/Common Instrument	I like to work on science activities			
			Noyce Enthusiasm for Science scale/Common Instrument	If I have kids when I grow up, I will take them to a science museum			
			Noyce Enthusiasm for Science scale/Common Instrument	I would like to have a science or computer job in the future.			
			Noyce Enthusiasm for Science scale/Common Instrument	I want to understand science (for example, to know how computers work, how rain forms, or how airplanes fly)			

			Noyce Enthusiasm for Science scale/Common Instrument	I enjoy visiting science museums or zoos			
			Noyce Enthusiasm for Science scale/Common Instrument	I get excited about learning about new discoveries or inventions			
			Noyce Enthusiasm for Science scale/Common Instrument	I like reading science magazines			
			Noyce Enthusiasm for Science scale/Common Instrument	I pay attention when people talk about recycling to protect our environment			
			Noyce Enthusiasm for Science scale/Common Instrument	I am curious to learn more about cars that run on electricity			
			Noyce Enthusiasm for Science scale/Common Instrument	I get excited to find out that I will be doing a science activity			
			Noyce Enthusiasm for Science scale/Common Instrument	I enjoy reading science fiction books			
			Noyce Enthusiasm for Science scale/Common Instrument	I like learning about science on the internet			

			Noyce Enthusiasm for Science scale/Common Instrument	I like online games or computer programs that teach me about science			
			Noyce Enthusiasm for Science scale/Common Instrument	Science is boring			
			Noyce Enthusiasm for Science scale/Common Instrument	I do science-related activities that are not for schoolwork.			
			Noyce Enthusiasm for Science scale/Common Instrument	I like science			
			Noyce Enthusiasm for Science scale/Common Instrument	Science is one of my favorite subjects			
			Noyce Enthusiasm for Science scale/Common Instrument	I take science only because I have to			
			Noyce Enthusiasm for Science scale/Common Instrument	I take science only because it will help me in the future			
			Noyce Enthusiasm for Science scale/Common Instrument	Before joining this program, I was interested in science and science-related things			

			Noyce Enthusiasm for Science scale/Common Instrument	Before joining this program, I participated in science activities outside of school			
			Adapted from the AWE Middle School Students Pre-Activity Survey	I like to design a solution to a problem			These questions are intended to ascertain student enthusiasm/interest in engineering, which is a dependent variable for this study.
			Adapted from the AWE Middle School Students Pre-Activity Survey	I like to be part of a team that designs and builds a hands-on project			
			Adapted from the AWE Middle School Students Pre-Activity Survey	I'm curious to learn how to program a computer game			
			Adapted from the AWE Middle School Students Pre-Activity Survey	I like to design and build something mechanical that works			

[1]**Research Questions Answered by Parent Survey**

4: What are the characteristics of SoI camps and their participants?

9: How does the SoI experience affect youth engagement with STEM?

[2]**Purpose of Item**

A: indicates that the variable from this item will be used for administrative purposes (e.g., documentation of consent or non-consent, longitudinal tracking, pre and post survey data linking)

D: indicates that the variable from this item will be used in descriptive analysis

C: indicates that the variable from this item will be used as a control variable