Evaluation of NASA's SEMAA (Science, Engineering, Mathematics, and Aerospace Academy) Project

Student Survey

Instructions for Completing the Student Survey

ınstr	fuctions for Completing the Student Survey
	Step 1: Write your name neatly on the lines on the next page. Do not write your name on any other pages.
	Step 2: Fill in the student survey. Read each question carefully. This is not a test: there are no right or wrong answers. We just want to know what you think. If you do not understand a question, you can ask your parent, but try to think of your own answers to the questions.
	Use a pencil to mark your answers. If you want to change one of your answers, be sure to erase the old answer completely and mark the new answer darkly.
	Step 3: When you finish the survey: Put your survey in the envelope labeled "Student Survey. Give the envelope to your parent.
know v Some c	destions in this booklet are not a test. There are no right or wrong answers. We just want to what you think. Questions ask you to mark just one answer. These questions say, "Check one box" or "Pick swer." For example, in this question you should check only one box:
Hov	v much do you like to learn about plants and animals? Check one box:
	I really do not like it.
ne bo	questions say, "Check as many boxes as you need." For these questions, you can mark just x, or you can mark more than one box. For example, this question says "Check as many as you need."
W	

If you would like to learn about several of the things in the list, you should mark all of the ones that interest you.

Please print your first and last name here on this page. Also tell us when you were born.

First Name:	Last Name:
What month, date, and year were	you born (date of birth)?
Birthday: Month:	Date: Year:
Please do not write your name	on any other pages in this booklet.
Do not write in Student ID number box. V	We will give you an identification number in place of your name.

Some items on this survey were adapted from Modified Attitudes Towards Science Inventory, Weinburgh and Steele (2000) and the Math and Science Interest Survey, Hulett, Williams, Twitty, Turner, Salamo, and Hobson (2004).

Do not write in this box.

Student ID number:

Please go to the next page.

A. Background Information

A1.	What is today's date? Write the month, date, and year:					
	Today's date:	Month:	Date:	Year:		
A2.	Are you a boy	or a girl?	□ Boy	☐ Girl		
A3.	What grade are	you in this year	?			
	□4 th	□ 5 th	□6 th	□ 7 th	□ 8 th	
SEMAA is a program that NASA runs for students. SEMAA stands for <u>S</u> cience, <u>E</u> ngineering, <u>M</u> athematics, and <u>A</u> erospace <u>A</u> cademy. In SEMAA, students learn about science and math. In SEMAA you might learn about the stars and planets, robots, wind, how to use a radio or a computer, how to build airplanes or rockets, or how to work in teams to plan a mission. The SEMAA program has two kinds of sessions. There are sessions during the school year and						
			of sessions. The	ere are sessions	during the school year and	
	re summer sess	n has two kinds	of sessions. The	ere are sessions chool.		
A4.	Have you ever Yes And You do not be a seen when the sees	n has two kinds sions when child been in the SEM	of sessions. The lren are not in so IAA program du I'm not sure Question A5.	ere are sessions chool.		

A5.	Hav □ Y	e you ever l Zes	oeen in t □ No	he SEM		gram <u>du</u> not sure		<u>e regula</u>	r school	<u>year</u> ?	
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A!	5b.	When you				_	-		-	-	? If you went to
	□ K	Kindergarten	□ 1 st	$\square 2^{nd}$	□ 3 rd	□ 4 th	□ 5 th	□ 6 th	□ 7 th	$\square 8^{\text{th}}$	
	√hy ar □ I we	e you apply ent to SEM	AA befor	re.			s year?	You may	check i	nore thar	one box.
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		ant to meet i	new friei	nds.							
L	J Oth	er reason: _									
[A6]	Post-te	est only]									
		u want to go	to SEM	IAA this	s year?	You ma	y check	more tha	an one b	ox.	
		ent to SEM			3		5				
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		ought I wou									
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		e science.		- 0							
		nted to lear	n more a	about sc	ience.						
		inted to mee	et new fr	iends.							
Ū	Oth	er reason: _									

B. Interest in Science

The following statements are about the study of science. Please read each statement carefully. Use this scale to show how much you agree or disagree with each statement.

If you STRONGLY DISAGREE :	1	2	3	4
If you DISAGREE :	1	2	3	4
If you AGREE :	1	2	(3)	4
If you STRONGLY AGREE :	1	2	3	4

It is important that you respond to *every statement*, and that you circle only one number per statement. Some of the rows are shaded to help you line up the statements and the numbers on the same row.

	STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
B1.	Science is useful for solving problems of everyday life.	1	2	3	4
B2.	Science is something that I enjoy very much.	1	2	3	4
B3.	I would like to do some reading in science which has not been assigned to me.	1	2	3	4
B4.	Science is easy for me.	1	2	3	4
B5.	When I hear the word "science," I have a feeling of dislike.	1	2	3	4
B6.	Most people should study some science.	1	2	3	4
B7.	Sometimes I read ahead in our science book at school.	1	2	3	4
B8.	I don't think I could do advanced science.	1	2	3	4
В9.	I think I could do more difficult science work than what I do now.	1	2	3	4
B10.	Science is helpful in understanding today's world.	1	2	3	4
B11.	I usually understand what we are talking about in science lessons at school.	1	2	3	4
B12.	No matter how hard I try, I cannot understand science.	1	2	3	4
B13.	I feel tense when someone talks to me about science.	1	2	3	4
B14.	I like to understand the scientific explanations for things.	1	2	3	4

Please go to the next page.

Here are more statements about science and studying science. Please read each statement carefully, and use the same scale to show how much you agree or disagree with each statement.

STATEMENTS	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
B15. I often think, "I cannot do this," when a science assignment seems hard.	1	2	3	4
B16. When I can't immediately solve a science problem, I stick with it until I have the solution.	1	2	3	4
B17. Science is of great importance to a country's development.	1	2	3	4
B18. It is important to know science in order to get a good job.	1	2	3	4
B19. I like the challenge of science assignments.	1	2	3	4
B20. It makes me nervous to even think about doing science.	1	2	3	4
B21. It scares me to have to take a science class.	1	2	3	4
B22. It is important to me to understand the work I do in science class.	1	2	3	4
B23. I have a good feeling toward science.	1	2	3	4
B24. Science is one of my favorite subjects.	1	2	3	4
B25. I have a real desire to learn science.	1	2	3	4
B26. I do not do very well in science.	1	2	3	4
B27. Sometimes I would like to learn more about science than the teacher covers at school.	1	2	3	4

Please go to the next page.

C. Out of school activities

[Pre-test only. On the post-test, "over the summer" will be replaced with "during the last three months"] Below is a list of activities that you might have done outside of school over the summer. For each activity, please tell us how often you have done these activities **over the summer**.

Over the summer, how often did you: Check just one box for each activity.

	Activities Outside of School	Not at all in the past 3 months	One Time	About once a month	About twice a month	About once a week	More than once a week
C1.	Gone to a science museum or zoo						
C2.	Gone to a sports event						
C3.	Read a book or magazine about science that was not fiction						
C4.	Taken something apart or put something together						
C5.	Watched a science program on TV						
C6.	Watched a sports program on TV						
C7.	Used the internet to look up science information						

Over the summer, how often did you: Check just one box for each activity.

	, , ,	Not at all in the past 3 months	One Time	About once a month	About twice a month	About once a week	More than once a week
C8.	Planned and cooked a meal						
C9.	Used a science kit or done a science project at home						
C10.	Used a telescope or microscope at home						
C11.	Played a video game						
C12.	Watched a movie at home or in a theater						
C13.	Read a science-fiction book						
C14.	Used computers or technology to solve problems						

C15.	During the past three months, did you do any of the following science or mathematics activities? Check as many as you need
	☐ A science fair at school
	☐ A science or mathematics club at school
	☐ I have a science or mathematics tutor
	☐ I am a science or mathematics tutor
	☐ I was in the NASA SEMAA program on Saturdays
	☐ I was in a different science or math program outside of school
	(What is the name of this program?)
	☐ None of the above

On the next page, we ask you how much you would like to do some activities outside of school. Please make a check mark on your choice for each row, using this scale to show how much you would like, or not like, each of the activities:

If you would REALLY LIKE the activity:	Ø	666	66	66	?
If you would LIKE the activity:	56	Z	66	1000	?
If you would NOT LIKE the activity:	(i)	666	(b)	36	?
If you would REALLY NOT LIKE the activity:	150	666	66	Ø	?
If you are NOT SURE about an activity:	666	(i)	66	66	1

Please go to the next page.

How much would you like to do each of these activities outside of school? Please check if you would really like it, would like it, would not like it, or would really not like it.

Act	ivities Outside of School	I would really like it	I would like it	I would not like it	I would really not like it	Not Sure
C16.	Use the internet to look up science information	100	660	66	66	?
C17.	Play a video game	(18)	660	66	66	?
C18.	Plan and cook a meal	(10)	000	66	66	?
C19.	Watch a movie at home or in a theater		66	66	66	?
C20.	Use a science kit or do a science project at home	(30)	000	66	66	?
C21.	Go to a science museum or zoo	(3)	66	66	(ii)	?
C22.	Read a science-fiction book	100	66	66	66	?
C23.	Read a book or magazine about science that was not fiction		660	66	666	?
C24.	Use computers or technology to solve problems	100	100	66	66	?
C25.	Take something apart or put something together	(3)	66	66	66	?
C26.	Watch a science program on TV		660	66	66	?
C27.	Watch a sports program on TV	150	660	66	66	?
C28.	Go to a sports event	(30)	000	86	66	?
C29.	Use a telescope or microscope at home	(18)	ió i	66	66	?

Please go to the next page.

[This item will only be included on the post-test in the full study.]

Let's compare how you felt during the summer about some activities and how you feel about these activities now. Is your interest in doing these activities now more than or less than it was in the summer? Is your interest much less than (\square), less than (\square), more than (\square), much more than (\square) or about the same (=) as it was in the summer? For each activity, put a check in the one box that best matches how you feel.

А	ctivities Outside of School	Much less now than before	A little less now than before	About the same as before	A little more now than before	Much more now than before
C30.	My interest in watching a sports program on TV is:			=		
C31.	My interest in watching a science program on TV is:			=		
C32.	My interest in using a telescope or microscope at home is:	00		=		
C33.	My interest in taking something apart or putting something together is:			=		
C34.	My interest in using computers or technology to solve problems is:	00		=		00
C35.	My interest in going to a sports event is:			=		
C36.	My interest in watching a movie at home or in a theater is:	00		=		00
C37.	My interest in reading a science-fiction book is:			=		
C38.	My interest in reading a book or magazine about science that is not fiction is:			=		
C39.	My interest in going to a science museum or zoo is:			=		
C40.	My interest in playing a video game is:			=		
C41.	My interest in using the internet to look up science information is:			=		
C42.	My interest in planning and cooking a meal is:			=		
C43.	My interest in using a science kit or doing a science project at home is:			=		

D. Science and Math in School

D1.	Does your scho		ence activities ou	activities outside of your regular class, such as a science club?			
	☐ Yes	□ No	☐ I am not sur	e			
-	said NO or I AM said YES, go to (kip to Question I	D2.			
	D1a. Do you pa	articipate in you	r school's scienc	e club?	1 Yes	□ No	
D2.	Would you enjo ☐ Yes	oy being in a sci	ence club at you		xt year? Chec	ck one box:	
D3.	How many time competition? (☐ Never	es have you ever Check one box: 1-2 times	participated in	a science fa □ 5-10 ti		ience-related re than 10 times	
D4.	Would you enjo Check one box ☐ Yes		in a science fair □ Not sure	or other sci	ience-related	competition next year?	
D5.	How many time ☐ Never	es have you ever □ 1-2 times	gone to a science 3-4 times	ce camp? (OX.	
D6.	What grade did Excellent Good Satisfactory Barely Pass Failing I don't know	(some sing (some (some (some	ience class last schools give a le schools give a le schools give a le schools give a le schools give a le	etter grade " etter grade " etter grade " etter grade "	'A") 'B") 'C") 'D")	k one box.	
D7.	What grade did Excellent Good Satisfactory Barely Pass Failing I don't know	(some sing (some (some (some	ath class last yeschools give a leschools give give a leschools give a leschools give a leschools give give a leschools give a leschools give a leschools give a leschools give	etter grade " etter grade " etter grade " etter grade "	'A") 'B") 'C") 'D")	one box.	

E. Classes in School

On the next page, we ask you about some classes you might take in school. We want to know how much you would like, or not like, these classes. Please make a check mark on your choice for each row, using this scale to show how much you would like, or not like, each of the classes. If you took a class already, check the box on the far right.

	I would really like it	I would like it	I would not like it	I would really not like it	Not Sure	I took this class already
If you would REALLY LIKE the class:	Ø	660	666	Či i	?	
If you would LIKE the class:	66		66	66	?	
If you would NOT LIKE the class:	66	660	2	666	?	
If you would REALLY NOT LIKE the class:	(5) (5)	660	666	()	?	
If you are NOT SURE about a class:	55	660	66	66	1	
If you already took this class:	55	666	66	66	?	1

How much do you think you would like these classes? Make a check mark on your choice for each row, using this scale to show how much you would like, or not like, each class:

	and scare to show	I would really like it	I would like it	I would not like it	I would really not like it	Not Sure	I took this class already
E1.	Earth Science	66	66	66	66	?	
E2.	Life Science	66	660	66	(5)	?	
E3.	Physical Science	100	000	(5) C	66	?	
E4.	Biology	66	00	65	(H)	?	
E5.	Chemistry		(0,0)	66	66	?	
E6.	Physics	(%)	(0,	66	66	?	
E7.	Anatomy and Physiology		(0;	66	66	?	
E8.	Computer Science	100	660	66	66	?	
E9.	Algebra	000	000	66	66	?	
E10.	Geometry		(0,	66	66	?	
E11.	Statistics		(0,0)	66	66	?	
E12.	Calculus	100	000	66	66	?	
E13.	Astronomy	100	000	66	66	?	

Please go to the next page.

F. College

If you decide to go to college after you finish high school, how much do you think you would you like to study each of these subjects in college? Please make a check mark on your choice: if you would really like it, would like it, would not like it, would really not like it, or if you are not sure about each subject.

		I would really like it	I would like it	I would not like it	I would really not like it	Not Sure
F1.	Art, music, or acting	100	•••	66	66	?
F2.	Astronomy	100	000	66	66	?
F3.	Biology	100	(30)	66	66	?
F4.	Business	(10)	(8:)	66	66	?
F5.	Chemistry	(10)	(3)	66	66	?
F6.	Computer science	(10 (0)	100	66	66	?
F7.	Engineering	100	600	66	66	?
F8.	Law	000	66	66	66	?
F9.	Literature (books and writing)	(10)	(3)	650	66	?
F10.	Math	(10)	(8:)	66	66	?
F11.	Medicine	(10)	(3)	66	66	?
F12.	Physics	(10 (0)	100	66	66	?
F13.	Teaching	(10)		66	66	?
F14.	History	1000	000	66	66	?

Please go to the next page.

G. Jobs

Below is a list of different types of jobs you might do when you are older. How much would you like to do these jobs? Please make one check mark for each job:

		I would really like it	I would like it	I would not like it	I would really not like it	Not Sure
G1.	Scientist	66	660	66	66	?
G2.	Entertainer (Actor, singer, dancer)	100	(30)	66	66	?
G3.	College Professor	66	660	66	66	?
G4.	Engineer	(36)	660	66	666	?
G5.	Firefighter	66	660	66	(i)	?
G6.	Computer Scientist	100	(00.	66	66	
G7.	Math Teacher	(00)	(30)	66	66	?
G8.	Military Officer (Army, Navy, Air Force, Marines)	66	100	66	666	?
G9.	Writer	100		86	66	?
G10.	Science Teacher	100	000	66	66	?
G11.	Doctor	150	(3)	66	66	?
G12.	Athlete	000	000	66	66	?
G13.	Astronaut	100	(36)	66	66	?
G14.	Lawyer	100		66	66	?
G15.	Construction Worker	(50)	(30)	66	66	?
G16.	Business Person	[00]	(30)	66	66	?
G17.	Police Officer	(66)	660	66	66	?

G18.	Do any of these pe ☐ Mother/Stepmo ☐ Father/Stepfath ☐ Foster Parent	ther \Box er \Box	b in science or mat ☐ Aunt/Uncle ☐ Brother/Sister ☐ Friend's Parent	h? (Check as many as you need.) ☐ Grandparent ☐ Family Friend/Neighbor ☐ Cousin					
	Tostel Farent	J	THERE S FAIGH	- Cousin					
	Thank you for completing the survey!								