

#### **iSTEM Grade 12 Survey**

**IMPORTANT**: Please use a **BLACK** pen. Mark response boxes with an X. Use block printing for any text or numeric responses. If you wish to change a response, mark the right answer and **CIRCLE** it.

iSTEM's goal is to learn more about how the experiences of students influence their future education and career choices. We're especially interested in your experiences with science, technology, engineering, and math during high school, and how they impact your decisions about your future education and career choices. This project is funded by the National Science Foundation and conducted by SRI International, a non-profit research institute based in California. We hope you will participate in our research study and share your experiences with us.

Some important points to keep in mind about this survey:

- We appreciate your honesty. All of the information will be kept confidential. Your name will NOT appear in any of our reports.
- There are no right or wrong answers.
- You do not have to answer any question that makes you feel uncomfortable, and you may stop filling out the survey at any time.
- The survey should only take about 20 minutes to complete. Thank you for your time.

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Your Feelings about School in General

### 1. Not including lunch or study periods, what has been your <u>MOST</u> FAVORITE subject and your <u>LEAST</u> FAVORITE subject in high school?

(Write the class number from the 01 - English list at right into the boxes below.) 02 - Foreign language 03 - Science **MOST FAVORITE** 04 - Art subject: 05 - Music 06 - Mathematics 07 - Engineering LEAST FAVORITE 08 - Physical Education or Gym subject: 09 - Computer Education or Computer Science 10 - Social Studies, History, Government or Civics 11 - Career preparation (such as health professions, business, or culinary arts)

2.	How much do you agree or disagree with the following statements? (Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
	A. You always try to do your best in school.				
	B. You always try hard, no matter how difficult the work.				
	C. Getting good grades is important to you.				
	D. You always study for tests.				
	E. You spend enough time on your homework to understand it well.				
	F. You are able to get help when you find your homework difficult.				
	G. You manage your time well enough to get all of your work done.				

3.	How much do you agree or disagree with the following statements? (Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
	A. Teachers at this school believe that all students in this school can do well.				
	B. Teachers at this school have given up on some of their students.				
	C. Teachers at this school expect very little from students.				
	D. Teachers at this school work hard to make sure that all students are learning.				
	E. Teachers at this school only care about smart students.				
	F. Teachers at this school always try to be fair.				
	G. Teachers at this school care about my opinions.				
	H. Teachers at this school would be willing to give me extra help.				
	I. Teachers at this school care about how I am doing in school.				



. Which of these school-offered services and experiences have you used during this academic year? (Mark (X) one box for each row.)	Not used	Used	Not offered at this school
A. College entrance exam preparation assistance			
B. Career guidance			
C. College tours			
D. Enrollment in college courses (offered on a college campus, online or at your school)			
E. Job shadowing or visits to observe work sites			
F. Internships			
G. One-to-one tutoring			
H. Classes and/or seminars on how to improve academically (for example, homework strategies, organization, time management)			
I. Academic counseling about what courses to take or how to apply to college			
J. Academic "catch up" program or class (for example, in reading or mathematics)			
K. Advanced Placement strategies (for example, tutoring, prep sessions, or summer academies supporting work in AP classes)			

#### Your Feelings about Different Subjects

#### 5. How much do you agree or disagree with the Strongly Strongly following statements? (Mark (X) one box for each row.) Disagree Agree Disagree Agree A. You see yourself as a math person B. Others see you as a math person C. You see yourself as a science person D. Others see you as a science person E. You see yourself as a technology person F. Others see you as a technology person

6.	How are your grades in the following subjects? (Mark (X) one box for each row.)	Mostly As	A mix of As and Bs	Mostly Bs	A mix of Bs and Cs	Mostly Cs	A mix of Cs and Ds	Mostly Ds
	A. Math							
	B. Science							
	C. English							
	D. Social studies/History							



- 7. During high school, what MATH classes have you taken (including those you are currently taking)? (Mark (X) ALL that apply.)
  - Algebra I including IA and IB
     Geometry
     Algebra II
     Trigonometry
     Review or Remedial Math including Basic, Business, Consumer, Functional or General Math
     Integrated Math I
     Statistics or Probability

Integrated Math II or above

Pre-algebra

Analytic Geometry

Other advanced math course such as Pre-Calculus or Calculus

- Other math course
- 8. What is the highest level math course that you will graduate with? (Please print.)

Course	title:	
000130	uuc.	

9. Excluding any courses you have taken outside of your high school,think about the MATH course that you took LAST YEAR when you were a junior (or about your most recent math course taken at your high school if you did not take one last year). What was the name of that course? (*Please print.*)

Course title:

#### Please answer questions 10-13 about the math course you listed in question 9

#### 10. How much do you agree or disagree with the following

statements about the usefulness of that MATH course? (Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
A. What students learn in this course is useful for everyday life.				
B. What students learn in this course will be useful for college.				
C. What students learn in this course will be useful for a future career.				

### 11. How much do you agree or disagree with the following statements about that MATH course?

(Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
A. You enjoyed this class very much.				
B. You thought this class was boring.				
C. You did well on tests in this course.				
D. You understood the most difficult material presented in the textbook used in this course.				
E. This course was a waste of time.				



12. How much do you agree or disagree with the following statements about the teacher of that MATH course? Remember, none of your teachers or your principal will see any of the answers you provide (Mark (X) one box for each row)

That math teacher	Strongly Disagree	Disagree	Agree	Strongly Agree
A. valued and listened to students' ideas.				
B. treated students with respect.				
C. treated every student fairly.				
D. thought every student can be successful.				
E. thought mistakes were okay as long as students learned from them.				
F. made math interesting.				
G. treated male and female students the same way.				
H. made math easy to understand.				

13.	In that MATH class, how often did you do the following? (Mark (X) one box for each row.)	Never	A few times during the year	Once or twice a month	Once or twice a week	Almost every day
	A. Applied mathematical concepts to "real world" problems					
	B. Analyzed data to make inferences or draw conclusions					
	C. Explained to the class how you solved a math problem					
	D. Worked on problems with more than one solution					
	E. Picked the projects or research topics you worked on					
	F. Made estimates, predictions, or hypotheses					
	G. Worked on projects that took multiple days to complete					
	H. Learned something about science					
	I. Used technology					
	J. Learned something about engineering					

### 14. During high school, what SCIENCE courses have you taken (including those you are currently taking)? (Mark (X) ALL that apply.)



15. Excluding any courses you have taken outside of your high school, think about the SCIENCE course that you took LAST YEAR when you were a junior (or your most recent science course taken at your high school if you did not take one last year). What was the name of that course? (*Please print.*)

Course title:

Please answer questions 16-19 about the science course you listed in question 15

#### 16. How much do you agree or disagree with the following

statements about the usefulness of that SCIENCE course? (Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
A. What students learn in this course is useful for everyday life.				
B. What students learn in this course will be useful for college.				
C. What students learn in this course will be useful for a future career.				

### 17. How much do you agree or disagree with the following statements about that SCIENCE course?

(Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
A. You enjoyed this class very much.				
B. You thought this class was boring.				
C. You did well on tests in this course.				
D. You understood the most difficult material presented in the textbook used in this course.				
E. This course was a waste of time.				

18. How much do you agree or disagree with the following statements about the teacher of that SCIENCE course? Remember, none of your teachers or your principal will see any of the answers you provide. (Mark (X) one box for each row.)

That science teacher	Strongly Disagree	Disagree	Agree	Strongly Agree
A. valued and listened to students' ideas.				
B. treated students with respect.				
C. treated every student fairly.				
D. thought every student can be successful.				
E. thought mistakes were okay as long as students learned from them.				
F. made science interesting.				
G. treated male and female students the same way.				
H. made science easy to understand.				



19.	In that SCIENCE course, how often did you do the following? (Mark (X) one box for each row.)	Never	A few times during the year	Once or twice a month	Once or twice a week	Almost every day
	A. Conducted laboratory activities, investigations, or experiments					
	<ul> <li>B. Wrote up results or prepare presentations from a lab activity, investigation, or experiment</li> </ul>					
	C. Memorized facts					
	D. Generated your own hypotheses					
	E. Used evidence/data to support an argument or hypotheses					
	F. Found information from graphs and tables					
	G. Worked on projects that took multiple days to complete					
	H. Watched the teacher demonstrate or lecture					
	I. Used probes, computers, calculators, or other educational technology to learn science					
	J. Used engineering ideas in assignments or projects					
	K. Learned some new mathematics so you could use it in science					

### 20. Have you ever had a difficult time understanding the content or earning the kind of grade you wanted in a science or math class?

Yes - Go to question 21

□ No - Skip to question 22

### 21. Think about the last time you had this kind of trouble. Which of the following did you do? (*Mark* (X) ALL that apply.)

Asked my teacher for help

Got someone to tutor me

Started spending more time studying and working on assignments

Dropped the class

- Got help from a parent or other adult outside the school
- Studied with a classmate

Other (please describe):



22.	In your junior year, did you participate in any of the following types of extra-curricular activities and if so, how often? (Mark (X) one box for each row. Mark N/A if the activity was not available.)	Never	A few times that year	Once or twice a month	Once or twice a week	Almost every day	N/A
	A. School math, science or technology club (for example, math club or robotics club)						
	B. Internship or shadowing with a science or engineering professional (for example, an engineer, doctor, veterinarian, or agricultural scientist)						
	C. Research at a science lab or with a research professional						
	D. Math or science competition						
	E. Math, science, or computer camp						
	F. Environmental projects (for example, monitoring water quality)						

### 23. In the PAST TWO YEARS, how often have you done the following activities outside of school?

(Mark (X) one box for each row.)

(Mark (X) one box for each row.)	Never	Rarely	Sometimes	Often
A. Read science books and magazines				
B. Made up your own experiment				
C. Designed (thought up) and built something on your own				
D. Taken apart a toy or appliance to see how it worked				
E. Accessed websites for computer technology information				
F. Visited a science museum, planetarium or environmental center				

### 24a. Have you taken any elective courses in Technology (including Computer Science) while in high school? (Mark (X) one only.)

- Yes, I took a course in this subject area
- No, my school does not offer courses in this subject area
- No, my school offers courses in this subject area, but I have not taken one

#### 24b. Have you taken any elective courses in Engineering while in high school? (Mark (X) one only.)

- Yes, I took a course in this subject area
- No, my school does not offer courses in this subject area
- $\Box$  No, my school offers courses in this subject area, but I have not taken one



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### 25. If you <u>HAVE</u> taken any elective Technology or Engineering courses, what reasons did you have for choosing this elective? (*Mark* (X) ALL that apply for each subject area.)

Technology	Engineering
□ N/A. I have not taken a course in Technology.	□ N/A. I have not taken a course in Engineering.
A. Your teachers wanted you to.	A. Your teachers wanted you to.
B. Your school counselor wanted you to.	B. Your school counselor wanted you to.
C. You are good in Technology.	C. You are good in Engineering.
D. You needed more courses in Technology for the type of career you want.	D. You needed more courses in Engineering for the type of career you want.
E. Most students who are like you take courses in Technology.	E. Most students who are like you take courses in Engineering.
F. You enjoy studying material in Technology.	□ F. You enjoy studying material in Engineering.
G. Taking courses in Technology is useful for <i>getting into</i> college.	G. Taking courses in Engineering is useful for <i>getting into</i> college.
H. Having taken high school courses in Technology will help you when you're in college.	H. Having taken high school courses in Engineering will help you when you're in college.
I. Your friends were taking more courses in Technology.	I. Your friends were taking more courses in Engineering.

# 26. How much do you agree or disagree with the following statements about your experience with TECHNOLOGY? (Technology can include Internet use, creating web pages or wikis, creating and/or editing video and audio files )

(Mark (X) one box for each row.)	Strongly Disagree	Disagree	Agree	Strongly Agree
A. You find working with technology to be difficult.				
B. You learn technology quickly.				
C. You feel helpless when using technology.				

### 27. Since the beginning of your junior year, which of the following people have talked with you about which MATH courses to take? (Mark (X) ALL that apply.)

- ☐ Your mother or female guardian
- ☐ Your father or male guardian
- ☐ Your friends
- A teacher
- A school counselor
- Other adult (neighbor, coach, etc.)
- □ None of these people

### 28. Since the beginning of your junior year, which of the following people have talked with you about which SCIENCE courses to take? (*Mark* (X) ALL that apply.)

- Your mother or female guardian
- ☐ Your father or male guardian
- Your friends
- A teacher
- A school counselor
- Other adult (neighbor, coach, etc.)
- □ None of these people



#### 29. How much do you agree or disagree with each of the following statements?

(Mark (X) one box for each row.)

If you spend a lot of time and effort in your math and science classes	Strongly Disagree	Disagree	Agree	Strongly Agree
A. you won't have enough time for hanging out with your friends.				
B. you won't have enough time for extracurricular activities.				
C. you won't be popular.				
D. people will make fun of you.				

### 30. During a typical weekday during the school

year, how many hours do you spend (Mark (X) one box for each row.)	Less than 1 hour	1-2 hours	2-3 hours	3-4 hours	4-5 hours	5 or more hours
A. Working on math homework and studying for math class						
B. Working on science homework and studying for science class						
C. Working on homework and studying for the rest of your classes						
D. Participating in extracurricular activities such as sports teams, clubs, band, or student government						
E. Working for pay, not including chores or jobs you do around your house						

#### Your Thoughts about the Future

#### 31. Which of the following standardized

Yes, I have taken tests have you taken? (Mark (X) one box No, I have not this test or plan to for each row.) taken this test take it this year A. SAT B. American College Testing Service (ACT) П Π C. An Advanced Placement (AP) exam D. An International Baccalaureate (IB) exam 

## 32. Since the beginning of the school year, which of the following people have you talked with about you going to college? (Mark (X) ALL that apply.)

- ☐ Your mother or female guardian
- ☐ Your father or male guardian
- Your friends
- A teacher
- A school counselor
- Other adult (neighbor, coach, etc.)
- □ None of these people



33.	Since the beginning of the school year, which of the following people have you talked with about possible jobs or careers when you are an adult? (Mark (X) ALL that apply.)
	☐ Your mother or female guardian
	☐ Your father or male guardian
	☐ Your friends
	A teacher
	A school counselor
	Other adult (neighbor, coach, etc.)
	None of these people
34.	What do you plan to do during your first year after high school? (Mark (X) AT LEAST one.)
	Enroll in an Associate's degree program in a two-year community college or technical institute If you know the name of the community college or technical institute you will attend next year,
	please specify:
	Enroll in a Bachelor's degree program in a college or university
	If you know the name of the college or university you will attend next year, please specify:
	Obtain a license or certificate in a career field
	Attend a registered apprenticeship program
	□ Join the armed services
	Get a full time job
	Start a family
	Do volunteer or missionary work
	□ Not sure what you want to do
35.	As things stand now, how far in school do you think you will get? (Mark (X) one response.)
	Less than high school
	🗌 High school diploma
	Associate's degree (that is, a 2-year degree at community college)
	Bachelor's degree (that is, a 4-year degree at college)
	Master's degree, Ph.D., M.D., law degree or other high level professional degree (after at least a Bachelor's degree)
36.	How interested are you in jobs related to the following subjects? (Mark (X) one box for each subject.)
	Science Technology Engineering Mathematics





#### Your Background

The following questions about you and your family will help us categorize your responses.

#### 37. What is your gender?

- Male
- Female

#### **38.** What is your race or ethnicity? (Mark (X) ALL that apply.)

- American Indian/Alaska Native
- Asian/Pacific Islander
- Hispanic
- Black
- U White

#### **39.** What is the primary language spoken in your home? (Mark (X) only one.)

- English
- A language other than English

#### 40. Do your parent(s)/guardian(s) work in any of the occupational fields below?

(For example, check "Healthcare" if your parent works as a dental hygienist or a dentist.) (Mark (X) <u>one</u> for <u>each</u> parent/guardian.)

Mother/Female Guardian (choose one)	Father/Male Guardian (choose one)
Computer / Mathematical Operations (for example, computer technician, computer programmer, actuary)	Computer / Mathematical Operations (for example, computer technician, computer programmer, actuary)
Architecture / Engineering (for example, surveyor, mechanical drafter, architect, civil engineer)	Architecture / Engineering (for example, surveyor, mechanical drafter, architect, civil engineer)
Life or Physical Science (for example, chemist, soil and plant scientist, biotech)	Life or Physical Science (for example, chemist, soil and plant scientist, biotech)
Healthcare (for example, lab technician, chiropractor, dental hygienist, veterinarian, optometrist, pharmacist, doctor)	Healthcare (for example, lab technician, chiropractor, dental hygienist, veterinarian, optometrist, pharmacist, doctor)
Does not work in any of these fields (for example, lawyer, business owner, restaurant worker, stay-at-home parent)	Does not work in any of these fields (for example, lawyer, business owner, restaurant worker, stay-at-home parent)



#### 41. What was the last grade in school or degree your mother and father completed?

(Mark (X) <u>one</u> for <u>each</u> parent/guardian.)

Mother/Female Guardian (choose one)	Father/Male Guardian (choose one)
Less than high school	Less than high school
☐ High school diploma or GED	High school diploma or GED
Started but did not complete an Associate's or a Bachelor's degree	Started but did not complete an Associate's or a Bachelor's degree
Completed an Associate's degree (2 year degree)	<ul> <li>Completed an Associate's degree</li> <li>(2 year degree)</li> </ul>
Completed a Bachelor's degree (4 year degree)	Completed a Bachelor's degree (4 year degree)
Completed a Master's degree, Ph.D., M.D., law degree or other high level professional degree	Completed a Master's degree, Ph.D., M.D., law degree or other high level professional degree
□ Don't know	□ Don't know



#### Information for Future Follow-Up

Because the goal of the iSTEM study is to learn about how students' experiences with STEM influence their experiences in high school and beyond, learning about your future experiences is key to the project's success.

If a new study is funded, we would like to contact you in two years to invite you to complete an iSTEM Follow-up Survey. Each person who completes the iSTEM Follow-up Survey will receive a \$45 gift card as a token of our appreciation for their time.

To ensure that we can keep in touch and hear your story after you graduate from high school, the next few questions ask for your contact information, as well as the contact information of a family member or close friend who will know how to reach you if you move.

This information will be kept strictly confidential and will not be shared with anyone.

### 42. Please <u>print</u> your name, address, home telephone number, cell phone number, and e-mail address.

Your First Name:	Middle Initial:	Last Name:

Address (include number, street, apartment number, P.O. Box, etc.):

City:		State:	Zip	cod	e:	
Home Telephone (including area code):	☐ Mark here if you do not h	ave a ho	me te	leph	one.	
Cell Telephone (including area code):	Mark here if you do not have your own cell phone.					
Email Address:						

Mark here if you do not have an email address.

#### 43. How would you prefer to be contacted about the iSTEM study in the future?

(Mark (X) ALL that apply.)

- 🗌 Mail
- 🗌 Email
- Home phone call
- Cell phone call
- Text message



### 44. Please <u>print</u> the following information for the parent or guardian with whom you live most of the time.

Parent/Guardian's First Name: Middle Initial: Las	t Name:				
Work Telephone (including area code, telephone number, and extension, if applicable): () – Ext Mark here if your parent/guardian does not have a work phone number.					
Cell Telephone (including area code):					
Mark here if your parent/guardian does not have a cell phone number.					
Email Address:					

 $\hfill \square$  Mark here if your parent/guardian does not have an email address.



45. Please <u>print</u> the name, address, telephone number, and email address of a relative or close friend who does <u>not</u> live with you and who will always know how to contact you. If you don't know the address, please fill in as much as you know.

Relative/Friend's First Name: Middle Initial	: Last Name:					
Address (include number, street, apartment number, P.O. Box, etc.):						
City:	State: Zip code:					
	ark here if he/she does not have a home telephone you don't know the number.					
Cell Telephone (including area code): ( )						
Email Address:	ss or you don't know the email address.					

46. What is this person's relationship to you? (Mark (X) one response.)

- 🗌 A parent
- A grandparent
- An aunt or uncle
- A brother or sister
- A cousin
- A friend
- Other (please describe):



#### THANK YOU FOR YOUR PARTICIPATION IN THE ISTEM SURVEY!

