

Intel Science Talent Search Entry Form

Entries for the 2010 Intel Science Talent Search **must be received by 8:00 p.m. ET on Wednesday, November 18, 2009** at Intel Science Talent Search, Society for Science & the Public, 1719 N Street, N.W., Washington, DC 20036. Any entry received after the deadline will not be accepted UNLESS it was (1) metered in a U.S. Post Office by November 9, 2009 or (2) sent by a nationally-known carrier that guaranteed, in writing, delivery by the 8:00 p.m. ET deadline **and** (3) the judging process has not been initiated. **No entries or forms are accepted by fax or e-mail.**

PLEASE TYPE OR PRINT

Title of Research Report: _____

Field of Scientific Research (You must select only one. For a description of each category, see p. 6.)

- | | | |
|--|---|--|
| <input type="checkbox"/> Animal Sciences (AS) | <input type="checkbox"/> Computer Science (CS) | <input type="checkbox"/> Medicine & Health (ME) |
| <input type="checkbox"/> Behavioral & Social Sciences (BE) | <input type="checkbox"/> Earth & Planetary Science (EP) | <input type="checkbox"/> Microbiology (MI) |
| <input type="checkbox"/> Biochemistry (BI) | <input type="checkbox"/> Engineering (EN) | <input type="checkbox"/> Materials Science (MS) |
| <input type="checkbox"/> Bioinformatics & Genomics (BG) | <input type="checkbox"/> Environmental Science (EV) | <input type="checkbox"/> Physics & Space Sciences (PH) |
| <input type="checkbox"/> Chemistry (CH) | <input type="checkbox"/> Mathematics (MA) | <input type="checkbox"/> Plant Sciences (PS) |

Check all those applicable: Human Subjects Vertebrate Animals Worked w/Supervising Scientist (Form IIA)

Student Information

Last Name _____ Full First Name _____ Full Middle Name _____ Nickname _____

Street _____

City _____ County _____ State _____ Zip _____

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Telephone Number _____

E-Mail _____

MALE FEMALE U.S. CITIZEN? Yes No

Country of Birth _____ Date of Birth ____/____/____

High School Information (The College Board assigns a six-digit code to each high school. Your guidance office will know this number, or you can search at: www.collegeboard.com/student/testing/sat/codelist.html)

College Board High School Code _____

High School Name _____

High School Street Address _____

HS City _____ State _____ Zip _____

Principal Last Name _____

Principal First Name _____

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School Telephone Number _____

Fax Number _____

Teacher Email _____

*Teacher Last Name _____

Teacher First Name _____

Teacher Prefix _____

*A **Certificate of Recognition** is sent to the teacher of STS Semifinalists & Finalists.
Please indicate one teacher at your high school to receive this honor if you are selected.

Congressional Representative Corresponding to Student's Home (available at www.house.gov)

DO NOT STAPLE

Student Last Name

Student First Name

Most Influential Person Who has been the single most influential person in the development of your scientific career?
(Please select someone, and only one, with whom you have had personal contact.)

Name & Mailing Address:

Title	First Name	Last Name
Address 1		
Address 2		
Address 3		
City ()	State	Zip
Telephone	Email	

What is this person's relationship to you? _____
RELATIONSHIP (father, mother, sibling, teacher, mentor, etc.)

In what ways did this person influence you?

Family Information

Father

Mother

Father's Full Name

Mother's Full Name

Please indicate how to list your parent(s) in the official Intel STS biography if you are selected as a Finalist:

Siblings List the ages of the children in your family (including yourself) from oldest to youngest. Please check the proper column to indicate yourself and your sibling(s).

Order in Family	Age (at last birthday)	Brother	Sister	Yourself
Oldest Child				
Second Child				
Third Child				
Fourth Child				
Fifth Child				
Sixth Child				

Student Activities & Interests

What occupation do you hope to pursue? _____
CHOICE #1

Do you have a second choice? _____
CHOICE #2

- Have you participated in any of the following?
- _____ Science fair at your local or regional level
 - _____ Intel International Science and Engineering Fair (ISEF) Finalist
 - _____ Discovery Challenge (DCYSC)/SSP Middle School Program Finalist
 - _____ Science training program or summer institute _____
 - _____ Other science competition(s) _____

DO NOT STAPLE

Student Last Name

Student First Name

Extracurricular Activities & Interests

Please list the top 5 activities in which you have been involved during your high school career and offer a brief explanation of your involvement including the duration and/or any leadership role (e.g. science, math, or engineering clubs, Boy Scouts or Girl Scouts, school publications, music, athletics). Contain the answer to this sheet, or if, on a separate sheet, limit to a maximum of 250 words.

How have you spent recent summers?

Last summer: _____

Two summers ago: _____

Three summers ago: _____

List any paid employment during the school year with average hours per week.

List any volunteer work during the school year with average hours per week.

What colleges and/or universities do you wish to attend?

List here special recognitions, awards, honors and scholarships from both school and community, if any. Include national or international honors received during your high school career. Science-specific projects and competitions are addressed on the next page.

Academic (list up to 5):

Community (list up to 3):

Extracurricular (athletic, music, etc.) (list up to 3):

List hobbies you are pursuing, if any.

What foreign languages do you speak and/or read fluently, if any?

What subjects in high school have you liked most?

What course of study do you plan to pursue in college, graduate or professional school?

What would you like to be doing ten years from now? Why?

Science Projects & Publications

Beginning with your submitted Intel STS research report, list any individual or team research projects to which you have contributed during high school and complete the appropriate fields of the following table. A project does not need to have been submitted to a competition to be listed. Limit answers to this page or in a similar format on a separate sheet.

Month/Year (start & end dates)	Author(s) (if a team project)	Project Title	Competition(s) Entered/Awards
			Intel STS 2010

List any scientific publications on which you are an author or co-author and submit a copy with your entry.

Intel STS Research Project

Limit each response to 100 words.

What inspired you to conduct this research project?

How has doing this research project helped you clarify your interest in science?

What benefits do you think your research will bring to the world? What additional steps, and by whom, might be needed for this benefit to be realized?

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PART II - Essay Questions

To be completed by the student

Address **all** essay questions, answering each within the stated word limit. Provide a word count at the end of each section. Your answers, labeled with Part II and the question number, should be on additional pages, with your name in the upper right hand corner. The essay pages should follow this page in your assembled entry form.

1. Your Promise as a Scientist, Mathematician or Engineer (maximum 500 words)

Address through specific and concrete examples what characteristics you have that best demonstrate your affinity and aptitude for being a good scientist. What have you done that illustrates scientific attitude, curiosity, inventiveness, initiative? How does your experience suggest future success as a scientist, mathematician or engineer?

2. Major Scientific Question of the Future (maximum 500 words)

What is a major scientific question in your field whose answer you believe will have a significant impact on the world in the next 20 years, and why? Using examples from your own experience or research, explain how might you envision addressing the question over the next 20 years.

3. Research Project "layperson's summary" (maximum 100 words)

Summarize your project in layperson's terms. Your explanation should provide easily understandable background, procedures, conclusions and relevance. The summary will aid readers, including administrators, journalists and the public.

4. Research Project Abstract (maximum 250 words)

Provide a scientific abstract of your research project. The abstract should include the purpose of the experiment, procedures, data, and conclusions. It also may include any possible research applications. It must focus on the research conducted by you and should not include work or procedures done by the Supervising Scientist or other researchers.

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PART II - Essay Questions 5 (a-f)
Research Project Support
To be completed by the Student

To give the evaluators and judges a better understanding of your research experience, please answer the following questions, providing complete information in all sections. Provide clear, concise responses on a separate piece of paper with your name listed on the top right-hand corner of each page.

If you did your research under a Supervising Scientist (in a laboratory or as field research), that scientist must complete Part IIA, the Supervising Scientist Form, on page 7. (Supplemental forms may also be required for projects involving human subjects or non-human vertebrate animals or tissue, see Rules, pp. 3-5.) The Supervising Scientist Form, Part IIA, may be sent with the Entry Form OR sent to Intel STS/Society for Science & the Public by the Supervising Scientist, but it must arrive by the November 18, 2009 deadline.

- 5 (a) Where was the research conducted and who supervised the research? Provide names, titles, and contact information for key people who supported the research. If you have personal ties to any of the key people (e.g. father, aunt, family friend), please indicate the nature of the relationship.
5 (b) How did you get the idea for your research? If the research was conducted with the support of a Supervising Scientist, please address how the relationship was established (e.g. summer program, placement through high school, personal contact) and explain how the research idea developed.
5 (c) What was the duration of the research? Explain the amount of time you spent on the research project that you have submitted.
5 (d) If your research was conducted as a part of a larger research project or group, explain how your work is independent of this larger laboratory project. If there were other high school students in the group, be specific about how your work was similar to other students vs. your independent work.
5 (e) List those specific aspects of your work which you carried out independently vs. those in which you received guidance or training (e.g. in experimental design, specific techniques, use of special equipment or instruments, gathering data, analyzing data, arriving at conclusions)
5 (f) Indicate any other substantive guidance received, as well as any prior research involvement or training that helped you in conducting your own work in this project.

I certify that all the information given throughout the Intel STS application is correct to the best of my knowledge and I certify that the Research Report I am submitting is my own individual work, not that of a student team and does not represent the work of others. I agree to accept the decision of the judges as final and understand that the Intel STS proceedings and my complete Entry Form & Research Report will not be returned to me but shall become the sole property of Intel STS/SSP. I also agree to permit Intel STS/SSP to use all information contained in my Entry Form in any way it deems appropriate for publicity purposes. I certify that I have read and fully understood all rules and eligibility requirements found in the Intel STS Rules & Official Entry Form and that I have complied with all rules and meet the eligibility for submitting this Intel STS entry. I further understand that scientific fraud, misconduct or violation of the rules and/or eligibility requirements may result in disqualification and forfeiture of any awards and that SSP reserves the right in such cases to bar future participation in SSP programs.

Signature of Student

Date

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PART IIA - Supervising Scientist Form

To be completed by the Supervising Scientist

Students working with a Supervising Scientist are required to have the following form and questions completed by that scientist to provide the evaluators and judges with a full understanding of the research conducted by the student. If the student's project involved the use of non-human vertebrate animals or tissue, the Supervising Scientist is also required to complete and sign a Vertebrate Animal Exception Form.

The questions below should be answered in **a signed letter on letterhead stationery** and attached to this form and submitted by either the student with his or her entry **OR** sent by the researcher directly to Intel Science Talent Search, Society for Science & the Public, 1719 N Street, N.W., Washington, DC 20036, to be received by **8:00 p.m. ET on Wednesday, November 18, 2009**.

1. a. How did the student begin to work with you?

Explain briefly how the student was accepted into your laboratory or research group (e.g. through a summer program, a high school partnership, personal relationship, direct communication from student). If you or other key members of your laboratory have a personal tie to the student, please indicate the nature of the relationship (e.g. father, aunt, family friend).

b. How did the student get the idea for his/her project?

Was the project assigned; picked from a list of possible research topics; result from discussion with a scientist; arise from work in which the student was engaged; or did the student suggest it?

2. a. Provide a brief description of your laboratory/research group (size, number of projects, research levels (post-doc, doctoral, undergraduate, high school) and what the student's role was within this group.

b. Were there other high school students in your research group?

If so, please list the other students and explain the interaction among the high school students. How was this student's work different and independent from others?

3. What areas of the research project were conducted independently by the student?

What parts did the student do on his/her own, and on which parts did he/she receive help (in the experimental design, choice of techniques, use of special instruments or equipment, construction of equipment, gathering data, arriving at conclusions, etc.)?

4. What did the student do that showed creativity and ingenuity?

Based on your knowledge of the student, please provide examples of how this student demonstrates future promise as a scientist. Was he/she creative in their science, or creative for a high school student? What is your impression of their knowledge of experimental design, construction or use of equipment, evaluation of data, etc.?

5. What was the duration and intensity of the student's research experience at your institution?

Number of weeks, months or years; full-time vs. part-time; resident vs. non-resident, etc.

6. Additional Comments

Reminder: Projects involving the use of human subjects or non-human vertebrate animals or tissue require the submission of the appropriate Supplemental Forms bearing the signature of the Supervising Scientist.

Thank you for your support of this student and of the Intel Science Talent Search.

Name of Supervising Scientist (please type or print)

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Telephone Number

Signature

Date

()
Fax Number

Institution

Title

E-mail

Intel Science Talent Search

PART III - Teacher/Advisor Recommendation Form *To be completed by a Teacher or Advisor*

Entrants may submit up to three Teacher/Advisor recommendation forms by teachers and/or advisors (including the supervising scientist) whom they know and with whom they have worked.

Teachers/Advisors should address the following questions in a **signed letter on letterhead** and attach it to this form (making sure the student name is included). The completed recommendation should be given to the student in a sealed envelope so the student may send it with the Entry Form, **OR** it can be sent separately so that it arrives at Intel Science Talent Search, Society for Science & the Public, 1719 N St., N.W., Washington, DC 20036 by **8:00 p.m. ET on Wednesday, November 18, 2009. Students who do not have any recommendations will be adversely affected in the evaluation and judging because of incomplete information.**

1. How long have you known this student and in what capacity? How does this student compare to students you currently teach and also to those you have known during your teaching career?

2. Please address, with specific examples if possible, the student's character and integrity.

3. Please describe your knowledge of the extracurricular involvement and leadership this student has demonstrated among his/her peers.

4. Please summarize your observations and experience with this student that address his/her future promise as a scientist, mathematician or engineer. Relevant topics include (but are not limited to) scientific attitude, curiosity, initiative, originality of thought and work ethic.

5. Please explain your level of knowledge regarding the submitted research project and/or any other research projects conducted by this student during his/her high school career. If involved, can you attest that the application and research project submitted in this application properly reflect his/her own work?

Thank you for your support of this student and of the Intel Science Talent Search.

Signature of Teacher or Advisor

Date

Name of Teacher or Advisor (Print or type)

Position

Home Address

City

State

Zip

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Home Telephone

Work Telephone

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Fax Number

E-Mail

Part III

Intel Science Talent Search
PART IV - Secondary School Record
This form is to be completed by the High School Guidance Office

THIS FORM MUST BE INCLUDED WITH THE STUDENT'S OFFICIAL HIGH SCHOOL TRANSCRIPT;
Please be sure to submit a list of current year coursework if not included on the transcript.

Instructions to high school staff: This page must not be shown to the student after completion. Please enclose this form and the official transcript (with a signature, stamp or seal) in a sealed envelope for the student to send with their entry. If the current year coursework is not included, please submit a separate listing. If this procedure is against your policy, the transcript and form may be sent separately to Intel STS, Society for Science & the Public, 1719 N Street, N.W., Washington, DC 20036, to be received by 8:00 p.m., ET on Wednesday, November 18, 2009.

- 1. How many students are in this student's senior class?
2. What is the student's estimated senior class rank? We do not rank students
3. What is the approximate average graduation rate of your school over the past 2-3 years?
4. Approximately what percentage of your graduates attend four-year colleges?
5. Please check all that apply:
Home School, Public School, Private School, International Baccalaureate, Magnet Program(s), Advanced Placement Courses Offered, AP Courses offered in math & sciences

STANDARDIZED TEST SCORES

Please provide this information below, even if it is provided on the transcript.

SAT I Please list all test dates, but student's highest score for each area:

Test Date(s): Crit R: Math: Writing:
Test Date(s): Crit R: Math: Writing:

SAT II

1. Date Subject Score 2. Date Subject Score
3. Date Subject Score 4. Date Subject Score

ACT

Date English Math Reading Science Composite

AP Course Test Scores (Emphasis should be given to math and science courses.)

1. Date Subject Score 2. Date Subject Score
3. Date Subject Score 4. Date Subject Score
5. Date Subject Score 6. Date Subject Score

4. Only graduating high school students may enter the STS. Student's expected graduation date: Month Year

I certify that the information given above and enclosed secondary school records are correct for:

Name of Student (Please type or print)

Name of Guidance Counselor or Principal (Please type or print) Email Phone Number

Original Signature of Guidance Counselor and/or Principal Date

Intel Science Talent Search
NON-HUMAN VERTEBRATE ANIMAL EXCEPTION FORM
REQUIRED FOR BEHAVIORAL NON-HUMAN VERTEBRATE ANIMAL PROJECTS
OR VERTEBRATE ANIMAL TISSUE STUDIES

Type or Print

This form must be submitted for any vertebrate animal project, including human tissue studies. It is to be completed (Part A or B) and signed (Part C-below) by the Supervising Scientist, attesting to compliance with the non-human vertebrate animal project rule. The rule for these projects is on p. 3 of the Intel STS Rules and Official Entry Form. Projects that do not satisfy these requirements may fail to qualify for the Intel STS.

The student's project involved (Please check one): [] Non-human Behavioral Research [] Vertebrate Animal Tissue (incl. human)

The Supervising Scientist must complete either Part A or B, and then sign and complete Part C.

A. Non-human Behavioral Projects:

- 1. List the genus, species and common name of animal(s) involved in the project.
2. Where was the study conducted? Provide the name of the research institution, title of the study, the Institutional Animal Care and Use Committee (IACUC) approval number and date of IACUC approval, as required and/or applicable.
3. Describe, in appropriate detail, the student's training to work with the abovementioned animals, the supervision under which the work took place, and the student's overall interaction with the animals.

B. Vertebrate Animal or Human Tissue Projects:

- 1. List the genus, species, common name and tissue(s) or organ(s) of the animal(s) involved in the project.
2. Provide information regarding the vertebrate study from which the tissue was obtained. Include the name of the research institution, the title of the study, the Institutional Animal Care and Use Committee (IACUC) approval number and date of IACUC approval (where required and/or applicable). Human tissue studies, where the tissue samples can be identified with a specific person, must have IRB review and informed consent. (Students taking samples from their own bodies are exempt from this requirement.)

3. I verify that the student worked solely with non-living materials that were supplied to him/her by myself or qualified personnel from my laboratory; and that the animals used were sacrificed for a purpose other than the student's research.

C. After completing Part A or B above, please complete and sign.

Signature Date Telephone Number
Name of Supervising Scientist (please type or print) Fax Number
Institution Title E-mail

**If the institution approving this project has a different form that contains the same information, that IRB form can be substituted for this form.*

Student Last Name _____

Student First Name _____

DO NOT STAPLE

Intel Science Talent Search
INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL FORM*
FOR PROJECTS INVOLVING HUMAN SUBJECTS
Type or print

Student's Name _____

Student's High School _____

Name, address and telephone number of institution providing approval:

A. Explain why human subjects are proposed or necessary for this project.

B. Describe and assess any potential risk (physical, psychological, social, legal, or other).

C. Describe consent procedures to be followed and attach a sample of completed Informed Consent Form used.

Check if **not** applicable.

D. Describe procedures to minimize risks. _____

E. Describe benefits to the individual or society. _____

F. Explain how the benefits exceed the risks. _____

G. Approved by Institutional Review Board (IRB)

To be completed by the IRB prior to experimentation; a minimum of 3 members are required. See high school IRB composition, p.5. in Rules.

No more than minimal risk involved.

More than minimal risk involved (an Informed Consent Statement is required from each subject in the study).

Scientist/Science Teacher (not involved with project being reviewed):

Member of IRB's Printed Name

Signature

Date of Approval

Physician/Psychiatrist/Physician's Assistant/Psychologist/Registered Nurse/Licensed Social Worker (circle one):

Member of IRB's Printed Name

Signature

Date of Approval

School Administrator (preferably Principal or Vice Principal; circle one, if applicable):

Member of IRB's Printed Name

Signature

Date of Approval

GUIDELINES FOR EVALUATING RISK IN ACTIVITY AND RESEARCH GROUPS

Once a study population is chosen, the student researcher must assess any potential physical and/or psychological risks when developing the research plan. In evaluating risk, students and IRBs must satisfy the following federal definition of minimal risk:

No more than minimal risk exists when the probability and magnitude of harm or discomfort anticipated in the research are not greater (in and of themselves) than those ordinarily encountered in DAILY LIFE or during performance of routine physical or psychological examinations or tests.

RISK GROUPS

The following risk groups require additional safeguards because they may be vulnerable to coercion or undue influence:

1. Any member of a group that is naturally at-risk (e.g., pregnant women, individuals with diseases such as cancer, asthma, diabetes, cardiac disorders, psychiatric disorders, dyslexia, AIDS, etc.)
2. Special vulnerable groups that are covered by federal regulations (e.g. children/minors, prisoners, pregnant women, mentally disabled persons, or economically or educationally disadvantaged persons)

RISK ACTIVITIES

The following are examples of activities that contain **more than minimal risk**:

1. **Physical**
 - (a) **Exercise** other than ordinarily encountered in DAILY LIFE by that subject.
 - (b) **Ingestion of any substance** or exposure to any potentially hazardous materials.
2. **Psychological**
 - (a) Any activity (e.g. survey, questionnaire, viewing of stimuli) or experimental condition that could potentially result in **emotional stress**. For example, answering questions related to personal experiences such as sexual, physical or child abuse, divorce and/or psychological well-being (e.g. depression, anxiety, suicide) must be considered more than minimal risk. Additionally, research activities that involve exposing subjects to stimuli or experimental conditions that could potentially result in emotional stress must also be considered more than minimal risk. Examples include violent or distressing video images, distressing written materials or activities that could potentially result in feelings of depression, anxiety, or low self-esteem in subjects.
 - (b) Any activity that could potentially result in negative consequences for the subject due to **invasion of privacy or breach of confidentiality**. When research activities involve collection of personal information (e.g. history of abuse, drug use, opinions, fingerprints) or health-related data (genetic material, blood, tissue) the researcher must consider risks related to invasion of privacy and possible breach of confidentiality. Ways to reduce these risks include collecting data anonymously or developing data collection procedures that make it impossible to link any identifying information (e.g. subject's name) with his/her responses or data.

Intel Science Talent Search
INFORMED CONSENT STATEMENT
FOR PROJECTS INVOLVING HUMAN SUBJECTS*
Type or print

Student Researcher's Name

Student Researcher's High School

Research Title

A. Research procedures involving you are:

B. Risks

1. Possible discomforts or risks you may reasonably expect by participation in this research:

2. Procedures to be used to minimize risks:

C. Possible benefits you may reasonably expect:

D. If you have any questions regarding this project, please contact my Supervising Scientist.

Name of Supervising Scientist () phone number

I have read and understand the conditions stated above and consent to participate in this research procedure. I understand that I am free to withdraw my consent and to discontinue my participation in this research activity at any time without any prejudice toward me.

Participant's signature Date

Parent's or guardian's signature if participant is a minor (under age 18) or a person with protected special needs.

Parent's/guardian's signature Date

Supervising Scientist's signature**

* If the institution where the project is to be conducted has a different Informed Consent Statetment that contains essentially this same information, the institution's form may be used.

** When this form has been approved and signed by the Supervising Scientist, it should be reproduced and signed by each study participant.