



California Nanosystems Institute,
SANTA BARBARA, CALIFORNIA 93106-9490

DR. STEPHEN WILSON
STEPHENDWILSON@UCSB.EDU

Dear Parents and Guardians,

We are very excited that your child will be participating in the School for Scientific Thought (SST). To improve future programming and better understand how students learn in an environment like SST, we are starting to conduct research on courses offered through SST. We know that what we learn from your child's experience will only make future programs better.

To help better understand how high school aged students learn about university-level STEM research topics and how to best communicate complex ideas, education researchers at UCSB are conducting research on children's learning and we invite your child to participate.

The attached consent form describes the types of data we would like to collect (audio and video recording, short surveys, and copying your child's work done in the class). If you have any questions, please feel free to contact Ali Muller (almuller@ucsb.edu) or Dr. Stephen Wilson (stephendwilson@ucsb.edu).

Please return the signed permission form indicating whether or not you allow your child to participate by 10/8 when your child arrives for their first day of the class.

Sincerely,

Stephen Wilson
Professor and Associate Chair, Materials Department
Co-Director, NSF's Quantum Foundry at UC Santa Barbara
Professor, Science Education
University of California, Santa Barbara
Santa Barbara, CA 93106

Protocol Number: 1-22-0128

Approved by the UCSB Human Subjects Committee for use thru: 03/07/2032

SUMMARY OF KEY INFORMATION:

This section is to give you key information to help you decide whether or not to volunteer for a research study about how high school students understand and learn about university-level STEM research topics. This study is taking place in conjunction with the School for Scientific Thought class and will require no additional time commitment. Within the scopes of the class, researchers will collect student work, record audio or video and take photographs of students to understand the student thinking while learning about university-level STEM research topics. Participation in this research study will help researchers develop age and content appropriate curriculum for high school students as well as provide insight for researchers into the general interest in university STEM research topics that high school level individuals have. For a complete description of benefits and risk, please refer to the Detailed Consent below.

PURPOSE:

Your child is being asked to participate in a research study. The purpose of the study is to understand how high school students understand and learn about university-level STEM research topics in an informal learning environment.

PROCEDURES:

If you decide to allow your child to participate, we will videotape your child as he or she participates in the class activities as a part of the School for Scientific Thought class. We will also photograph his or her written, drawn, and constructed work done as part of these activities. Approximately 120 students will be recruited for this study. Parental permission is for data collection only. Children who do not wish to be part of the research study (or do not have parental permission) will still be included in all activities; however, no data will be collected from these students and they will not be filmed.

RISKS:

Your child may become uncomfortable being filmed. If at any time, your child decides that he or she does not wish to continue the participating in the research, he or she may decide to sit at a table not being filmed or ask that the camera be turned off.

BENEFITS:

There are no direct benefits to participating in this study.

CONFIDENTIALITY

Your child's study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. Your child's personal information may be released if required by law. Authorized representatives from the following organizations may review your research data for purposes such as monitoring or managing the conduct of this study:

- The National Science Foundation or Center for Science and Engineering Partnerships (The funding and program coordination teams)
- University of California Institutional Review Board (the committee that is charged with the reviewing studies involving human subjects)
- Members of the study team

Absolute confidentiality cannot be guaranteed since research documents are not protected from subpoena. We may use or share your child's research information for future research studies. If we share your child's information with other researchers, it will be de-identified, which means that it will not contain your child's name or other information that can directly identify your child. This research may be similar to this study or completely different. We will not ask for your additional informed consent for future use of your child's de-identified data. The data we collect will not be linked to your child's identity in any way. We may use or share this unidentifiable data in future research studies yet to be determined.

RIGHT TO REFUSE OR WITHDRAW:

Your decision to have your child participate or not participate in this research study WILL NOT affect their involvement in the class. All enrolled students will be welcome to participate in all activities regardless of study participation. If you do decide to allow your child to participate, your child may refuse to participate and still receive any benefits your child would receive if he/she were in the study. You may change your mind about being in the study and remove your child after the study has started.

QUESTIONS:

If you have any questions about this research project or if you think you may have been injured as a result of your participation, please contact Alexandria Muller (almuller@ucsb.edu) or Stephen Wilson (stephendwilson@ucsb.edu) If you have any questions regarding your rights and participation as a research subject, please contact the Human Subjects Committee at (805) 893-3807 or hsc@research.ucsb.edu. Or write to the University of California, Human Subjects Committee, Office of Research, Santa Barbara, CA 93106-2050

PARTICIPATION IN RESEARCH IS VOLUNTARY. YOUR SIGNATURE BELOW WILL INDICATE THAT YOU HAVE DECIDED TO PARTICIPATE AS A RESEARCH SUBJECT IN THE STUDY DESCRIBED ABOVE. YOU WILL BE GIVEN A SIGNED AND DATED COPY OF THIS FORM TO KEEP.

Signature of Parent or Legal Guardian: _____ Date: _____ Time: _____

Protocol Number: 1-22-0128

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PURPOSE:

You are being asked to participate in a research study. The purpose of the study is to understand how high school students understand and learn about university-level STEM research topics in an informal learning environment.

PROCEDURES:

If you decide to participate, we will videotape you as during class activities as a part of the School for Scientific Thought class. We will also photograph any written, drawn, and constructed work done as part of these activities. Approximately 30 students will be recruited for this study. If you do not wish to be part of the research study (or do not have parental permission) you will still be included in all activities; however, no data will be collected from you will not be filmed.

RISKS:

You may become uncomfortable being filmed. If at any time, you decide that you do not wish to continue the participating in the research, you may decide to sit at a table not being filmed or ask that the camera be turned of.

BENEFITS:

There is no direct benefit to you anticipated from your participation in this study.

CONFIDENTIALITY

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. Your personal information may be released if required by law. Authorized representatives from the following organizations may review your research data for purposes such as monitoring or managing the conduct of this study:

- The National Science Foundation or Center for Science and Engineering Partnerships (The funding and program coordination teams)
- University of California Institutional Review Board (the committee that is charged with the reviewing studies involving human subjects)
- Members of the study team

Absolute confidentiality cannot be guaranteed since research documents are not protected from subpoena. We may use or share your research information for future research studies. If we share your information with other researchers, it will be de-identified, which means that it will not contain your name or other information that can directly identify you. This research may be similar to this study or completely different. We will not ask for your additional informed consent for future use of your de-identified data. The data we collect will not be linked to your identity in any way. We may use or share this unidentifiable data in future research studies yet to be determined.

RIGHT TO REFUSE OR WITHDRAW:

Your willingness to or to not participate in this study will not affect your SST experience in any way. All students will be encouraged to participate in all of the activities and lessons that are a part of the SST class. If you do decide to participate in the study, you may refuse to participate at any time and still receive any benefits you would receive if you were in the study. You may change your mind about being in the study and quit after the study has started.

QUESTIONS:

If you have any questions about this research project or if you think you may have been injured as a result of your participation, please contact Alexandria Muller (almuller@ucsb.edu) or Stephen Wilson (stephendwilson@ucsb.edu). If you have any questions regarding your rights and participation as a research subject, please contact the Human Subjects Committee at (805) 893-3807 or hsc@research.ucsb.edu. Or write to the University of California, Human Subjects Committee, Office of Research, Santa Barbara, CA 93106-2050

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Signature of Participant or Legal Representative: _____ Date: _____ Time: _____