

## **RESEARCH PARTICIPANT ASSENT FORM- STUDENT**

Collaborative Research: SEI: Teachers and Researchers Advancing Integrated Lessons in STEM  
(TRAILS) 2.0

Principal Investigator: Dr. Todd Kelley  
Technology Leadership and Innovation  
Purdue University

### **Key Information**

Please take time to review this information carefully. This is a research study. Your participation in this study is voluntary which means that you may choose not to participate at any time without penalty or loss of benefits to which you are otherwise entitled. You may ask questions to the researchers about the study whenever you would like. If you decide to take part in the study, you will be asked to sign this form, be sure you understand what you will do and any possible risks or benefits. This study will investigate secondary students' engagement in science inquiry and engineering design learning activities.

### **What is the purpose of this study?**

The TRAILS 2.0 team will work directly with up to 90 secondary Biology or Agriculture (Life Science) and Engineering/ Technology Education teachers to impact up to 10,000 students within schools in eastern Chesapeake Bay (Delaware, Maryland, and Virginia), Southeastern Colorado and Northern New Mexico, and native Hawaiian-serving schools. The goal of this study is to

- improve student's capacity to pursue STEM careers by strengthening their 21st century skills (creativity, critical thinking, collaboration, communication)
- enhance socio-emotional outcomes (STEM career awareness, perception of STEM, attitude towards place (hometown setting)).

### **What will I do if I choose to be in this study?**

If you want to be in this study, you will be asked to:

1. Allow researchers to review your responses to 21<sup>st</sup> Century Skills survey and Career Interest survey.
2. Allow researchers to review your responses to STEM Semantics survey.
3. Allow researchers to review your responses to Place Attachment survey.
4. Allow researchers to review your Engineer's Notebook.
5. Allow researchers to ask you questions about your experiences with the TRAILS lessons during an interview.
6. Allow researchers to review your TRAILS journal entries.
7. Share some demographic information about you such as your gender and race/ethnicity.
8. Say **Yes** using the web link (preferred) or sign this page, fold it in half and return it to your teacher.
9. **Have your parents/guardians say yes** using the web link (preferred) or sign the Parent Consent Form and return to your teacher.

No one other the research team will look at the questions you answer.

### **How long will I be in the study?**

You will learn two STEM unit lessons implemented by your science/technology teachers during the school year. Each unit lesson is composed of 5-10 sessions and will last 1-2 weeks. You will take surveys three times for each lesson, before lesson, after lesson, and after the school year.

### **What are the possible risks or discomforts?**

The risks participants in this study will encounter are no more than what the participant would encounter in everyday life. Breach of confidentiality is always a risk with data, but we will take precautions to minimize this risk as described in the confidentiality section. Information your child provides and statements he/she makes will not be used in any way to evaluate their performance as students in their respective classes.

### **Are there any potential benefits?**

If you decide to be in this study, some good things might happen to you. You might learn more about how to solve problems using the engineering design process, learn more about science inquiry, and careers in science, technology, engineering, and math. But we do not know for sure that these things will happen. We might also find out things that will help other students someday.

### **Are there costs to me for participation?**

There are no anticipated costs to participate in this research.

### **Will information about me and my participation be kept confidential?**

This study is funded by National Science Foundation (NSF). It is important to note that when conducting this research, the researchers cannot guarantee the confidentiality of subjects because they cannot control what subjects might share outside of the research environment. All data will be de-identified using a coding scheme and stored by the lead investigator until data analysis is complete, by June 2027. Any electronic files will be kept in a Purdue secured share drive. Any written record of participants' responses and files of de-identified student codes will be kept in a locked file cabinet in the TRAILS research office in the Young Hall, Purdue Polytechnic. Only researchers involved in this project will have access to the data. All data will be deidentified, and the data will not be used for any other purposes aside from this research and results will be disseminated to educational research journals and all data will be deidentified. The project's research records may be inspected by the Purdue University Institutional Review Board or its designees, the National Science Foundation, and by departments at Purdue University responsible for regulatory and research oversight to ensure that participants' rights are being protected.

### **What are my rights if I take part in this study?**

You do not have to be in this study. You can say "no" and nothing bad will happen. If you say "yes" now, but you want to stop later, that is okay too. No one will hurt you or punish you if you want to stop. All you have to do is tell us you want to stop. Participation in this study will not affect your grade.

### **Who can I contact if I have questions about the study?**

If you have questions, comments or concerns about this research project, you can talk to one of the researchers. Please contact the lead researcher, Todd Kelley at (765) 496-2383 or

trkelley@purdue.edu. The email address is irb@purdue.edu. To report anonymously via Purdue's Hotline, see [www.purdue.edu/hotline](http://www.purdue.edu/hotline)

If you have questions about your rights while taking part in the study or have concerns about the treatment of research participants, please call the Human Research Protection Program at (765) 494-5942, email ([irb@purdue.edu](mailto:irb@purdue.edu)) or write to:

Human Research Protection Program - Purdue University  
Ernest C. Young Hall, Room 1032  
155 S. Grant St.  
West Lafayette, IN 47907-2114

**Documentation of Informed Consent**

I have had the opportunity to read this consent form and have the research study explained. I have had the opportunity to ask questions about the research study, and my questions have been answered. I am prepared to participate in the research study described above. I will be offered a copy of this consent form after I sign it.

Assent here (preferred) : [https://purdue.ca1.qualtrics.com/jfe/form/SV\\_2mZcGS8z5yul34y](https://purdue.ca1.qualtrics.com/jfe/form/SV_2mZcGS8z5yul34y)



If you prefer, sign this hard copy and return it to your classroom Teacher.

\_\_\_\_\_  
Student's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Student's Name

A handwritten signature in black ink, appearing to read "Todd R. Kelley", is written over a horizontal line.

\_\_\_\_\_  
Researcher's Signature

\_\_\_\_\_  
2/1/2022  
Date