

## Consent Form



Dear Student,

You are invited to participate in a research project concerning your current laboratory experiences as a student. Your participation consists of completing this web-based survey which takes approximately 15 minutes. The aim of this study is gain a much clearer understanding of your laboratory research experience. The outcomes of this study should allow science educators to improve educational practices.

The survey is anonymous. No data is collected concerning your identity and neither you nor your institution will be named or referenced in any report concerning this data. Every effort will be made to protect your privacy.

Should you choose to participate, no monetary compensation is offered. However, following completion of this survey you can ask your instructor to add 2% to your overall grade for dedicating your time to this survey. In order to receive this addition to your grade, you must tell your instructor that you have completed the survey. The survey does not record whether you participate or not and does not automatically report your participation to your instructor or institution. Your participation in this study is voluntary. You are free to decide not to participate in this study or to withdraw or stop at any time while completing the survey. If you are willing to participate in this study, please press the **Consent Button** below.

Thank you,

David Ian Hanauer, Ph.D.  
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[This project has oversight from the Indiana University of Pennsylvania Institutional Review board for the Protection of Human Subjects \(Phone: 724-357-7730\).  
Informed Consent Form](#)

I understand that by pressing the **Consent** button I agree to participate in this survey of laboratory experiences and that I will be directed to the survey and my responses recorded for research purposes. I also understand that I can withdraw from this study by pressing the **Withdraw** button and I will leave the online survey. I understand that my participation is completely voluntary and that I have the right to not to continue at any time during the survey.

- Consent  
 Withdraw

The following questionnaire relates to your experiences in your current laboratory course. Please answer all questions in relation to your experiences in that course.

**Please specify the name of your university**

**What is the name of the laboratory course you are currently participating in?**

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**In your own words could you describe what you did in this laboratory course**

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**Is the course you are currently doing a SEA-PHAGES course**

- Yes  
 No

**Did you find and name a bacteriophage**

- Yes  
 No

**Did you obtain an electron-microscope image of your bacteriophage**

- Yes  
 No

**Did you annotate a bacteriophage genome**

- Yes  
 No

**Did you present a poster dealing with you laboratory course research in an academic setting such as a science meeting or a university science fair?**

- Yes  
 No

**Did you participate in the SEA-PHAGES research symposium**

- Yes  
 No

**Rate the degree to which you agree or disagree with each statement**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My research will help to solve a problem in the world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My findings were important to the scientific community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I faced challenges that I managed to overcome in completing my research project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was responsible for the outcomes of my research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The findings of my research project gave me a sense of personal achievement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a personal reason for choosing the research project I worked on	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The research question I worked on was important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In conducting my research project, I actively sought advice and assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My research project was interesting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My research project was exciting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**In the table below you will find 5 different emotion words from a standardized emotion index. Think about the laboratory course you participated in and wherever relevant please indicate the extent to which each word describes your experience of that course**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
delighted	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
happy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
joyful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
amazed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
surprised	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
astonished	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Rate the degree to which you agree or disagree with the following statement concerning your confidence in your abilities to function as a scientist in your area.**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I am confident that I can use technical science skills (use of tools instruments and techniques)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can generate a research question to answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can figure out what data/observations to collect and how to collect them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can create explanations for the results of the study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can use scientific literature and reports to guide my research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I can develop theories (integrate and coordinate results from multiple studies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Rate the degree you agree or disagree with the following statements concerning your sense of yourself as a scientist who undertakes research activities**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I have a strong sense of belonging to the community of scientists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I derive great personal satisfaction from working on a team that is doing important research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have come to think of myself as a 'scientist'	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like I belong in the field of science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The daily work of a scientist is appealing to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please read each description and think about how much each person is or is not like you. Check the answer that best reflects how much the person in the description is like you.

	Not like me at all	Not like me	A little like me	Somewhat like me	Like me	Very much like me
A person who thinks discussing new theories and ideas between scientists is important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person who thinks it is valuable to conduct research that builds the world's scientific knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person who thinks that scientific research can solve many of today's world challenges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A person who feels discovering something new in the sciences is thrilling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rate the degree to which you agree or disagree with the following statements dealing with the discussion of your research

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I have discussed my research in this course with my parents (or guardian)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have discussed my research in this course with my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have discussed my research in this course with students who are not in my class but in my institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have discussed my research with students who are not at my institution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have discussed my research in this course with professors other than my course instructor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Rate the degree to which you agree or disagree with the following statements concerning your future intentions and career choices**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Following this course, I intend to enroll in similar laboratory research courses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I intend to complete a science related undergraduate degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future, I intend to enroll in a science related graduate program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MY future career will involve collecting, analyzing and reporting scientific data.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the future, I would like to be a research scientist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**What is your class level?**

- Freshman/first year
- Sophomore
- Junior
- Senior
- Unclassified

**What gender do you identify with?**

- Male
- Female
- Other

**What is your current cumulative GPA?**

- Below 2.5
- 2.6-3.0
- 3.1-3.5
- 3.6-4.0
- 4.1 and Higher

**What is the highest level of your parent's or guardian's educational achievement level?**

- No college degree
- Bachelor's degree
- Master's degree
- Doctorate or Professional degree

**Which of the following descriptors best describes your parent's or guardian's occupation**

- Unskilled labor
- Skilled labor
- Clerical
- Service
- Managerial
- Professional

**What is your racial or ethnic identification? (select all that apply)**

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Other Pacific Islander
- White
- Other
- I prefer not to respond.

**What type of institution do you study in:**

- Research University
- Master's Granting Institution
- Four Year School
- Community College

**Thank you for participating in this survey.**