



Environmental Science Immersion Program (E-SIP)

Program Snapshot of Curriculum Structure

Location: Zoom Virtual Classroom

9 Saturday Afternoons - October 5th to November 30th

Session A: 1 pm - 4pm PST



Environmental Science Program

E-SIP

Have you ever wondered how we know which species are endangered? How air pollution is affecting the daily life of both humans and wildlife? Why recycling is harder than it seems? A career in environmental science dives into all of these topics and so much more.

For those interested in helping our planet and it's resources, environmental science offers a multitude of career choices, ranging from wildlife biologists to environmental engineers to pollution specialists. E-SIP offers high school students a chance to explore environmental science over 9 weeks as it relates to sustainability, education, and careers.

Environmental Science Guest Speakers

We will hear from professional environmental scientists from across the field with plenty of time for discussion and questions. They will share their educational journeys, their job duties, and what they love about environmental science.

Education Pathways in Environmental Science

Environmental science careers span a wide array of topics, locations, and duties and E-SIP will cover what education is best for someone interested in environmental science, tips for navigating high school and college with environmental science in mind, and resume/cover letter writing tips for jobs and internships. These skills are important for any discipline and give students confidence when facing these scenarios in the future.

Environmental Workshops

Through activity-based workshops and discussions, students will go over topics important to environmental science and the interaction between humans and natural resources.

Workshops include topics like waste management, biodiversity, and pollution. Covering these concepts will give students a head start in college and their career, and give them the tools to think more in depth about the challenges our world faces.

Team Work and Research Based Projects

Working as a team is an important skill in environmental science and life. E-SIP allows students to research an environmental issue as a team, develop solutions together, and present their research in a presentation. This not only mimics college level projects, but shows the importance of collaboration that is an essential part of environmental science.

Program Snapshot of ESIP Weekly Curriculum



Evening of June 6th (15 minute Group Timeslot Assigned between 5-7pm)

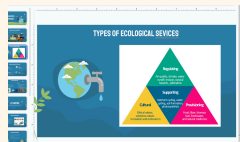
Small Group Meetings: “Getting to Know Each Other & the Program

Two-three days prior to the ESIP program, we want to meet individually with students in their research project groups of 4-5 students. This optional 15-minute meeting will give every student the chance to connect personally with staff members as well as their fellow group members in a small environment before the program starts. Students will learn about their group project, meet fellow students, & learn more about 9 weeks together before we begin the main session.

SATURDAY, October 5th 1pm PST

Orientation for the Environmental Science Immersion Program

The program begins as all students meet their fellow students and E-SIP staff as we learn about the basic structure of our Environmental Science Immersion Program. We will cover our core curriculum and provide an overview of these transformative 9 weeks. The students in our program will be from different backgrounds and perspectives, but for this program we will be brought together as a team. We will review our E-SIP goals, expectations, and student outcomes. There will also be a presentation about the basic aspects of the environmental sciences field that will provide a background to the research, academic, and professional aspects of the field.



SATURDAY, October 12th 1pm PST



Environmental Engineering

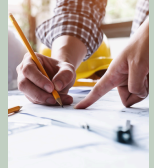


Sylvia Deputy

I graduated from the University of Florida with a Masters Degree in Environmental Engineering. I currently work as the Corporate Environmental Engineer for AUC a chemical manufacturing company in Miami and manage 6 chemical plants in Florida, Georgia, and Mississippi. I have worked as an environmental consultant developing environmental plans. I also have 5 years experience in construction of power plants.

Biodiversity: The Building Blocks of the Environment

We will start the E-SIP program at the foundation of the environment: why biodiversity is important, exploring ecosystems, and discussions on what a healthy environment looks like. This will form the building blocks for a recurring topic in E-SIP - humans and our relationship to the environment. Each workshop will be filled with discussion, activities, and opportunities for students to brainstorm together.

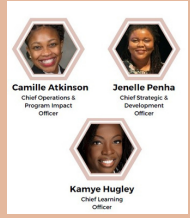


SATURDAY, October 19th 1pm PST

“Personal Productivity & Teams”

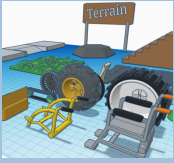
The Bridging Element was formed to provide workplace solutions that promote inclusive leadership, positively impacts productivity, and creates strategic thinking. At The Bridging Element, our mission is to connect businesses and young professionals with the resources they need to transform the workplace. To do this, we provide training, education, and consulting services that enhance the development of young professionals through culturally responsive training, targeted engagements, and learning opportunities.

The Bridging Element



***Students will be working on the Group Project each Week**

Ecosystem Services in Daily Life



There's no question about it - we rely on the environment and natural resources every day. The water we drink, the paper we write upon, the clothes we wear - these all came from natural resources around us. E-SIP students will learn about the services the earth provides us and how we can use these sustainably so future generations will also enjoy them.

SATURDAY, October 26th 1pm PST

Air Pollution Specialist



The California Air Resources Board (CARB) researches air pollution and the harmful effects it can have upon the public by developing programs and actions to fight climate change. CARB is made up of a team of scientists, economists, engineers, policy makers, and experts who work together to combat air pollution in California. We will be hearing from one of their members on what an air pollution specialist does, what some of the challenges in the field are, and how you can join CARB through internships or job opportunities.

The Importance of Cycles

Everyone has heard of the water cycle, but about the carbon cycle? The albedo effect? How about how they all connect with each other? This workshop focuses on environmental cycles and their importance to keeping the earth in balance. In addition, we will have a brief introduction to the important world of systems thinking. We will use activities and real-world examples to examine how interfering with cycles causes long-term effects.



SATURDAY, November 2nd 1pm PST



Ewww, what's in the water??

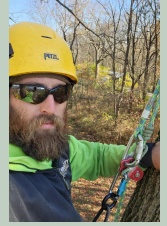


Pollution threatens habitat health across the world, and takes the form of water, air, noise, and ground pollution (and more!). Students in this workshop will discuss solutions to real-world problems and learn about eutrophication, biomagnification, and food webs. We'll start to see how interconnected the environment is as we build on the previous workshops of biodiversity, ecosystem services, and environmental cycles.

The Secret Life of Trees

Zach Musser

Zach Musser is a forester with years of varied experience on his resume. He currently an Herbicide Program Manager for Mint City Utility Services in Central Indiana. He graduated from Purdue University in 2016 with a degree in Forestry. Since then, he has worked as a Forestry Consultant, Indiana Department of Natural Resources (IDNR) District Forester, and a Utility Line Clearance Arborist. He enjoys spending his free time with his wife and 1 year old daughter. He will be speaking on the different careers in forestry, how to find internships, and the importance of controlling invasive species.



Forester

SATURDAY, November 9th 1pm PST

Population Dynamics - Understanding the Study of Populations

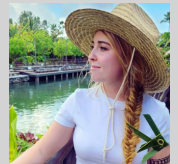


Don't be intimidated by the two big words! Population dynamics is the study of, you guessed it, populations, specifically in plant and animal research. It's an essential part of an environmental scientist's job and we'll cover the basics of the topic in E-SIP so students feel even more comfortable with this topic when it inevitably comes up in the future.

"The Fun of Teaching"

Baleigh Heusinger

Baleigh Heusinger is an environmental educator with a Bachelor's Degree in Wildlife from Purdue University and a resume full of experience. She has worked as an educator at two different zoos, a naturalist at a National Park, and as the director of a non-profit focused on conservation education. These jobs have allowed her to work in multiple states with people of all ages and she is passionate about teaching others about the natural world and the science behind it. She'll bring a host of knowledge about a career in environmental education, along with great stories and a passion for her job.



Environmental Educator

SATURDAY, November 16th 1pm PST

College Skills and Applications



Thinking about college can be overwhelming, but this workshop will cover the ins and outs of college applications, clubs, classes, especially as they relate to environmental science. How can you find an internship in college? How can you help conduct research in a lab? Bring as many questions as you can, because E-SIP is here to help!

Technical Writing Workshop

No matter what career you choose, writing and communication are essential skills. For careers such as environmental science, your technical writing abilities will look amazing on a resume and be helpful in your job. We'll go over what technical writing is, examples from peer-reviewed publications, and practice with some writing activities.



SATURDAY, November 23rd 1pm PST

Putting it all Together - the Community Debate



A favorite among students, the second to last week of the session we will combine everything we have learned in E-SIP into a fun activity that also mimics real-world scenarios. Students will be given different roles in a hypothetical community with environmental issues, and have to formally debate with each other on what the community should do. In real environmental discussions, many stakeholders are at the table with many opinions, and being able to give persuasive arguments while listening to the ideas of others is an essential skill. Plus, it's fun!



“Fail Your Way to Success: Learning the Necessary Lessons for your Destination”

As an environmental planner, Patrick Oeschlager has dealt with problems and problem-solving. He has a bachelor's degree in Environmental Science from Juniata College and a master's degree in Landscape Systems and Design from Purdue University. He has also worked as a Hunter-Trapper Outreach Specialist and most recently, a Land stewardship Assistant. He currently resides in Washington and will be speaking about Environmental Planning and Water Quality Specialists, his current work.

Patrick Oeschlager



Environmental
Planner

SATURDAY, November 30th 1pm PST

“Wrap-up and Final Presentations



On the last day of the fall session, student groups will present their research and hard work to the rest of the class, giving everyone the opportunity to learn about environmental science, problems we face in the world, and solutions that can help. A completion certificate will be provided to students with good attendance via email. We hope to keep in touch with some of our E-SIP students in the months and years to come!



Final scheduling, workshops/simulations & sequence of speakers is subject to change. Please contact us at info@impactinternships.org if you have questions about the E-SIP curriculum.