

To review the CASE *Environmental Science Issues (ESI)* course concept crosswalk for each of the following types of SAE, click on the appropriate links below.

[Foundational SAE \(Advanced Level\)](#)

[Research Immersion SAE](#)

Advanced Foundational SAE Independent Learning Plan

	Instruction (Concept)	Hands on Activity Performance Objective (APP)	Recommended Extension	Assessment
Career Exploration and Planning			Review and revise prioritized list of five career areas of interest and complete at least one college or employment application. (SAE for All A1)	Advanced Foundational SAE Evaluation Grading Rubric
Employability Skills for College and Career Readiness	Solving environmental problems requires research, planning, and communication skills.	Investigate an environmental problem that may occur locally. (Activity 1.1.1)	Select a career mentor and seek feedback on employability skill readiness. (SAE for All A2)	Advanced Foundational SAE Evaluation Grading Rubric
	Organization and record keeping are important to success in environmental science.	Set up the ESI Notebook and Laboratory Notebook. (Activity 1.1.2)		
	Effective communication and conflict resolution foster a working relationship when differing viewpoints exist.	Analyze effective communication behaviors. (Activity 1.2.3)		
		Identify effective conflict resolution behaviors and develop classroom conflict guidelines. (Activity 1.2.3)		
Personal Financial Management			Complete the FAFSA, at least one scholarship application, and prepare a personal financial plan that includes postsecondary education and training. (SAE for All A3)	Advanced Foundational SAE Evaluation Grading Rubric
Workplace Safety			Create an agricultural workplace safety presentation or demonstration for elementary or middle school students. (SAE for All A4)	Advanced Foundational SAE Evaluation Grading Rubric

	Instruction (Concept)	Hands on Activity Performance Objective (APP)	Recommended Extension	Assessment
Agricultural Literacy	Government policies and regulations are enacted to manage resources.	Explain how federal regulations affect local communities, agriculture, and the environment. (Project 5.3.1)	Analyze a recent change in state or federal agricultural policy and evaluate its positive or negative effects on their career pathway of interest. (SAE for All A5)	Project 5.3.1 Evaluation Rubric / Advanced Foundational SAE Evaluation Grading Rubric
		Identify local facilities not in compliance with environmental laws. (Project 5.3.1)		
Authentic Experience			Complete 40 hours of research experience during the ESI course. (modified SAE for All AE)	Advanced Foundational SAE Evaluation Grading Rubric
Final Product	Environmental questions are studied using research, the scientific method, critical thinking, and problem solving techniques.	Write a research proposal outlining the background and need for their research as well as a plan for conducting the research. (Project 6.1.2)	Update career plan using information compiled in app activities and projects listed. (SAE for All AFP)	Project 6.1.2 Evaluation Rubric / Advanced Foundational SAE Evaluation Grading Rubric
		Conduct a self-designed research project and collect data for results and analysis. (Project 6.1.2)		
	Results of research experiments include interpretation of data in the form of posters, papers, or oral presentations.	Write a research paper summarizing the findings of their research. (Project 6.1.2)		
		Prepare a research poster to present to the class and at local science fairs. (Project 6.1.2)		

Research Immersion SAE Independent Learning Plan

	Instruction (Concept)	Hands on Activity Performance Objective (APP)	Recommended Extension	Assessment
Opportunity Identification – What to Study	Research is driven by questions and supported by literature reviews, experimentation, and communication of results.	Brainstorm ideas for research projects and define a question and hypothesis to study in order to frame research. (Activity 6.1.1)	Identify research topics of interest and start drafting questions to research. (modified SAE for All R1)	Research SAE Evaluation Grading Rubric

	Instruction (Concept)	Hands on Activity Performance Objective (APP)	Recommended Extension	Assessment
Opportunity Identification – Identifying My Research	Background research is conducted to identify what is known about the research question.	Collect and summarize similar research conclusions. (Activity 6.1.1)	Variation of Research SAE that fits your product: Analytical Research (see below). (modified SAE for All R2)	Project 6.1.2 Evaluation Rubric / Research SAE Evaluation Grading Rubric
	Environmental questions are studied using research, the scientific method, critical thinking, and problem solving techniques.	Write a research proposal outlining the background and need for their research as well as a plan for conducting the research. (Project 6.1.2)		
		Conduct a self-designed research project and collect data for results and analysis. (Project 6.1.2)		
	Analytical Research Begin with a question that asks why or how something occurs, followed by a period of data collection using qualitative and/or quantitative methodologies. Conduct an analysis of data, facts, and other information to determine the answer to the question posed.			Related CASE Pathway/Courses: <ul style="list-style-type: none">• Natural Resources and Ecology (NRE)• Environmental Science Issues (ESI)
Career Plan Connection	The public must be informed about environmental issues before they can make decisive actions resulting in a solution.	Develop and present an issue to a public group or organization. (Problem 6.1.3)	Create a one-minute verbal summary that describes the value of your Research SAE to your overall career plan. (modified SAE for All R3)	Guide to Assessing Problems / Research SAE Evaluation Grading Rubric
Outcome Brainstorming	Results of research experiments include interpretation of data in the form of posters, papers, or oral presentations.	Prepare a research poster to present to the class and at local science fairs. (Project 6.1.2)	Create a vision board that shares your personal intended outcomes for your SAE. (modified SAE for All R4)	Project 6.1.2 Evaluation Rubric / Research SAE Evaluation Grading Rubric
Final Product		Write a research paper summarizing the findings of their research. (Project 6.1.2)	Ensure all documentation and additional planning is completed to begin your Research SAE. (modified SAE for All RFP)	