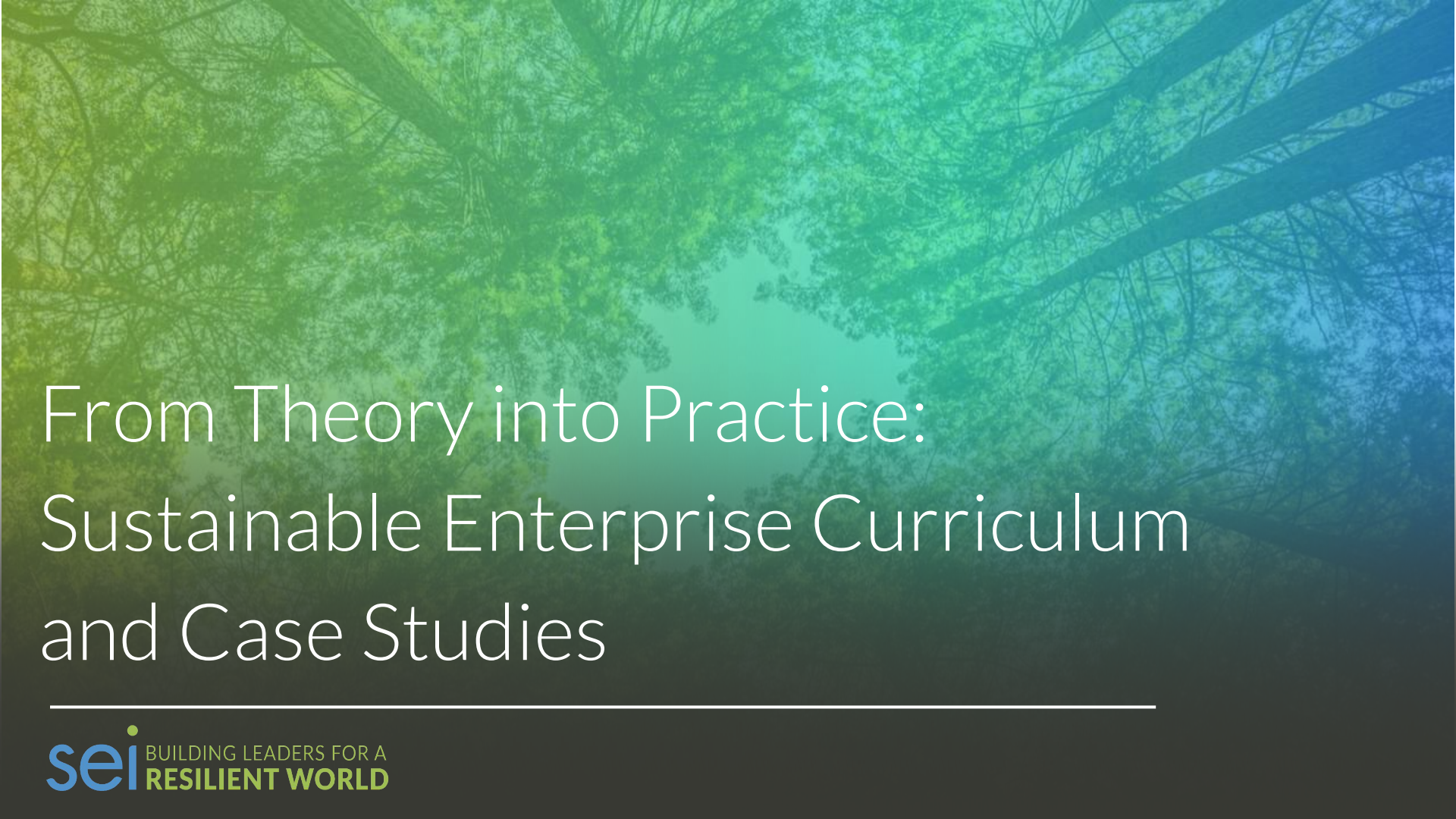


From Theory into Practice: Sustainable Enterprise Curriculum and Case Studies

sei BUILDING LEADERS FOR A RESILIENT WORLD

Introductions

Abigail Loughlin (She/Her)

Project Coordinator, SEI

sei

Mission

Building leaders to accelerate climate solutions

Vision

A resilient world where all communities thrive

SEI's Education and Workforce Pathway

ENERGIZE SCHOOLS

ENERGIZE CAREERS

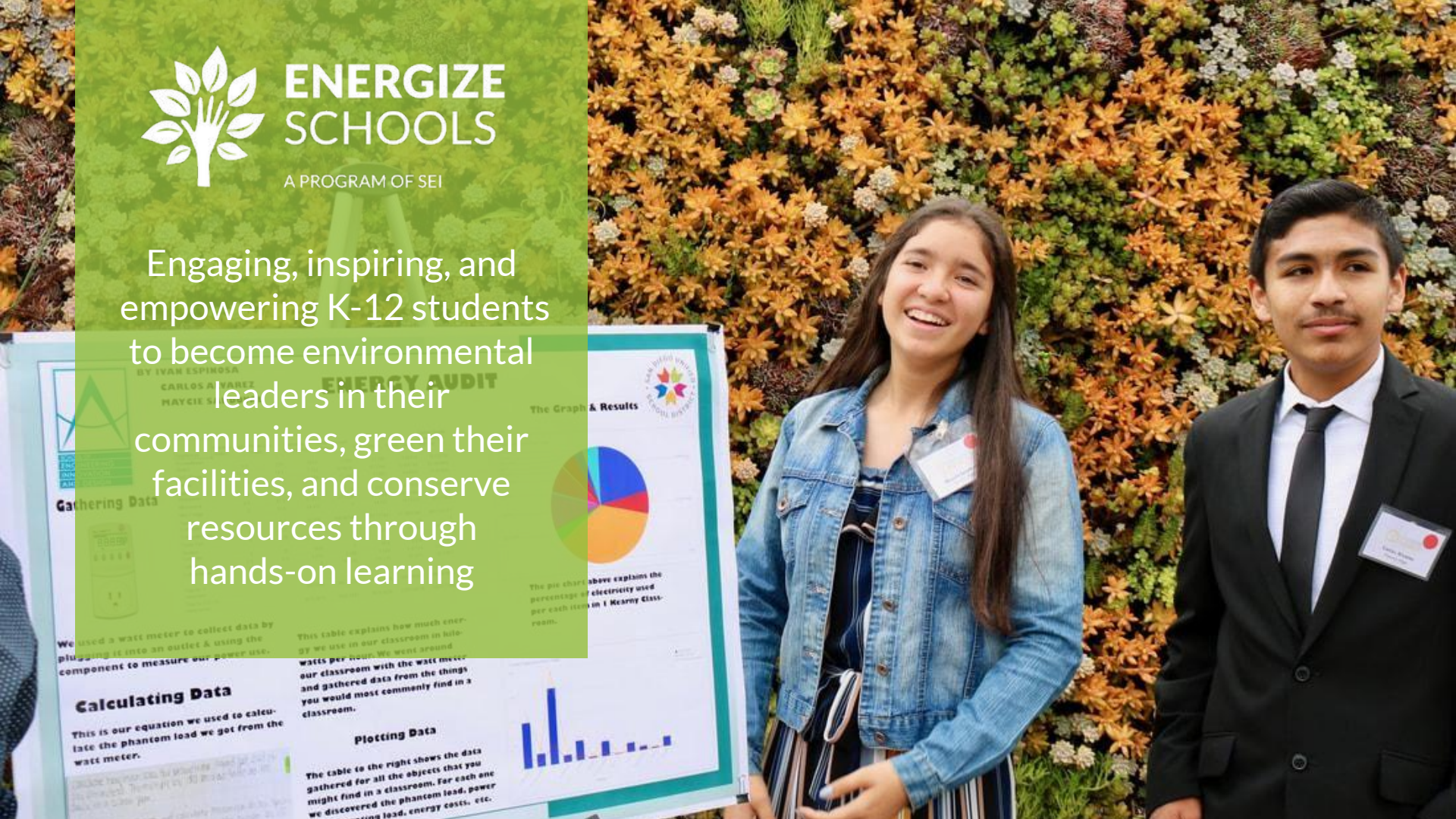
ENERGIZE COLLEGES

CLIMATE CORPS

ENERGIZE SCHOOLS

A PROGRAM OF SEI

Engaging, inspiring, and empowering K-12 students to become environmental leaders in their communities, green their facilities, and conserve resources through hands-on learning



Energize Schools Offerings

Project-Based Sustainability Curriculum

Green Career Connections and Preparation

Teacher Professional Development

Hands-On School Sustainability Competitions

Green Team and Campus as a Living Lab Support

Instructional Planning Support

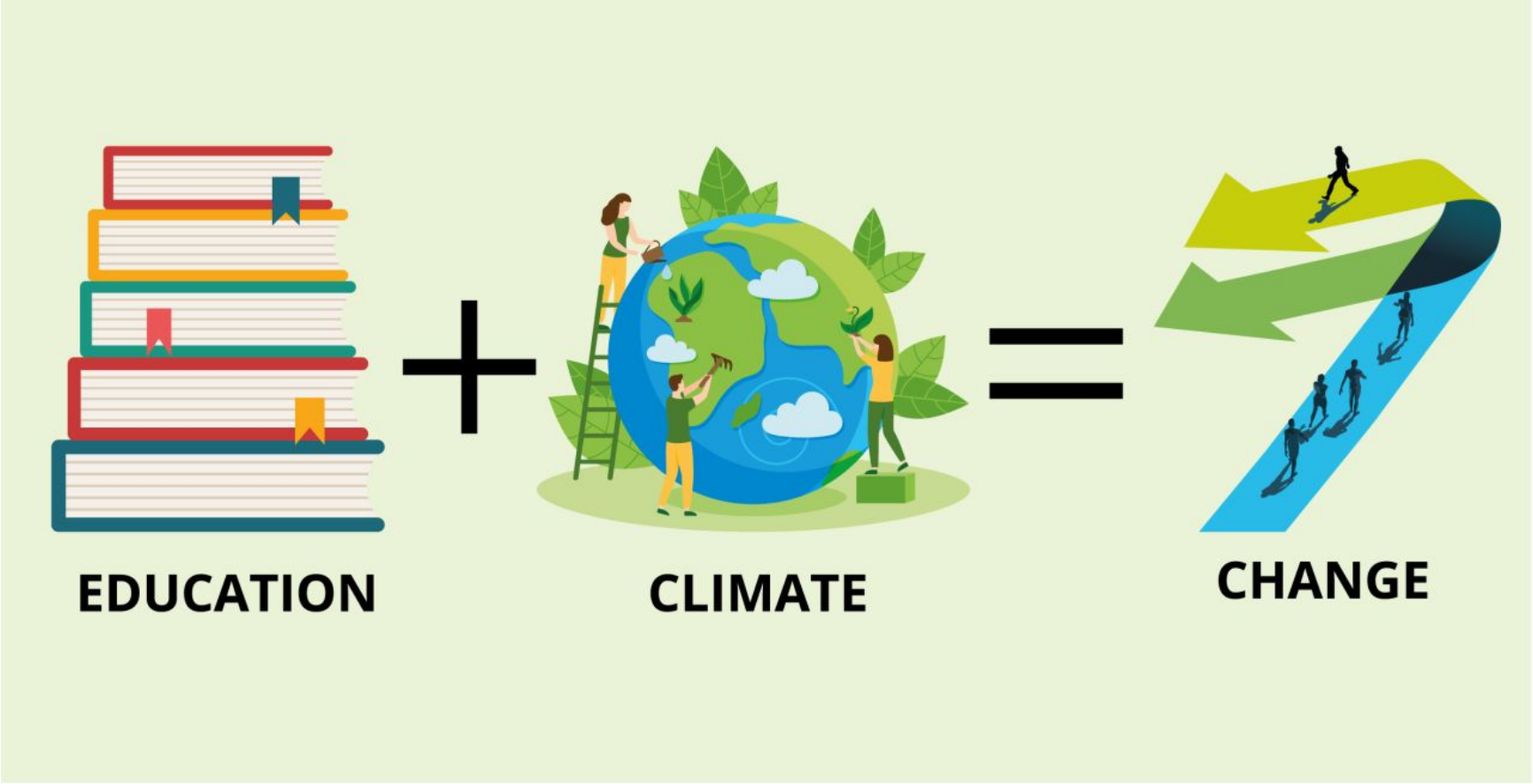
Problem Statement

The North American Association for Environmental Education survey found that **only 21 percent** of teachers feel "very informed" about climate change.

About half of teachers said they lack resources to teach effectively about climate change some of the time or always.

(source: If Climate Change Education Matters, Why Don't All Teachers Teach It?
Schools Aren't Ready for the Climate Crisis. A New Report Lays Out How to Change That)

What are we doing?



SCHOOL OF
ENVIRONMENTAL
LEADERSHIP

A PROGRAM OF SEI

A 4-year comprehensive high school program to develop skills in communication, collaboration, critical thinking, and creativity through project-based, experiential learning

About The SEL

- A 9-12 pathway model by Strategic Energy Innovations (SEI)
- Project-based, standards-aligned, scaffolded curriculum
- Interdisciplinary leadership and environmental learning
- Mentorship by teachers, parents, and professionals

Case Study: Curriculum at Work

Junior year of the SEL program students complete the Sustainable Enterprise course.

Here are some examples of green businesses from previous years:

- Last year, students presented a wide range of products from locally grown tea in biodegradable bags to tote bags made from donated clothes.

ENERGIZE SCHOOLS
A PROGRAM OF SEI

Sustainable Enterprise

Module

Module folders include an Educator Module Outline and folders for each unit within the module.

Unit

Unit folders contain an Educator Unit Outline and folders for each lesson within the unit.

Lesson

Lesson folders contain an Educator Instructional Guide, Presentation Slides, and a Student Handout.

Course Overview

Course Outline: Total Instruction Time - 30 hours

Time	Module	Description	Instructional Notes
3.75 hours	Introduction to Sustainable Enterprise	In this module, students will be introduced to the concept of a sustainable enterprise. Students will learn about how sustainable enterprises are designed and managed, as well as the triple bottom line. Students will also research and complete a case study of a sustainable enterprise.	This module includes two short units that through direct instruction will help students create a baseline understanding of what sustainability and sustainable enterprises are.
18 hrs	Designing a Sustainable Enterprise	In this module, students will learn about the various aspects of starting and running a business. Students will take what they learned and create a business plan for their very own green business.	This module includes both direct instruction and work time on student business plans. Teachers should consider whether they want students to complete their business plans individually, or work in small groups of 2-3 students .
9.75 hrs	Sustainable Entrepreneurship	In this module, students will engage in self reflection to learn about their unique leadership style. They will then take this information to apply to a sustainable enterprise team. Teams will then form and start on implementing their green business.	This module includes one unit of lessons and a project (listed below). Teachers should think through how they would like to structure the job interviews in lesson 2, and how to divide students into project groups ahead of time.

Project

Min 7.5 - 9 hrs	Project: Sustainable Entrepreneurship	Students will implement their business plans, practice project management skills, and develop an implementation work plan. This includes a project timeline and a work plan with integrated communications, materials, and logistics plans. From work planning, students will be equipped with the structure and resources to execute their business plans.

Standards

Career and Technical Education Standards (CTE)

- Marketing, Sales & Service: A1.1, A1.3, A3.0, A3.3, B2.2, B2.4, C1.0, C1.1, C1.6, C2.3, C3.0, C3.2 C3.4, C4.4, C4.5
- Business & Finance: A1.4, A3.0, A3.1, A3.3

Common Core State Standards ELA Literacy (CCSS)

- Language Standards: 4.a, b, d, 6
- Reading Standards for Informational Text: 4, 7
- Writing Standards: 1.a, f, 6, 7, 8
- Speaking and Listening Standards: 1.a-d, 2
- Reading Standards for Literacy in Science and Technical Subjects: 7,9

CA History-Social Sciences Standards

- Economics: 12.1.1, 12.2.2, 12.3.1-3

Additional Resources: [Curriculum Drive,]

ENERGIZE
SCHOOLS
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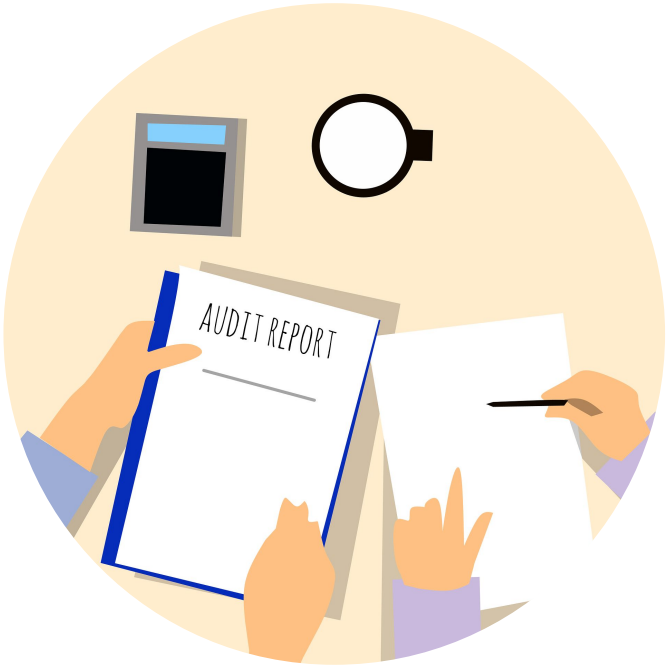
Identifying Sustainable Enterprise Opportunities

Identifying Sustainable Enterprise Opportunities

In this lesson you will…

- Develop and determine the viability of business ideas
- Identify a professional purpose that motivates them



Essential Question

What makes a good sustainable enterprise business idea?

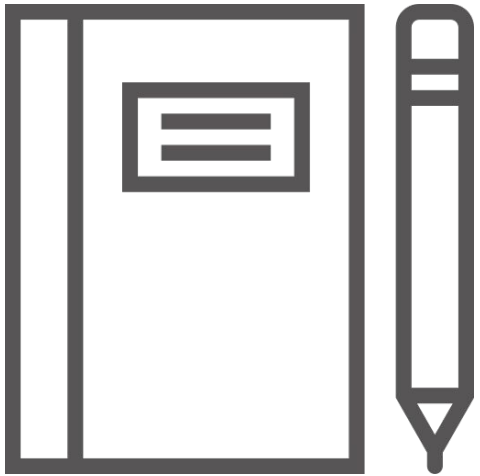
How to Identify a Problem

What are examples of social and environmental problems in your community?

Brainstorm

Take 10 minutes to complete the table on your worksheet.

- In this exercise you'll identify and explore social and environmental problems, and think about enterprise opportunities to address those problems that are within the scope of this project.
- Refer to the list of problems and opportunities you have generated so far in the "Sustainable Enterprise Ideas" table from your Logbook to narrow your list to 4-6 promising enterprise ideas.



Creating a Real World Connection

A higher purpose is something that provides deep and genuine motivation, that inspires and excites us. Each of us care about similar and different things, shaped by our experiences, what we believe, and what we've been taught about what makes for a meaningful and fulfilling life.

In this exercise, consider the things that make you feel excited and motivated in three areas: personal, professional, and community.

Student Handout: Identifying Sustainable Enterprise Opportunities

Energize Schools Curriculum Offerings

Aligned with...

- NGSS
- Common Core
- CTE
- CA Environmental Principles and Concepts

Distance Learning

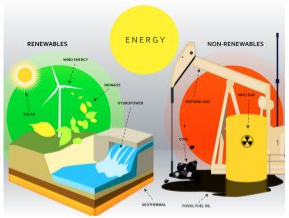
Sustainability Courses

Certificates

Sustainability Units

Sustainability Guides

Energize Schools Curriculum Offerings



Innovations in Green Technology

IGT excites and prepares students for green career opportunities in STEM fields through a series of scaffolded projects on wide-ranging topics in green technology. Field trip and professional shadowing suggestions included.

Unit Overview

Introduction to Climate Change
Fundamentals of Energy & Electricity
Energy Efficiency & Conservation
Solar Water Heating
Non-Renewable Energy Sources
Renewable Energy
Green Transportation
Energy, Environment, & Utilities Careers
Ecological Economics & Climate Policy

Key Projects and Assignments

Energy Auditing & Action Planning
Building a Solar Water Heater
Solar Car Design

Energy & Environmental Design

Students enrolled in EED complete in-depth projects related to sustainable building design, energy efficiency, and renewable energy. The course includes suggested field trips and internship opportunities.

Unit Overview

Introduction to Sustainable Design
The Electrical Grid
Electrical Circuits
Energy Audit
Solar Installation
Zero Net Energy
Energy Storage
Green Building

Key Projects and Assignments

Building an Electrical Circuit
Labor Market & Skills Assessment
School Zero Net Energy Design Challenge

QUESTIONS?

energizeschools.org/curriculum.html

Let’s build leaders for a resilient world, together!

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www.seiinc.org

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