CATALOG DESCRIPTION

This catalog includes 4 courses at the high school level: Computer Science and Technology Integration, STEM & Society: United Nations Sustainability Goals, Engineering and STEAM. Through a Project Based Learning approach, students explore technology and computational thinking, the United Nations Sustainable Development Goals and engage in STEAM tasks integrating multiple subjects. Students will investigate real-world problems, and develop and test innovative solutions. This catalog also includes these courses for Middle School and Elementary School (3-5 & K-2).

COURSE DESCRIPTIONS

Computer Science and Technology Integration

The Computer Science focuses on the CSTA (Computer Science Teachers Association) Standards for Students. Each of the tasks highlights computational thinking practices, encouraging students to frame problems in ways that inspire inquiry, problem solving, and innovative design. The tasks empower learners to take an active role in choosing, achieving, and demonstrating competency using technology applications in the learning process.

STEM & Society: UN Sustainability Goals

This course encourages students to apply what they are learning in the classroom (particularly in science and social studies courses) to explore concepts and content associated with the United Nations Sustainable Development Goals through a Project Based Learning approach. Students will also have the opportunity to work through performance tasks associated with STEM products that integrate language arts and math using a global lens.

Engineering

In this course, students will define problems and gather information about situations that people may want to change. They will need to investigate the problem and create a solution that solves the problem brought forward. These tasks can include the development of drawing, models, and other solutions that may also include the testing of the solution to gather more information. Engineers figure out how things work and develop solutions that make things better for people and the world.

STEAM

In this course, students will explore real world problems using the lens of science, technology, engineering, the arts, and mathematics. Every task provides an example of how each part of STEAM is important for solving complex problems representing a variety of fields, helping students understand how STEAM subjects are not separated in real world problem solving, but blended seamlessly. Teachers can choose to implement just one product based on their course, work with teachers from other courses, or blend STEAM into their course using multiple products.

CAREER EXAMPLES

Below are examples of some of the careers featured within each course.

- Web Developer
- AI Engineer
- Environmental Scientist
- Interior Design Consultant
- Marine Engineer
- Transportation Engineer
- Landscape Architect
- Systems Designer

RESOURCES

Course List

This resource provides a deeper look at the specific projects within each course.
Password: definedcatalogs

- Computer Science & STEM Courses and Projects

Playbooks

The course playbooks provide additional background on the course and how to utilize it in your classroom.

- HS Computer Science and Technology Integration
- HS STEM & Society: UN Sustainability Goals
- HS Engineering
- HS STEAM

UNIT OUTLINES
The projects in each course are aligned to content specific units. The table below shows the unit outlines for the 4 High School courses included in Computer Science & STEM.

Computer Science and Technology Integration	**STEM & Society: United Nations Sustainability Goals**	**Engineering**	**STEAM**
Computing Systems	Quality of Life	Mechanical Engineering	Doer
Network and Internet	Peace and Equity for All	Industrial Engineering	Creator
Data and Analysis	Physical Earth	Environmental Engineering	Thinker
Algorithms and Programming	Human Impact on Earth	Structural Engineering	Helper
Impacts of Computing		Aerospace Engineering	Persuader
Digital Literacy		Design Engineering	
Artificial Intelligence AI			

PROJECTS
The table below shows how many projects are included in each course. Each project is presented through the lens of a specific career such as the examples shown on the first page.

10 Projects	15 Projects	17 Projects	16 Projects

PRODUCTS
The table below shows how many products are included in each course. Most projects include 2-3 product options, however the STEAM projects have 5 products.

30 Products	45 Products	51 Products	80 Products

PRICING
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