

CATALOG DESCRIPTION

This catalog includes 8 courses at the elementary school level: **K-2 & 3-5 Computer Science and Technology Integration, K-2 & 3-5 STEM & Society: United Nations Sustainability Goals, K-2 & 3-5 Engineering** and **K-2 & 3-5 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 High School and Middle School.

COURSE DESCRIPTIONS

Computer Science and Technology Integration

This course is designed around the to focus on the CSTA (Computer Science Teachers Association) Standards. The units in this course support student exploration of basic computing systems and network security, computational thinking using algorithms and basic programming skills, as well as investigating ways technology can impact people. Additionally, students will use different methods of collection, analyze and share data or information. The exploration of artificial intelligence and its impact on society is included within the units of this course.

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 also have the opportunity to work through performance tasks associated with STEM products that integrate language arts and math.

Engineering

In this course, students define problems and gather information about situations that people may want to change. They investigate the problem and create a solution that solves the problem brought forward. These tasks include the development of drawings, models, and other solutions that may also involve testing 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. The tasks introduce students to the kind of thinking needed for each part of STEAM with topics of high interest to students and strong connection to curriculum. 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.

- Toy Designer
- Wildlife Biologist
- Artificial Intelligence Engineer
- Parks and Recreations Manager
- Aircraft Designer
- Robotics Engineer

RESOURCES

Course List

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

Password: definedcatalogs

- [Computer Science & STEM](#)

Playbooks

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

- [K-2 Computer Science and Technology Integration](#)
- [3-5 Computer Science and Technology Integration](#)
- [K-2 STEM & Society: UN Sustainability Goals](#)
- [3-5 STEM & Society: UN Sustainability Goals](#)
- [Elementary Engineering](#)
- [K-2 STEAM](#)
- [3-5 STEAM](#)

UNIT OUTLINES			
<i>The projects in each course are aligned to content specific units. The table below shows the unit outlines for the 4 Middle School courses included in Computer Science & STEM.</i>			
Computer Science and Technology Integration	STEM & Society: United Nations Sustainability Goals	Engineering	STEAM
Computing Systems	Quality of Life	Aerospace Engineering	Doer
Network & The Internet	Peace and Equity for All	Industrial Engineering	Creator
Data & Analysis	Physical Earth	Structural Engineering	Thinker
Impacts of Computing	Human Impact on Earth	Environmental Engineering	Helper
Impacts of Technology		Mechanical Engineering (3-5 only)	Persuader
Digital Literacy			
Artificial Intelligence A1 (3-5 only)			
PROJECTS			
<i>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.</i>			
Computer Science and Technology Integration	STEM & Society: United Nations Sustainability Goals	Engineering	STEAM
15 Projects (K-2)	4 Projects (K-2)	15 Projects (K-2)	12 Projects (K-2)
13 Projects (3-5)	17 Projects (3-5)	18 Projects (3-5)	16 Projects (3-5)
PRODUCTS			
<i>The table below shows how many products are included in each course. Most tasks have 2-3 products per project, however the STEAM projects have 5 products.</i>			
Computer Science and Technology Integration	STEM & Society: United Nations Sustainability Goals	Engineering	STEAM
45 Products (K-2)	12 Products (K-2)	45 Products (K-2)	60 Products (K-2)
39 Products (3-5)	51 Products (3-5)	54 Products (3-5)	80 Products (3-5)
PRICING			
Your dedicated partnerships manager will be happy to provide you with a custom quote. Discounts available for product bundles and multi-year agreements.			