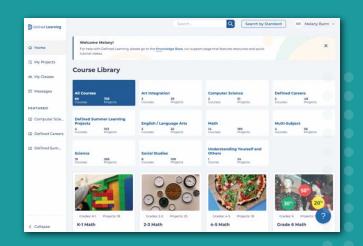




Online library of over 800 standards-aligned, customizable, career-connected projects for K–12



# **Educators** turn to **Defined Learning for:**

- A research-based solution to provide hands-on experiences for K–12 students.
- High-quality resources that can easily supplement their day-to-day curriculum as well as summer and after-school programs.
- STEM and career-connected learning.
- A solution to provide educators and students with the learning content they need.

www.DefinedLearning.com



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# Preparing Students for College and Beyond **Through Project-Based Learning**

Defined Learning's projects are based on real-world situations across hundreds of careers to excite students about their career opportunities and connect classroom content to career pathways.

Each hands-on project starts with an engaging real-world video that shows students the practical application of educational concepts. Students are then asked to complete a performance task and apply their knowledge and skills to a real-world situation.

Defined Learning helps educators integrate the real world across curricula and empower students to build the critical future-ready skills they need to succeed in college, careers, and life.





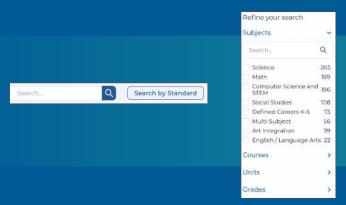


"I have discovered Defined Learning is a great tool to help me create relevant lessons. The supplementary curriculum provides students with research resources, videos, and project prompts that encourage students to think outside the box and puts them in real-world situations."

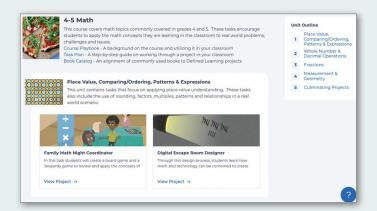
> - ANTHONY JOHNSON SW Regional & RSS District Teacher of the Year & TED-Ed Innovative Educator, Salisbury, NC

# Take a Closer Look at Using Defined Learning to Engage Students and Deepen Learning Across the Curricula

Searching for just the right project to use in a class is a breeze since educators can search by keyword, standard, subject, course, unit, and grade.







A unit outline, course playbook, and task plan are provided within each K-12 course. K-5 courses also include a book catalog which suggests books that will connect students to the context of the task.

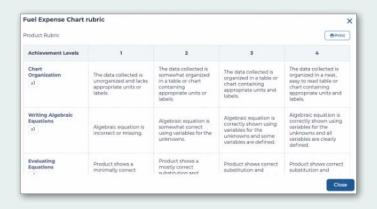
Each project is through the lens of a career. An engaging slide presentation that includes videos, check-ins, research tools, helpful vocabulary, 2-3 product options, and information about the design process is provided in each project.





Each project has its own Goal, Role, Audience, and Situation to provide a real-world scenario for students to use when applying their learning and creating their products.

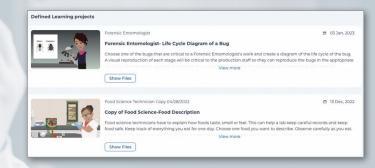
Customizable rubrics are provided for each product.





Projects are customizable as well.

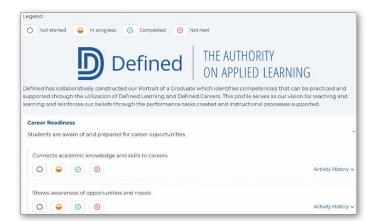
The online portfolio allows students to showcase their work.





The Career Cluster Wheel provides a visual of all the career clusters students have experienced.

The optional customizable plans section provides a place to monitor progress. It's perfect for a Portrait of a Graduate or statewide initiatives such as ICAP, ECAP, ILP, IPS, and more!





Defined Learning has a variety of educational content to meet a wide range of instructional needs. The Defined Learning courses are collections of units and projects with authentic and engaging opportunities for students to demonstrate deeper learning, build future-ready skills, and apply standards within the content area. Defined Learning includes the following content across its library of courses:

- K-12 Math
- K-12 Science
- K-12 Social Studies
- K-12 English Language Arts (ELA)
- K-12 Art Integration
- K–12 Computer Science and Technology Integration
- K–12 STEM and Society: United Nations Sustainability Goals
- K-12 Engineering
- K–12 Science, Technology, Engineering, the Arts, and Math (STEAM)

Take a look into the courses and units for each of the subjects available with Defined Learning.



# **MATH**

Defined Learning Math includes 14 courses for grades K–12. Through a project-based learning (PBL)approach, students explore math-related performance tasks. Students will investigate real-world problems and develop and test innovative solutions.

## **Elementary:**

- Grades K–1 Math
- Grades 2–3 Math
- Grades 4–5 Math

#### Middle School:

- Grade 6 Math
- Grade 7 Math
- Grade 8 Math
- Algebra I

## **High School:**

- Algebra I
- Algebra II
- Geometry
- Pre-Calculus & Calculus
- Statistics
- Integrated Math 1
- Integrated Math 2
- Integrated Math 3

### **Grades K-1 Math**

This course covers math topics commonly covered in Kindergarten and grade 1. These tasks encourage students to apply the math concepts they are learning in the classroom to real-world problems, challenges, and issues. This course includes culminating projects which are tasks that include concepts from various units and standards at these grade levels.

## Grades 2-3 Math

This course covers math topics commonly covered in grades 2 and 3. These tasks encourage students to apply the math concepts they are learning in the classroom to real-world problems, challenges, and issues. This course includes culminating projects which are tasks that include concepts from various units and standards at these grade levels.

## **Grades 4–5 Math**

This course covers math topics commonly covered in grades 4 and 5. These tasks encourage students to apply the math concepts they are learning in the classroom to real-world problems, challenges, and issues. This course includes culminating projects which are tasks that include concepts from various units and standards at these grade levels.

#### **Grade 6 Math**

In this course, students will apply their knowledge in operations with decimals, expressions, equations, and inequalities; rates, ratios, and percents; and operations with fractions, integers, geometry, data, and statistics to real-world situations.

## **Grade 7 Math**

In this course, students will apply their knowledge in rational numbers, expressions, equations, inequalities, ratio and proportional relationships, integers, geometry, data, and probability to real-world situations.

## **Grade 8 Math**

In this course, students will apply their knowledge in linear equations and functions, solving equations and systems, real numbers and exponents, radicals and the Pythagorean theorem, geometry, and data and statistics to real-world situations.

## Algebra I

In this course, students will focus on the structure of the real number system. Students will examine symbolic representations in solving real-world problems.

## Algebra II

In this course, students will apply fundamental skills of mathematics such as functions, equations and inequalities, probability and statistics, logarithmic and exponential relationships, quadratic and polynomial equations, and matrices.

## Geometry

In this course, students will explore topics commonly covered in a geometry course. These tasks encourage students to apply the geometric concepts they are learning in the classroom to real-world careers, problems, challenges, and issues.

## **Pre-Calculus & Calculus**

In this course, students will explore topics such as trigonometric functions, complex numbers and vectors, polynomial and rational functions, binomial theorem and probability, matrices, and determinants. These tasks encourage students to apply the mathematical concepts they are learning in the classroom to realworld careers, problems, challenges, and issues.

#### **Statistics**

In this course, students will explore topics in population, sampling and hypotheses, descriptive statistics, probability, and data distributions. These tasks encourage students to apply the statistics concepts they are learning in the classroom to real-world careers, problems, challenges, and issues.

## **Integrated Math 1**

In this course, students will explore linear relationships, models, and data and contrast them with exponential functions. Integrated Math 1 also uses properties and theorems involving congruent figures to deepen and extend understanding of geometric knowledge from prior grades.

## **Integrated Math 2**

In this course, students study quadratic expressions, equations, and functions, extending to real and complex numbers for solving all quadratics. They explore the connection between probability and data via conditional probability and counting methods for decision-making. Geometry topics cover right triangle trigonometry, Pythagorean relationships, and algebraic representations of circles.

## **Integrated Math 3**

In this course, students apply methods from probability and statistics to draw inferences and conclusions from data. Tasks include the introduction and application of polynomial, rational, and radical functions. Right triangle trigonometry is expanded to include general triangles. This course concludes with tasks which bring together functions and geometry to create models and solve real-world problems.

## Career examples featured in the math catalog: Vehicle Designer Rain Barrel Manufacturer Landscape Architect Aeronautical Engineer Banker Smartphone Designer Paramedic Aquarium Designer Event Planner Engineer Marine Biologist Packaging Analyst Paramedic • Financial Counselor Park Planner Marketing Strategist Dietitian Actuary Researcher Baker Game Designer



# **Defined Learning Math Courses and Units**

The table below lists the courses and unit outlines for the all K-12 courses included in the Math catalog. The variety of courses for high school math provide options for both a traditional math sequence as well as an integrated math sequence. The projects in each course are aligned to the content-specific units listed below.

Grades K–1 Math	Grades 2–3 Math	Grades 4–5 Math	Grade 6 Math	Grade 7 Math	Grade 8 Math	Algebra I	
Counting and Place Value Concepts  Adding & Subtracting  Money, Time & Data  Measurable Attributes & Shapes  Culminating Project	Adding & Subtracting     Multiplying & Dividing     Representing Fractions     Money, Time & Data     Measurable Attributes & Shapes     Culminating Project	Place Value, Comparing/ Ordering, Patterns & Expressions Whole Number Decimal Operations Fractions Measurement Geometry Culminating Project	Operations with Decimals     Expressions, Equations & Inequalities     Rates, Ratios & Percents     Operations with Fractions     Integers     Geometry     Data & Statistics	<ul> <li>Rational Numbers</li> <li>Expressions, Equations &amp; Inequalities</li> <li>Ratio &amp; Proportional Relationships</li> <li>Integers</li> <li>Geometry</li> <li>Data &amp; Probability</li> </ul>	Linear     Equations &     Functions     Solving     Equations &     Systems     Real Numbers     & Exponents     Radicals & the     Pythagorean     Theorem     Geometry     Data &     Statistics	Expressions     & Equations     Linear Functions     Systems of     Linear Functions     Quadratic     Functions     Exponents     & Radicals     Exponential     Functions	
		ow are how many project is presente					
18	25	18	18	16	13	15	
Below .	Products Below are how many products are included in each course. Most projects include 2–3 product options.						
45	62	45	45	40	32	37	



Algebra II	Geometry	Pre-Calculus	s & Calculus	Statistics	Integrated Math 1	Integrated Math 2	Integrated Math 3
Quadratic Functions     Systems of Equations & Inequalities     Exponential & Logarithmic Functions     Sequences & Series     Trigonometric & Other Functions	Coordinates, Transformations & Constructions  Similarity & Congruence  Right Triangles & Trigonometry  Circles, Conics & Polygons  Three- Dimensional Figures  Geometric Modeling	Trigonometric Functions  Complex Numbers & Vectors  Polynomial & Rational Functions  Binomial Theorem & Probability  Matrices & Determinants  Analytic Geometry	Contextual Applications of Differentiation  Analytical Applications of Differentiation  Limits & Continuity  Differential Equations  Integrals & Integrals & Integration	Populations     Sampling &     Hypotheses     Descriptive     Statistics     Probability     Data     Distributions	Relationships     Between     Quantities     Linear &     Exponential     Functions     Systems     of Linear     Equations &     Inequalities     Descriptive     Statistics     Relationships     Between     Quantities     Congruence,     Constructions     & Coordinates	Extending the Number System     Quadratic Functions     Expressions & Equations     Probability     Similarity & Right Triangle Trigonometry     Circles & Coordinates     Extending the Number System	Inferences & Conclusions from Data  Polynomial, Rational & Radical Functions  Trigonometry of General Triangles & Trigonometric Functions  Logarithmic Functions  Mathematical Modeling  Geometric Modeling  Inferences & Conclusions from Data
			Projow many projects presented throu	are included in			
22	15	7	4	12	22	19	22
Вє	Products  Below are how many products are included in each course. Most projects include 2–3 product options.						
55	37	17	10	30	55	47	55

Defined Learning Science includes 14 courses for grades K–12. Through a PBL approach, students explore science-related performance tasks. Students will investigate real-world problems and develop and test innovative solutions.

## **Elementary Science:**

- Grades K-2 Earth and Space Science
- Grades K-2 Life Science
- Grades K-2 Physical Science
- Grades 3-5 Earth and Space Science
- Grades 3-5 Life Science
- Grades 3-5 Physical Science

### Middle School:

- Earth and Space Science
- Life Science
- Physical Science

## **High School:**

- Biology
- Chemistry
- Earth and Space Science
- Environmental Science
- Physical Science

## Grades K-2 and Grades 3-5 Earth and **Space Science**

These courses encourage students to apply what they are learning in the classroom by exploring concepts and content associated with the Earth and the systems and processes that shape the Earth and impact humans through a PBL approach. Students also have the opportunity to work through performance tasks associated with stars and the solar system.

#### **Grades K-2 and Grades 3-5 Life Science**

These courses encourage students to apply what they are learning in the classroom about living things to realworld problems, challenges, and issues. Students are encouraged to consider the relationships living things have with their environment and how the environment impacts living things.

## **Grades K–2 and Grades 3–5 Physical Science**

These courses encourage students to apply what they are learning in the classroom and to explore the foundational principles of physical science through a PBL approach. Throughout these courses, students will discover relationships between physical science and real-world situations.

## Middle School Earth and Space Science

In this course, students will explore content and concepts involved in Earth and space science such as Earth systems, weather/climate, space systems, and natural resources. The tasks within this course will encourage students to apply learning and skills associated with Earth and space science to work through real-world situations and challenges.

#### Middle School Life Science

In this course, students will explore content and concepts involved in life science such as biodiversity and living systems, interdependent relationships in ecosystems, biological adaptations, heredity, growth, development, reproduction, and molecules to systems. The tasks within this course will encourage students to apply learning and skills associated with life science to work through real-world situations and challenges.

## Middle School Physical Science

In this course, students will explore content and concepts involved in physical science such as structure and properties of matter, chemical reactions, energy, waves, sounds and light, forces, motion, interactions, electricity, and magnets. The tasks within this course will encourage students to apply learning and skills associated with physical science to work through realworld situations and challenges.

## **High School Biology**

This course incorporates perspectives and understanding across major subdisciplines of biology encouraging students to apply knowledge and science practices to real-world problems and projects. In this course, students apply learning of a variety of life processes and how different organisms meet the challenges of living in their environment. Additionally, students' experience in biology supports their developing environmental literacy.

## **High School Chemistry**

In this course, students will apply fundamental skills of chemistry such as the periodic table, atomic structure, chemical reactions, stoichiometry, solutions, reaction rates, and nuclear chemistry.

## **High School Earth & Space Science**

In this course, students will explore content and concepts in Earth and space science. The tasks within this course will encourage students to apply learning and skills associated with Earth and space science to work through real-world situations and issues.

## **High School Environmental Science**

In this course, students will explore topics such as ecosystems, energy and dynamics, environmental concerns, politics, laws, Earth systems, and natural resources. The content within this course encourages students to apply their learning to real-world careers, problems, challenges, and issues.

## **High School Physical Science**

In this course, students will explore topics in structure and properties of matter, the periodic table and bonding, chemical interactions, energy and radioactivity, and forces. These tasks encourage students to apply the physical science concepts they are learning in the classroom to real-world careers, problems, challenges, and issues.

#### Career examples featured in the science catalog: Astronomer Paleontologist Geologist Energy Engineer Event Planner · Biomedical Engineer Musician Virologist Materials Engineer Chemical Engineer Weather Reporter Pyrotechnician Erosion Management • Water Treatment Specialist Specialist Astronomer Veterinarian Urban Forester • Tiny House Designer Wind Energy Specialist Wind Farmer Mechanical Engineer Emergency Management Radiology Technologist Coordinator



# **Defined Learning Science Courses and Units**

The table below lists the courses and unit outlines for the all K-12 courses included in the Science catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K-2 Earth & Space Science	Grades 3–5 Earth & Space Science	Middle School Earth & Space Science	High School Earth & Space Science	Grades K–2 Life Science	Grades 3–5 Life Science	Middle School Life Science
Weather & Climate     Earth's Systems: Processes     That Shape the Earth     Space Systems: Patterns & Cycles	Weather & Climate     Processes that Shape the Earth     Renewable & Non-Renewable Resources     Stars & the Solar System	Earth Systems     Weather & Climate     History of the Earth     Space Systems     Natural Resources     Human Impacts on the Earth	Earth & Human Sustainability     Earth Systems     Weather & Climate     Space Systems	Animals,     Plants & Their     Environment     Structure,     Function, &     Information     Processing     Interdependent     Relationships     in Ecosystem	Ecosystems:     Environment     & Organisms     Ecosystems     & Organisms:     Matter and     Energy     Life Cycles     Inheritance     Structure &     Function	Molecules to Systems     Growth, Development & Reproduction     Heredity     Biological Adaptations     Interdependent Relationships in Ecosystems     Biodiversity & Living Systems
		elow are how many n project is present				
6	12	15	17	6	17	16
Below	Products  Below are how many products are included in each course. Most projects include 2–3 product options.					
18	30	37	42	18	42	40



Grades K–2 Physical Science	Grades 3–5 Physical Science	Middle School Physical Science	High School Physical Science	Biology	Chemistry	Environmental Science
<ul> <li>Earth &amp; Human Sustainability</li> <li>Earth Systems</li> <li>Weather &amp; Climate</li> <li>Space Systems</li> </ul>	Forces & Interactions     Energy     Waves     Structures & Properties of Matter	Structure & Properties of Matter  Chemical Reactions  Energy  Waves, Sounds & Light  Forces, Motions, & Interactions  Electricity  Magnets	Structure & Properties of Matter  Periodic Table & Bonding  Chemical Interactions  Energy & Radioactivity  Forces & Motions  Energy Energy Waves	Cells Genetics Natural Selection Intersections in Ecosystems The Biosphere Human Impacts on Ecosystems Viruses Protists Plants Human Systems	<ul> <li>Periodic Table</li> <li>Atomic Structure</li> <li>Chemical Reactions</li> <li>Stoichiometry</li> <li>Solutions</li> <li>Reaction Rates</li> <li>Nuclear Chemistry</li> </ul>	Earth Systems     Ecosystems:     Interactions,     Energy &     Dynamics     Natural     Resources     Environmental     Concerns     Politics,     Laws & the     Environment
	Projects  Below are how many projects are included in each course.  Each project is presented through the lens of a specific career.					
6	13	13	19	21	11	15
Products  Below are how many products are included in each course. Most projects include 2–3 product options.						
18	32	32	47	52	27	37



## **SOCIAL STUDIES**

Defined Learning Social Studies includes 9 courses for grades K–12. Through a PBL approach, students explore geography, civics, Middle/High School Economics, and Middle/High School World History I: From Ancient Times to 1500 performance tasks. Students will investigate real-world problems and develop and test innovative solutions.

## **Elementary Social Studies:**

- Grades K-2 Social Studies
- Grades 3-5 Social Studies
- Grades K-5 Program of Inquiry

## Middle/High School:

- Middle/High School United States History I: From Early America to Reconstruction
- Middle/High School United States History II: Late 1800s to 21st Century
- Middle/High School Civics and Government
- · Middle/High School **Economics**
- Middle/High School World History I: From Ancient Times to 1500
- Middle/High School World History II: From Early Modern Times to the Present

## **Grades K-2 Social Studies**

In this course, students will explore the four core disciplines: geography, civics, economics, and history. They will engage in projects that allow them to study how humans have interacted with each other and with the environment over time.

### **Grades 3–5 Social Studies**

In this course, students will explore the four core disciplines: civics, economics, geography, and history. They will engage in projects that allow them to study how humans have interacted with each other and with the environment over time.

## **Grades K–5 Program of Inquiry**

This course is a transdisciplinary program of inquiry designed based upon the International Baccalaureate key concepts. It introduces students to the idea that our learning is interconnected and can create global change. The program of inquiry focuses on developing questions and planning inquiries; applying disciplinary concepts and tools; evaluating sources and using evidence; and communicating conclusions and taking informed action.

## Middle/High School United States History I: From Early America to Reconstruction

This course is designed to provide opportunities for students to learn history through engaging, authentic performance tasks that reflect the features of PBL. In each task, students are placed in a real-world situation where they take on a career role and are presented with a problem to solve or a topic to explore. Students conduct research, then demonstrate their knowledge and understanding by creating products for a particular audience.

## Middle/High School United States History II: Late 1800s to 21st Century

This course is designed to provide opportunities for students to learn history through engaging, authentic performance tasks that reflect the features of PBL. In each task, students are placed in a real-world situation where they take on a career role and are presented with a problem to solve or a topic to explore. Students conduct research, then demonstrate their knowledge and understanding by creating products for a particular audience.

## **Middle/High School Economics**

This course is designed to provide opportunities for students to learn economics through engaging, authentic performance tasks that reflect the features of PBL. In each task, students are placed in a realworld situation where they take on a career role and are presented with a problem to solve or a topic to explore. Students conduct research, then demonstrate their knowledge and understanding by creating products for a particular audience. In this approach to learning economics, students learn more deeply and better retain content knowledge. They also build the future-ready skills of critical thinking, problem solving, collaboration, communication, and creativity.

## Middle/High School Civics and Government

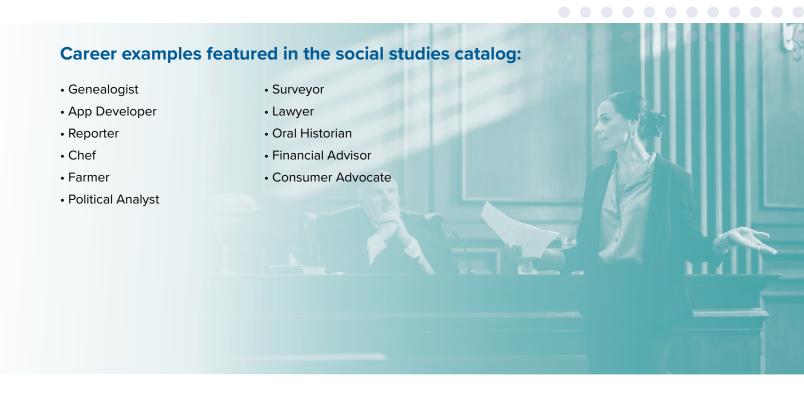
This course is designed for students in grades 6–12 studying United States civics and government. The tasks within this course will encourage students to apply knowledge and skills associated with civics and government to work through real-world situations and issues.

## Middle/High School World History I: From **Ancient Times to 1500**

This course is designed to provide opportunities for students to learn history through engaging, authentic performance tasks that reflect the features of PBL. In each task, students are placed in a real-world situation where they take on a career role and are presented with a problem to solve or a topic to explore. Students conduct research, then demonstrate their knowledge and understanding by creating products for a particular audience.

## Middle/High School World History II: From Early **Modern Times to the Present**

This course is designed to provide opportunities for students to learn history through engaging, authentic performance tasks that reflect the features of PBL. In each task, students are placed in a real-world situation where they take on a career role and are presented with a problem to solve or a topic to explore. Students conduct research, then demonstrate their knowledge and understanding by creating products for a particular audience.





## **Defined Learning Social Studies Courses and Units**

The table below lists the courses and unit outlines for the all K–12 courses included in the Social Studies catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K–2 Social Studies	Grades 3–5 Social Studies	Grades K–5 Program of Inquiry	Middle/High School United States History I: From Early America to Reconstruction		
<ul><li>Geography</li><li>Civics</li><li>Economy</li><li>History</li></ul>	<ul><li>Geography</li><li>Civics</li><li>Economy</li><li>History</li></ul>	<ul> <li>Who We Are</li> <li>Where We Are in Place &amp; Time</li> <li>How We Express Ourselves</li> <li>How the World Works</li> <li>How We Organize Ourselves</li> <li>Sharing the Planet</li> </ul>	<ul> <li>Colonial America</li> <li>The Revolution</li> <li>The New Nation</li> <li>A Young Nation</li> <li>The Nation Expands</li> <li>A Nation Divided</li> <li>A Nation Reunited</li> </ul>		
	Below are how many <b>project</b> s	ects s are included in each course. Igh the lens of a specific cares			
10	13	18	12		
Products  Below are how many products are included in each course. Most projects include 2–3 product options.					
25	32	54	30		



Middle/High School United States History II: Late 1800s to 21st Century	Middle/High School Civics and Government	Middle/High School Economics	Middle/High School World History I: From Ancient Times to 1500	Middle/High School World History II: From Early Modern Times to the Present	
<ul> <li>The U.S. at the End of the 19th Century</li> <li>Changes in the Early 20th Century</li> <li>The U.S. in Prosperity and Depression: 1920s and 1930s</li> <li>The United States and World War II</li> <li>Post War United States</li> <li>The U.S. in Changing Times: 1960s and 1970s</li> <li>The United States in Recent Decades</li> </ul>	Constitutional     Democracy &     Basic Principles     Active     Citizenship	Exchanges & Markets     The National & Global Economy	The Ancient World  Early Middle Ages in Europe Beyond  Late Middle Ages in Europe	The Early Modern     World     The Modern     World	
E	Below are how many   Each project is presente				
20	10	5	8	8	
Products  Below are how many products are included in each course. Most projects include 2–3 product options.					
50	25	15	22	22	

## **ENGLISH LANGUAGE ARTS**

Defined Learning ELA includes 2 courses for middle and high school. Through a PBL approach, students explore performance tasks tied to **ELA** skills and standards.

#### Middle School:

Short Stories

## **Middle School Short Stories**

In this course, students will explore short stories by various authors and in various styles. They will explore themes and connect their learning to real- world situations.

## Middle/High School:

• ELA

## Middle/High School ELA

In this course, students will explore novels across different genres. They will explore themes and connect their learning to real-world situations.

## Career examples featured in the ELA catalog:

- TV Producer
- Talent Agent

Journalist

- Detective
- Health Educator
- Podcast Producer

## Defined Learning ELA Courses and Units

The table below lists the courses and unit outlines for the 2 Middle and High School courses included in the ELA catalog. The projects in each course are aligned to the content-specific units listed below.

Middle School Short Stories	Middle/High School ELA			
Classic American Authors	Classic American Literature			
Stories from Around The World	• Allegory			
Contemporary Authors	Historical Fiction			
• Coming of Age				
	Non-Fiction			
Proj	ects			
Below are how many <b>project</b> :	s are included in each course.			
Each project is presented throu	gh the lens of a specific career.			
9	13			
Products				
Below are how many <b>products</b> are included in each	course. Most projects include 2–3 product options.			
22	32			

## **ELA Skills Are Infused Throughout** All Defined Learning Projects and Performance Tasks

All Defined Learning courses K–12 are built around the skills of reading, writing, research, speaking, and listening. Below are examples how these skills — along with critical thinking, effective communication, and information literacy — are woven throughout Defined Learning resources, projects, performance tasks, and courses.



## Literature

In addition to the K–5 Fine Arts and Literature course, all K-5 tasks include suggested books that can be used as research resources, read alouds, independent reading or partner reading.

Two courses that incorporate literature are available for middle and high school. (See page 20.)



## **Informational Text**

K-5 students explore informational text in the STEM and Society course. (See page 30.)

Within secondary tasks there are research resources, including real-world websites, that students use to gather information. The knowledge and ideas they gain are used to undertake problem-solving and product development.



## Writing

Throughout all K–12 tasks, students are encouraged to conduct research and then communicate what they have learned through informational, argumentative/ persuasive, or writing that incorporates both. Common products connected to writing are reports, stories, articles, proposals, and letters.



K–12 tasks encourage students to conduct research projects. In the research process, they gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information. At the secondary level, students also draw evidence from literary or informational texts to support analysis, reflection, and research.



## Speaking and Listening

Integrated within K–12 performance tasks are numerous opportunities for students to present their ideas and findings through oral means, including presentations, debates, and podcasts. Many of these opportunities also encourage students to conduct research and create presentations using multimedia.



Defined Learning Art Integration includes 3 courses for grades K–12. Through a PBL approach, students explore performance tasks tied to visual and performing arts skills and standards.

## **Elementary School:**

• Grades K-5 Fine Arts and Literature

## Middle/High School:

- Performing Arts Integration
- Visual Arts Integration

## **Grades K-5 Fine Arts and Literature**

In this course, students will learn through the reading, comprehension, and analysis of selected literary works. Students will apply learned fine arts skills and techniques in the creative process of self-expression. Artists highlighted in this course have different artistic skills in order to provide a variety of art forms for teachers and students to explore.

## Middle/High School Performing Arts Integration

In this course, students will explore novels across different genres. They will explore themes and connect their learning to real-world situations.

## Middle/High School Visual Arts Integration

In this course, students will learn about architectural and technical drawing, how to create effective infographics, different art businesses, and cultural and historical influences on art. They will learn how the arts naturally integrate and encompass English language arts and reading, math, social studies, and science as they research artists, identify careers in the arts, and create visual artworks in various mediums.





## **Defined Learning Art Integration Courses and Units**

The table below lists the courses and unit outlines for the 3 courses included in the Art Integration catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K–5 Fine Arts & Literature	Middle/High School Performing Arts Integration	Middle/High School Visual Arts Integration				
<ul><li>Black History</li><li>Hispanic Heritage Month</li><li>Women's History Month</li><li>Art &amp; Fiction</li></ul>	<ul><li>Dance</li><li>Theater</li><li>Music</li></ul>	<ul><li>Architectural/Technical Drawing</li><li>Infographics</li><li>Art as a Business</li><li>Cultural &amp; Historical Art</li></ul>				
	Projects  Below are how many projects are included in each course.  Each project is presented through the lens of a specific career.					
14	12	13				
Products Below are how many products are included in each course. Most projects include 2–3 product options.						
42	36	39				



## **COMPUTER SCIENCE AND TECHNOLOGY INTEGRATION**

**Defined Learning Computer Science and Technology Integration includes** 4 courses for grades K-12. Through a PBL approach, students explore performance tasks tied to computer science skills and standards.

### **Elementary School:**

- Grades K-2 Computer Science and **Technology Integration**
- Grades 3-5 Computer Science and **Technology Integration**

## Middle/High School:

- Middle School Computer Science and **Technology Integration**
- · High School Computer Science and **Technology Integration**

## K-Grade 2 Computer Science and **Technology Integration**

This course is designed around the Computer Science Teachers Association (CSTA) standards. The units in this course support student exploration of basic computing systems and the basics of network security. Students will use computational thinking, building an understanding of basic algorithms and programming skills. They will also investigate the way some technologies have impacted the lives of people in the community. Additionally, students will use different methods to collect, analyze, and share data or information.

## **Grades 3–5 Computer Science and Technology Integration**

This course is designed around the CSTA 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 to collect, analyze, and share data or information. The exploration of artificial intelligence and its impact on society is included within the units of this course.

## Middle School Computer Science and **Technology Integration**

This course is designed to highlight CSTA standards for students. Each of the tasks incorporate 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. Students explore computing systems, networks and the internet, data and analysis, algorithms and computing, and the impact technology has on the daily lives of people.

## **High School Computer Science and Technology Integration**

This course focuses on the CSTA 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.

## **Defined Learning Computer Science** and Technology Integration **Courses and Units**

The table below lists the courses and unit outlines for the 4 courses included in the Computer Science and Technology Integration catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K–2 Computer Science & Technology Integration	Grades 3–5 Computer Science & Technology Integration	Middle School Computer Science & Technology Integration	High School Computer Science & Technology Integration		
Computing Systems	Computing Systems	Computing Systems	Computing Systems		
Networks & the     Internet	Networks & the     Internet	Networks & the     Internet	Networks & the     Internet		
Data & Analysis	Data and Analysis	Data & Analysis	Data & Analysis		
Algorithms &     Computing	Algorithms &     Computing	Algorithms &     Computing	Algorithms &     Computing		
Digital Literacy	Digital Literacy	• Digital Literacy	• Digital Literacy		
	Artificial Intelligence	Artificial Intelligence	Artificial Intelligence		
	Proj Below are how many projects ach project is presented throu				
14	10	13	10		
Products  Below are how many products are included in each course. Most projects include 2–3 product options.					
42	30	39	30		



## Defined Learning STEAM includes 4 courses for grades K–12. Through a PBL approach, students engage in STEAM tasks integrating multiple subjects.

## **Elementary School:**

- Grades K-2 STEAM
- Grades 3-5 STEAM

## Middle/High School:

- Middle School STEAM
- · High School STEAM

## **Grades K-2 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 curricula. 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.

## Grades 3-5 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 real-world problems. Teachers can choose to implement just one product based on the subject they are teaching or combine subjects and products into interdisciplinary projects.

## Middle School 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 engaging example of how each part of STEAM is important for solving local and global challenges. 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.

## **High School 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 separate 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 integrate STEAM into their course using multiple products.





# Defined Learning STEAM Courses and Units

The table below lists the courses and unit outlines for the 4 courses included in the STEAM catalog.

The projects in each course are aligned to the content-specific units listed below.

Grades K–2 STEAM	Grades 3–5 STEAM	Middle School STEAM	High School STEAM			
<ul><li>Doer</li><li>Creator</li><li>Thinker</li><li>Helper</li></ul>	<ul><li>Doer</li><li>Creator</li><li>Thinker</li><li>Helper</li><li>Persuader</li></ul>	<ul><li>Doer</li><li>Creator</li><li>Thinker</li><li>Helper</li></ul>	<ul><li>Doer</li><li>Creator</li><li>Thinker</li><li>Helper</li><li>Persuader</li><li>Organizer</li></ul>			
Projects  Below are how many projects are included in each course.  Each project is presented through the lens of a specific career.						
12	16	16	16			
Products  Below are how many products are included in each course. Most projects include 2–3 product options.						
60	80	80	80			



# **ENGINEERING**

Defined Learning Engineering includes 4 courses for grades K–12. Through a PBL approach, students will investigate real-world problems and develop and test innovative solutions.

## **Elementary School:**

- Grades K-2 Engineering
- Grades 3-5 Engineering

## Middle/High School:

- Middle School Engineering
- · High School Engineering

## **Grades K-2 Engineering**

In this course, students will gather information and potentially make observations 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 drawings, models, and other solutions that may also include the testing of the solution to gather more information.

## **Grades 3–5 Engineering**

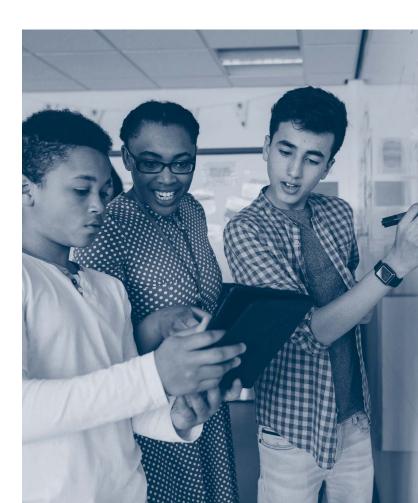
In this course, students define problems and gather information about situations that people may want to change. They investigate the problem and create a solution that solves the problem brought forward. These tasks include the development of drawings, models, and other solutions that may also involve testing the solution to gather more information.

## Middle School 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 drawings, models, and other solutions that may also include the testing of the solution to gather more information.

## **High School 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 drawings, models, and other solutions that may also include the testing of the solution to gather more information.





## **Defined Learning Engineering Courses and Units**

The table below lists the courses and unit outlines for the 4 courses included in the Engineering catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K–2 Engineering	Grades 3–5 Engineering	Middle School Engineering	High School Engineering				
<ul> <li>Mechanical Engineer</li> <li>Industrial Engineer</li> <li>Environmental Engineer</li> <li>Structural Engineer</li> <li>Aerospace Engineer</li> </ul>	<ul> <li>Mechanical Engineer</li> <li>Industrial Engineer</li> <li>Environmental Engineer</li> <li>Structural Engineer</li> <li>Aerospace Engineer</li> </ul>	<ul> <li>Design Engineering</li> <li>Mechanical Engineer</li> <li>Industrial Engineer</li> <li>Environmental Engineer</li> <li>Structural Engineer</li> <li>Aerospace Engineer</li> </ul>	<ul> <li>Design Engineering</li> <li>Mechanical Engineer</li> <li>Industrial Engineer</li> <li>Environmental Engineer</li> <li>Structural Engineer</li> <li>Aerospace Engineer</li> </ul>				
	Projects  Below are how many projects are included in each course.  Each project is presented through the lens of a specific career.						
15	16	15	17				
Products Below are how many products are included in each course. Most projects include 2–3 product options.							
37	40	37	42				





## STEM AND SOCIETY: UNITED NATION SUSTAINABILITY GOALS

**Defined Learning STEM and Society: United Nation Sustainability Goals** includes 4 courses for grades K-12. Through a PBL approach, students will investigate real-world problems and develop and test innovative solutions.

## **Elementary School:**

- Grades K–2 STEM and Society: United Nations Sustainability Goals
- Grades 3–5 STEM and Society: United Nations Sustainability Goals

## Middle/High School:

- · Middle School STEM and Society: United Nations Sustainability Goals
- High School STEM and Society: United Nations Sustainability Goals

## **Grades K–2 STEM and Society: United Nations Sustainability Goals**

This course encourages students to apply what they are learning in the classroom to explore concepts and content associated with the United Nations Sustainable Development Goals through a PBL approach. This course is designed to look at the UN Sustainable Goals through a local lens. Students will also work through performance tasks associated with STEM products that integrate language arts and math.

## **Grades 3–5 STEM and Society: United Nations 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 PBL approach. Students will also work through performance tasks associated with STEM products that integrate language arts and math.

## Middle School STEM and Society: **United Nations 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 PBL approach. Students will work through performance tasks associated with STEM products that integrate language arts and math.

## **High School STEM and Society: United Nations 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 PBL approach. Students will work through performance tasks associated with STEM products that integrate language arts and math using a global lens.



## **Defined Learning STEM and Society: United Nations Sustainability Goals Courses and Units**

The table below lists the courses and unit outlines for the 4 courses included in the STEM and Society: United Nations Sustainability Goals catalog. The projects in each course are aligned to the content-specific units listed below.

Grades K–2 STEM & Society: United Nations Sustainability Goals & Units	Grades 3–5 STEM & Society: United Nations Sustainability Goals & Units	Middle School STEM & Society: United Nations Sustainability Goals & Units	High School STEM & Society: United Nations Sustainability Goals & Units
• Quality Life	• Quality Life	• Quality Life	• Quality Life
Peace & Equity	Peace & Equity	Peace & Equity	Peace & Equity
Physical Earth	Physical Earth	Physical Earth	Physical Earth
Human Impact on Earth	Human Impact on Earth	Human Impact on Earth	Human Impact on Earth
Projects  Below are how many projects are included in each course.  Each project is presented through the lens of a specific career.			
4	15	17	15
Products Below are how many products are included in each course. Most projects include 2–3 product options.			
12	37	42	37



"Defined Learning provides my teachers with everything they need to implement engaging performance tasks in the classroom. The hands-on projects makes careers come alive for students because they can apply their classroom knowledge in a real-world setting."

> - DR. GENEVA WALTERS Superintendent of Kankakee School District, IL

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