

### Our Focus:

We turn your classroom into a mini science lab where students actively experiment and discover. Our mission is advancing understanding of science through discovery, exploration, and education.

### Aligning:

Our lessons are aligned with NGSS and Colorado State Standards. Everything we bring into your classroom directly supports your students. [Lessons are enhanced to fit English Language Learner and your classroom needs.](#)



### Tiny Scientists, Big Ideas:

Students will use the **Engineering Design Process** to solve challenges by: Asking, Imagining, Planning, Creating, and Improving while using teamwork.

#### Grade 2

Students will investigate matter, its various states, and their properties. They will also discover significant geological and water features in the Roaring Fork Valley to gain insights into how Earth events can happen either rapidly or gradually.

#### Grade 3

Students will investigate electric and magnetic forces, deepen their understanding of food chains, gather data on weather patterns, and engage in discussions about solutions to weather hazards caused by natural processes in order to mitigate their impacts.

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\*We customize the experience to fit your schedule, budget, and classroom goals

### Grade 2 Activities

**The Challenge:** Explore and uncover a Snowmass ice age fossil site in their own classroom.

**The Challenge:** Create a model of geologic formations using simple materials.

### Grade 3 Activities

**The Challenge:** Design a tool using magnets to pick up small metal objects.

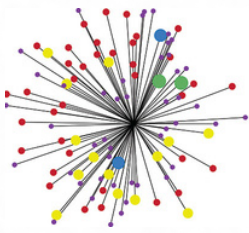
**The Challenge:** Explore weather data and identify weather hazards to design a shelter that can sustain hazardous conditions.

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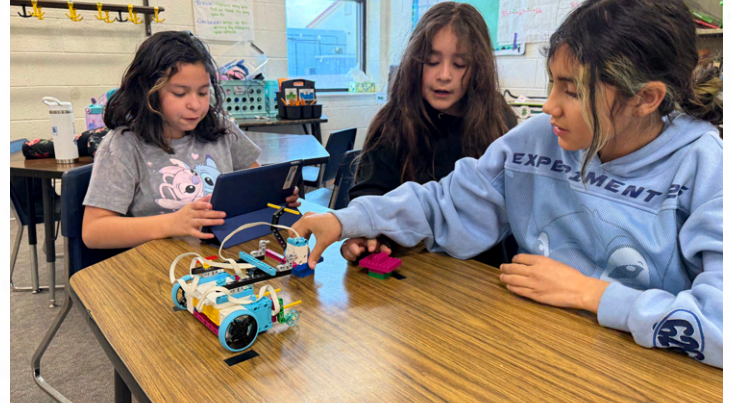
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# TECHNOLOGY



## Our Focus:

We turn your classroom into a mini coding lab where students build, test, and innovate with technology. Our mission is advancing understanding of science through discovery, exploration, and education.

## Aligning:

Our lessons are aligned with NGSS and Colorado State Standards. Everything we bring into your classroom directly supports your students. Lessons are enhanced to fit English Language Learner and your classroom needs.



## Tiny Coders, Big Ideas:

Students will use the **Engineering Design Process** to solve challenges by: Asking, Imagining, Planning, Creating, and Improving while using teamwork.

### Grade 2

Students will explore essential coding skills and use software to build programs with sequences and simple loops, to express ideas or a solution to a problem.

### Grade 3

Students will work with different algorithms exploring how they can be improved for the same task.

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## Grade 2 Activities

**The Challenge:** Build and code an automated spirograph to create unique patterns.

**The Challenge:** Students will create a brick sorting machine, which will be programmed to sort by colors.

## Grade 3 Activities

**The Challenge:** Build a circuit and program a microcontroller to automate an artificial pancreas.

**The Challenge:** Students will use a gyroscope to take in positional data that will allow for a robot to navigate through a course.

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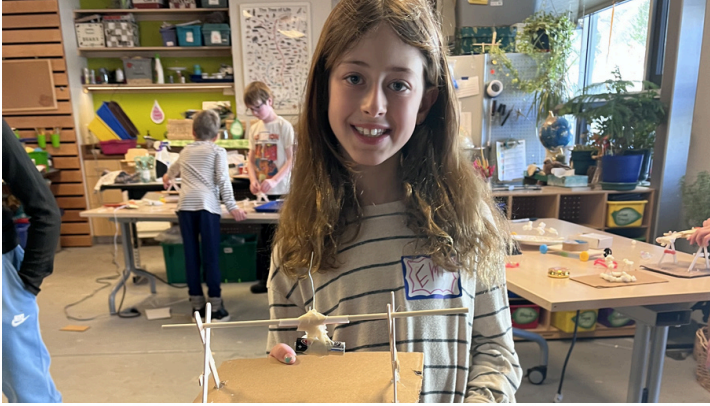
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# ENGINEERING



## Our Focus:

We turn your classroom into a mini engineering lab where students actively design, create, and innovate. Our mission is advancing understanding of science through discovery, exploration, and education.

## Aligning:

Our lessons are aligned with NGSS and Colorado State Standards. Everything we bring into your classroom directly supports your students. Lessons are enhanced to fit English Language Learner and your classroom needs.



## Tiny Engineers, Big Ideas:

Students will use the **Engineering Design Process** to solve challenges by: Asking, Imagining, Planning, Creating, and Improving while using teamwork.

### Grade 2

Students will investigate the characteristics of shapes and discover how an object's design impacts its functionality in the context of engineering structures.

### Grade 3

Students will design structure as a solutions to a problem aimed at minimizing the effects of weather-related hazards.

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## Grade 2 Activities

**The Challenge:** Create a design that can endure impacts through the use of structural shapes.

**The Challenge:** Design a bridge capable of supporting various weights.

## Grade 3 Activities

**The Challenge:** Creating a framework to safeguard a community from environmental hazards

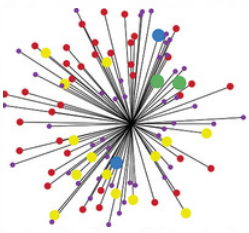
**The Challenge:** Students are tasked with designing and constructing a gravity-powered water system to address a specific problem.

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### Our Focus:

We turn your classroom into a mini math lab where students actively apply problem-solving skills and data collection. Our mission is advancing understanding of science through discovery, exploration, and education.

### Aligning:

Our lessons are aligned with NGSS and Colorado State Standards. Everything we bring into your classroom directly supports your students. Lessons are enhanced to fit English Language Learner and your classroom needs.



### TINY MATHEMATICIANS, BIG IDEAS:

Students will use the **Engineering Design Process** to solve challenges by: Asking, Imagining, Planning, Creating, and Improving while using teamwork.

#### Grade 2

Students will utilize their mathematical skills to measure the lengths of different objects, while also designing and presenting their findings through graphs.

#### Grade 3

Students will apply their mathematical skills to examine data presented in tables and graphical displays, allowing them to articulate their findings throughout the challenges.

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### Grade 2 Activities

**The Challenge:** Design a ramp that enables an object to travel the greatest distance.

**The Challenge:** Students will design and launch rockets with varying weights, recording the different distances each one travels.

### Grade 3 Activities

**The Challenge:** Students design and enhance a parachute to gather data on which design remains airborne the longest.

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