ASPEN SCIENCE CENTER

K-1 EXPERIENCES

SCIENCE

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 Learners and your classroom needs.

Tiny Scientists, Big Ideas:

Students will use the **Scientific Method** to answer questions by: Hypothesizing, Experimenting, and Analyzing while using teamwork.

Kindergarten

Students will investigate how sunlight impacts the Earth's surface and create solutions to address its warming effects. They will explore the concepts of force and motion, observing moving objects to grasp the principles of pushes and pulls in action.

Grade 1

Students will investigate the patterns of the sun, moon, and stars, while describing and observing phenomena that can be anticipated. Additionally, they will explore sound, waves, and light by designing and constructing devices that utilize either light or sound.

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

Kindergarten Activities

The Challenge: Design and test different shelters to reduce the time for an ice cube to melt.

The Challenge: Design and create tents and umbrellas that can withstand various weather conditions.

Grade 1 Activities

The Challenge: Design a device that produces different sounds through vibrations.

The Challenge: Explore and map different constellations using simple materials.

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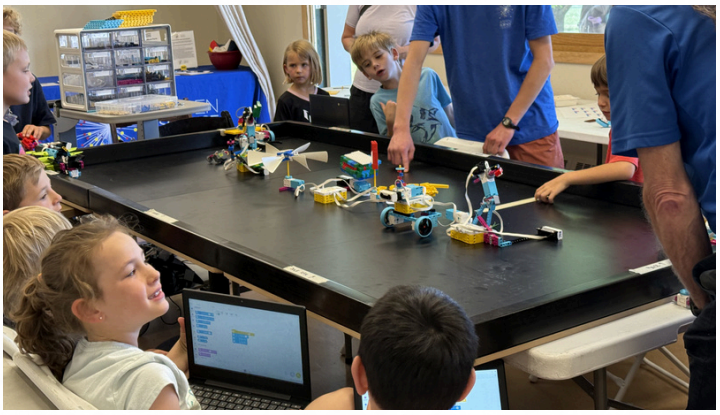
TECHNOLOGY



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.

Kindergarten

Students will understand what an algorithm is and create simple step-by-step instructions that a peer can follow, and test algorithms with technology.

Grade 1

Students will understand and describe basic computer hardware and software, and solve problems by building an algorithm that can be modified for different purposes.

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Kindergarten Activities

The Challenge: Practice algorithm instructions using technology in Lego Bricks.

The Challenge: Students practice breaking instructions down into steps. Example: navigating each other in partners to different places around the room.

Grade 1 Activities

The Challenge: Build simple code for a robot to follow a sequence and path.

The Challenge: Create a map of a computer software to demonstrate knowledge of functions.

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ENGINEERING

Our Focus:

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

Aligning:

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Tiny Engineers, Big Ideas:

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

Kindergarten

Students will apply their understanding of geometry to plan, design, and construct structures utilizing various shapes and materials.

Grade 1

Students will utilize two- or three-dimensional shapes, along with their understanding of city and town buildings, to design and construct innovative structures.

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Kindergarten Activities

The Challenge: Design a ramp for a car to move objects.

The Challenge: Design a "Marble Maze" to demonstrate how pushes and pulls change direction.

Grade 1 Activities

The Challenge: Design a bridge that can support a small toy car using only specific shapes.

The Challenge: Design a shelter that focuses on addressing environmental changes.

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MATH

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.

Kindergarten

Students will enhance and broaden their math vocabulary by describing, comparing, and identifying the components and characteristics of their designs and constructions.

Grade 1

Students will enhance their math vocabulary by describing the data they collected during their challenge. This will involve using both direct measurements of lengths and indirect measurements through the use of various objects.

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Kindergarten Activities

The Challenge: Use their knowledge of geometry to build a structure for a story character from a fable.

Grade 1 Activities

The Challenge: Design a flashlight using simple materials and then measure the “Path of Light” using different objects.

The Challenge: Build and test different rockets to measure the height and distances they fly.

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