FREEPORT-MCMORAN FOUNDATION CENTER FOR

LEADERSHIP IN LEARNING

Now scheduling learning opportunities for the 2025-2026 school year!

Professional learning with Arizona Science Center is hands-on, standards-aligned, and research-based. We bring our workshops directly to your school for an engaging, in-person experience. Sessions are flexible in length to fit your school's needs, with timing options outlined in the following pages. After the session, educators receive virtual copies of handouts and resources, along with access to the Center's extensive database of science lessons, ensuring they have the tools to bring impactful STEM learning to their classrooms.

ARIZONA SCIENCE CENTER

PRICING & TRAVEL COST

CENTER FOR LEADERSHIP AND LEARNING

Pricing:

Coaching	Approximately 1 hour	$175
Microsession	Approximately 1.5 hours	$700
Half Day Session	Approximately 3 hours	$1250
Full Day Session	Approximately 6 hours	$2500
STEM Activity Kits	Our STEM Activity Kits are designed to ensure a seamless and engaging learning experience for 30 students. It includes all the essential materials to support both the facilitator and participants.	Inquire for details

Travel Costs:

50-100 miles from Arizona Science Center	$100
100-150 miles from Arizona Science Center	$150
150-200 miles from Arizona Science Center	$200
201+ miles from Arizona Science Center	$250
Requires Overnight Stay	$250

TOPIC OPTIONS

EARLY CHILDHOOD SCIENCE

Topic Options:

Early Childhood Science		Grades: Preschool-1			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Early Science and Sensemaking	Dive into effective techniques and engaging activities to cultivate sensemaking in young children through science. Learn how to foster inquiry, critical thinking, and understanding of scientific concepts using hands-on exploration and playful learning.		X	X	
STEM through Guided Play	Observing, Planning, Guiding: Learn to set up the classroom environment and use open-ended comments, questions and suggestions to guide children toward learning goals while still providing children with choices.	X	X	X	
Engineering in the Early Years	Explore innovative strategies and hands-on activities to introduce engineering concepts to young children. Learn how to foster problem-solving skills, creativity, and curiosity through the engineering design process.	X	X	X	
Developing Language through Early Science	With intentional support from teachers during guided inquiry experiences, children can develop a rich vocabulary and new communication skills. Explore three specific supports that promote language development during science.	X	X	X	
Dramatic Science: Playful Learning in the Classroom	Discover imaginative dramatic play activities that inspire kids to see themselves in exciting STEM careers. Learn hands-on strategies to make STEM fun and engaging for young learners!	X	X	X	
Cultivating Early Coding Skills	Discover practical strategies and hands-on activities to introduce foundational coding concepts to young children. Learn how to integrate coding into your curriculum, making learning fun and developmentally appropriate. Equip yourself with resources to foster a love for coding in your classroom.	X	X	X	

TOPIC OPTIONS

EFFECTIVE SCIENCE TEACHING

Topic Options:

Effective Science Teaching		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Inquiry-Based Science	Inquiry-based science professional development trains educators to foster critical thinking and problem-solving through hands-on activities. It focuses on promoting scientific inquiry, data interpretation, and student engagement, empowering teachers to create dynamic learning environments that enhance curiosity and deepen science understanding.		X	X	
Classroom Management Strategies for the Collaborative Classroom	Classroom Management Strategies for the Collaborative Classroom professional development equips educators with tools to foster cooperation and positive behavior. It focuses on effective communication, conflict resolution, and creating an inclusive environment, enabling teachers to manage diverse classrooms and promote teamwork, respect, and student engagement.		X	X	
3 Dimensional Science Assessments	3-Dimensional Science Assessments professional development helps educators align their assessments with the 3-Dimensional Arizona Science Standards, and therefore also the AZSCI state assessment. It focuses on integrating science practices, crosscutting concepts, and disciplinary core ideas to create meaningful assessments that evaluate student understanding.		X	X	

TOPIC OPTIONS

EFFECTIVE SCIENCE TEACHING

Effective Science Teaching		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
5E Learning Cycle	The 5E Learning Cycle professional development trains educators to implement the 5E model—Engage, Explore, Explain, Elaborate, Evaluate—to enhance student learning through inquiry-based lessons, fostering critical thinking, exploration, and deeper understanding in science education.		X	X	
Addressing Student Misconceptions	Addressing Student Misconceptions in Science professional development equips educators with strategies to identify and correct common scientific misconceptions, promoting deeper understanding and critical thinking by using targeted interventions and evidence-based instructional practices.		X	X	
Instilling a Maker Mindset	In this hands-on professional development session, educators will explore the key principles behind a "maker mindset" and how to integrate inquiry-based and problem-solving strategies into their teaching practice. Participants will gain practical tools and techniques for designing lessons that inspire curiosity, encourage critical thinking, and promote student independence.	X	X	X	
Teaching the Problem Solving Process	Through design challenges, collaborative projects, and building an app prototype, learn how to prompt students to consider the broader social impacts of computer science. **Focused on 6th-10th grade levels*		X	X	

TOPIC OPTIONS

ENGINEERING DESIGN PROCESS

Topic Options:

Engineering Design Process		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Science and Engineering Practices	This professional development workshop explores science and engineering practices, focusing on formative assessment through the integration of claim, evidence, and reasoning to enhance student understanding and critical thinking.	X	X	X	X
Engineering with Storybooks	This professional development workshop demonstrates how to integrate engineering concepts with storybooks, helping teachers engage students in problem-solving, creativity, and critical thinking through narrative-driven activities that enhance learning and foster a deeper understanding of engineering principles.	X	X	X	X
Engineering Design in the Workforce	This workshop explores the 4 C's—critical thinking, creativity, collaboration, and communication—through the Engineering Design Process, highlighting how it fosters career readiness and soft skills like adaptability, teamwork, and communication, offering practical strategies for educators to implement.	X	X	X	

Topic Options:

Inclusive Teaching Practices		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Strategies to Meet the Needs of All Learners	Learn effective strategies to support and engage students with special needs, fostering an environment where every learner can thrive! This introductory workshop will provide educators with practical tools and insights to create a science classroom that is welcoming and accessible for all students. Explore how to modify lessons and implement differentiated instruction to meet diverse learning needs through hands-on activities and group discussions.		X	X	X

Topic Options:

Intergrating STEM		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Integrating Science through Literature	Explore creative ways to integrate STEM concepts with language arts in this engaging workshop. Learn strategies for blending science, technology, engineering, and math into reading, writing, and literacy instruction. Discover how diverse texts and literature can inspire STEM inquiry, problem-solving, and critical thinking. Help students make meaningful connections between stories, real-world challenges, and STEM skills	X	X	X	

TOPIC OPTIONS

INTERGRATING STEM

Intergrating STEM		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Exploring the "M" in STEM	Discover the power of mathematics as a core element in STEM education during this interactive professional development workshop. Learn strategies for integrating math with science, technology, and engineering through real-world applications and hands-on projects. See how mathematical thinking fuels problem-solving, design, and innovation, equipping students with essential skills for their future careers.		X	X	
Connecting Social Studies & STEM	Learn how to connect social studies and STEM in this interactive workshop. Discover strategies for integrating history, geography, economics, and civics with science, technology, engineering, and math to create engaging, interdisciplinary lessons. Explore hands-on projects that link STEM skills to historical innovations.		X	X	
STEM in the Arts	Special area teachers are invited to explore blending STEM, arts, and music in the classroom! Learn creative strategies and practical tools to enhance student engagement through interdisciplinary lessons. Discover innovative ways to incorporate technology, engineering, and math into art and music, and leave with fresh ideas and resources to inspire creativity and STEM learning.	X	X	X	

TOPIC OPTIONS
PROGAMMABLE DEVICES

Topic Options:

Progammable Devices		Grades: K-12			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Edison Robots	Discover how to use Edison robots to teach coding, robotics, and problem-solving in your classroom. This hands-on workshop covers basic programming, lesson ideas, and interactive activities—no prior experience needed!	X		X	X
Micro:bits	Learn how to integrate Micro:bits into your teaching to make computer science and STEM engaging. This hands-on workshop covers basic programming, lesson ideas, and interactive projects—perfect for all experience levels!	X	X	X	
Makey Makey	In this session, educators will explore how a MakeyMakey works through hands-on lessons exploring circuitry. Build a conductivity tester and explore the possibilities of problem-based learning with the tool.	X	X	X	
Circuit Playground	Dive into a complete unit that utilizes Adafruit's Circuit Playground to develop programs that use the same hardware inputs and outputs found in smart devices. **Focused on 6th-10th grade levels*	X	X	X	

Topic Options:

Project Based Learning		Grades: K-8			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Project-Based Learning Essentials	Explore the key elements of Project-Based Learning (PBL) and how to create engaging, student-driven experiences. This workshop covers core principles, practical strategies, and classroom applications to enhance learning through real-world projects.			X	X
Planning a Project-Based Learning Experience	Learn how to design meaningful Project-Based Learning (PBL) experiences for your students. This workshop covers structuring projects, aligning with standards, and guiding student inquiry to create engaging, real-world learning opportunities. This pairs well with coaching sessions!		X	X	

Topic Options:

STEM Mission & Vision		Grades: PreK-12			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Developing/Refining your STEM Mission & Vision	Align your school's STEM approach with a clear, inspiring mission and vision. This workshop helps educators define goals, build consensus, and develop a unified strategy to foster a strong STEM culture.		X	X	

Topic Options:

Authentic Research in the Classroom		Grades: 3-12			
Session Options	**Description**	**Kit Add On**	**3 Hours**	**6 Hours**	**Multi-day**
What Do We Wonder Program	Spark curiosity and inquiry in your students with our What Do We Wonder? series! In this 4-session program, one of our facilitators will lead engaging, hands-on sessions in your classroom that are designed to help students observe phenomena, ask meaningful questions, and explore answers through collaborative research. Teachers support and observe during each session, with guidance from our team to continue to incorporate the inquiry process throughout the school year. Perfect for grades 3-8!				X
Advancing STEM Research Training	This program is a multiple-day, in-person, professional development workshop focused on curriculum, activities, and guides to support middle and high school teachers involved in providing science/STEM research opportunities for their students. Educators will learn how to reach their goals and overcome obstacles specific to their school/region.		X	X	X
Starting a School/ District Science Fair	Ready to launch a science fair at your school or across your district? This hands-on workshop is designed to guide teachers and administrators through the process of planning, organizing, and running a successful science fair from the ground up. Learn how to set goals, support student research, create fair guidelines, and manage logistics—whether you're starting small or thinking big. With practical tools, templates, and expert advice, you'll leave ready to inspire student curiosity and showcase their scientific thinking through a meaningful and well-run event.		X		

Coaching

Coaching	Grades: PreK-8		
Description	**1 Hours**	**3 Hours**	**6 Hours**
Through our mentoring and coaching support, we assist educators in effectively planning, reflecting on, and solving challenges in STEM education. We provide guidance in creating engaging, hands-on lessons, and offer strategies for continuous improvement, ensuring educators feel confident and empowered in their teaching. Our support fosters growth and innovation, helping educators deliver high-quality STEM experiences for their students.	X	X	X

STEM Club

STEM Clubs		Grades: K-8		
Session Options	**Description**	**Kit Add On**	**6 Hours**	**12 Hours**
Storybook STEAM (Virtual or In Person)	A club for K-5 students where engineering meets imagination! Through hands-on challenges inspired by fairy tales, kids design solutions like protecting Humpty Dumpty in an egg drop or building homes for the Three Little Pigs, while exploring STEAM concepts and enhancing problem-solving skills.	X	X	X
Cracking the Code (Virtual or In Person)	This club for grades 3-8 introduces coding, robotics, and computational thinking. Students solve problems, write code, and program robots, developing STEM skills while discovering the creative power of technology through hands-on activities.	X	X	X
STEM Futures (Virtual or In Person)	A club for grades 5-8 where students explore various STEM careers. Each week, they engage in hands-on activities from fields like engineering and biology, gaining insight into future career possibilities and discovering their own passions in STEM.	X	X	X

Topic Options:

Computer Science		Grades: K–12			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
AI 101	This workshop introduces participants to the fundamental concepts of artificial intelligence, including the benefits and risks of using AI in educational settings. Explore how to use AI to support various tasks in the classroom.		X	X	
Teaching CS in Elementary School	Participants will explore fundamental computer science concepts, including sprites, events, behaviors, algorithms, sequences, and conditionals through block-based coding.		X	X	
Connecting CS to Curriculum	Discover how to integrate computer science into various content areas including math, reading, science, and social studies.		X	X	
Strategic Technology Integration	A framework to guide teams of district administrators, school leaders, and educators through a series of collaborative visioning, self-assessment and goal-setting exercises to create or expand upon a computer science education implementation plan for their students.				X
Coding with AI	Participants will explore how to empower students to become confident, ethical coders through leveraging generative AI tools to help explain code, tackle problems, and even generate code.		X		
Web Development for Beginners	During this workshop, explore how to teach problem solving, creative expression, and teamwork by having students create and share content on their very own web pages. *Focused on 6th-10th grade levels		X		
Interactive Animations and Games	Participants will discover how to engage in the same design process that computer scientists use to learn how to teach programming concepts and develop images, animations, interactive art, and games. *Focused on 6th-10th grade levels		X	X	

TOPIC OPTIONS

COMPUTER SCIENCE

Computer Science		Grades: K–12			
Session Options	**Description**	**Kit Add On**	**1.5 Hours**	**3 Hours**	**6 Hours**
Integrating Arizona Tech Standards	Get hands on with the International Society for Technology in Education (ISTE) standards adopted by Arizona and explore how to easily adopt them in the classroom.		X		
CS Discoveries* *9 day application-based program	Mapped to CSTA standards, CS Discoveries covers topics such as problem solving, programming, physical computing, user centered design, and data, while inspiring students as they build their own websites, apps, animations, games, and physical computing systems. CS Discoveries can be taught as a single semester, two semesters over multiple years, or as a full-year course. **Focused on 6th-10th grade levels*				
CS Principles *9 day application-based program	CS Principles is a rigorous, engaging, and approachable curriculum that explores many of the foundational ideas of computing so all students understand how computing and technology impact the world. This year-long curriculum can be taught as an introductory class and as an AP course - no prerequisites required for students or for teachers new to computer science! **Focused on 9th-12th grade levels*				
AP CSA *9 day application-based program	AP CSA is a full year curriculum to teach software engineering and object-oriented design while learning the Java programming language. This includes the problem solving process, data science, developing and implementing algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. **Focused on 9th-12th grade levels*				

SCIENCE TEACHER RESIDENCY (STaR)

ELEMENTARY & MIDDLE SCHOOL MODULES

Science Teacher Residency (STaR)

Lower Elementary Modules		Grades: K-2		
Session Options	**Description**	**Kit Add On**	**12 Hours**	**24 Hours**
Physical Science Module	Explore how light and sound waves interact with objects around us, observe forces acting on objects, identify the properties of matter, and discover the types of matter and how they change states	X	X	X
Life Science Module	Participants will engage in four days of hands-on, research-based learning activities that challenge common student misconceptions about life science. Explore foundational concepts such as living vs. non-living things, animal and plant life cycles, and investigate habitats and ecosystems.	X	X	X

Upper Elementary/Middle School Modules		Grades: 3-8		
Session Options	**Description**	**Kit Add On**	**12 Hours**	**24 Hours**
Life Science Module	Discover how energy flows through an ecosystem, how organisms adapt to their ever-changing environments, how animals and plants depend on each other for survival, and more! **Focused on 3rd, 5th, 6th and 8th grade levels*	X	X	X
Chemistry Module	Reveal the tiny particles that make up matter, how and why matter exists in different forms, the effects of combining substances, and the unique properties of various chemicals. **Focused on 5th, 6th and 8th grade levels*	X	X	X

SCIENCE TEACHER RESIDENCY (STaR)

UPPER ELEMENTARY & MIDDLE SCHOOL MODULES

Session Options	Description	Kit Add On	12 Hours	24 Hours
Space Science Module	Explore how the Earth and Moon move within our solar system, why the Moon's appearance changes, the cause of eclipses and the effects of Earth's tilt on the length of days and seasons. *Focused on 5th and 6th grade levels	X	X	X
Environmental Science Module	Investigate the study of the environment and solutions to environmental problems by examining physical, chemical and biological conditions of the environment and their effect on organisms! *Focused on 3rd, 4th, 5th, 6th and 8th grade levels	X	X	X
Physical Science Module	Dive into forces such as pushes and pulls, how gravitational force is universal, how balanced and unbalanced forces affect objects, and so much more! *Focused on 4th, 5th, 6th, and 7th grade levels	X	X	X
Earth Science Module	Dig into the changes to Earth's surface, provide evidence of past plate motions and design solutions to predict and minimize the effects of natural hazards. *Focused on 4th, 7th and 8th grade levels	X	X	X

If you have any questions, contact cll@azscience.org.


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