

# SCIENCE ON WHEELS

ARIZONA SCIENCE CENTER



## ABOUT SCIENCE ON WHEELS

We bring the science to you! Science on Wheels engages people of all ages in Science, Technology, Engineering and Math (STEM) experiences at your site. From large-scale Assemblies and Family Nights to smaller-scale Classroom Workshops, our engaging programs are sure to spark a passion for science.

Our in-depth, hands-on programs are well-equipped for a variety of settings and consist of grade-specific content that supports Arizona College and Career Readiness Standards and Next Generation Science Standards.

**LEARN MORE AND REQUEST YOUR SCIENCE ON WHEELS  
EXPERIENCE AT [AZSCIENCE.ORG!](https://www.azscience.org)**

# WORKSHOPS

## GRADES PREK-8



### **WORKSHOPS | GRADES PREK-8**

We bring the science to your classroom! Preschool and K-8 Science on Wheels Workshops consist of hands-on, grade-specific content based on Arizona State Education Standards. They are designed for a single class or similarly-sized group.

*Pricing varies and is listed under each grade level. \*Discounts available for multiple sessions of the same Workshop on the same day.*



## **WORKSHOPS | PRESCHOOL**

**UP TO 25 PARTICIPANTS | 60 MINUTES | \$250 PER SESSION**

### **1. 3-2-1 Blastoff—Stomp Rockets**

We're going to have a blast! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

### **2. All About Arizona**

Learn about some of the things that call the desert home. Observe real desert plants, rocks, fossils and artifacts, then create a desert animal and protect it from the sun.

### **3. All About Clouds**

Your head will be in the clouds as you learn about the water cycle, create clouds and observe a liquid nitrogen cloud in action.

### **4. Bounce and Roll**

Explore the scientific relationship between gravity, force and motion through various hands-on physics experiments. Engineer ramps, knock down bowling pins and make a bouncy ball to take home!

### **5. Bubble-ology**

Pop! Mix up your own bubble solution, create and test unique bubble wands, and observe a giant bubble from the inside!



**6. Build It**

What can you build? Learn about engineering, math and architecture as you complete multiple building challenges—including recreating famous structures from around the world!

**7. Coding with Kibo**

Meet Kibo, a robot that introduces young scientists to coding using blocks! Build and program your robot to complete a series of movements and sounds.

**8. Colorful Chemistry**

Join our journey of rainbow science as we mix up colorful art, color-changing chemistry experiments and make a lava lamp to take home.

**9. Dino-mite!**

Explore paleontology as we transform into dinosaur detectives. Piece together a skeleton, excavate a dino egg and create your very own fossil!

**10. Icy Investigations**

Winter is here! Learn about snow and ice, make your own snow, and observe one of the coldest liquids on Earth: liquid nitrogen.

**11. Insectarium**

Discover characteristics of insects as you observe live critters, “see” like a bug and build a terrarium.

**12. It’s Slime Time!**

Get messy as you investigate preschool chemistry! Learn about the properties of silly, slippery slimes and invent a scientific goo to take home.

**13. Junior Detectives**

Who stole the cookies from the cookie jar? Learn how to analyze fingerprints and use detective tools, then use those skills to solve the cookie jar mystery!



#### **14. Light and Shadows**

Discover the characteristics of light and shadows by hunting for shadows, exploring light mixing and creating shadows with a variety of objects.

#### **15. Scribble Bots**

Use the engineering design process to brainstorm, build and decorate a Scribble Bot. What unique designs can your robot scribble?

#### **16. Solar Science**

Explore the star that provides light, heat and energy. Safely observe the Sun with solar telescopes and create art projects that harness its power!

#### **17. Space Explorers**

Explore your favorite planets and stars in space! Learn how to use a real telescope, build a constellation viewer and see the Moon up-close.

#### **18. Whirly, Twirly, Flying Things**

Design soaring helicopters and test them out in our specially-engineered wind tunnel.



**WORKSHOPS | GRADES K-1**  
**UP TO 30 PARTICIPANTS | 60 MINUTES | \$300 PER SESSION \***

**1. 3-2-1 Blastoff—Stomp Rockets**

We're going to have a blast! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

**2. Bounce and Roll**

Explore the scientific relationship between gravity, force and motion through various hands-on physics experiments. Engineer ramps, knock down bowling pins and make a bouncy ball to take home!

**3. Bubble-ology**

Pop! Mix up your own bubble solution, create and test unique bubble wands, and observe a giant bubble from the inside!

**4. Build It**

What can you build? Learn about engineering, math, and architecture as you complete multiple building challenges including recreating famous structures from around the world.

**5. Coding with Kibo**

Meet Kibo, a robot that introduces young scientists to coding using blocks! Build and program your robot to complete a series of movements and sounds.



**6. Colorful Chemistry**

Join our journey of rainbow science as we mix up colorful art, color-changing chemistry experiments and make a lava lamp to take home.

**7. Insectarium**

Discover characteristics of insects as you observe live critters, “see” like a bug and build a terrarium.

**8. Junior Detectives**

Who stole the cookies from the cookie jar? Learn how to analyze fingerprints and use detective tools, then use those skills to solve the cookie jar mystery!

**9. Light and Shadows**

Discover the characteristics of light and shadows by hunting for shadows, exploring light mixing and creating shadows with a variety of objects.

**10. Scribble Bots**

Use the engineering design process to brainstorm, build and decorate a Scribble Bot. What unique designs can your robot scribble?

**11. Solar Science**

Explore the star that provides light, heat and energy. Safely observe the Sun with solar telescopes and create art projects that harness its power!

**12. Space Explorers**

Explore your favorite planets and stars in space! Learn how to use a real telescope, build a constellation viewer and see the Moon up-close.

**13. Stomach This**

Explore the longest system in the human body: the digestive system! This hands-on program illustrates how food travels through our bodies and gives us the nutrients we need to survive.

**14. Whirly, Twirly, Flying Things**

Design soaring helicopters and test them out in our specially-engineered wind tunnel.



**WORKSHOPS | GRADES 2-3**  
**UP TO 30 PARTICIPANTS | 60 MINUTES | \$300 PER SESSION\***

**1. 3-2-1 Blastoff—Stomp Rockets**

We're going to have a blast! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

**2. 3-2-1 Blastoff—Soda Bottle Rockets**

Ready for launch! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

**3. Chemysteries**

Investigate the properties of various solid, liquid and gas chemicals, and explore the mysterious changes that occur when they are combined. You won't believe this color-changing chemistry isn't magic!

**4. Dash into Coding**

Learn how to code in a fun and interactive way! Guide Dash, the robot, through various challenges by coding them with a tablet.

**5. Engineer a Rescue**

Use principles of physics and engineering to design and build a parachute and zipline. Can your team successfully engineer a safe rescue?

**6. Geology Rocks!**

Observe real rocks and minerals and test their hardness on the Mohs hardness scale. Plus, learn about Arizona's unique relationship with rocks by forming a mining company that digs for copper and other minerals.



**7. Hoot! The Science of Owls**

How do owls move so quietly, why do they turn their heads so much and what do they eat? Learn about these fascinating birds of prey as we explore owl anatomy, diets and piece together clues left behind in their pellets!

**8. Incredible Inventions**

Learn about simple machines, forces and the engineering design process as your team works together to build a ramp that will slow down a bouncy ball as it rolls to the end.

**9. Insectarium**

Discover characteristics of insects as you observe live critters, “see” like a bug and build a terrarium.

**10. Monster Manual**

Learn how DNA serves as an instruction manual for our bodies while extracting real DNA from a strawberry and decoding the DNA of a “monster”.

**11. Ocean Rescue**

Learn about real-world chemistry as you investigate the relationship between pH and coral reefs. Plus, learn how to help our water systems by building a water filter to clean polluted water!

**12. Roller Coasters**

Explore the concepts of gravity, motion and energy while completing roller coaster design challenges.

**13. Solar Science**

Explore the star that provides light, heat and energy. Safely observe the Sun with solar telescopes and create art projects that harness its power!



#### **14. Sphero Mazes**

Learn all about coding with Sphero robots! Create a unique maze and challenge your classmates to direct their robots through it.

*\*Please note: this program requires ample floor space.*

#### **15. Stomach This**

Explore the longest system in the human body: the digestive system! This hands-on program illustrates how food travels through our bodies and gives us the nutrients we need to survive.

#### **16. The Power of a Drop**

Water is a commodity that can't be wasted! Use planning, prototyping and teamwork to help Arizona's urban and rural communities utilize their water sources.



**WORKSHOPS | GRADES 4-5**  
**UP TO 30 PARTICIPANTS | 60 MINUTES | \$300 PER SESSION\***

**1. 3-2-1 Blastoff—Stomp Rockets**

We're going to have a blast! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

**2. 3-2-1 Blastoff—Soda Bottle Rockets**

Ready for launch! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

**3. Awesome Anatomy**

Work in small groups to learn proper dissection techniques and etiquette to explore the anatomy of real specimens! Please inquire about current availability for:

- Squid Dissection | Additional \$75 per Session
- Cow Eye Dissection | Additional \$75 per Session
- Fish Taxonomy (3 Types of Fish) | Additional \$175 per Session

**4. Charged Up**

Discover basic principles of electricity through the use of a Van de Graaff generator and hands-on challenges using insulators, conductors, and circuits.

**5. Chemysteries**

Investigate the properties of various solid, liquid and gas chemicals, and explore the mysterious changes that occur when they are combined. You won't believe this color-changing chemistry isn't magic!



**6. Engineer a Rescue**

Use principles of physics and engineering to design and build a parachute and zipline. Can your team successfully engineer a safe rescue?

**7. Geology Rocks!**

Observe real rocks and minerals and test their hardness on the Mohs hardness scale. Plus, learn about Arizona's unique relationship with rocks by forming a mining company that digs for copper and other minerals.

**8. Girls Out of This World (*Girls in STEM*)**

Explore a few amazing women who have helped the field of astronomy! Build your own telescope, learn how food gets to space, and design a space suit.

**9. Hoot! The Science of Owls**

How do owls move so quietly, why do they turn their heads so much, and what do they eat? Learn about these fascinating birds of prey as we explore owl anatomy, diets and piece together clues left behind in their pellets!

**10. Incredible Inventions**

Learn about simple machines, forces and the engineering design process as your team works together to build a ramp that will slow down a bouncy ball as it rolls to the end.

**11. Level Up with Bloxels**

Work in groups to build a video game character and the world they live in using Bloxels (pixel blocks). Then, bring your creations to life and test out your unique-to-you video game!

**12. Ocean Rescue**

Learn about real-world chemistry as you investigate the relationship between pH and coral reefs. Plus, learn how to help our water systems by building a water filter to clean polluted water!



### **13. Roller Coasters**

Explore the concepts of gravity, motion and energy while completing roller coaster design challenges.

### **14. Sphero Mazes**

Learn all about coding with Sphero robots! Create a unique maze and challenge your classmates to direct their robots through it.

*\*Note: This program requires ample floor space.*

### **15. The Power of a Drop**

Water is a commodity that can't be wasted! Use planning, prototyping and teamwork to help Arizona's urban and rural communities utilize their water sources.

### **16. Tintas y Pintas / Tints and Prints**

Explore the history, science and art behind natural dyes that are native to Latin America. Extract beautiful colors from plants onto fabric and create a Papel Picado to take home.

### **17. Zombie MD**

A zombie virus has infected your class! Learn about epidemiology by working as a class to track the spread of the virus. Then, work in small groups to create a vaccine.



## **WORKSHOPS | GRADES 6-8**

**UP TO 30 PARTICIPANTS | 60 MINUTES | \$300 PER SESSION\***

### **1. 3-2-1 Blastoff—Stomp Rockets**

We're going to have a blast! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

### **2. 3-2-1 Blastoff—Soda Bottle Rockets**

Ready for launch! Design, build and test your own rockets using a specially-engineered stomp rocket launch pad.

### **3. Awesome Anatomy**

Work in small groups to learn proper dissection techniques and etiquette to explore the anatomy of real specimens! Please inquire about current availability for:

- Squid Dissection | Additional \$75 per Session
- Cow Eye Dissection | Additional \$75 per Session
- Fish Taxonomy (3 Types of Fish) | Additional \$175 per Session

### **4. Battlebots**

Explore coding and engineering design principles by arming a Sphero robot. Teams will work collaboratively to prepare their robot for battle!

*\*Note: This program requires ample floor space.*

### **5. Engineer a Rescue**

Use principles of physics and engineering to design and build a parachute and zipline. Can your team successfully engineer a safe rescue?



**6. Girls Out of This World (Girls in STEM)**

Explore a few amazing women who have helped the field of astronomy! Build your own telescope, learn how food gets to space and design a space suit.

**7. Level Up with Bloxels**

Work in groups to build a video game character and the world they live in using Bloxels (pixel blocks). Then, bring your creations to life and test out your unique-to-you video game!

**8. Roller Coasters**

Explore the concepts of gravity, motion and energy while completing various roller coaster design challenges—including loops and corkscrews!

**9. The Power of a Drop**

Water is a commodity that can't be wasted! Use planning, prototyping and teamwork to help Arizona's urban and rural communities utilize their water sources.

**10. Zombie MD**

A zombie virus has infected your class! Learn about epidemiology by working as a class to track the spread of the virus. Then, work in small groups to create a vaccine.



**CREATE ON WHEELS WORKSHOPS | GRADES 7-12**  
**UP TO 30 PARTICIPANTS | 90 MINUTES | \$400 PER SESSION\***

Bring CREATE at Arizona Science Center® to your classroom! These workshops are based on Arizona Science Center’s makerspace, and foster creativity, problem-solving and imagination. What can you CREATE?

**1. Balloon Cars**

Students will learn how to assemble an air-powered car! This program focuses on real-world problems, math and mechanical engineering.

**2. Design It with Makey Makey**

Use the human-centered design process to brainstorm, prototype and test a one-handed controller designed for computer game play.

*\*Note: This program requires a class set of computers that has a USB-A port.*

**3. LEDesign**

Students will learn basic circuitry while creating their own personalized wearable item that lights up.



## **ASSEMBLIES**

**UP TO 100 PARTICIPANTS | 45 MINUTES | \$400 PER SESSION\***

Prepare to be amazed by chemistry, liquid nitrogen and fiery experiments!

*\*Discounts available for multiple sessions of the same assembly on the same day.*

### **FOR GRADES K-5**

#### **Superhero Science**

Who's your favorite superhero? Explore the science behind fan-favorite super powers such as flying, freeze rays and lightning discharges!

### **FOR GRADES K-8**

#### **Combustion!**

What are the three elements a fire needs to ignite? What happens when we change one of these elements? Learn about fire safety and explore combustion in this red-hot assembly!

#### **Really Cool Science**

Take a break from the Arizona heat to learn about solids, liquids and gasses while observing some of the coolest liquid nitrogen experiments!

### **FOR GRADES 4-8**

#### **Mix it Up!**

What are the different signs of a chemical reaction? Observe colorful, bubbly experiments to investigate the world of chemistry. You won't believe it's not magic!



## **FAMILY SCIENCE NIGHTS** **UNLIMITED PARTICIPANTS | 2 HOURS MINIMUM** **\$500 FOR THE FIRST 2 HOURS** **\$100 EACH ADDITIONAL HOUR\***

Invite your friends and family! Family Science Nights are ideal for large audiences of all ages. These engaging programs consist of hands-on activities that curious minds can explore at their own pace. While available during school hours, Family Science Nights are designed for evening events or as an addition to your school's Science Night.

### **FOR GRADES K-2**

#### **Storybook STEM Family Night**

Combine STEM and literacy through engaging, hands-on challenges. Each activity is inspired by a popular childrens' book.

### **FOR GRADES K-8**

#### **All About Arizona Family Night**

Explore the amazing state we call home through hands-on activities. Observe desert animal characteristics, mine for copper, decorate a cactus, and more!

#### **Astronomy Family Night**

Explore space with hands-on activities about planets, stars, gravity, and being an astronaut. And view space through telescopes!

*\*Note: The site must provide an adult volunteer to supervise the telescopes outside.*



### **Brain Games Family Night**

Put your brain to use! Explore hands-on puzzles, riddles, and challenges that exercise different parts of your brain.

### **Engineering Family Night**

Channel creativity, problem solving, teamwork, and communication through hands-on challenges and explore the role of engineering in everyday life.

### **Explore STEM Family Night**

Build a tower, make a binary code bracelet, explore the planets, decorate a cactus, and more! This family night combines elements of all the other family nights.



**UNIVERSE ON WHEELS**  
**MOBILE PLANETARIUM DOME**  
**GRADES PREK-12**

**LARGE DOME**

**19' tall, 30' long, 22' wide**

40-50 Participants per Show

2 Hours Minimum (~3 Shows per Hour)

\$850 For the First 2 Hours, \$100 Each Additional Hour

**SMALL DOME**

**10' tall, 17' long, 17' wide**

30 Participants per Show

2 Hours Minimum (~3 Shows per Hour)

\$650 For the First 2 Hours, \$100 Each Additional Hour

See the stars with Universe on Wheels! The Mobile Planetarium Dome is a state-of-the-art, inflatable, ADA-accessible portable planetarium that can seat 30-50 participants at a time, depending on ages. Shows vary in topic, length and grade level, and multiple groups can rotate throughout the day.

*Note: The Dome requires a large indoor space, such as a gymnasium or cafeteria, that is at least 19 feet tall, 22 feet wide and 30 feet long.*



## **STEM EXTRAVAGANZA**

**GRADES K-8**

**UP TO 900 PARTICIPANTS | FULL OR HALF DAY**

**PRICING VARIES**

Invite Arizona Science Center for a science-filled school takeover! This highly customizable experience includes a full- or half-day of fun filled with engaging, hands-on experiences. Students rotate through hands-on workshops, exciting science assemblies, Universe on Wheels planetarium presentations and more! Available as an add-on, teachers can engage in STEM professional development opportunities and activities.

### **PRICING BASED ON FULL-DAY EXPERIENCE**

- Less than 100 students: \$2,500

- 101-200 students: \$4,200

- 201-400 students: \$7,000

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

- 401-600 students: \$9,200

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

- 601-900 students: \$11,000

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

## WORKSHOPS | PRESCHOOL

- \$250 for the first session
- \$250 for each additional session

## WORKSHOPS | GRADES K-8

- \$300 for the first session
- \$225 for each additional session\*

## CREATE ON WHEELS WORKSHOPS | GRADES 7-12

- \$400 for the first session
- \$250 for each additional session\*

## ASSEMBLIES

- \$400 for the first session
- \$250 for each additional session\*

## FAMILY SCIENCE NIGHTS

- \$500 for the first two hours
- \$100 for each additional hour\*

## UNIVERSE ON WHEELS

- Large Dome | \$850 for First 2 Hours
- Small Dome | \$650 for First 2 Hours
- For Both Domes | \$100 for each additional hour\*

## STEM EXTRAVAGANZA

*Note: Pricing varies based on the number of students and length of day. Add-ons such as Universe on Wheels and educator professional development may affect the prices below.*

- Less than 100 students: \$2,500
- 101-200 students: \$4,200
- 201-400 students: \$7,000

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

- 401-600 students: \$9,200

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

- 601-900 students: \$11,000

*Note: Must split students in two groups: one session in the morning, one session in the afternoon*

## TRAVEL FEES

- 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

*\*Discounted sessions/hours must be the same Workshop, Assembly, Family Science Night or STEM Extravaganza topic on the same day.*