

# ATOMIC LEGACY CABIN

# FIELD TRIPS AND OUTREACH PROGRAMS

# **Registration Open!**

Phone: (970) 248-6251 Email: AtomicLegacyCabin@lm.doe.gov For more information, visit: energy.gov/lm/atomic-legacy-cabin



### **About Our Staff**

Atomic Legacy Cabin interpretive staff have achieved the Certified Interpretive Guide professional level certification through the National Association for Interpretation (NAI). Interpretive staff have also made a commitment to meet Next Generation Science Standards (NGSS).

# Field Trips and Outreach Program Requests

The Atomic Legacy Cabin offers a look into the unique historical and scientific legacy of the Colorado Plateau through a variety of history and science, technology, engineering, and math (STEM) programs. All field trips and programs are provided at no cost by the U.S. Department of Energy Office of Legacy Management. All programs will be confirmed by staff prior to the scheduled date. Submit your request by email at **AtomicLegacyCabin@lm.doe.gov**, or by phone, **(970) 248-6251**.

### **Onsite Tours and Programs**

- Groups must provide their own transportation to and from the interpretive center.
- Groups will be limited to no more than 40 indoors due to fire code capacity. Consecutive days may be scheduled to accommodate larger groups.
- Groups larger than 40 may be accommodated through use of indoor and outdoor space, weather permitting. Groups will be split into two or three smaller groups to rotate through each activity.

# **Driving Directions**

The Atomic Legacy Cabin is at **2597 Legacy Way** behind the Orchard Mesa Municipal Cemetery on 26 1/4 Road and U.S. Highway 50.

\*\*Indiana Company of the Atomic Legacy Way behind the Orchard Mesa Municipal Cemetery on 26 1/4 Road and U.S. Highway 50.

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\*\*Indiana Cemetery on Cemetery

# Guest Speakers and Outreach Programs

- Interpretive staff will travel to your location and provide program materials at no cost.
- When preparing your program request, please indicate your group's ability to provide a projector and/or computer.
- With access to a variety of STEM professionals, we can create a program or schedule a guest speaker to accommodate any type of educational event including (but not limited to):
  - Problem-based learning classes
  - Career fairs
  - · STEM events
  - · Boy Scouts and Girl Scouts
  - Public and private schools
  - Universities
  - · High school and college level programs pending availability of subject-matter-experts

Call us to find out how we can best support your event to fit your curriculum.



Field Trips and Outreach Programs										
Programs	Grade Level									Available as
	Pre-K	K	1	2	3	4	5	MS	HS	Outreach
History of Uranium on the Colorado Plateau							✓	✓	✓	✓
Create Your Own Cabin	✓	✓	✓							✓
Become a Historical Thinker						✓	✓	✓		
Energize the Yo-Yo						✓	✓	✓		✓
Newton's Balloons					✓	✓	✓	✓		✓
Geology Rocks				✓	✓	✓	✓			✓
Groundwater: Go With the Flow							✓	✓	✓	✓
Plants and Pollinators				✓	✓	✓	✓			✓
States of Matter				✓	✓	✓	✓			
Radiation 101								✓	✓	✓



## Field Trips and Outreach Programs

Each program typically lasts 40 minutes to 1 hour, depending on group size and needs. Larger groups may request multiple programs onsite for a longer experience. STEM programs are designed to meet Next Generation Science Standards (NGSS) for each grade level. Middle school (MS) and high school (HS) programs expand on concepts from previous grade-level programs.

# History of Uranium on the Colorado Plateau

**Grades:** 5, MS–HS

**Key content:** Manhattan Project, Cold War,

uranium mining and milling

Available as outreach: Yes

Learn about the legacy of uranium in Grand Junction and on the Colorado Plateau during the Manhattan Project and Cold War eras.



#### **Create Your Own Cabin**

**Grades:** Preschool, K-1

**Key content:** Uranium mining, prospectors, geologists, and

Geiger counters (radiation detector devices)

**Available as outreach:** Yes

This program engages young minds through an interesting lesson and hands-on activity that enrich early childhood knowledge in engineering and color and shape recognition, as well as fine motor-skill development as they use their creativity to make a 2D log cabin while learning about the story behind the Atomic Legacy Cabin.

#### Become a Historical Thinker

**Grades:** 4–5, MS

**Key content:** Manhattan Project, Cold War, uranium

mining and milling

Available as outreach: No

Ever wonder how historians study the past? In this program, conducted in the Atomic Legacy Cabin, students will think like historians as they look for clues to crack the code of the past.

## **Energize the Yo-Yo**

**Grades:** 4–5, MS

**Key content:** Physical science, kinetic and potential

energy, types of energy, and gravity

**NGSS:** Energy (4-PS3-2, 4-PS3-4, MS-PS3-1,

MS-PS3-2, MS-PS3-5)

**Available as outreach:** Yes

What do yo-yos have to do with energy? In this program, students will each receive their own yo-yo to learn about different types of energy and how it can be converted from one form to another.

#### **Newton's Balloons**

**Grades:** 3–5. MS

**Key content:** Physical science, Isaac Newton, gravity, motion,

force, velocity, and mass

**NGSS:** Motion and Stability: Forces and Interactions

(3-PS2-1, 3-PS2-2, MS-PS2-1, MS-PS2-2)

Available as outreach: Yes

Motion plays an active role in everyday life. In this program, students will learn about Newton's three laws of motion and observe these laws in action as they race their own balloon-powered rockets.









### **Geology Rocks**

**Grades:** 2–5

**Key content:** Geology, igneous, metamorphic, sedimentary, rock cycle, and Colorado Plateau

**NGSS:** Earth's Materials and Systems (2-ESS1-1, 4-ESS2-1, 4-ESS2-2, 5-ESS2-1)

**Available as outreach:** Yes

Our planet's landscape is constantly changing — eroding and forming beneath our feet. Observing different types of rocks from the Colorado Plateau, students will identify comparisons and contrasts in their compositions. Students will also explore the rock cycle, rock uses, and perform hands-on tests to determine rock types and identify unique characteristics, just like geologists!

#### Groundwater: Go With the Flow

**Grades:** 5, MS–HS

**Key content:** Environmental science.

groundwater, aquifer, pollution

**NGSS:** Earth's Materials and Systems

(5-ESS2-2, MS-ESS2-4,

HS-ESS2-5)

**Available as outreach:** Yes

Groundwater is a vital source of water in the earth and is constantly flowing under our feet through soil and bedrock. Through a hands-on activity creating their own aquifer in a cup, students will learn about the importance of groundwater and demonstrate how human actions and natural events can potentially cause underground contamination.



#### **Plants and Pollinators**

**Grades:** 2–5

**Key content:** Environmental and life sciences, native

and invasive species, and pollinators

**NGSS:** Ecosystems: Interactions, Energy, and

Dynamics (2-LS2-2, 5-LS2-1)

**Available as outreach:** Yes

Why are plants and pollinators important to the ecosystem? Students will explore the answer to this question and learn about the difference between native and invasive species as they make their own native plant seed ball to attract pollinators.



#### **States of Matter**

**Grades:** 2–5

**Key content:** Physical science, atoms, molecules, states of matter, volume, solutions, and viscosity

**NGSS:** Matter and Its Interactions (2-PS1-1, 2-PS1-3, 2-PS1-4,

5-PS1-1, 5-PS1-2, 5-PS1-3, 5-PS1-4)

Available as outreach: No

States of matter ... matter! Chemists, engineers, and environmental scientists all need to understand how molecules are arranged, how they behave, change, and combine. Learn the physical properties of solids, liquids, and gases during this exciting, hands-on scientific exploration.



#### **Radiation 101**

**Grades:** MS-HS

**Key content:** Radiation, ionizing and nonionizing, alpha, beta,

neutron, gamma, time, distance, and shielding

**NGSS:** Waves and Their Applications in Technologies for

Information Transfer (MS-PS4-2, HS-PS1-8,

HS-PS4-3, HS-PS4-4)

**Available as outreach:** Yes

Radiation is all around us, all the time, from natural and human-made sources. Students will learn what radiation is, the difference between ionizing and nonionizing radiation, and the different types of radiation by safely exploring everyday items and examples of radiation.







# Atomic Legacy Cabin U.S. Department of Energy Office of Legacy Management

2597 Legacy Way, Grand Junction, CO 81503

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or scan below:

