

OUTREACH PROGRAMS

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GROUT
MUSEUM
DISTRICT

Touch It. See It. Feel It.

Please contact **Emma Seehusen** at 319-234-6357 for Outreach Programs.

Science Demonstrations (pages 4-7)	\$175.00
Schedule four Science Demonstrations and get the fifth one free!	
Traveling Trunks (pages 8-9)	\$30.00
Scouting for Badges (page 11)	\$30.00
Festival Outreach (page 12)	Call for pricing
Imag-mobile! (page 13)	2hr/\$300.00...1hr/\$175
STARLAB (pages 14-15)	\$175.00
STARLAB Additional Hour	\$60.00
Museum in a School (page 16-17)	\$600.00
A staff person will come to your class and teach six activity-based lessons.	
All materials included!	
Science Classes (page 18)	\$100.00/Class of 30 Max
Additional Class Options (page 18)	\$75.00/Class of 30 Max
Reading between the lines (page 19)	Call for pricing

**All programs are subject to transportation costs.*

How to Make a Reservation

- To schedule an Outreach Program, contact Emma Seehusen at (319) 234-6357 or email at emma.seehusen@gmdistrict.org
- Due to a high volume of programs the Outreach Coordinator may be difficult to reach. Thank you for your patience.
- Make reservation at least three weeks prior to program.
- Reservations are booked on a first-come, first-served basis. Dates cannot be "held".
- Outreach Programs are available everyday of the week.

Have the following information ready:

- Outreach Programs you are requesting.
- Date and time of program (have alternate dates as well).
- Name of facility and person in charge.
- Complete mailing address, telephone number and email address of contact person.
- Ages or grade level and approximate number of participants expected.
- Billing information.

Outreach Information

- Once your program has been scheduled the Science Outreach Coordinator will send a contract to be signed and returned two weeks prior to your program.
- Billing will occur after the program has been presented unless otherwise arranged. Please make checks payable to Grout Museum District.
- Travel costs of 50 cents per mile round trip will be added to programs outside of the Waterloo and Cedar Falls area.
- Museum staff will arrive approximately 20 minutes prior to your program to set up.

All Grout Museum District Outreach Programs are aligned to the Iowa and Common Core Curriculum!

Let the GMD come to you!

Struggling to create fascinating programs? Let us do the work by supplying all the materials and activities for one low cost (plus the cost of transportation).

4 Demonstrations

The following demonstrations are approximately 30-45 minutes long. Buy four within a year's time and receive the fifth one free. Sure to please large and small audiences of all ages. Cost effective and educational entertainment for All School Assemblies. Cost is \$175 per demonstration.

Some demonstrations have an additional activity option. For an extra \$25 add a fun hands-on activity for up to 30 students.



GREAT SCIENTISTS *(Recommended for all ages)*

Expose eager minds to famous scientists from many backgrounds and eras. See experiments and pictures and hear narratives that will give a more accurate view of scientists

WET AND WILD WATER *(Recommended for all ages)*

Learn about Molecules, Surface Tension, Water Pressure and Density with this demonstration. It is sure to be a "splash" as we engage the audience by playing "Sink or Float".

BUBBLES *(Recommended for all ages)*

Why are bubbles always round? What is needed to create a giant bubble? Discover the answer to these questions and more as we experiment with bubbles.

WORLDS LARGEST CHEMISTRY! *(Recommended for all ages)*

See the lesson that put the Grout Museum District in the Record Books, on August 13, 2011. Topics include Acid Base Reactions, Redox Reactions and States of Matter.

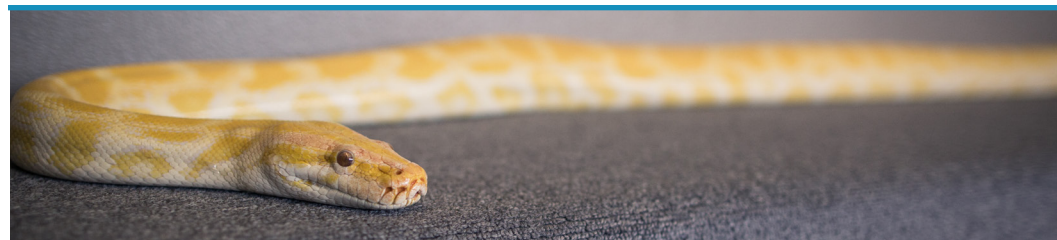
SUPER COLD *(Recommended for all ages)*

Use liquid nitrogen, learn how temperature is related to the three phases of matter: solids, liquids and gases. The mind shattering experiments that students will see during this demonstration will blow them away! Concepts: changes in phase, temperature and contraction/expansion.

Add-on: Liquid Nitrogen Ice Cream

COMBUSTION *(Recommended for all ages)*

Fire is a chemical reaction that scientists call combustion! Be amazed by this explosive demonstration while watching amazing effects like flash powder, flash paper and exploding hydrogen balloons. Fire safety is stressed throughout. Concepts: fire, oxygen, temperature, fuel and explosions.





SNAKES ALIVE! *(Recommended for all ages)*

Are snakes slimy? Are they warm or cold blooded? Learn the answers to these questions and many more as participants get up close and personal with some of the most feared animals on the planet. Concepts: basic facts and animal behaviors.

KITCHEN SCIENCE *(Recommended for all ages)*

Get your students excited about science as they watch and participate in experiments using materials found in everyday life. Concepts: fire, air pressure, acids/bases and chemical reactions.

Add-On: Alka-Seltzer Rockets

ROCKETS AWAY *(Recommended grades 1-4)*

Watch as rockets of all shapes and sizes are launched into the atmosphere. A brief explanation of the forces of flight precedes this demonstration. (Need a large outside space to launch and a calm day to do this program). Concepts: Newton's Law and forces of flight.

Add-On: Straw Rockets

SOUND SCIENCE *(Recommended grades 2 and up)*

See the amazing science of sound as we demonstrate vibration, frequency and the Doppler Effect with singing rods, singing pipes and spouting bowls. Concepts: vibrations, frequency and resonance.

Add-on: Talking Strips

CHARGE IT UP! *(Recommended grades 2 & up)*

Students will get a charge out of this demonstration as we reveal the power of electricity using materials such as a Van de Graf Generator, a Leyden jar and a three foot Tesla Coil! Concepts: static electricity, current electricity, inventors and invention.

MAD MIXTURE *(Recommended for all ages)*

The best of - Super Cold, Combustion, Snakes Alive! and Kitchen Science. Sure to please students of all ages.

Add-on: Oobleck

CREEPY CRAWLIES *(Recommended for all ages)*

Find out why the hissing cockroaches hiss and see how furry a giant tarantula really is! This demonstration is guaranteed to fascinate and creep-out even your boldest students. Concepts: basic facts and animal behaviors.





The Traveling Trunks are interactive learning units designed to motivate all learning styles. The trunks are packed with a variety of tools such as museum artifacts, models, books, videos, games, activities and teacher's guide complete with lesson plans.

Trunks can be rented for a 2-4 week period for \$30.

Trunks can be picked up at the Imaginarium or shipped FedEx for an additional charge. The Grout Museum District pays for return shipping.

HISTORY THEMES

AFRICAN AMERICANS

(Recommended for grades 5 - High School)

Immerse your class in African American culture through topics such as the Underground Railroad, influential African Americans and local history. CD-ROMs, videos and poster are included.

LINCOLN TRUNK

Step back in time and into the life of Abraham Lincoln with items representing Abraham Lincoln and Mary Todd Lincoln, a Civil War soldier and slaves.

PIONEERS

Discover what life was like in Iowa over 100 years ago. A tin-type photograph, tools, candle mold, ice skates, butter mold, 1840's clothes, books, historical photo reproductions and a video are all included in this kit.

LIFE AND TIMES OF THE PIONEER CHILD

Examine the everyday experiences of early Iowa children using McGuffey readers, slates, games, toys and photo reproductions.

NATIVE AMERICANS

Explore Iowa's Native American heritage through artifacts such as arrowheads, photo reproductions, 500 Nations video series and Native American games.

DINOSAURS

Travel back to the time when dinosaurs roamed the Earth. Take a closer look at dinosaurs using real fossils, dinosaur models, and various reading resources.





SCOUTING FOR BADGES

Is organizing transportation too difficult to get your troop or pack to the Imaginarium? We'll bring the science to you and our educator will lead your scouts through earning a Belt Loop and Academic Pin, Badge, Try-It or Activity Pin. Awards are not included. The cost of the program is \$100.00.

SCOUTING FOR BADGES TOPICS INCLUDE:

BROWNIES TRY-ITS:

- Science in Action
- Space Explorer
- Movers
- Science Wonders

JUNIORS BADGES:

- Making it Matter
- Weather Watch
- Sky Search
- Rocks Rock!
- Aerospace
- Science Sleuth

CUBS BELT LOOPS AND ACADEMIC PINS:

- Weather
- Map and Compass
- Astronomy
- Science
- Geology

WEBELOS PINS:

- Geologist



Add an element of science for all ages to your hometown event or festival. (Call for pricing)

CARS AND COASTERS

Experiment with the scientific principles of gravity, momentum and motion through the excitement of toy cars and 24 feet of Blu Track racing strips, Imaginarium staff will set up a variety of simple and complex roller coaster configurations complete with hills and loops for children of all ages to send cars flying through the air or racing to the finish line.

BUBBLES

Can you make a square bubble? Participants will use a variety of bubble wands to try to make bubbles of all shapes and sizes.



The Imaginarium is hitting the road to bring you a load of fun. Sign up to have Imag-mobile programming provide two hours of hands-on activities, demonstrations and make and take crafts. \$300. Mini-Magi-mobile option: 1 hour - half the activities for \$175.

BUGS ON PARADE

From insects to arachnids, participants will engage in crafts and experiments to better understand our multi-legged friends. Museum staff will take out a different bug every 30 minutes for participants to take a closer look.

SCIENCE OF SPIN

We put a new spin on art using whirly-gigs, gyroscopes and tops to create spin art and color wheels. This fun-filled program will have participants spinning science and art so fast they might get dizzy!

GROSSOLOGY

Participants try their hand in the science of really gross experiments. Learn how a substance can act like a liquid and a solid.





STAR LAB Requirements

View the nighttime sky indoors with our portable planetarium. Students will learn all about the Constellation Cylinders and Greek Mythology.

STARLAB shows accommodate approximately 25-35 students comfortably. Class teachers must be present. The Star Lab is handicap accessible. Cost is \$175 for one hour of programming and \$60 for each additional hour of programming.

- STARLAB must be set up indoors on a clean, flat surface. Minimum floor space : 25 X 25 feet with a ceiling height of 11 feet and no hanging light fixtures close to the dome. Typical locations: gymnasiums, cafeterias, libraries or auditoriums.
- STARLAB remains in one location and classes come to it.
- STARLAB requires one hour to set up and 30 minutes to take down.
- Quiet is essential during presentations. Physical education classes or other noisy activities should not take place nearby.



Bring the fun and excitement of a field trip to your class without leaving the school. You provide two classrooms full of eager students and our staff will provide six one hour-long lessons including materials for only \$600. (For every class over twenty-four students there will be an additional \$10.00 charge per student.)

SCHOOL OF FLIGHT

(Recommended for grades 3-5)
Students will learn about the four forces of flight through demonstrations and activities presented in this six-week course. Every participant will build and launch an Estes skill Level 1 model rocket.

Add-on: Skill Level 2 rockets for students in 6th grade and up. Additional \$200.

OUTREACH TO SPACE

Students will explore the universe through exciting and memorable hands-on exhibits and activities on topics such as the sun, moon, stars and space travel.

Add-on: Telescopes Additional \$100

UP! UP! And Away! High Altitude Ballooning

(Recommended for grades 5-8)

Students will explore properties of the upper atmosphere through this unique experience. Students will design and build an experiment to be sent in to Near space, and will be able to connect with engineering professionals.

Science of Zoom

(Recommended for grades 3-6)

Students will learn many physical properties as they construct a CO₂ powered race car then send it flying down an 80 ft track in less than 10 seconds.



Classes are hands-on workshops designed to motivate student to ask questions and solve problems. Imaginarium staff will lead students through the class as they explore science. Classes are a great introduction to a new unit. Classes are limited to 30 students.



DINOSAURS TO FOSSILS

(Recommended for grades 2-5)

The study of dinosaurs stretches our imaginations and invites us to discover a world and time much different from our own. Learn how paleontologists are able to classify the different types of fossils and what those fossils can tell us about the types of life that were present in the distant past.

CHEMICAL REACTIONS

(Recommended for grades 3 & up)

Discover the amazing feats that can be accomplished with the science of chemistry. This class uses household materials to form chemical reactions. Students will measure and mix solutions in this highly hands-on experience.

BUBBLES

(Recommended for grades Pre-3)

Learn about the concepts of surface tension and friction through experimentation and the creation of bubbles.

Introduce young minds to science concepts through the power of reading. Imaginarium staff will begin the program by reading a short story based on a science related topic. Following the story children will have the opportunity to participate in hands-on activities based on the story.

(Recommended for grades Pre School-Kindergarten)



OWLS: After reading the book, The Barn Owl, children will listen to owl calls, handle an owl skull and dissect an owl pellet.

SHELLS: Shells are beautiful objects but where do shells come from? Imaginarium staff will read the book, What Lives in a Shell and provide a variety of shells for children to touch and see. Participants will also have the opportunity to make a shell necklace or bracelet.

DINOSAURS: Read about the adventures of a little mouse in a book, The Field Mouse and the Dinosaur Named Sue. Children will then be able to touch real and replica fossils, dig for fossils and make their own fossil.



MAMMALS: Is a camel a mammal? Find out as we read the fun Dr. Seuss book, Is a Camel a Mammal. Students will have an opportunity touch skulls, furs and other animal parts that characterize a mammal as mammal.



Emma Seehusen, Outreach Coordinator



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