Part lab, part collections vault, part DIY garage, part hangout, and *all* fun.  
*Q?rius – Unlock your world.*

[qrius.si.edu](http://qrius.si.edu)
Welcome to Q?rius

Introducing Q?rius

Q?rius offers a new way to connect science with everyday experience. It is a first-of-its-kind interactive and experimental environment – part lab, part collections vault, part DIY garage, part hangout, and all fun.

The Q?rius Learning Lab

Q?rius is an exhibit-sized interactive space filled with resources that are available only to your students at the world’s largest natural history museum. The lab includes:

• A collection of 6,000 objects – fossils, bones, insects, cultural artifacts, pressed plants, and more – all accessible for investigations, carefully selected to support learning goals connected to curriculum for your specific class experience
• A suite of digital tools, including videos, virtual objects, and references, that maximize hands-on learning from objects and link objects to core science ideas and the people who study them
• Scientific tools integrated with all school experiences

Create a New Kind of Field Trip

Book a field trip to Q?rius and help students experience firsthand how real-world investigations based on science pursued by Smithsonian scientists can spark new ideas, generate curiosity, deepen understanding of content, and help master scientific practices. https://evansvol.si.edu/custom/508/client/

The Q?rius Approach

Q?rius is different from most other places in the museum. Students enter into the role of scientist and engage in solving real-world problems.

All classes and self-guided experiences:

• Feature the work and amazing discoveries of Smithsonian scientists
• Use inquiry-based, team-oriented approaches to key questions similar to those addressed by Smithsonian scientists
• Integrate objects, data, scientific equipment, and digital assets to investigate core ideas
Two Kinds of Immersive Experiences

NATURAL HISTORY INVESTIGATIONS

Natural History Investigations are 60-minute classes for up to 30 students at a time, led by experienced Museum Educators. Using objects, data, scientific equipment, and digital media, students complete a series of activities based on Smithsonian research. In the process, they investigate core ideas in nature and culture related to classroom curriculum. They gain critical skills in the practices of science by observing, documenting results, and justifying their conclusions with evidence.

**DIG DEEP: GRADES 6-12**
Students collaborate with classmates to identify the most efficient way to find and dig for iron ore, by reading geologic maps, piecing together drill cores, and analyzing tectonic forces and their effects on layers of rocks. Students learn to read the stories of rocks and use modeling techniques employed by Smithsonian scientists Ben Andrews and Sorena Sorensen to complete the final challenge.

**FORENSIC MYSTERIES: GRADES 6-12**
Students examine human bones, objects, and artifacts using the forensic tools and techniques of Smithsonian scientists Doug Owsley and Kari Bruwelheide. The challenge is to determine age, sex, time since death, and cause of death for two forensic cases.

**BIRD STRIKE WHODUNIT?: GRADES 6-12**
Students follow in the footsteps of Smithsonian scientist Carla Dove to examine “snarge” – i.e. the remains left behind (and often found by pilots) at the scene of impact between wildlife and airplane. Snarge may contain whole feathers, feather parts or “barbules,” or other body parts. Dr. Dove and her team of forensic ornithologists apply forensic methodologies to determine species of birds from fragmentary evidence. To solve their own mystery, students will examine specimens using microscopy, whole feather comparisons with museum specimens, and DNA ‘barcoding.’

**REEFS UNLEASHED: GRADES 6-12**
Imagine being a Smithsonian marine biologist assessing biodiversity in coral reefs and measuring that which cannot be seen with the naked eye. This is the challenge that students take on. Playing the role of marine biologist, students will identify species collected with the use of an ARMS unit, calculate the percentage of a species present in the habitat, and simulate DNA processing to contribute to the coral reef census.

THE Q?RIUS EXPEDITION

The Q?rius Expedition is a 60-minute, self-guided survey of natural history topics, tools, and activities in Q?rius, available to as many as 60 students at a time. Museum Educators and volunteers orient students, provide guidance during the Expedition, and ensure that all students have equal access to curiosity-driven activities and collections-based explorations.

The theme for the Q?rius Expedition is Hidden Worlds (Grades 6-12). Spanning the science curriculum, students explore how natural history science helps reveal hidden worlds. Based on their choice of activity, students may investigate evidence of water on Mars, zoom in on bees, identify minerals in rocks using techniques familiar to Smithsonian scientists, identify new species from coral reefs, discover the material content of ancient pottery, reveal the identity of a mystery human skull, hear insect sounds in new ways, or explore patterns across nature. Students record their observations on Expedition Data Collection Sheets.
DIY School Group Visit

School groups are invited to “drop in” to Q?rius during public hours Monday through Friday from 2:00 - 5:00 p.m. Small groups can explore Q?rius with their chaperones, assisted by enthusiastic and engaging volunteers. Space may be limited.

Teachers and chaperones may pick up or download a map and guide to Q?rius to assist students in identifying science topics they want to explore.

Digital Field Books and Natural History Badge

**WHAT IS A DIGITAL FIELD BOOK?**
Just as scientists record their observations, students can record their experiences with Q?rius activities and collections. They can gather digital collections objects, videos, and images; and make and save their own notes. Once they go home, students can also access and organize the digital objects they found at the museum.

**WHAT IS A NATURAL HISTORY BADGE?**
Natural History badges acknowledge students’ deep engagement with the science practiced at the National Museum of Natural History. They can earn a Hidden Worlds Natural History badge by completing activities and earning stars. With 55 stars, they earn a badge. If they don’t earn enough stars onsite, they can earn stars by completing activities online at qrius.si.edu. Natural History badges can only be earned during public hour visits or online.

The Hidden Worlds theme refers to the many ways natural history science helps make the invisible visible; this can mean bringing the microscopic into view; finding patterns and connections that are usually hidden in our day to day lives; displaying large amounts of data; or documenting rare or hard to reach aspects of the natural world and humans’ interactions with it.

**HOW TO REGISTER?**
**FOR GROUPS PARTICIPATING IN A Q?RIUS EXPEDITION FACILITATED PROGRAM:**
Teachers may register groups of students using a single e-mail address and with a user id alias not related to student names. Multiple accounts may be created with the same email address but can only be used for field books, not badges.

**FOR INDIVIDUAL STUDENTS VISITING Q?RIUS DURING PUBLIC HOURS:**
Students with adult permission or aged 13 or older can create their own personal user ids and passwords to earn badges and store images, video and objects to their personal Digital Field Books. (School and personal identities cannot be combined.)

Continuing the Curiosity

The Q?rius website at qrius.si.edu offers a variety of different follow-up opportunities for your students. Students can conduct an investigation with an online activity, jump into science stories, create a digital field book, complete a natural history badge challenge, or explore science in action.
Prior to your field trip, feel free to explore Q?rius on your own. Join us at Smithsonian Teachers Night or walk in any day of the week during public hours for a pre-visit opportunity.

Hours: 2:00 - 5:00 p.m. daily, Monday - Friday; 10:00 am - 5:00 pm, Saturday and Sunday

The Q?rius website includes a section just for Teachers. Get ready for your field trip by mastering the logistics of a Museum visit and preparing your students for what they will see and do. Think of the National
Museum of Natural History as one of the largest science classrooms in the world, and take advantage of all that it has to offer to inspire and engage your students!

**Other Learning Spaces**

Throughout the Museum, different learning spaces are open to the public during certain hours and reserved at other times for school groups that have registered for immersive programs led by museum educators. Your group is welcome to conduct its own DIY visit during public hours.

**Q?RIUS JR. – A DISCOVERY ROOM**

A learning space for grades K – 8 that focuses on exhibition themes, including comparison and contrast of objects, close examination of specimens such as fossils, skulls, and shells, and use of evidence to draw conclusions.

**O. ORKIN INSECT ZOO**

A special exhibit hall on the second floor of the Museum where visitors can get to know live insects and their many-legged relatives. Tarantula feedings and an insect touch cart are offered daily.

**BUTTERFLY PAVILION**

Experience live butterflies at Partners in Evolution exhibit. (Note: fee-based.)

**JOHNSON IMAX THEATER**

IMAX On Demand films are shown at 9:30 a.m. for school groups and at other times throughout the day.

**Questions?**

For questions about Q?rius and other education programs at the National Museum of Natural History, please feel free to contact us at (202) 633-4039 or NMNHSchoolPrograms@si.edu.