Welcome to Q?rius,  
The Coralyn W. Whitney Science Education Center

Introducing Q?rius
Created for teens and tweens, Q?rius (pronounced “curious”) is an interactive and experimental learning space that brings the unique assets of the Smithsonian’s National Museum of Natural History – the science, researchers, and collections – out from behind the scenes, including:

- 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 scientific research can spark new ideas, generate curiosity, deepen understanding of content, and help master scientific practices. https://naturalhistory.si.edu/education/school-programs

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 school programs:

- 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 collections objects, data, scientific equipment, and digital assets to investigate core ideas
Immersive Experiences for School Groups

Q?rius offers 60-minute pre-registered classes led by experienced Museum Educators for up to 35 students at a time. 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.

**BIRD STRIKE WHODUNIT: GRADES 6-12** During takeoff from Reagan National Airport, a plane collided with a flock of birds and was forced to make an emergency landing. During this staff-led program, students will follow in the footsteps of Smithsonian scientists to determine the species of bird that brought down the airplane by examining bird fragments and feathers collected from the affected aircraft, and simulating processing DNA. Students will learn how bird strike data is used by airport managers to alter airfield habitats, and debate proposed methods of discouraging bird congregation around airports.

**DIG DEEP: GRADES 6-12** How do geologists know what lies beneath the earth’s surface? During this staff-led program, students will collaborate and compete with their classmates to identify the most efficient way to find iron ore by learning to read the stories of rocks. Students will develop skills used by Smithsonian scientists to identify geologic features in rocks, interpret geologic maps, piece together drill cores, and model how tectonic forces deform rocks. After honing their geologic skills, they will compete in groups to see who can most accurately find the extent of the natural resource.

**FORENSIC MYSTERIES - A “GRIZZLY” DISCOVERY: GRADES 6-12** A group of hikers stumbled across what looks like human remains. Have they found a crime scene or could there be another explanation? During this staff-led program, students will examine real human bones, objects and artifacts using the forensic tools and techniques of Smithsonian scientists to determine age, sex, time since death, and maybe even cause of death.

**FORENSIC MYSTERIES - MYSTERY AT YORKTOWN CREEK: GRADES 6-12** Erosion along a creek bed produces a startling discovery – a human skeleton! Before the clues are washed away forever, students will get the chance to examine the evidence collected by the archaeologist during this staff-led program. Using the forensic tools and techniques of Smithsonian scientists, they will study the human bones and artifacts found with the skeleton to determine who this person was, when they lived, and what their life might have been like. Uncover the mystery of a person whose burial could turn out to be over 200 years old!

**Q?RIUS COLLECTIONS CHALLENGE: GRADES 6-12** The Q?rius Collection Zone includes 6,000 natural history objects, all accessible for student exploration in this staff-led program. Working in teams, students will receive a Collections Challenge Card, which assigns them to work in one of the Museum’s departments: Anthropology, Botany, Entomology, Invertebrate Zoology, Paleobiology, Mineral Sciences, or Vertebrate Zoology. Like scientists and collections managers at the Museum, students will follow protocols for handling valuable and sometimes delicate objects, and agree upon a strategy to curate and interpret a collection of their own while engaging in the scientific method.

**REEFS UNLEASHED: GRADES 6-12** During this staff-led program, students explore how Smithsonian scientists measure the biodiversity of coral reefs using nondestructive methods. They will model the same scientific processes used by our scientists by observing and analyzing images of plates with the actual organisms that live in the Autonomous Reef Monitoring Structures (ARMS) to better understand human impact on coral reefs. Based upon their observations students will develop, test, and refine explanations and potential recommendations for protecting and preserving coral reefs. Join us on select dates to participate in this redesigned pilot program!
**In School: Curiosity Continues**

The Q?rius website at [www.qrius.si.edu](http://www.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, or explore science in action.

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<th>LIVE SMITHSONIAN SCIENCE HOW WEBCASTS</th>
<th><em>Smithsonian Science How</em> delivers real-world science into classrooms through free, interactive, live webcasts and supporting classroom resources. The 30-minute programs feature the research and personalities of the Smithsonian’s National Museum of Natural History, providing your students with positive STEM role models, information about science careers and pathways, and connections to current research. Every webcast includes a package of standards-aligned teaching resources that includes lessons, activities, and other resources that highlight science content and practice.</th>
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<td>SMITHSONIAN SCIENCE HOW VIDEO LIBRARY</td>
<td>Visit our video library to watch the collection of dozens of <em>Smithsonian Science How</em> videos, featuring experts and topics in the subject areas of earth science, life science, paleontology, and social studies. Each video has a complementary package of standards aligned teaching resources that include lessons, activities, and other resources that highlight science content and practice.</td>
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<td>SMITHSONIAN SCIENCE HOW LIVE CHATS</td>
<td>Participate in live, text-based chats with scientists that have previously been featured on a <em>Smithsonian Science How</em> live webcast. Students have the opportunity to have a direct conversation with scientists about their career pathways and work at the Museum. Supplement the live chat by watching the Smithsonian Science How video archive of the featured scientist and using the available teaching resources before and after the live chat.</td>
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<td>TEACHING RESOURCES</td>
<td>Resources include webcasts and podcasts, lessons, online activities, posters, science literacy resources, websites, videos, and Smithsonian science career profiles. Use the resources to create a lesson plan, develop a research project, generate an interactive class experience, or otherwise engage pre-teen and teen learners in a science topic. Relevant national science standards are provided.</td>
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<td>JUMP INTO SCIENCE STORIES</td>
<td>Delve into the same topics being explored by Smithsonian scientists, such as volcanoes, genomics, extinction, and human evolution. Read about the cutting-edge work and adventures of Smithsonian scientists, watch videos of them in action, hear them talk about what inspires their curiosity, and manipulate digital objects similar to the ones they use.</td>
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<td>CREATE A DIGITAL FIELDBOOK</td>
<td>Just like a scientist records their observations, students ages 13 and over may record the results from their experiences with Q?rius activities and collections online. Create an account to save objects, stories, images, and notes to a Digital Field Book.</td>
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<td>WATCH SCIENCE UNFOLD</td>
<td>Watch videos of real-life scientists explaining their work, how they got started in their careers, and how they balance and integrate their work, passions, and everyday lives.</td>
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Teacher Planning
Prior to your field trip, feel free to explore Q?rius on your own.

HOURS:
10:00 a.m. - 5:00 p.m., 7 days a week.

The Q?rius website includes a section just for Teachers. Visit us at www.qrius.si.edu/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
Q?rius jr. is a hands-on room featuring real Museum objects and artifacts. During Open Hours, visitors explore activities representing exhibitions and behind-the-scenes research at the Museum. Visitors of all ages can look at fossils, skulls, shells and minerals, use a microscope, try on traditional clothing from around the world, and much more! School groups grades K-5 can take advantage of school programs during the school year.

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

JOHNSON IMAX THEATER
Please note that the Johnson IMAX Theater permanently closed October 1, 2017.

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.