

## Sackler Educational Laboratory for Comparative Genomics and Human Origins 2011-2012 School Year Offerings

Journey to the Spitzer Hall of Human Origins and step into the state-of-the-art Sackler Educational Laboratory with your students to begin investigating Human Origins and Evolution, DNA Isolation and Fingerprinting, and the Evolution of the Human Brain. 8th grade labs are designed to support the NYC Scope and Sequence for Science, and high school labs are designed to support the Living Environment Regents Standards.

### Grade 8: Lab A: Fossil Skull Evidence for Change Through Time

This 45 minute inquiry-based lab activity is coupled with a 45 minute Guided Field Trip Exploration in the Spitzer Hall of Human Origins. Students will collect evidence of physical traits on fossil skulls used to classify species, determine evolutionary relationships between ape and hominid species, and build an evolutionary tree to illustrate their findings. Fee: \$105, M- F



### Grades 8 or 9: Lab B: DNA Extraction from Strawberries

In this 45 minute hands on lab activity, students learn about the molecule that is the basis for all life on earth by extracting DNA from strawberries and visualizing the DNA with their naked eye and then magnified under a microscope. This activity is coupled with a Guided Field Trip Exploration in the Spitzer Hall of Human Origins. Fee: \$105, M- F

### Grades 9-12: Lab C: Evidence for Evolution

In this 90-minute activity, students act as scientists by collecting different lines of evidence for evolutionary change over time. Using the Sackler Educational Lab fossil skull collection and the exhibits in the Spitzer Hall of Human Origins, students will search for clues of physical, genetic, and environmental change through time. Fee: \$105, M- F

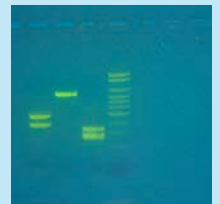


### Grades 9-12: Lab D: Exploring Human Origins Fossil Skulls, Stone Tools & DNA

In this 90 minute lab activity, students compare the evolution of hominid skulls, stone tool technologies, and DNA sequences to understand which biological and cultural traits are adaptations unique to each species and which are shared. Student will combine their physical, cultural, and genetic data to determine where each species fits on the evolutionary tree. Fee: \$175, M- F

### Grades 9-12: Lab E: Wildlife Forensics Identifying Endangered Species through Gel Electrophoresis

In this advanced 90 minute genetics activity, students investigate the illegal trade of endangered sturgeon species for caviar. Students load DNA digested with restriction enzymes into an agarose gel and run gel electrophoresis to visualize unique DNA fingerprints of different sturgeon species. Students will understand that restriction enzymes are used to cut the DNA of different species in different places, resulting in each species' unique pattern. Fee: \$175, M-F.



### Grades 9-12: Lab F: Your Evolving Brain

In this 90 minute advanced lab activity, students investigate the features of our brain that makes us uniquely human. Using 3-D brain models, microscopes, and skull casts, student compare brain structure between humans and other living mammals to determine what we share and how the human brain has evolved to make us unique. Fee: \$175, M-F

*The Museum greatly acknowledges The Mortimer D. Sackler Foundation, Inc. for its support to establish the Sackler Brain Bench, part of the Museum's Sackler Educational Laboratory, in the Spitzer Hall of Human Origins, offering ongoing programs and resources for adults, teachers, and students to illuminate the extraordinary working of the human brain.*

*Student classes in the Sackler Educational Laboratory, offered through the Museum's Gottesman Center for Science Teaching & Learning, are made possible by a generous grant from The Mortimer D. Sackler Foundation, Inc. and The Hall of Human Origins' lead benefactors Anne and Bernard Spitzer.*

**TO REGISTER: Call Central Reservations (212) 769-5200**  
**For more information, please visit [www.amnh.org/education/sackler](http://www.amnh.org/education/sackler)**