

## **ANCIENT CIVILIZATIONS**

Mondays, September 8-December 8 (no class Oct 13 and Nov 24; 12 weeks)

11:00am -12:15pm

Ages 8-10

**Students investigate the biology and chemistry of mummification, learn the engineering and math skills needed for building the ancient pyramids, and practice real archaeology skills like excavation, analysis, and artifact interpretation all while using the scientific method. The course builds problem-solving, observation, and critical thinking skills in a fun, historical and scientific context. All lab costs are included in the registration fee.**

Instructor: Jessica Barnes, BSc

Location: Science Center (suite 5)

Full semester - \$220 OR \$20/lab (plus \$0.99 AH fee)

10% off sibling discount

Register for full semester or individual labs.

### **LAB SCHEDULE:**

#### **MUMMIFICATION SCIENCE – Monday, September 8**

We study the process of mummification as a method of preservation and conduct an experiment to mummify a hot dog.

#### **ANCIENT TECH BUILDERS- Monday, September 15**

Students recreate ancient technologies such as levers and ramps to understand how pyramids and temples were built.

#### **PYRAMID ARCHITECTURE – Monday, September 22**

Students investigate the math and science involved in the construction of pyramids as they design and engineer their own pyramid structures.

#### **AQUEDUCTS - Monday, September 29**

Students learn how ancient civilizations engineered aqueducts to transport water over long distances, using gravity, physics, and early engineering principles that still inspire modern infrastructure.

#### **REMOTE SENSING IN ARCHAEOLOGY- Monday, October 6**

Students discover how archaeologists use cutting-edge LiDAR technology to scan landscapes from above and uncover hidden ancient structures buried beneath forests, soil, and time.

### **PRESERVATION OF ARTIFACTS - Monday, October 20**

Students discover the science of artifact and fossil preservation, from making protective casts around dinosaur bones to using special coatings that shield ancient objects from air, moisture, and decay.

### **GEOLOGY OF ANCIENT SITES - Monday, October 27**

Students dive into the dazzling world of gems and treasures as we use geology, chemistry, and archaeology to uncover the science behind Earth's most mysterious and valuable finds!

### **SOIL LAYER RECONSTRUCTION - Monday, November 3**

Students build stratigraphic layers to understand how archaeologists read history from the ground.

### **FORENSIC ANTHROPOLOGY – Monday, November 10**

This week, we learn how scientists identify and investigate ancient bones, and simulate the reconstruction of a skeleton.

### **HIEROGLYPHIC CODING - Monday, November 17**

Students explore the cognitive science of symbolic systems and the principles of pattern recognition by encoding and decoding messages using ancient Egyptian hieroglyphs.

### **ARCHAEOLOGY – Monday, December 1**

Students learn about the study of human history from analysis of artifacts and investigate how archaeologists find new sites to study.

### **ARCHAEOLOGICAL DIG – Monday, December 8**

We practice our mapping and patience as we use excavation tools and techniques to uncover artifacts in our own archaeological dig site models.