

## SCIENCE

### **ASTRONOMY (.5 credit)**

**Grades: 9-12**

Why do stars twinkle? Is it possible to fall into a black hole? Will the sun ever stop shining? Since the first glimpse of the night sky, humans have been fascinated with the stars, planets, and universe that surrounds us. This course will introduce students to the study of astronomy, including its history and development, basic scientific laws of motion and gravity, the concepts of modern astronomy, and the methods used by astronomers to learn more about the universe. Additional topics include the solar system, the Milky Way and other galaxies, and the sun and stars. Using online tools, students will examine the life cycle of stars, the properties of planets, and the exploration of space.

### **FORENSICS: Secrets of the Dead (.5 credit)**

**Grades: 9-12**

Fingerprints. Blood spatter. DNA analysis. The world of law enforcement is increasingly making use of the techniques and knowledge from the sciences to better understand the crimes that are committed and to catch those individuals responsible for the crimes. Forensic science applies scientific knowledge to the criminal justice system. This course focuses on some of the techniques and practices used by forensic scientists during a crime scene investigation (CSI). Starting with how clues and data are recorded and preserved, the student will follow evidence trails until the CSI goes to trial, examining how various elements of the crime scene are analyzed and processed.

### **FORESTRY & NATURAL RESOURCES (.5 credit)**

**Grades: 9-12**

Forests and other natural resources play an important role in our world, from providing lumber and paper products to providing habitat for birds and animals. In the Introduction to Forestry and Natural Resources course, you'll learn more about forest ecology, management, and conservation. You'll explore topics such as environmental policy, land use, water resources, and wildlife management. Finally, you'll learn more about forestry related careers and important issues facing forestry professionals today.

### **PALEONTOLOGY (.5 credit)**

**Grades: 9-12**

From Godzilla to Jurassic Park, dinosaurs continue to captivate us. In this course, students will learn about the fascinating creatures both large and small that roamed the earth before modern man. Watch interesting videos from experts at The Royal Tyrrell Museum, a leading paleontology research facility, and discover how the field of paleontology continues to provide amazing insight into early life on earth.

### **RENEWABLE ENERGY (.5 credit)**

**Grades: 9-12**

The earth's population is growing rapidly, and we need to find new, innovative ways to ensure that we are able to provide for our global energy needs. Students will look at the reasons why sustainability is important, take a balanced and evidence-based look at climate change, and learn new ways that we can harness renewable resources.

**SPACE EXPLORATION (.5 credit)**

**Grades: 9-12**

In 1961, Yuri Gagarin became the first human to go to space. In 1969, Neil Armstrong became the first human to step on the moon. This comprehensive course will examine the history and future of space travel. Find out how we have put people in space in the past, and what it will take for us to reach new frontiers, including Mars and beyond.