

# **Woodley Leadership Academy**

## **Middle School Science Course Description**

### **Sixth Grade Science**

In sixth grade students gain a greater understanding of the nature and structure of scientific knowledge and learn to recognize evidence and ways to think about designing solutions to problems. In life science students explore the variation of ecosystems as they gain in-depth knowledge of the biotic and abiotic factors influencing the balance of an ecosystem. They describe the relationships and interactions within ecosystems including those that cause ecosystems to change. In physical science students deepen their understanding of energy through investigations demonstrating the transformation of kinetic energy and energy transfer by radiation, conduction, or convection. In earth science students extend their knowledge of earth processes related to rock and soil formation and surface features. They analyze evidence for plate tectonics and apply an understanding of fossils and rock formations to questions about geologic history.

### **Seventh Grade Science**

In seventh grade students gain a greater understanding of the nature and structure of scientific knowledge and learn to recognize evidence and ways to think about designing solutions to problems. In physical science students deepen their understanding of energy through investigations of waves, light and sound. This is followed by another physical science unit which introduces the fundamentals of chemistry. In life science students explore cells and cell development. In earth science students focus on the hydrosphere. They study weather and climate with a special focus on energy as a driver of change in earth systems, as well the nature and quality of surface and ground water.