Middle School Science

Science 5 (1.0 Credit)

Grade 5 Science continues to build on the science skills that have been obtained in years previous. There will be an emphasis on earth and space science, life science, and physical science. Students will begin the course by focusing on earth and space science by looking at the solar system and planets. Students will come to an understanding of the concept of the earth as a sphere and the earth's place in the solar system. The course continues with a focus on physical science and the different tools that can measure force, time, and distance. They will also grow in their understanding of how light and sound travel and interact with each other as well as the different types of energy. Students will take a look into life science and the ways that organisms are interconnected. The course continues with great emphasis on life science and begins by focusing on the many ecosystems of the earth and the way that all parts of ecosystems depend on each other. Students will learn the different types of ecosystems that exist. They will learn that ecosystems change and how the changes affect their ability to support their populations. Learners will examine plants; that they have different structures and how those structures allow them to respond to different needs. Students will also grow in their understanding of the importance of good nutrition to all living organisms. The course concludes with a look into the scientific process and the importance of investigations and conclusions in the study of science. Instruction will include real life application, hands-on projects and assessments, and video and short research projects.

Life Science grades 6 – 8 (1.0 Credit)

Life Science is the study of cells, heredity, biological populations and their changes over time. It includes human biology, ecology, diversity of organisms and the history and nature of science. In this course, students will have the opportunity to conduct and design experiments, identify and classify organisms. Life Science is the study of cells, heredity, biological populations and their changes over time. It includes human biology, ecology, diversity of organisms and the history and nature of science. In this course, students will have the opportunity to conduct and design experiments, identify and classify organisms. Students will work on developing skills in data recording, classifying, measuring, observing, hypothesizing, analyzing, evaluation and inferring.

Earth & Space Science grades 6 – 8 (1.0 Credit)

Students will begin by learning about the scientific method and hone their understanding of using scientific measurements to Earth and Space Science. Also included are lessons on Earth maps and globes including detailed instruction on how to find specific locations using latitude and longitude. The beginning of the course focuses on space science. Students will learn about Earth movements, seasons, the Moon, tides, solar and lunar eclipses, the Sun and its role as the main source of light and energy in the solar system. They will learn about planets, asteroids, meteors, comets and their orbits and how force gravity holds it all together. Outside the solar system there are lessons on stars, constellations, nebula, the Milky Way and galaxies beyond. There have been many recent discoveries in space science. Accordingly, careful attention has been given to presenting the most updated information available in areas of discovery such as stars with planets and the latest methods of detecting them as well as a look at NASA's most recent Curiosity landing on the Martian surface. The course continues by zeroing in closer to home: Earth science. Yet, the coursework is uniquely integrated and applied to disciplines of study outside of Earth science. Starting with the Earth's interior students study rocks and minerals, volcanoes, earthquakes, undersea ridges, trenches and mountains and how the study of Earth's geologic history helps explain these phenomena. On the Earth's surface students study weathering, soil and erosion as well as water in all its forms the water cycle, oceans and ocean currents. Above the Earth they will study the atmosphere: its composition, air pressure and air movement. This knowledge is then applied to lessons on how human populations are affected by natural resources, renewable and non-renewable, both on and inside the Earth. These lessons are integrated with lessons that discuss how humans and living organisms are affected by air and water pollution, acid rain, changes in the ozone layer and how these conditions influence biodiversity, habitat loss and species survival. The course is capped off by lessons that take an in-depth look at the process of technology design giving students a look at of how scientists and technical designers work together to achieve common goals. Lastly, students are taught about the kinds of professions that currently exist in the science and technology fields and learn about the necessary academic preparation needed to gain employment in these branches of study.

Physical Science grades 6 – 8 (1.0 Credit)

This is an introduction to the Physical Sciences and scientific methodology. The objectives are to impart a basic knowledge of the physical properties and chemistry of matter. Skills are developed in the classroom, and reinforced through homework reading, and interesting labs that relate to everyday life.
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