



Express Science Middle School Science Environmental Science

Curriculum Features

The Express Science Middle School curriculum is designed as a survey of science topics in order to provide a solid foundation in all of the Sciences. Important concepts are developed in a sequential and stepwise manner that is understandable by all students. The modules are written to increase student interaction by providing a readable, engaging, and informative instructional curriculum that is ready for use in the classroom.

Environmental Science

Environmental Science units explain the interaction of biotic and abiotic factors and analyze their effect from both a local and global perspective. Environmental Science contains modules that describe the effects of natural and man-made factors on the environment and the living organisms within an ecosystem. Students will learn why it is important to understand environmental issues on the local level but work toward a global response.

Formative assessments are included with each module as a valuable instructional strategy. Summative assessments are included with each unit as a confirmation of student success.

A. Natural Resources

This unit contains modules that emphasize the varying amounts and types of natural resources that are located throughout the Earth and how they are used to support life processes. The modules cover the important topics that define natural resources and describe how humans have utilized their benefits. The students will learn the value of our natural resources, issues that surround their use, and ways to protect them for the future.

1. Land
2. Water
3. Wind
4. Fossil Fuels
5. Forests
6. Minerals
7. Wildlife
8. Distribution of Natural Resources

B. Ecosystems

This unit contains modules that explain the interaction between the environment, plants, and animals. The modules provide a deep understanding of the processes that affect the ecosystems and how they influence the living organisms in that area. The students will learn how ecosystems work and how the energy transfers within an ecosystem determine the environmental health of an area.

1. Ecosystem Components
2. Food Chains and Food Webs
3. Trophic Levels
4. Biomass Pyramids
5. Animal Interactions
6. Natural Causes of Population Fluctuations
7. Human Influences on Population Fluctuations

C. Pollution

This unit describes the many sources of pollution that affect living organisms and their environment. The modules concentrate on common problems, their cause, effects, and possible solutions. The students will learn why certain factors pollute the environment, their source, the science behind their effect, and solutions.

1. Air Pollution
2. Water Pollution
3. Waste Disposal
4. Integrated Waste Management
5. Waste Water Treatment
6. Pollution and Human Health
7. POPs-Persistent Organic Pollutants
8. Household Pollutants

D. Climate

This unit provides a scientific explanation of the reasons for weather and climate. The modules give a complete treatment of weather factors and how they influence the living organisms found in an area. The students will understand the characteristics of the various biomes, why they exist, and threats to their survival.

1. Weather and Climate
2. Biomes
3. Tropical Rain Forests
4. Grassland Biomes
5. Desert Biomes
6. Frozen Biomes
7. Aquatic Biomes
8. Global Warming