Maryland State Standards, Grade 8

Leaf Pack Network® curriculum meets the following Maryland State Standards for grade 8.

Skills and Processes (1.0)

Scientific Inquiry

By the end of the specified grade level students know and are able to do everything required at earlier grades and:

1.8.1 Access and process information from readings, investigations, and/or oral communications.

1.8.2 Formulate questions, which lead to the development of a testable hypothesis.

1.8.3 Use observations, research and select appropriate scientific information to form predictions and hypotheses.

1.8.4 Recognize/develop well-designed procedures that identify the independent and dependent variable, the need for control when testing a factor, the importance of multiple trials, the selection of appropriate materials/equipment, and the development of clear, logical directions within an investigation.

1.8.5 Demonstrate safety when conducting an investigation.

1.8.6 Use appropriate instruments and metric units when making measurements and collecting data.

1.8.7 Collect, organize, and display data in ways others can verify (i.e. numbers, statistics, tables, graphs, drawings, charts, diagrams) using appropriate instruments (e.g., calculators, spreadsheets, databases, and graphing programs).

1.8.8 Analyze and summarize data to identify trends and form a logical argument about a cause and effect relationship or a sequence of events.

1.8.9 Interpret and communicate findings (i.e., speaking, writing, and drawing) in a form suited to the purpose and audience, using developmentally appropriate methods including technology tools and telecommunications.

Critical Thinking

By the end of the specified grade level students know and are able to do everything required at earlier grades and:

1.8.11 Construct and use classification systems for grouping objects, materials, concepts, and actions, organisms, etc.

1.8.12 Critique scientific information and identify possible sources of bias.

1.8.13 Analyze the adequacy of the supporting evidence used to form conclusions, devise a plan, or solve a practical problem.

1.8.14 Provide supporting evidence when forming conclusions, devising a plan or solving a practical problem.

1.8.16 Modify ideas based on new information from developmentally appropriate readings, data, and the ideas of others.

1.8.17 Describe to others how scientific information was used.

Applications of Science

By the end of the specified grade level students know and are able to do everything required at earlier grades and:

1.8.18 Apply scientific principles and/or concepts to understand a new situation.

1.8.20 Apply concepts and processes of science to take and defend a position relative to an issue.

Life Science (3.0)

Ecology

By the end of the specified grade levels students know and are able to do everything required at earlier grades and:

3.8.12 Analyze evidence that within ecosystems organisms have different functions (niches) that enable the ecosystem to survive.

3.8.13 Analyze changes that occur due to interactions in the environment and determine if they are beneficial or detrimental from different perspectives.

Environmental Science (6.0)

Interdependence of Organisms

6.8.2 Identify and explain the interdependency of organisms within the environment in a given ecosystem.

Natural Resources and Human Needs

6.8.4 Compare how different parts of the world have varying amounts and types of natural resources and how the use of those resources determines environmental quality.

Environmental Issues

6.8.5 Analyze how human activities can accelerate or magnify many naturally occurring changes.