



Leaf Pack Network

New York State Standards

In order to conduct a Leaf Pack Experiment, the students must have an understanding of life processes and "the food web". Familiarity with stream ecology, including the characteristics and significance of different aquatic invertebrates, would be very helpful. Since this background knowledge is not explicitly a part of Leaf Pack, and can be taught in many different ways, it is impossible to associate any Standards to it uniformly.

So, assuming that the required preparation was accomplished:

- If an experiment is performed, as well as the 3 control pack study, students will draw on their understanding of stream ecology, macroinvertebrates, and life processes to determine what the 3 experimental leaf packs should be, and why. If they explain their reasoning and their hypothesis in a written statement, the exercise will fulfill the following standards:
 - **English Language Arts**
Standard 1 - Information and Understanding: Speaking and Writing
 - **Mathematics, Science, and Technology**
Standard 6 - Interconnectedness: Models
- The rest of the Leaf Pack Study, with or without 3 experimental leaf packs, fulfills the Standards as follows:
 - Determining 3 dominant tree species:
Mathematics, Science, and Technology
Standard 3 - Mathematics: Measurement, Uncertainty
 - Measuring and Placing the bags:
Mathematics, Science, and Technology
Standard 3 - Mathematics: Measurement, Uncertainty
 - Filling out the Site and Field Data Sheets:
Mathematics, Science, and Technology
Standard 3 - Mathematics: Measurement, Uncertainty
Standard 4 - Science: Physical Setting 2,5 The Living Environment 7
Social Studies
Standard 3 - Geography: 1,2
 - Identifying, Counting and Analyzing Macroinvertebrates:
Mathematics, Science, and Technology
Standard 3 - Mathematics: Uncertainty
Standard 4 - Science: The Living Environment 1,3,4,5,6,7

- Filling out Web Site:
 - Mathematics, Science, and Technology**
 - Standard 2 - Information Systems
- Written Final Report
 - English Language Arts**
 - Standard 1 - Information and Understanding: Speaking and Writing
 - Standard 3 - Analysis and Evaluation: Speaking and Writing
 - Mathematics, Science, and Technology**
 - Standard 1 - Analysis, Inquiry and Design: Scientific Inquiry
 - Standard 2 - Information System
 - Standard 3 - Mathematics: Mathematical Reasoning
 - Standard 4 - Science: Physical Setting, Living Environment
 - Standard 6 - Interconnectedness: Models, Patterns of Change
 - Standard 7 - Interdisciplinary Problem Solving
- Altogether, conducting a thorough Leaf Pack Experiment, including a fully developed final report on the findings, will fulfill these New York State Standards requirements:
 - **English Language Arts**
 - Standard 1 - Information and Understanding: Speaking and Writing
 - Standard 3 - Analysis and Evaluation: Speaking and Writing
 - **Mathematics, Science and Technology**
 - Standard 1 - Analysis, Inquiry and Design: Scientific Inquiry
 - Standard 2 - Information System
 - Standard 3 - Mathematics: Mathematical Reasoning, Measurement, Uncertainty
 - Standard 4 - Science: Physical Setting 5, The Living Environment 1,3,4,5,6,7
 - Standard 6 - Interconnectedness: Models, Patterns of Change
 - Standard 7 - Interdisciplinary Problem Solving
 - **Social Studies**
 - Standard 3 - Geography: 1, 2



The Leaf Pack Network is an initiative of Stroud™ Water Research Center. The Stroud Center seeks to advance knowledge and stewardship of freshwater systems through global research, education, and watershed restoration. Learn more at www.stroudcenter.org