



Lesson Plan: Closed Bottle Gentian	
Lesson Objectives	Students will demonstrate learning of the Gentian plant germination, growth, flowering and seed production, its endangerment and possible solutions by drawing a series of pictures that will tell a sequential story.
Project Objectives	
Grade Level	5
Background Information	<p>The Closed Bottle Gentian is a beautiful wildflower that grows in rich, moist soil in full or partial sun. The Gentians are most likely found in flood plain forests, thickets, or swampy areas near water. Its name Gentiana is named after Gentius, the King of Illyria (was a region in the western part of the Balkan Peninsula) who found that the roots had a medicinal effect on his malaria stricken troops. The plant blooms August through October with 1.5-inch violet, sometimes white, closed terminal cluster flowers. The plant is 1-3 foot tall with a non-branching stem. The leaves are mostly stalkless, lance-shaped with parallel venation, and devoid of hairs. As the leaves move up the stem, they go from being opposite leaves to more of a whorled pattern. Gentians are used in herbal medicine as an anti-inflammatory, to lower fevers, and as a liver tonic. It is also used as a gastric stimulant to treat a loss of appetite, digestive problems, flatulence, and insufficient production of gastric juices and saliva. Gentians are considered endangered in NJ and some reasons cited are habitat loss due to spreading of cities and suburbs, and over-collection due to pharmacological purposes.</p>
Materials/Resources	White copy paper Crayons

	Pencils Erasers Construction paper in different colors Glue Clear tape
Vocabulary	Swamp Inflammatory Pharmacological Flatulence Parallel venation Endangered
Activities	<ol style="list-style-type: none"> 1. Students will learn how to make an accordion notebook using the following website: http://www.makingbooks.com/accordion.shtml 2. Students should then discuss the elements of a story including the characters, beginning, the problem, solution, and ending. Emphasize that pictures should be able to tell what is going on. 3. Include details such as parts of a flower, their life cycle, some threats to the species from humans and some possible solutions to the story. 4. All students should share their stories when done.
Student Reflection	<ol style="list-style-type: none"> 1. What was the most challenging part about your picture story? What part of your story did you particularly like? 2. What did this piece make you learn about yourself? 3. Did your work meet the standards for this assignment?

Resources

http://www.wildflower.org/plants/result.php?id_plant=GEAN

http://www.fs.fed.us/wildflowers/plant-of-the-week/gentiana_andrewsii.shtml

<http://gentian.rutgers.edu/endang.htm>

<http://www.readwritethink.org/classroom-resources/lesson-plans/draw-story-stepping-from-45.html?tab=4#tabs>