

## 2016-17 New PLC Science Class Proposal: Botany

Prerequisite: None

One quarter: .5 Credit

Course Description: Botany is a project based biology course with a focus on plants. Topics include plant anatomy/physiology, plant ecology, gardening, Minnesota plant identification, and current issues in plant science. Students will design a 4x4 square foot garden and develop a scientific investigation related to plants.

### Proposed Outline of Botany Class

1. Unit 1: Plant Anatomy/Physiology
  - a. Root Structure/Function
  - b. Stem Structure/Function
  - c. Leaf Structure/Function
  - d. Flower Structure/Function
  - e. Seed Structure/Function
2. Unit 2: The Scientific Method
  - a. Parts of the scientific method
  - b. Methods in plant experimentation
  - c. Student developed plant experiment
3. Unit 3: Plant Ecology
  - a. Plants in a biological community
  - b. Plants and the environment
  - c. Plants and humans
4. Unit 4: Gardening in Minnesota
  - a. Starting seeds indoor and outdoor
  - b. Food vs flower gardens
  - c. Square foot garden
  - d. Composting
  - e. Minnesota plant ID

### Instructional Resources/Materials:

#### Books:

*Wildflowers of MN Field Guide* by Stan Tekiela (x20)

*Trees of MN Field Guide* by Stan Tekiela (x20)

*All New Square Foot Gardening II* by Mel Bartholomew (x20)