Humans have been growing plants for thousands of years. Farmers and horticulturists make their living growing food and other plants, while other people grow gardens for pleasure. Becoming a good gardener requires one to understand the science of growing plants, how to prepare the soil, how to select and plant seeds, and how to care for the growing plants.

**Requirements**

1. Do the following: (1 hour)
   1. Explain the most likely hazards you may encounter while working near a bee hive or colony, and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
   2. Show that you know first aid for treating symptoms from bee stings that could occur while working near a hive or colony of bees, including anaphylactic shock, pain, swelling, redness, itchiness, and skin rash.
2. Do the following: (2 hours)
   1. Grow six vegetables, three from seeds and three from seedlings, through harvest.
      1. This can be done at home indoors OR in our greenhouse/classroom.
      2. Choose a vegetable plant that will grow well during that time of year, therefore look at planting guides for the season you choose to plant.
   2. Grow six flowers, three from seeds and three from seedlings, through flowering.
3. Give the food value of the following:
   1. Three root or tuber crops (.5 hours)
   2. Three vegetables that bear above the ground (.5 hours)
   3. Three fruits (.5 hours)
4. Test 100 seeds for germination. Determine the percentage of seeds that germinate. Explain why you think some did not germinate.
   1. Include what kind of seed it was. (.5 hours)
   2. What season the seeds were meant to be grown. (.5 hours)
   3. What was the documented germination rate on the package? (.5 hours)
5. Visit our county extension center’s Master Gardener Garden. (1 hour)
   1. Report on what you learned.
      1. What is the purpose of the garden?
      2. Who is in charge?
      3. What type of management practices do they use at the garden?
      4. Document your time at the garden with photos and things you learned.
6. Identify five garden pests (insects, diseased plants). Recommend two solutions for each pest. At least one of the two solutions must be an organic method. (.5 hours)
7. Do ONE of the following:
   1. Build a compost bin and maintain it for 90 days. (3 hours)
   2. Build a vermipost bin (worm compost bin) and maintain it for 90 days. (3 hours)
   3. Build a hydroponic garden containing three vegetables or herbs, or three ornamental plants. Maintain this garden through harvest or flowering, or for 90 days. *(There are a lot of youtube.com videos on how to do this.)* (3 hours)
   4. Build one water garden, either in a container (at least 12 by 6 inches and 6 inches deep), or in the ground as a small, decorative pond no larger than 6 by 3 feet and 24 inches deep. Maintain the water garden for 90 days. (3 hours)
   5. Prepare a honey super for use on a hive or colony. Remove a filled honey super from the hive or colony and prepare the honey for sale. (3 hours)