1. Big Idea:
   • Change our Drainage Pond into a Rain Garden

2. Goals and Objectives
   • At the completion of this STEM project students will be able to:
     o Research and identify high tolerant plants
     o Understand technological design process
     o Use scale and ratios to create models
     o Use geometry to sketch and create model
     o Create a presentation of their group’s model
     o Create geometrical net
     o Inform community members of their role with environmental challenges
     o Understand water and soil properties

3. First Quarter
   • Teacher Training and Brainstorming
   • Teach Technological Design Process
     o Identify
     o Design
     o Implement
     o Evaluate
   • IDENTIFY Need for Rain Garden
   • Field Trip to Career Center (Especially Agricultural Program)

4. Second Quarter
   • Present STEM concept to faculty. Help 6th and 8th grade develop STEM ideas.
   • Ecology based Field Trip (Camp KATE)
   • Research and sketch/DESIGN using web-based program
   • Create geometric net for Bird Habitat (DESIGN)
   • Guest Speaker – Civil Engineer
• Guest Speaker – DNR Ecologist

5. Third Quarter

• Model Building (IMPLEMENT)
  o Ratio/Scale/Geometry
  o Material Sale – Tax, Discount, and Interest

• Prepare Oral or Media Presentation for model

6. Fourth Quarter

• Group Presentation (EVALUATE)
• Construct Rain Garden (IMPLEMENT)
• Construct Habitats
• Create community flyers for local newspaper, businesses and school website

7. Ongoing……...

• Have 6th and 8th grade introduce STEM.
• Have optional student chosen year long project.
• Use STEM (design process) lessons in every subject.
• Implement After-school STEM program.