1. **Big Idea**
   - Provide opportunities for all students at TES to think and work like engineers, designers, and problem solvers.

2. **Goals and Objectives**
   a. Provide Townville teachers the initial professional development for STEM, training and resources for implementation of STEM projects, and follow-up sessions.
   b. As a school, integrate STEM units into the SC Academic Standards for each grade level. Create cross-curricular units where appropriate.
   c. Introduce STEM to students in all grades, providing experiences that use the Design Process, and emphasizing the importance of all STEM aspects in their daily lives.
   d. Raise the awareness and understanding of the STEM initiative at TES for parents and community members by providing opportunities for parents and community members to view final student projects from various grade levels and various STEM units and communicating information throughout the school year in various methods (ie. via website, classroom newsletters, school newsletter, etc.).

3. **Timeline for 2011-12 School Year**
   a. August - December
      • STEM Institute (Mike and Morgan)
      • Provide an overview of STEM and the implementation plan to faculty and staff
      • Begin professional development for STEM (partnership with CU?)
      • Begin identifying STEM units that can integrate into units of current curriculum.
      • Communicate STEM information to parents and community members
   b. January – May
      • Introduce STEM to students.
      • Each teacher will provide at least one STEM experience for students.
      • Schedule at least one opportunity for parents and community members to see final student projects (possibly connect with an open house or other evening school event).
      • Continue PD as needed
   c. June
• Review and Evaluate integration of STEM into curriculum. Modify or build on units as needed.
• Review STEM implementation. Identify needs (PD, resources, etc.) for 2012-13 school year.
  • Discuss expansion of STEM within the school (careers, competitions, etc.)
  • Create revised/new Action plan for 2012-13 school year.

4. Assessment
• By the end of the school year,
  a. The school will have a document showing the integration of STEM into the curriculum, showing specific units for each grade level and the correlating standards/units.
  b. Students will have completed at least one unit and have a final product that can be assessed (including, but not limited to the final model, journals, or a performance rubric).
  c. Feedback from parents, teachers, and students will be gathered providing positive and negative aspects of the STEM integration and changes in attitude and/or awareness.

5. Resources
a. Human – CU (talk with Bill Havice), STEM staff, faculty and staff at TES, community volunteers
b. Monetary – money to buy supplies and materials needed for the STEM units
c. Other Resources – STEM materials, ITEEA website, materials available on state access website

6. Examples of Learning Experiences
• K – 2nd grade: Integration of units from Technology Starters, to be determined by the teachers throughout the first year of implementation. For example:
  • Bug Bungalow! could be used in connection with the second grade animal unit.
• 3rd – 6th grade: Integration of units from Models for Introducing Technology, to be determined by the teachers throughout the first year of implementation. For example:
  • The Hydroelectric Dam Challenge could be used in conjunction with the 3rd grade science landforms unit.
• Safety Buzzers could be used in conjunction with the 4th grade electricity unit.