1. Big Idea-
   • To integrate STEM into the school curriculum, culture, and community across all grade levels.

2. Goals and Objectives-
   a. To train faculty in the Engineer By Design model to solve STEM problems.
   b. (Present the model to the faculty. Then complete the EGG DROP challenge using the EBD model.)
   c. To challenge each grade level to solve the Egg Drop Challenge before the end of the first nine-weeks.
   d. To conduct a STEM family and community night to promote an understanding of STEM. This night would include various STEM challenges for parents to complete with their using the Engineer By Design model.
   e. (Set up various mini stem challenges for the parents to complete with their children. Possible examples:
      • Move a group of objectives from point a to point b without touching them with your hands.
      • Using supplied materials, build the tallest tower possible that will support the weight of pink pearl eraser.
   f. To facilitate a standard based STEM project at each grade level using the Engineer Design Model.
      - (Each teacher will be responsible for setting this up for students based on the science and math curriculum).
      - To facilitate a STEM exhibition awareness and celebration of student work.

3. Timeline-
   a. TEACHER TRAINING for design model -- Completed by September 2011
   b. EGG DROP CHALLENGE – Completed by beginning of November
   c. STEM NIGHT – Completed by end of November
   d. STEM PROJECT – Completed by the beginning of May
   e. STEM EXHIBITION – Completed by the end of May
4. **Assessments**-
   a. To assess achievement of students and teachers, both will create a portfolio of STEM projects completed throughout the year with artifacts such as pictures, drawings, notes, diagrams, graphs, etc.
   b. To assess the success of STEM nights parents will be given a survey with questions that determine their understanding and how they view STEM in levels of importance.

5. **Resources**-
   a. Community Partners
   b. STEM Resources and ITEEA Website
   c. Science Lab Materials
   d. Learning Experiences:
   e. School Wide Training for faculty
   f. School wide EGG DROP
   g. Grade level STEM projects
   h. Presentation at STEM Exhibition

6. **Example:**

THE GREAT EGG DROP CHALLENGE

- **Identify the Problem:** Students will create a container for an egg to safely land when dropped from a specified location using recyclable materials easily attainable. Each grade level will have varying degrees of difficulty. Kindergarten container will be dropped from 3 feet. First and Second grade container will be dropped from 6 feet. Third, fourth, and fifth grade containers will be dropped from 10 feet.
- **The students will then be allowed to follow the rest of the EBD model.**