Action Plan

Anderson One, Wren Elementary School-Kim Brock, Lisa Mathis, Amy Bagwell

**Big Idea:** Integrate STEM units into 4th grade curriculum

**Goals/Objectives:**

1. Complete training for integration of STEM units
2. Family/Community Night
3. Facilitate 1 standards based STEM unit per semester
4. STEM exhibition and celebration of student work

**Timeline:**

1. Teacher training completed by September
2. First STEM unit and exhibition completed by December
3. Second STEM unit and exhibition completed by June
4. STEM family night held by end of November

**Assessments:**

1. Notebook/journal/portfolio of student work
2. Parent survey
3. Rubric for completion of unit

**Resources:**

1. Community partners
2. STEM resources/ITEEA website
3. Lab materials
4. Mobile laptop lab

**Classroom Preparation:**

1. Grouping/seating, rules, etc
2. Mini-projects for practice of above
3. Norms/design process
4. Space
5. Collection of materials
6. Time

**Learning Experiences:**

1. Training
2. Completing units
3. STEM night
4. Exhibition
5. Guest Speakers

Example:

STEM Night-

1. Teachers plan night designed to help parents understand STEM
2. Collect materials, handouts, assign responsibilities
3. Students/families rotate through stations
4. Station 1: teacher explains rationale for STEM units
5. Station 2: Mini-unit
6. Station 3: Mini-unit
7. Station 4: Exit slip provides feedback for teachers
Name of Problem: Hunger Games-Catching Mouse
Name of Author: Lisa Mathis, Kim Brock, Amy Bagwell

Course: 4th grade STEM

Unit: Life Science: Organisms and Their Environments

Standards: Science 4-2.2- 4-2.6; Math 4-6.1 through 4-6.4; Technological Standards 8, 9, 10 and 11

Big Idea: The interactions between organisms and their environments

Essential Question: How do we create an environment that prohibits unwanted organisms?

Scenario: A newly constructed school has become home to unwanted pests (mice). The school has partnered with local pest control agencies, along with attempting their own exterminating procedures. Yet the mice march on! The school has asked a new team of engineers to save the day—YOU! How can you solve the problem?

Materials and Resources: Examples of previously attempted prevention methods/techniques, mobile laptop lab, videos of mouse spotting, interviews of exterminators and custodians, science lab tools and materials for models

Content Information: After introducing Life Science Standards and learning about vertebrates/invertebrates and their specific environments, the students will begin a focused study of mice. After introducing data collection methods and various ways to record and display information, students will select a method to display their findings about the mouse activity in the building. The students will write to persuade an audience.

Deliverables: Student teams will create an alternate method for exterminating/preventing mice from entering the school.

Parameters: Cost efficient, safety issues (exits, walkways, doors), environmentally friendly (students and people in building), harm to mice

Assessment: Present design to staff via infomercial (model, visual/graphic presentation), evidence of work (journal, notes), rubric