

Math Transfer Goals

- Based on an examination of the **problem/situation**, initiate a plan, execute it, evaluate and explain the reasonableness of the solution.
- Demonstrate **automaticity** in basic computation and **critical vocabulary**
- Investigate and explain how mathematical concepts can relate to one another in the context of a **problem/situation*** or abstract relationships.
- Demonstrate **perseverance*** through making an attempt, evaluating strategy/solution, and being flexible when working on problems, situations, or concepts
- Communicate effectively in a **variety of ways*** based on purpose, task, and audience using appropriate vocabulary.

Teacher Notes on Language

- **problem/situation** means practical applications that can be integrated into other subject area
- **automaticity** means instant and correct response to basic math facts
- **facts** means basic computation and critical vocabulary
- **concrete** means using manipulatives or physical models
- **perseverance** means to work through a problem using a variety of methods (tools/strategies) to reach a solution regardless of right/wrong
- **variety of ways** means concretely , algebraically, pictorially, graphically, abstractly , orally, or in written form.

Science Transfer Goals

- Generate questions based on observations, prior knowledge, and real world experiences that inspire further exploration.
- Design investigations using appropriate **tools and resources** to generate evidence that relates to question/hypothesis.
- Define a **problem** and develop a solution through creation of a model with regular testing and redesign.
- **Analyze and interpret** collected data and/or that of other scientists to arrive at justifiable conclusions.
- Use the language of science to communicate and **defend** results of scientific investigation based on data.
- **Apply/make connections** between multiple fields of knowledge and real-world applications.

Teacher Notes on Language

- **Tools and resources.** - This includes standard science equipment **as well as** technology (e.g., modeling software) and engineering (e.g., design process). We want students to create and use models to study and explain scientific processes, concepts, relationships, and systems
 - **Problem.** - This primarily relates to Engineering topics and challenges. We want students to experience the development of a simple or sophisticated solution based on the design, test, and fail forward that is essential to Engineering.
 - **Analyze and interpret.** - An example of analysis would be to calculate the mean, while interpretation would be to explain the relationship between the mean and the hypothesis.
 - **Defend.** - be able to justify, prove, and repeat results or explain where another viewpoint or conclusion is justified.
- Apply and make connections** - An example would be analyze the mechanism of cause and effect within a system