Science and Technology Glossary

career and life roles - The specific multiple and overlapping roles all people "play" throughout their lives and the time and energy they put into each role (e.g., child, student, worker, friend, parent).

carrying capacity - The number of individuals in a population that the resources of a habitat can support.

counterbalance - An equal opposing force or effect. In a system, counterbalances can provide important sources of feedback that may oppose or encourage change in the system.

fair test - A comparison or test in which all details are the same except the thing being tested.

heat - The total energy, both potential and kinetic, of matter.

model –

Mathematics: A mathematical representation of an object or relationship. While models may be diagrams or physical representations, they can also be equations or sets of equations that are used to represent an object or relationship. Colored chips may be used as models for positive and negative numbers. Geometric diagrams are sketched as part of the problem solving process. The graph of a function describes the relationship visually. Ohm's law v=ir, describes the relationship among voltage, current and resistance in simple electric circuits.

Science and Technology: Tools for learning about thinks they are meant to resemble. These include physical, mathematical, and conceptual models. At the early grades models are appropriately limited to physical models.

scientist - An individual who explains and predicts phenomena in the world through investigations driven by inquiry and conclusions supported by verifiable evidence.

scientific principles - The underlying assumptions required in the system of thought related to science. These include the following:

- the world is understandable
- scientific ideas are subject to change
- scientific knowledge is durable
- science cannot provide answers to all questions
- science demands evidence
- science is a blend of logic and imagination
- science explains and predicts
- science is not authoritarian

system - A collection of things and processes (and often people) that interact to perform some function.

technological design - A problem-solving process which often requires the application of trouble shooting, research and development, invention, innovation and experimentation to create or modify a physical device for the purpose of meeting a particular need.

temperature - The amount of energy of motion; higher temperatures indicate a greater average amount of atomic or molecular motion