



**SYNERGISTIC  
SYSTEMS**

A DIVISION OF PITSCO, INC.

# PARENT BRIEFING

## Module

# Creative Solutions

- Given an open-ended challenge, apply the steps of a problem solving model to develop a solution.
- Use pneumatics to solve a problem.
- Apply electrical, pneumatic, and mechanical principles while using building sets to construct simple and compound machines.

## Session Focus

**1** Simple Machines

**2** Mechanical

**3** Electrical

**4** Pneumatic

**5** The Challenge

**6** The Challenge

**7** Test Your Solution

### Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

For the next few days, your child will be learning about different problem solving techniques while completing the Creative Solutions Module. As your child's best teacher, your participation in the learning process is extremely important.

### Words students will learn in this Module include:

- force
- hypothesis
- lever
- wheel and axle
- scientific method
- pneumatic
- screw
- problem solving
- pulley
- mechanical advantage

### Questions for discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts with your child.

He or she will be asked to:

- Define "brainstorming." (*This is a technique used by two or more people to find possible solutions to an identified problem.*)
- Identify the formula for calculating work. (*Work = force x distance.*)
- List four of the six simple machines. (*The six simple machines include: lever, pulley, inclined plane, wheel and axle, screw, and wedge.*)
- Identify the five steps of the Synergistic Problem Solving Model. (*The five steps of the Synergistic Problem Solving Model are identify, brainstorm, test, evaluate, and redesign or implement.*)



Instructor: \_\_\_\_\_