



**SYNERGISTIC  
SYSTEMS**

A DIVISION OF PITSCO, INC.

# PARENT BRIEFING

## Module

# Applied Physics

- Observe Newton's law of inertia using an Air Track.
- Calculate the velocity of Air Track cars using the Air Track and photogate timer.
- Experience and understand the concept of data transmission using laser technology.
- Observe and comprehend the concept of energy transfer using two Air Track cars.

## Session Focus

- 1 Air Track
- 2 Sound Energy
- 3 Heat Energy
- 4 Heat Experiments
- 5 Light Filters
- 6 Laser Technology
- 7 Laser Experiments

### 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 sound waves and frequency, how heat affects materials, and how light can carry things while completing the Applied Physics module. As your child's best teacher, your participation in the learning process is extremely important.

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

- acceleration
- amplitude
- conduction
- insulator
- radiation
- velocity
- laser
- electromagnetic spectrum
- frequency
- reflection
- convection

### 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:

- Differentiate between insulator and conductor. (*An insulator does not conduct electricity well. Charged particles, called electrons, are not free to move and cannot carry a current.*)
- Explain how light waves travel. (*Light waves travel in one direction but along two paths. One part is moving up and down, or vertically, and the other is moving side to side, or horizontally.*)
- List the steps of the scientific method. (*Make observations; identify the problem; make more observations; state a hypothesis; test, observe and collect data; analyze the data; and make conclusions.*)



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