

MODULE

Light & Lasers

- Explore refraction of light, concept of reflection, magnification, light intensity and color, and how messages may be transferred via laser.
- Examine the effects of a prism on white light and laser light.
- Design a laser security system and design a method to circumvent a laser security system.

SESSION FOCUS

- 1 Basics of Light
- 2 Refraction
- 3 Reflection
- 4 Magnification
- 5 Intensity and Color
- 6 Laser Signal Path
- 7 Laser Alarm

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.

Your participation in the learning process is extremely important, as you are your child's best teacher.

For the next few days, your child will be learning about the various aspects of light and lasers by completing the *Light & Lasers* Module.

Words students will learn in this Module include:

- concave lens
- convex lens
- electromagnetic spectrum
- frequency
- infrared light
- laser
- lens
- magnification
- photon
- reflection
- refraction
- ultraviolet light
- visible light
- wavelength

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 and activities with your child. He or she will be asked to:

- Explain the relationship between the angle of incidence and the angle of reflection. (*The angle of incidence is equal to the angle of reflection.*)
- Describe the magnification properties of a convex lens. (*A convex lens has a magnification less than one. In other words, it makes objects appear smaller.*)
- Explain why a colored slide decreases the intensity of the light passing through it. (*A colored slide filters, or blocks, some colors of light. This prevents some of the light from passing through it. Because the slide reduces the number of light rays, it decreases the intensity of the light.*)

Student: _____

Parent: _____