

## Introduction to Optics

Base your answers to the following questions on the videotape you viewed in lab:

1. Why do we try to find out how light behaves rather than what light is?
2. What is diffraction?
3. Describe the path of a light beam unimpeded by objects or outside forces.
4. Does an electric field or a magnetic field affect the path of a light beam?
5. What is scattering?

6. Does a surface have to be opaque in order to reflect light? Justify your answer based on what you observed in the film.

7. What happens to a beam of light when it is reflected?

8. Under what conditions does refraction occur?

9. What happens to a beam of light when it is refracted?

10. The swimmers and their feet seemed to separate, when seen through the lens of the camera that was moving beneath the water's surface. Explain why.