



a WOW Lab

**BLUEPRINT**

Light-Bending JELL-O

## Glossary

**angle of incidence** - the angle, measured from the normal, at which light strikes the surface of a different medium.

**critical angle** - the smallest angle of incidence at which total internal reflection occurs.

**optics** - the branch of physics concerned with the physical properties and study of light.

**refraction** - change in the direction of a light or sound wave when it passes from one medium into another.

**Snell's law** - describes the relationship between the refraction and angle of incidence of light travelling through two different media. Mathematically, this relationship can be expressed as,  $n_1 \sin \theta_1 = n_2 \sin \theta_2$  where  $n_1$  and  $n_2$  are the indices of refraction for the two different media and  $\theta_1$  and  $\theta_2$  are the angles of incidence.

**total internal reflection** - occurs when light hits a different medium at an angle greater than the critical angle. The light is reflected back into the medium.

**waveguide** - a device, such as optical fibres, that confines waves.

**waveguide phenomena** - a wave travelling through a waveguide will experience total internal reflection until it hits a new medium.