

PHYSICS  
 REVIEW: WAVE BEHAVIOR

Frequency  
 Wavelength  
 Velocity  
 Amplitude  
 Period  
 Transverse...longitudinal  
 Waves on springs  
 Fixed end...free end  
 Reflection...transmission  
 Inverted...right side up  
 Superposition  
 Standing wave  
 Resonance  
 Angle of incidence...angle of reflection...angle of refraction  
 Angles measured between  
     (a) wave and barrier (reflection)  
         wave and boundary (refraction)  
     OR (b) direction of travel and normal (reflection and refraction)  
 Wavelength decreases when wave travels from deep to shallow water...and vice versa  
 Frequency constant when wave travels from one depth to another  
 Velocity constant in a given depth of water  
 Velocity decreases when wave travels from deep to shallow water...and vice versa  
 Different depths of water for water waves correspond to different media  
     for light waves...index of refraction different  
 Slits and obstacles  
 Circular waves can be generated by allowing wave to pass through slit that  
     is small compared to the wavelength  
 Diffraction  
 Interference  
 Nodal line formation...crest and trough...path difference from sources  
 Young's Experiment...double slit interference pattern  
 Nodal line...dark line...minimum  
 Antinodal line...bright line...maximum  
 Nodal line number and spacing...effect of varying frequency (or  
     wavelength)...effect of varying spacing of sources  
 Relative spacing of nodal line pattern for red and blue light...logic  
     behind using this observation to deduce that red light has a larger  
     wavelength than blue light  
 Diffraction grating  
 Thin film  
 Path difference...inversion...net effect  
 Polarization...transverse wave..."Scotch Tape Effect"...

$$v = f\lambda \quad \frac{\sin\theta_1}{\lambda_1} = \frac{v_1}{\lambda_1} = \frac{v_2}{\lambda_2} = \frac{n_2}{n_1} = n_1 \sin\theta_2 \quad \lambda = \frac{dx}{nL}$$