

Transparency of Materials with Different Wavelengths

Make predictions: Do you think that UV, Visible, and IR light will pass through each of these materials? Mark a T for transparent, L for translucent, or an O for Opaque.

Material	UV prediction (T or O)	UV actual	Visible prediction (T, L, or O)	Visible actual	IR prediction (T or O)	IR actual
Blue Glass						
Copper Screen						
Styrofoam						
Wool						
Silk						
Wax Paper						
Aluminum Foil						
Gauze						
Paper						
Note card (thick paper)						
Red cellophane						
Blue cellophane						
Purple cellophane						
Orange cellophane						
SPF 4						
SPF 30						
Control						

Electromagnetic Waves

Use the boxes below to list the waves of the electromagnetic spectrum in order from largest wavelength to smallest wavelength.

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Why might a longer wavelength like the Infrared have difficulty traveling through some of the materials?

When light passed through colored material, how did the light change as it passed through?

What did the visible light look like after passing through the red cellophane? and Explain why?

Prior to doing your lab, what did you base your predictions on?

When you were testing the SPF 4, SPF 30, vs. control group, which one took the longest to change color? Explain why you think this is the case.