

TABLE 32–1 Indices of Refraction[†]

Material	$n = \frac{c}{v}$
Vacuum	1.0000
Air (at STP)	1.0003
Water	1.33
Ethyl alcohol	1.36
Glass	
Fused quartz	1.46
Crown glass	1.52
Light flin	.58
Lucite or Plexiglas	1.51
Sodium chloride	1.53
Diamond	2.42

[†] $\lambda = 589 \text{ nm}$.

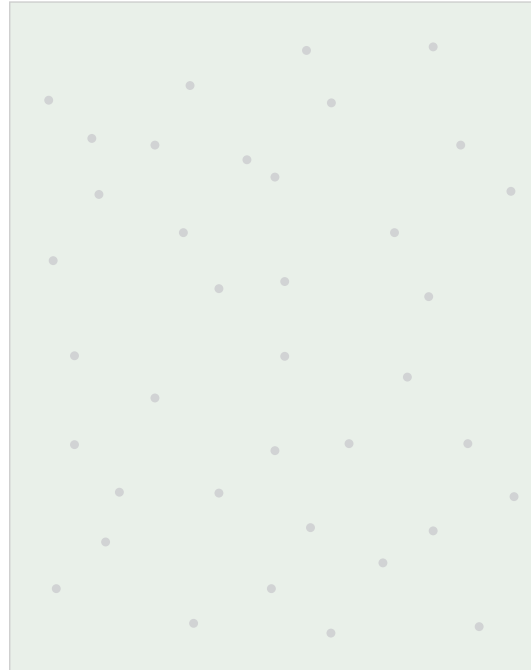
Some Indexes of Refraction^a

Medium	Index	Medium	Index
Vacuum	Exactly 1	Typical crown glass	1.52
Air (STP) ^b	1.00029	Sodium chloride	1.54
Water (20°C)	1.33	Polystyrene	1.55
Acetone	1.36	Carbon disulfide	1.63
Ethyl alcohol	1.36	Heavy flint glass	1.65
Sugar solution (30%)	1.38	Sapphire	1.77
Fused quartz	1.46	Heaviest flint glass	1.89
Sugar solution (80%)	1.49	Diamond	2.42

^aFor a wavelength of 589 nm (yellow sodium light).

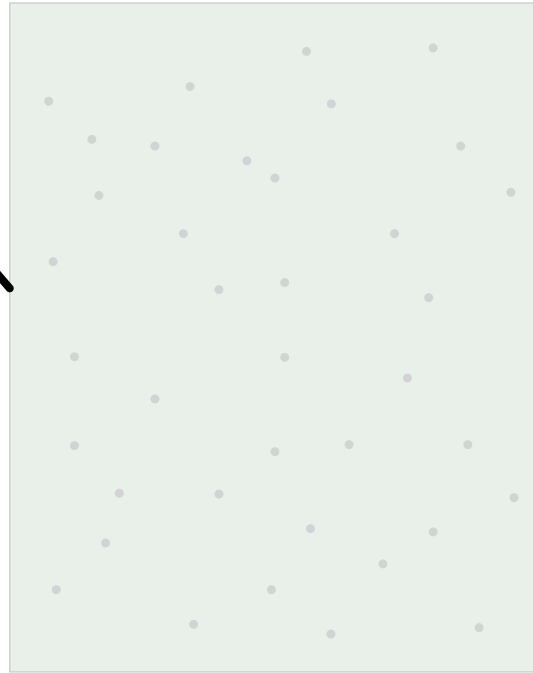
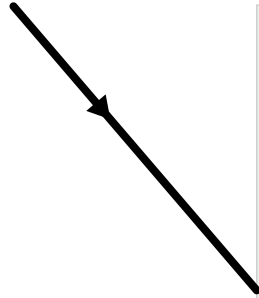
^bSTP means “standard temperature (0°C) and pressure (1 atm).”

Adventures of a Light Beam

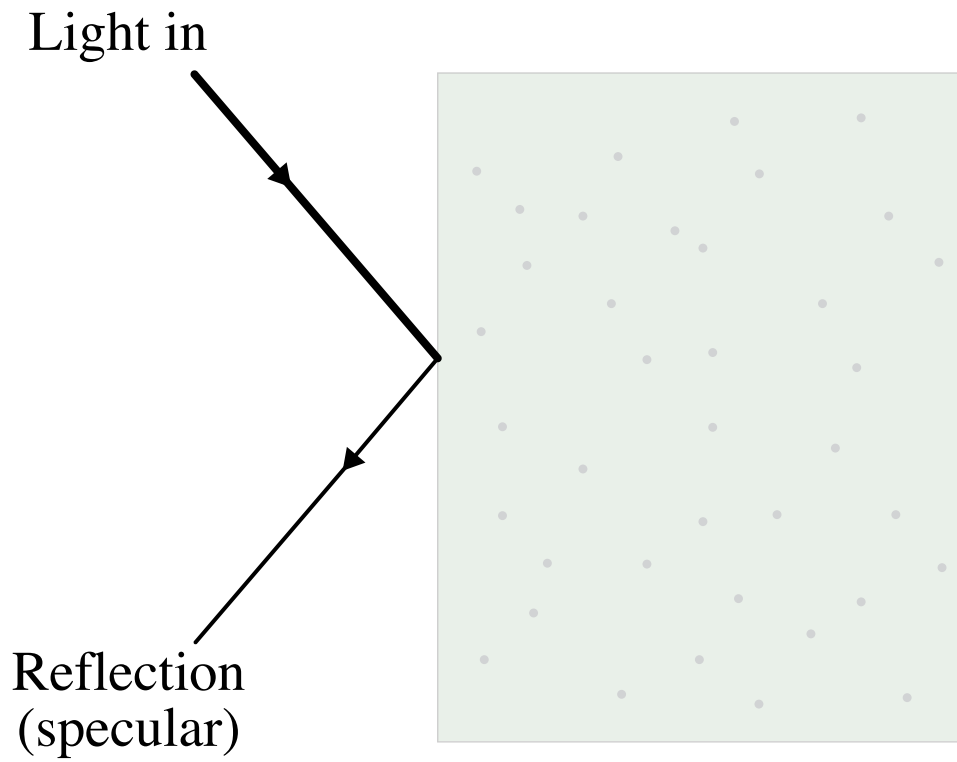


Adventures of a Light Beam

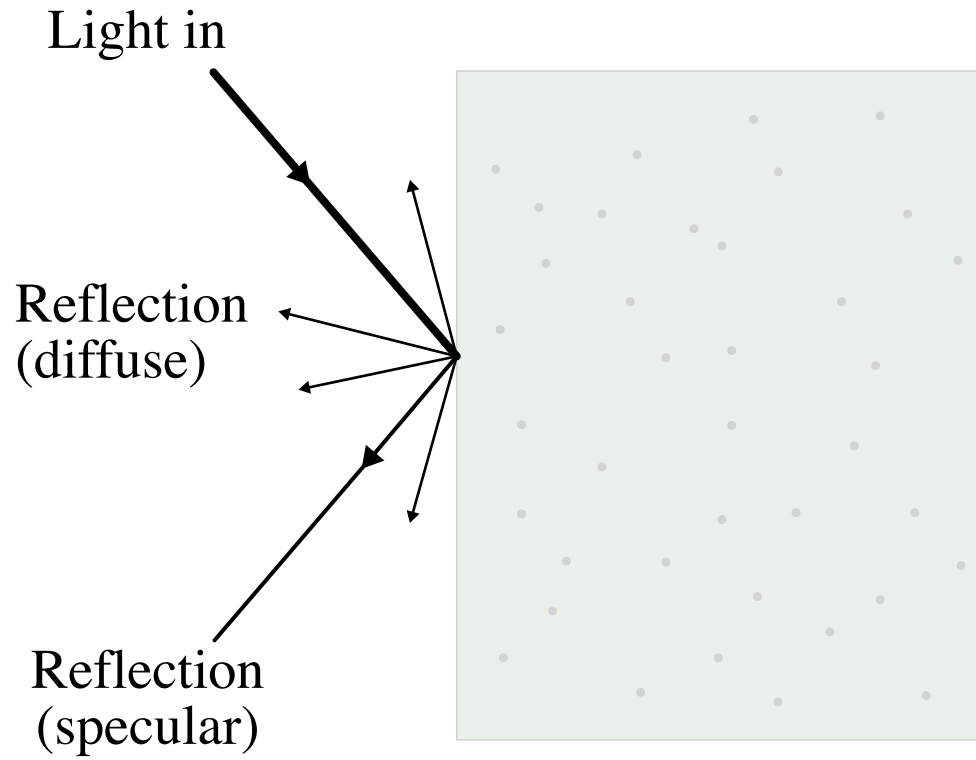
Light in



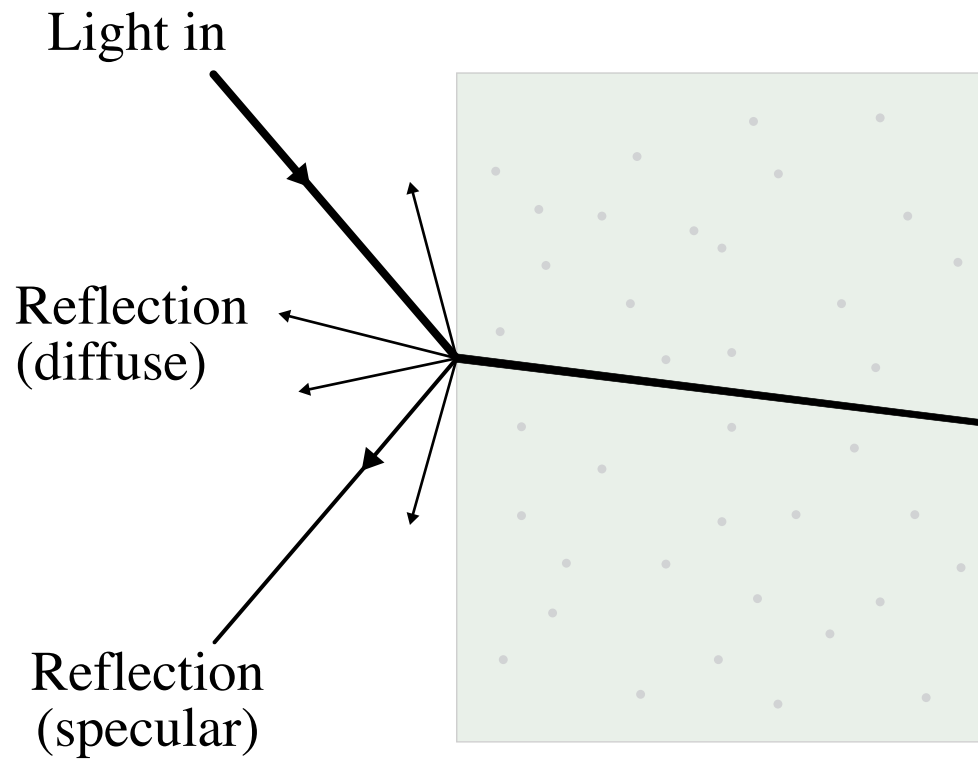
Adventures of a Light Beam



Adventures of a Light Beam

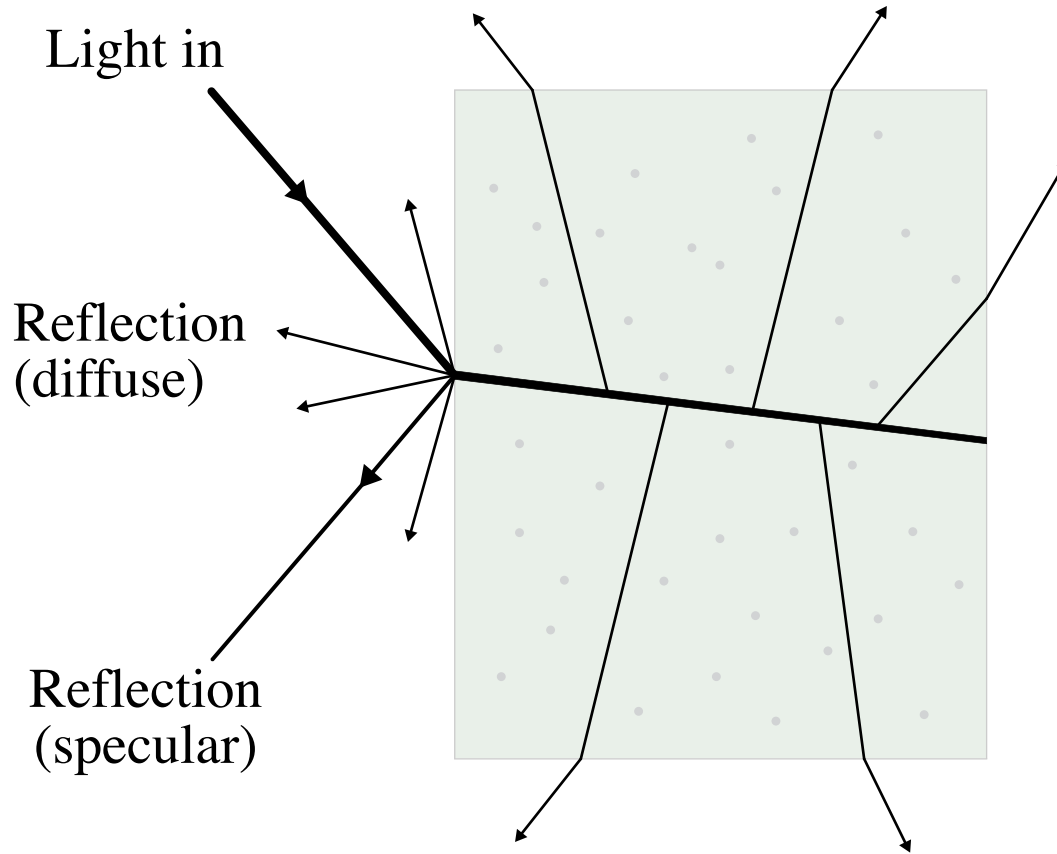


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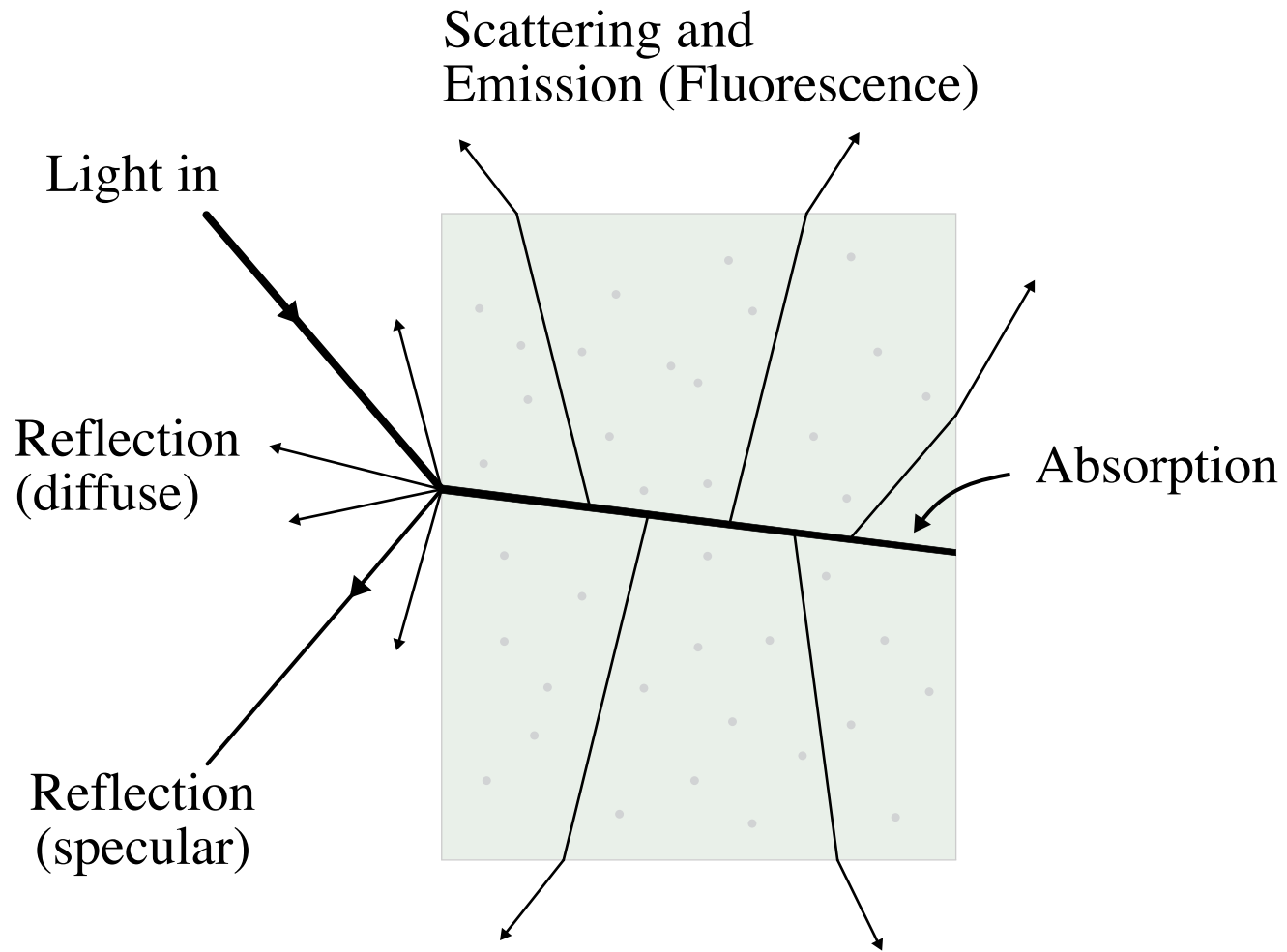


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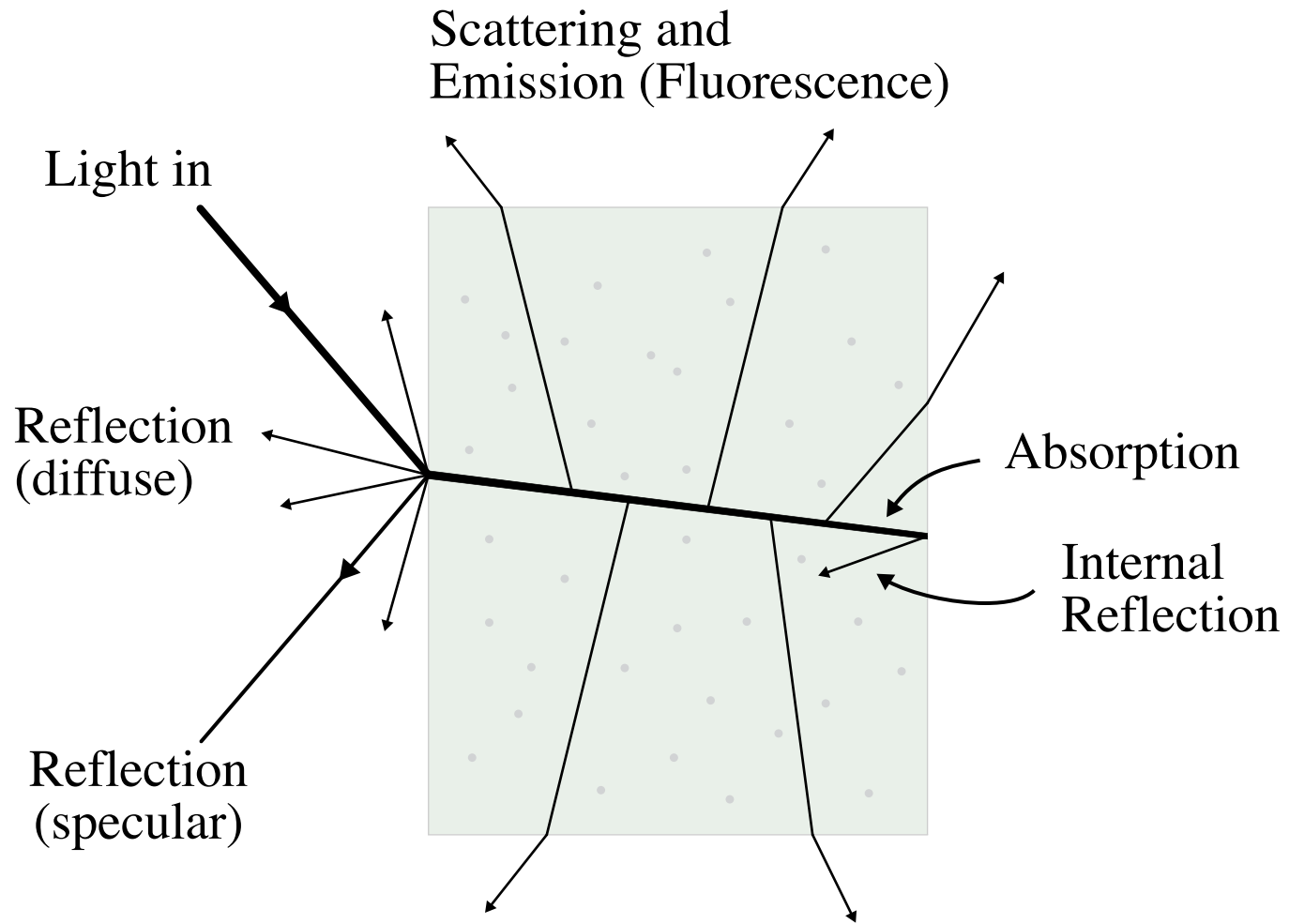
Scattering and
Emission (Fluorescence)



Adventures of a Light Beam



Adventures of a Light Beam



Adventures of a Light Beam

