

photographs

► **INSERT** The Energy of Light and Sound *DVD*

▼ **SELECT** *Visuals a la Carte*

▼ **SELECT** *Photographs*

VISUAL	GO TO SCREEN
Acoustic ceiling tile	1
Acoustic foam	1
Albert Einstein portrait	1
Aluminum foil; opaque labeled	1
Aurora	1
Bat ears	1
Ben Franklin's glass armonica	1
Bioluminescent algae, agitated & emitting blue light	1
Bioluminescent mushrooms	1
Burro ears	1
Car shade	2
Cat ears	2
Christiaan Huygens portrait	2
Clarinet reed	2
Cluster of light bulbs	2
Colorful clothespins	2
Colorful paper umbrellas	2
Concave mirror; plane mirror	2
Convex mirror as work of art	2
Curtains	2
Dental mirror	3
Dolphin	3
Drinking glass	3
Ear trumpets	3
F-16 pilot wearing night vision goggles	3
Fiber optic bundle	3
Fogbow	3
Full moon	3

VISUAL	GO TO SCREEN
Fun house mirror	3
Giraffe	3
Hardwood floor	4
Household mirror	4
Human ear; model; external ear prominent	4
Laser light beam; close up	4
Laser light; cutting steel	4
Laser light; in entertainment	4
Laser light; in medicine	4
Laser light; leveling and measuring device	4
Light rays emanating from sun	4
Lighting device seen only with night vision goggles	4
Lightning and sun	5
Max Planck portrait	5
Megaphone	5
Microscope mirror	5
Milk container... translucent or opaque?	5
Moonbow	5
Mount St. Helens in visible and thermal IR light	5
Opaque window shade	5
Opaque; fish casting shadows; shadow labeled	5
Oscilloscope	5
Palm tree in infrared (IR) light	6
Parrot head	6
Pencil in glass of water	6
Pierre Gassendi portrait	6
Pillows	6
Plant grow light	6
Plastic popcorn box casting shadow at 9:00 a.m.	6
Plastic popcorn box casting shadow at 12:00 noon	6
Plastic popcorn box casting shadow at 3:00 p.m.	6
Plastic wrap; transparent labeled	6
Prisms	7
Prism with visible light refracted	7
Public toilet with reflective glass walls	7

VISUAL	GO TO SCREEN
Rainbow	7
René Descartes portrait	7
Side view mirror	7
Sir Isaac Newton portrait	7
Still lake showing nearly perfect reflection	7
Sun	7
Sun dog	7
Sun screen; SPF to block UV rays	8
Sun's corona in ultraviolet (UV) light	8
Tanning bed using UV bulbs	8
Telescope mirror	8
Thomas Young portrait	8
Tile floor	8
Translucent and transparent candle holders	8
Translucent or transparent shower stall	8
Translucent Rosa Aurora marble	8
Translucent window shade	8
Translucent window shades on greenhouse ceiling	9
Transparent shoe heel	9
Transparent walls in an aquarium	9
Transparent water drop	9
Transparent window in a house	9
Transparent office window becoming translucent–1	9
Transparent office window becoming translucent–2	9
Trumpet	9
Union Station; Los Angeles, CA	9
UV light used for sterilization	9
Velvet fabric	10
Wax paper; translucent labeled	10
Windblown lake showing imperfect reflection	10

illustrations/ diagrams

▶ **INSERT** The Energy of Light and Sound *DVD*

▼ **SELECT** *Visuals a la Carte*

▼ **SELECT** *Illustrations/Diagrams*

VISUAL	GO TO SCREEN
Comparing / contrasting reflection and refraction	1
Compression wave; compression wave labeled	1
Convex and concave shapes; labeled	1
Electromagnetic spectrum	1
Hand shadows–1	1
Hand shadows–2	1
Hearing ranges of various animals	1
How to position yourself to see a natural rainbow	1
Human eye lens	1
Light in a vacuum and through various substances	1
Light rays; reflect, refract, scatter, transmit, absorb	2
Light: A Quick Review	2
Milky Way galaxy	2
Prism with visible light refracted	2
Prism; visible light refracted; ROY G BIV labeled	2
Proxima Centauri’s light reaches Earth in 4.3 years	2
Range of human hearing and beyond	2
Refraction; fish’s apparent and actual positions	2
Sound wave; compression, rarefaction labeled	2
Sound wave; cycles labeled	2
Sound wave; wavelength labeled	3
Sound: A Quick Review	3
Sun light reaches Earth in 8½ minutes	3
Transverse wave; peak, trough, wavelength labeled	3
Visible light spectrum with wavelengths	3

video bites

► **INSERT The Energy of Light and Sound DVD**

▼ **SELECT Visuals a la Carte**

▼ **SELECT Video Bites**

VISUAL	GO TO SCREEN
Acoustic guitar	1
Animal echolocation; bats	1
Animal echolocation; dolphins	1
Animal echolocation; human	1
Archer fish shooting water at prey	1
Astronaut taking a space walk and talking	1
Bell jar; removing all air from jar	1
Bell jar; returning air to the jar	1
Breaking a Wintogreen® LifeSavers® candy	1
Clarinet being played	1
Cup and string amplifier	2
Digital image c/u showing individual pixels	2
Dog hearing ultrasonic whistle	2
Doppler Effect; audio demonstration	2
Doppler Effect; car horn from inside the car	2
Doppler Effect; car horn from observer's position	2
Echo atop Mt. Whitney, CA	2
Electric guitar	2
Garden hose spray	2
Gasoline-powered leaf blower	2
Glass armonica demonstrator	3
Glass harp; Bach tune	3
Glass harp; musical scale	3
Glass harp; <i>Variations on the St. Anthony Chorale</i>	3
Glow tube being activated and glowing	3
Guitar amplifier	3
Guitar string being plucked	3
Hurricane Katrina in IR light	3

VISUAL	GO TO SCREEN
Mixing acrylic paints	3
Musical saw	3
Mystery sounds identification activity	4
Observing vibrations with a ruler–1	4
Observing vibrations with a ruler–2	4
Ping pong ball demonstrates vibrating glass	4
Plucking a guitar string	4
Plucking teeth of a comb	4
Printed photo c/u showing dot pattern	4
Refraction demonstration; glass in vegetable oil	4
Refraction demonstration; pencil in glass of water	4
Rubber band being plucked	4
Rubber band being stretched and plucked	5
Sonar fish finder	5
Sonogram	5
Sound traveling through a liquid; whalesong	5
Sound traveling through metal fence	5
Striking a match	5
Striking head of a drum with confetti on it	5
Sun dial; time lapse	5
Tacoma Narrows Bridge	5
Thunder and lightning	5
Triangle being struck	6
Trombone being played	6
Trumpet being played	6
Ultrasonic cleaner	6
Vibrating guitar string; vibration labeled	6
Vibrating tuning fork touched to water	6
Video game symphony	6
Violin being played	6
Water swells	6
Waves; montage	6

animations

► **INSERT The Energy of Light and Sound DVD**

▼ **SELECT Visuals a la Carte**

▼ **SELECT Animations**

VISUAL	GO TO SCREEN
Angle of incidence equals angle of reflection	1
Angle of incidence; angle of refraction	1
Compression wave	1
Doppler Effect	1
Frequency activity; counting train windows	1
High- and low-frequency sound waves	1
High-pitched (frequency) sound	1
Light rays reflecting off smooth and rough surfaces	1
Light reflecting off of a smooth surface	1
Loud sound	1
Low-pitched (frequency) sound	2
Mixing red, green and blue light	2
Refraction analogy; marching band	2
Soft sound	2
Sonar	2
Sound wave moving through a solid, liquid and a gas	2
Sound wave traveling through air to person	2
Sound wave traveling through ear	2
Sound waves reflecting off of a hard surface	2
Transverse wave	2
Two prisms refracting then rebuilding visible light	3
Vibrating tuning fork; sound waves propagating	3
Water droplet refracting visible light	3