

# photographs

▶ **INSERT** *the Virginia Ecosystems DVD*

▼ **SELECT** *Visuals a la Carte*

▼ **SELECT** *Photographs*

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Adaptation examples	1
Aggregate footpath	1
Aggregate; sifted into various sizes	1
American holly tree's waxy, spiky leaves	1
Appalachian cottontail rabbit (herbivore)	1
Asphalt atop aggregate; close-up	1
At the base of an American chestnut tree c. 1900	1
Australian sheep blowfly; full body view	1
Barred owl (carnivore)	1
Beach and boardwalk; Virginia Beach, VA	1
Black cherry tree	2
Black vulture space requirement; aerial view; labeled	2
Black vulture, deer, tree, millipede; aerial view; labeled	2
Black-eyed Susans (producer)	2
Blowfly; close-up on sucking mouthpart; labeled	2
Blowfly; spongy mouthpart sucking water drop; labeled	2
Bluegill	2
Boulder field; Shenandoah Nat'l Park; Valley and Ridge	2
Broad, thin, flat leaf of a deciduous (maple) tree	2
Brown recluse; gripping, piercing mouthparts; labeled	2
Bull ant; gripping, chewing mouthparts; labeled	3
Butterflies	3
Butterfly feeding; sucking mouthpart; labeled	3
Butterfly garden plants	3
Carpenter ant; gripping, chewing mouthparts; labeled	3
Chesapeake Bay beaches; blue crab; Coastal Plain	3
Chesapeake Bay; satellite view	3
Chipmunk (omnivore)	3

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Coal	3
Cowpasture River; black bear; Valley and Ridge	3
Deciduous trees in autumn	4
Deciduous trees in spring	4
Deciduous trees in summer	4
Deciduous trees in winter	4
Decomposer; common rod-shaped bacteria	4
Decomposer; fungi on tree stump	4
Decomposer; fungus cluster on tree bark	4
Decomposer; fungus on forest floor	4
Decomposer; shelf fungus on wood	4
Dominion Coal Plant; Wise, VA; artist's rendering	4
Dormancy; deciduous trees in winter	5
Dormancy; grass, trees in summer and winter	5
Dormancy; tulip at various stages of growth	5
Dulles Airport; aerial view; 1974	5
Dulles Airport; aerial view; 2008	5
Eastern goldfinch in summer and winter plumage	5
Eastern mole	5
Fairfax Fair Oaks area; aerial view; 1974	5
Fairfax Fair Oaks area; aerial view; 2008	5
Fairfax Fair Oaks area; aerial view; 2008; labeled	5
Ferns (producer)	6
Flannagan Reservoir; Pound River; Appalachian Plateau	6
Fly (omnivore)	6
Food chain; clover, slug, box turtle, bacteria	6
Food chain; strawberry, worm, wild turkey, hawk, bacteria	6
Food chain; Virginia pine, gray squirrel, red fox, bacteria	6
Food; aquatic plants; nymph; frog; heron	6
Food; soil, grass, rabbit, hawk	6
Freshwater tidal marsh, least bittern; Coastal Plain	6
Frog life cycle	6
Goldfinch	7
Granite countertop	7
Granite paving stones	7

# Virginia Ecosystems

Visuals a la Carte • Alphabetical by Type

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Grasshopper; chewing mouthparts; labeled	7
Gulf of Mexico; satellite view	7
Hardpan forest; striped skunk; Piedmont	7
Harvested food to be donated to food bank	7
Human impact; surface coal mining and reclamation	7
Human impact; surface coal mining in Virginia	7
Juvenile American toad (omnivore)	7
Lake Drummond, great blue heron; Coastal Plain	8
Largemouth bass	8
Limestone	8
Limestone quarry	8
Limestone uses	8
Limestone; erosion evident; key shows scale	8
Littering fine sign	8
Little Sluice Mountain; Geo. Washington Nat'l Forest	8
Longleaf pine, floodplain forests; crayfish; Coastal Plain	8
Magnolia tree; waxy topside, dull underside of leaves	8
Mallard (omnivore)	9
Mallard; adaptation labeled	9
Maple tree bark	9
Mature cultivated pine forest; abundant pine straw	9
Millipede space requirement; aerial view; labeled	9
Modern recycling sorting bin	9
Mole (carnivore)	9
Monarch butterfly life cycle	9
Monarch butterfly perched on milkweed	9
Mosquito feeding on human; sucking mouthpart; labeled	9
Mosquito; sucking mouthpart; labeled	10
Mount Rogers; spruce fir forest; Jefferson Nat'l Forest	10
Mount Rogers; Wilburn Ridge; Jefferson Nat'l Forest	10
Mountaintop removal mining of coal near Wise, VA	10
Mountaintop removal mining of coal near; aerial view	10
Mushrooms on the forest floor (decomposer)	10
Niche; Bacillus megaterium; decomposer	10

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Niche; morel; decomposer	10
North Carolina Sounds; satellite view	10
Oak marble galls	10
Oak tree leaves laden with early snow	11
Open-bottom arch road-stream crossing	11
Ornamental switchgrass waving in the wind	11
Pear-shaped puffball (decomposer)	11
Pileated woodpecker on log (omnivore)	11
Pine boughs free of snow	11
Pine needles; long, narrow leaves	11
Planting a blight-resistant chestnut tree	11
Puget Sound, WA; satellite view	11
Quarry; Luck Stone Quarry, Centreville, VA	11
Quarry; Luck Stone Quarry, Leesburg, VA	12
Quarry; Luck Stone Quarry; folded sedimentary rock	12
Rain barrel	12
Rain garden beside parking lot	12
Reclaimed pasture for grazing and haying	12
Reclaimed pasture with pond	12
Recycle and trash dumpsters	12
Recycled cardboard	12
Recycled paper dump	12
Red spruce forest; red-spotted newt; Valley and Ridge	12
Residential rain garden	13
River dredging; Occoquan River; satellite view	13
River dredging; Occoquan; dredging at mouth	13
River dredging; Occoquan; Fountainhead Park	13
Robin	13
Rose with thorny stem; structural adaptation labeled	13
Runoff emptying into rain garden	13
San Francisco Bay, CA; satellite view	13
Sand sorted into piles	13
Sand uses	13
Sea oats; wild ponies; Coastal Plain	14

# Virginia Ecosystems

Visuals a la Carte • Alphabetical by Type

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Shelter; beaver lodge	14
Shelter; cave	14
Shelter; hole in tree	14
Shelter; leaf litter	14
Shenandoah National Park	14
Short-tailed shrew	14
Skunk cabbage (producer)	14
Skunk cabbage; Potomac; shad; Piedmont/Coastal Plain	14
Snail (herbivore)	14
Soils; rich with humus, red with clay, light with sand	15
Space; barnacles in Chesapeake Bay	15
Space; red fox hunting	15
Stream monitoring; crew surveying in natural forest	15
Stream monitoring; measuring stream depth	15
Stream monitoring; measuring the height of a culvert	15
Students building and installing boardwalk	15
Students collecting leftover crops from farmers' fields	15
Students planting crops to help abate erosion	15
Tampa Bay, FL; satellite view	15
Temporary rain barrel	16
Timber rattlesnake; Jefferson National Forest; Blue Ridge	16
Trash day; various containers for sorting trash	16
Trash receptacle in a park	16
Tree space requirement; aerial view; labeled	16
Two connected rain barrels	16
Tysons Corner area; aerial view; 1974	16
Tysons Corner area; aerial view; 2008	16
Virginia bluebells growing under forest canopy	16
Virginia lakes; John H. Kerr Reservoir dam; aerial view	16
Virginia lakes; Lake Anna; satellite view	17
Virginia lakes; South Holston Lake; aerial view	17
Virginia mineral; datolite	17
Virginia mineral; iridescent calcite	17
Virginia mineral; popular collector's mineral	17

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Virginia opossum (omnivore)	17
Virginia rivers; Clinch River at Chestnut Ridge	17
Virginia rivers; Great Falls of the Potomac River	17
Virginia rivers; James River from Blue Ridge Parkway	17
Virginia rivers; James River; Balcony Falls	17
Virginia rivers; James River; rafting and kayaking	18
Virginia rivers; Potomac River	18
Vulture, deer space requirements; aerial view; labeled	18
Waxy topside of a holly bush leaf	18
White-tailed deer (herbivore)	18
White-tailed deer in summer and winter coats	18
White-tailed deer space requirement; aerial view; labeled	18
White-tailed deer, tree, millipede space requirements compared; aerial view; labeled (P)	18
Wildlife monitoring; eel scanned and weighed	18
Wolf spider (carnivore)	18
Wood anemone carpeting a Virginia forest floor	19
Yellow warbler	19
Young cultivated pine forest	19

# illustrations/ diagrams

► **INSERT** *the Virginia Ecosystems DVD*

▼ **SELECT** *Visuals a la Carte*

▼ **SELECT** *Illustrations/Diagrams*

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Bay and ocean compared	1
Concrete components	1
Deciduous forest ecosystem; title	1
George Washington and Jefferson National Forests; map	1
Human impact on Virginia ecosystems; title	1
Monarch flyways to Mexico	1
Natural and cultivated forests; title	1
Organisms' basic needs; food, water, shelter, space	1
Positive and negative impacts on the environment; title	1
Sound and bay compared	2
Southeastern watershed drainage basins	2
Stewardship; title	2
Video Quiz: Consumer, Producer or Decomposer?	2
Virginia aggregate quarries; map	2
Virginia coal locations; map	2
Virginia ecosystem food web; energy flow indicated	2
Virginia ecosystem food web; organisms involved; labeled	2
Virginia ecosystem food web; organisms' niches defined	2
Virginia ecosystems; title	3
Virginia geologic regions; map	3
Virginia granite quarries; map	3
Virginia limestone locations; map	3
Virginia mineral resources and fossil fuel production	3
Virginia predominant resources by region; map	3
Virginia sand and gravel quarries; map	3
Virginia state forests; map	3

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Virginia state park locations; map	3
Virginia watershed regions	4
Virginia's major rivers; Kerr Reservoir; labeled map	4
Virginia's major rivers; labeled map	4
Virginia's major rivers; unlabeled map	4

# video bites

▶ **INSERT** *the Virginia Ecosystems DVD*

▼ **SELECT** *Visuals a la Carte*

▼ **SELECT** *Video Bites*

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Air pollution; car exhaust, smog	1
Amazon water lily; water ecosystem; time lapse (NVB)	1
Arctic poppy; tundra ecosystem; time lapse (NVB)	1
Burdock seed dispersal	1
Cacti; desert ecosystem (NVB)	1
Chameleon eye moving; structural adaptation	1
Coal-fired power plant tour (NVB)	1
Dandelion seed dispersal (NVB)	1
Deciduous forest over one year; time lapse	1
Decomposers; shrew eaten by maggots; time lapse	1
Dragonfly nymph captures and eats a tadpole	2
Excavating aggregate	2
Frog captures and eats a dragonfly	2
Frog squealing; behavioral adaptation (NVB)	2
Garbage; curbside to landfill	2
Geese flying in formation; behavioral adaptation	2
Horn shark; structural adaptation (NVB)	2
Hummingbird feeding; structural adaptation	2
Mackerels schooling; behavioral adaptation	2
Monarch caterpillar becomes butterfly; time lapse	2
Niche; black bear; omnivore (NVB)	3
Niche; rainbow trout; insect eater	3
Niche; timber rattlesnake; mountain dweller; predator (NVB)	3
Niche; turkey vultures; carrion eater	3
Niche; white-tailed deer; herbivore	3
North American millipede	3
Osprey	3
Pangolin; structural adaptation (NVB)	3

<b>VISUAL</b>	<b>GO TO SCREEN</b>
Rabbit; structural adaptation	3
Rattan; tropical rainforest ecosystem; time lapse (NVB)	3
Road resurfacing using asphalt	4
Sea turtle; structural, behavioral adaptations	4
Shelter; crab digging hole	4
Shelter; robins in nest	4
Snakes; structural adaptation; camouflage	4
Spotted salamander; behavioral adaptation (NVB)	4
Venus's flytrap (NVB)	4
Vultures	4
Water movement within a watershed	4
Water pollution; garbage floating in water	4
Water; animals drinking	5
White-tailed deer	5
Wood, box turtles; structural adaptations compared (NVB)	5

# animations

▶ INSERT *the Virginia Ecosystems DVD*

▼ SELECT *Visuals a la Carte*

▼ SELECT *Animations*

VISUAL	GO TO SCREEN
Chesapeake Bay flyover and watershed region	1
VA watersheds emptying into Chesapeake, NC Sounds	1
VA watersheds emptying into three bodies of water	1
What is a watershed?	1