ABOUT THE EXHIBITION

The exhibition is divided into six sections. **The Living River** is an experiential space featuring an enlargement of Wade and Croome's *Hudson River Panorama*, contemporary artist Don Nice's Hudson River fish and contemporary photographs taken along the river. The **Community and Settlement** section includes images of people who have lived in our region over the past 400 years. That section is presented in a multi-media format viewable in the galleries. The other four sections: **Natural History and Environment**; **Transportation**; **Trade, Commerce and Industry**; and **Culture and Symbol** present the majority of the exhibition. The text that follows is drawn from those four sections and is offered here to be read by teachers and students.

NATURAL HISTORY AND ENVIRONMENT

The natural environment of the Hudson River is a series of complex, interlinking ecosystems that have been charted and studied for hundreds of years. Human settlement—first Native American and later European, African, and American—influenced and altered those natural systems. For more than a hundred years Hudson Valley residents have led efforts to restore and preserve the River's natural beauty and habitats for future generations.

NATURALISTS

In the late 18th century, the Hudson River Valley began to attract naturalists and scientists from Europe. They recorded the environment they found in detailed illustrations. During the 19th century, artists and print-makers produced images of the landscape for books and print editions. These images interpret natural history and make connections between science and art.

First Descriptions and Misconceptions

When Henry Hudson sailed up the river later named for him, he may have first believed he had discovered the passage to Asia he had set out to find. For three weeks, Hudson explored the river until his ship arrived just north of Albany. In his journal, first mate Robert Juet described the valley as filled with "great and tall Oakes…Grasse and Flowers, and goodly trees…Wal-nut trees, and Chestnut trees, Ewe trees, and trees of sweet…"

Many 17th-century Europeans illustrated maps of the New World with mythical beasts, leading to mistaken beliefs about the flora and fauna of North America.

First Views

Pictures of the landscape were almost unknown in America before 1800. Among the first were topographical views drawn by British military engineers. Among them, Captain Thomas Davies was distinguished for his technical skill. Captain John Montresor's map includes details of coastal harbors and military outposts. During the Revolutionary War, both the British and the Colonists used his highly regarded map. The most well known landscape artists in the region at this time were the Scottish émigré brothers Alexander and Archibald Robertson, who founded NYC's first art school, Columbia Academy.

Naturalists from Home and Abroad

In 1785, 15-year-old Francois Andre Michaux of Paris accompanied his father, Andre Michaux, a French diplomat and botanist, on an exploration of North American forests. In 1802 he returned to collect trees to help restore forests damaged in the French Revolution. Botanical artists Pancrace Bessa and Pierre Joseph Redouté illustrated Michaux's *North American Sylva*, first published in Paris in 1817.

French geographer and engineer Jacques Gerard Milbert toured the Hudson Valley in 1815 to collect plants. Milbert made drawings of most of the places he visited. Upon his return to Paris, he published these drawings as a set of 53 prints he called *Itinéraire Pittoresque* (Scenic Route). They are the most complete and accurate depictions of the northeast at the time.

In 1820, Amos Eaton, a botanist, geologist and co-founder of Rensselaer Polytechnic Institute in Troy published one of the first books on native plants and geology in America. Eaton's student, Ebenezer Emmons, a geologist and medical doctor, charted the geology of the region in 1824. Also influenced by Amos Eaton, John Torry, M.D., published *Flora of the State of New York* in 1843.

Artists as Naturalists

Although many 19th-century landscape painters produced imaginary compositions, others made sketches directly from nature. William Hart, a second-generation Hudson River School painter, believed artists should express feelings as well as accurate compositions. "Nature" he said, should "allow your picture to tell you what you feel."

Citizen Naturalists

In the collection rooms of natural science museums, drawers store neat rows of rare minerals, bird eggs, and insects. Some of the creatures no longer live on this continent. Amateur naturalists gathered many of these collections in the 19th century. Today we use the word "naturalist" to describe anyone who preserves and understands the environment.

EXPLORING THE SOURCE OF THE HUDSON RIVER

After several climbs up Mount Marcy in the Adirondack Mountains, Verplanck Colvin, a topographical engineer from Albany, discovered the source of the Hudson River in 1872. He described the lake as a "minute unpretending tear of the clouds...a lonely pool, shivering in the breezes of the mountains, and sending its limpid surplus through Feldspar Brook, to the Opalescent River, the well-spring of the Hudson."

Charting the Course

Thomas Davies is among the earliest known British officer-artists to record the mountains and lakes of the upper Hudson Valley. Trained in drawing and map-making, Davis recorded unique views of the Hudson and accounts of military campaigns, as well as maps of coasts and harbors.

Latitude N44.10679, Longitude W-73.9351

In the 1870s, those who were concerned with finding the source of the Hudson agreed that it was not the longest, but the highest tributary that defined the source. In addition to Lake Tear of the Clouds, Round Pond, Lake Avalanche, and Lake Colden were considered. An 1872 report to state legislators by Verplanck Colvin described Lake Tear of the Clouds with such eloquence that despite the controversy, the legislators decided to name it the official source.

ENVIRONMENTAL CONSCIOUSNESS

Early scientific observations and weather recordings from the Hudson Valley reveal a long-standing interest in the environment. These observations also reinforce the connection among all parts of the river; what happens in the Adirondacks affects the environment farther south. By the end of the 19th century, residents of the Hudson Valley began to protect the Hudson River and its surrounding valley from pollution and preserve its scenic beauty.

Recording the Environment

Weather directly affects such activities as farming and crop production, travel and shipping, home design and fashion. In the Hudson Valley, residents and tourists have observed, recorded, and forecasted the weather for centuries. These historical observations and meteorological recordings help us learn how the environment has changed over the past centuries.

Albany physician Jonathan Eights (1773-1848) recorded meteorological events and climatic change. Other Hudson Valley scientists constructed devices to monitor the environment, like surveyor Simeon DeWitt (1756-1834), who proposed a new design for a rain gauge, and instrument maker Joel W. Andrews, who made thermometers and hygrometers. Andrews used his instruments to estimate the altitudes of Vermont's Mount Equinox and New Hampshire's Mount Washington.

Preserving the Forests, Creating a Park

When Europeans first settled in the Hudson River Valley, the forests of the region seemed like an unlimited source of timber. But by the 1800s, the increased cutting of trees, especially along the upper Hudson River, led to empty fields, soil erosion, and other ecological problems.

In 1864, Vermont naturalist George Perkins Marsh published *Man and Nature*, a book that enlightened people's ideas about humankind's impact on nature. It linked deforestation with groundwater depletion and reduced water flow in streams and rivers.

Eight years after Marsh's book appeared, the NY Legislature hired the young Albany explorer Verplanck Colvin to lead a multi-year survey of the Adirondack region. Colvin saw the harmful effects of unregulated lumbering in the upper Hudson River watershed, and understood Marsh's warnings. He advocated for protection of the Adirondacks and his first success came on May 15, 1885, when the NY Legislature approved the Adirondack Forest Preserve. Greater protection for the Adirondacks came in 1892 after Glens Falls photographer Seneca Ray Stoddard presented to State Legislators an illuminated glass slide show featuring his Adirondack photographs. NY Governor Roswell P. Flower signed the Adirondack Park Bill ensuring that land owned by the State would be "forever kept as wild forest lands." Today, the Adirondack Park encompasses almost 6 million acres of land, nearly half of which belong to the State. It provides enjoyment and recreation for more than ten million visitors annually.

Saving the View

During the last decades of the 19th century, preservationist organizations and land protection legislation increased. Most efforts centered upon natural resource conservation, but the Hudson Valley's scenic beauty was also at stake. Quarrying activities along the cliffs of the Palisades, opposite upper Manhattan and Westchester County, created a movement to protect the natural landmark. In 1900, the States of NY and New Jersey created the Palisades Interstate Park Commission to preserve 13 miles of the Palisades.

As quarrying companies moved from the Palisades to the Hudson Highlands, preservationists turned their attention northward. The Hudson Fulton Celebration in 1909 heightened awareness of the Highland's scenery and historic sites. After failed attempts to establish a park, the NY Legislature voted in 1910 to extend the Palisades Interstate Park into the Hudson Highlands, creating the Bear Mountain-Harriman State Park.

Hudson Valley residents still make difficult choices between economic growth and scenic preservation. When the St. Lawrence Cement Company proposed building a new factory in Greenport in 1999, close to the historic homes of Hudson River School painters Frederic Edwin Church and Thomas Cole, residents and preservationists nationwide lobbied to protect the view. In 2005, NY's Department of State ruled against the cement plant.

Modern Environmentalism

The modern environmental movement took shape in the Hudson Valley in the 1960s. The movement combined earlier interests in preserving scenery with a commitment to stop industrial pollution and protect the threatened ecology of the river.

In 1962, Consolidated Edison proposed building a two-million-kilowatt hydroelectric plant at Storm King Mountain that many people opposed. Not only did it threaten to deface a natural and historic landmark, the intake system threatened spawning striped bass. Author and historian Carl Carmer and others formed the organization Scenic Hudson in November 1963 to oppose the power plant. After years of litigation, a settlement was reached in 1980. Consolidated Edison gave the land to the Palisades Interstate Park Commission and the town of Cornwall.

Other individuals and organizations galvanized environmental consciousness in the Valley. Folk musician Pete Seeger from Beacon, NY, first voiced his concern for the health of the Hudson in a 1961 song that began, "Sailing up my dirty stream." In 1969, he and friends built the replica sloop *Clearwater* to bring awareness of the need for a clean river. At the same time, the Hudson River Fishermen's Association began monitoring potential industrial polluters and established the post of "river keeper" in 1972.

The health of the Hudson River will continue to be watched as the Beacon Institute and IBM work to develop the River and Estuary Observatory Network (REON). The system will ensure the river's protection for future generations.

THERE AND GONE: THE EVER-CHANGING SHAPE OF THE RIVER

The natural cycles of seasonal change and geological transformation have altered the shape of the Hudson River. Islands and sand shoals have appeared and shifted with the flow of the water, as have the River's banks. Dramatic changes to the Hudson River followed in the wake of European settlement – dredging shipping channels, building docks and wharves, constructing dams. Early maps and drawings show a landscape different from what we know today.

Disappearing Islands

Human intervention and natural processes have caused some Hudson River islands to disappear, especially near Albany and Troy. Van Rensselaer's Island, directly across from Albany, once offered a great view of the capital city. Before bridges spanned the river, the island was also the site of a ferry launch. The northern half of the island contained a mixture of private residences and small factories built on land once belonging to the Vischer family. Van Rensselaer's Island disappeared during the early 20th century as the channel separating the island from the east bank was filled.

A similar fate happened to Park Island, also known as Island Park. The island sat near the west bank of the Hudson River about halfway between Albany and Troy. In 1865, the Albany County Agricultural Society held its annual fair on the island, and a year later railroad magnate Erastus Corning built a race track there. A new clubhouse was built in 1885, the same year the Albany Bicycle Club hosted it races on the island. Neither the island nor the park survives today, victims of waterfront development and the I-787 highway.

Shaping the River

For centuries, human beings have shaped and altered the Hudson River to improve navigation, commerce and industry, and provide recreation opportunities. Notable changes occurred on the upper Hudson River between Albany and Coxsackie, where sandbars made navigation dangerous. During the 1830s, dikes confined the current and kept the main channel open. In 1863 NY State approved a series of repairs, dredging and channel straightening, later taken over by the Federal government.

In the early 20th century, urban reformers proposed beautification changes to Albany's waterfront. On April 23, 1912, Mayor James B. McEwan requested Albany architect Arnold Brunner "to prepare studies for the improvement of the city," especially the area along the Hudson River. Much of the waterfront belonged to commercial businesses and manufacturers. When Brunner declared, "the devastating ugliness of the old water front can no longer be endured," he voiced a rising opinion that the river's edge should serve the community and not only the interests of the individual or corporation. Only some of Brunner's recommendations were adopted.

The construction of Interstate highway 787 between Albany and Watervliet further straightened the river's west bank and brought more than 200 acres of land into public ownership. Much of the land is now the Corning Preserve, designed with recreational trails and boat launches.

CULTIVATING THE HUDSON VALLEY

The earliest cultivators were Native Americans who raised crops such as corn, beans, and squash along the banks of the Hudson River. When Europeans arrived in the early 17th century they brought a variety of new plants and animals to the Hudson Valley. Over the years, fertile farmlands were cultivated on both sides of the river. Today, people are interested in locally made and raised produce such as cheese, honey, and wine, which are sold at farmers' markets, specialty suppliers and local shops.

Early Cultivators

Recent archaeological evidence found on Pap-scan-ee Island just south of Albany revealed a seasonal riverside Mahican camp with small bark houses used for farming and fishing. Archaeologists found the remains of raspberry and elderberry seeds, corn kernels and cob fragments, sturgeon, freshwater mussels and white-tailed deer.

In 1678 Marte Gerretse van Bergen bought 35,000 acres of land near Catskill from Native Americans. Fifty years later, van Bergen's sons established a prosperous farm. When the Swedish Finn naturalist, Peter Kalm (1716-1779) arrived in Albany in 1749 he commented on the cultivated lands in and around the city and noted the abundance of apple trees, corn, wheat, rye, peas, potatoes and grapes.

The Society for the Promotion of Arts, Agriculture and Manufacturers

Founded in 1791, Albany Institute of History & Art traces its origins to the first agricultural organization in NY, the Society for the Promotion of Arts, Agriculture and Manufacturers. The organization was founded to improve the state's economy and ensure the welfare of its citizens through advances in agricultural methods. Papers by members including John Jay, George Clinton, Chancellor Robert R. Livingston, Jr. and Simeon DeWitt were published annually.

The Society emphasized agricultural achievements and offered prizes for the most useful discoveries. Its role in agricultural promotion shifted when the State established the Board of Agriculture in 1819.

Jesse Buel: Reformer and Educator

"To Improve the Soil and the Mind" was the motto of Jesse Buel, one of 19th century NY's strongest agricultural advocates. As Secretary of the Board of Agriculture, Buel knew about practical farming issues and was determined to develop a college for teaching farmers the best scientific practices. A printer by trade, he bought 85 acres in the Sandy Barrens west of Albany and established the Albany Nursery. Using scientific methods—drainage, deep plowing, well-bred livestock, manure for fertilizer—Buel transformed the Pine Barrens into an agricultural paradise.

In Albany in 1834, Buel began publishing, *The Cultivator*, *A Monthly Journal devoted to Agriculture, Horticulture, Floriculture and to Domestic and Rural Economy*; it became most the popular farm journal in America. Illustrated articles ranged from soil improvements to the management of bees and how to skin a cow. In 1841, the Board of Agriculture appropriated money to begin a NY State Fair, including a system for awarding prizes, a tradition that continues today.

Cattle on the Hoof and Canned Hams

Beginning in the 1850s Albany became one of the largest wholesale cattle markets in the country. Cattle were brought by train to the stockyards for watering and feeding before boarding trains to NYC or New England. Before the construction of the railroad bridge in 1866, cattle swam across the Hudson River in summer and walked across the frozen river in winter.

With the invention of refrigerated railroad cars, entrepreneurs opened meatpacking companies. One of the best known companies in the region, Albany Packing Company, later called Tobin Packing Co., Inc., made "First Prize" products including hams, sausage and lard until the 1980s.

Cultivating the Valley Today

The Hudson Valley is known for its orchards, wineries, maple syrup, breads and cheeses. Most growers rely on the arrival of migrant workers from Mexico, Jamaica, and South America to harvest the crops from July to October.

The Menands Markets and the Troy Waterfront Framer's Market offer an array of produce and goods created by growers, bakers, chefs, and other artisans. This growing interest in producing and buying locally grown and made products supports a healthy regional food system and the local economy.

Also popular are Community Supported Agriculture projects known as CSAs. These are membership organizations whereby families pay local farmers in advance for fresh produce throughout the season.

TRANSPORTATION

The Hudson River and the surrounding valley have functioned as natural conduits, conveying people, goods, and ideas. They have also fueled transportation revolutions, including steam-powered boats, railroads, automobile highways, and airports, and have broadened the reach of the Hudson River deep into the United States and Canada. For a system offering such opportunities for movement, the Hudson River has also posed barriers not easily crossed.

RIVER TRAVEL

Migratory Native American tribes used the river as a resource and passageway for centuries before Henry Hudson's travels. During the 18th century, settlers and traders sailed the natural water "highway," between NYC and Albany. After 1807, steam powered boats allowed swift and reliable transportation. The river became a popular destination for fleets of elegant "palace steamers" for tourists from all over the world—then a "doorway" to the Western territories via the canals—and a "playground" for adventure, racing, and leisure. Many have recognized that the beauty and history of the Hudson River Valley is best understood from the vantage point of the river itself.

Quiet Waters

Throughout the 17th and 18th centuries, the river's broad undisturbed waters flowed between almost silent wooded banks. The passage of a solitary boat seemed an event. When the first European explorers sailed into NY harbor, they encountered Native peoples, descendents of ancient civilizations living in migratory communities. These people were the river's first travelers.

Early accounts of Henry Hudson's 1609 voyage describe hospitable Indians approaching the European's ship in dugout canoes filled with oysters and beans. The canoes were made of the light wood of the tulip tree, abundant on the banks of the river.

To make the canoes, the trunks were first slowly burnt away at the base, felled with stone axes, then hollowed with fire and stone chisels. Dutch colonists who traded with the Indians called the tulip tree "canoe-wood."

Journeyed River

As settlement in the Hudson Valley increased during the 18th and early 19th centuries, the river became a vital route between NYC and Albany. Sailboats, including schooners, frigates, and sloops helped establish trade, transportation, and defense. These wind-powered vessels moved unpredictably on the Hudson, frequently stalled by unfavorable currents or shoals in the upper regions.

In 1807, Robert Fulton's maiden voyage of the *North River* steamboat inaugurated steam-powered transport as a quick, reliable alternative. Fulton's steamboat monopoly on the Hudson was opposed by the sloop captains and independent steamboat operators. In 1824, Chief Justice John Marshall of the U.S. Supreme Court declared the monopoly unconstitutional, opening competition to new steamboat companies and ferry and towboat operations. By mid-century, Albany Basin was a major hub of river traffic. Boat design increased capacity for cargo, passengers, amenities, and safety. One hundred years after the advent of the steam engine, the use of cars, trucks, railroads and airplanes overshadowed river travel.

Sports and Leisure

New Yorkers used rowboats as personal transportation for many years on the Hudson before competitive rowing began in the mid 19th century. Races organized by competitive clubs attracted large crowds and gambling. Cash prizes and trophies were awarded to the winners. In 1790 the first iceboat was used for transportation on the frozen Hudson River and by 1861, the first ice yacht club began in Poughkeepsie. Ice boats reached lengths of 30 to 50 feet and were transported between sites on rail cars. Depending on the design and classification, today's ice boats reach speeds of 60 to 100 miles per hour.

Current Travel

Slow-speed barges continue to provide economical transport for commercial bulk cargoes on the Hudson. Keeping with the maritime heritage of the river, sightseeing tour boats offer daily journeys from early spring through late fall. Several NY State parks, clubs, and businesses offer opportunities for outrigger canoeing, rowing, sailing, rafting, ice sailing and kayaking. Public awareness and improved river access have renewed interest in traditional small craft for residents and visitors to the Hudson Valley.

CANALS

The concept for a canal linking the Hudson River to the interior of the continent originated in the 18th century. By 1825, the Erie Canal was complete as were canals linking the Hudson River to Lake Champlain and the coal fields of north-eastern Pennsylvania. These artificial extensions of the Hudson River opened the

western and northern parts of the country for trade and settlement, and allowed cities like Albany and NY to prosper. Today, the Erie Barge Canal still offers opportunities for commerce, recreation, and tourism.

Setting the Course

Following the Revolution, Americans surveyed and mapped the lands to the west to find ways to travel and link western products to east coast markets.

In 1784, a young surveyor named Simeon DeWitt accepted the appointment of Surveyor General for NY State, a position he held throughout his life. DeWitt surveyed much of NY by the late 1790s and began preparing a map of the State. The first edition, published in 1802 measured 4 x 12 feet, a smaller version followed in 1804.

The Western Inland Lock Navigation Company was organized in 1792 with the purpose of improving navigation along the Mohawk River for regional farmers. Although the company constructed only 2 miles of canal by 1800, it stirred interest in a larger canal project. In 1808, DeWitt began to survey waterways between the Hudson River and Lake Erie for a canal. Two years later the Legislature provided $3000 for a board of canal commissioners (including DeWitt and his cousin DeWitt Clinton) to begin building a canal; construction officially began in 1817.

Meeting of the Waters

When completed in 1825, the Erie Canal was an engineering marvel. It extended the reach of the Hudson River and connected interior communities with NYC. Spanning 363 miles across NY, the canal originally included 18 aqueducts, and 83 locks to raise and lower boats the 680 feet difference in altitude between the Hudson River at Albany and Lake Erie at Buffalo.

To celebrate the opening, communities along the canal held festivities. In NYC in October of 1825 the celebrations included fireworks and a parade. Governor DeWitt Clinton, proponent of the canal, emptied a barrel of Lake Erie water into the Atlantic Ocean at Sandy Hook, a symbolic mingling of the waters.

Although traveling at only 4 miles per hour, mule or horse-drawn canal boats opened towns throughout western NY to commerce, tourism, and immigrants. Communities such as Syracuse and Rochester prospered, while the falls at Niagara received thousands of tourists each year.

The Erie Barge Canal

The Erie Canal prospered as a transportation system until the late 19th century. Attempts were made to revitalize the waterway by eliminating tolls in 1882 and enlarging the canal. The first rebuilding was completed in 1862, but by the end of the century additional changes were needed to accommodate larger barges with deeper drafts. Work began on the Erie Barge Canal in 1905 and took ten years to complete. Much of today's canal dates from this second rebuilding.

The original Erie Canal had a bottom width of 20 feet and a depth of 4 feet. The new Barge Canal had a bottom width of 75 feet in the main channels and a depth of 12 feet. Locks were rebuilt and two reservoirs constructed to provide adequate water supply for the eastern section. Unfortunately, the Barge Canal could not compete with railroads and the highway system of the post-World War II era.

Today, the Erie Barge Canal serves mainly pleasure boaters and tourists. A 348-mile-long Canal Way Trail opens the historic waterway to hikers, bicyclists, cross-country skiers, and sightseers.

PARALLEL TRANSPORT

The Hudson River is a natural highway for transporting goods, people, and ideas. The earliest man-made roads took advantage of the level access along the river banks and the hundreds of wharves servicing cities, towns and estates. Faster modes of transportation such as steamboats increased demand for the number and quality of parallel roads. By the 1850s, a complex system of railroads provided even faster and more efficient transportation. The 20th century brought the automobile, the construction of super highways, bridges, and airports. Another significant parallel transport, the "Underground Railroad," guided African-Americans to freedom during the mid 19th century.

Roads, Turnpikes and Superhighways

Early roads originated as paths and later became military roads, plank roads, and paved roads. By the late 18th century turnpikes built by private companies charged tolls for people, wagons, sleighs, carriages, and all livestock. With the ever-increasing number of people traveling between NYC and Albany, and beyond, the demand for roads and services such as stables, hotels and restaurants expanded. The development of the automobile in the early 20th century led to the construction of bridges and tunnels and superhighways such as Thomas E. Dewey Thruway, which opened in 1950, and the Taconic State Parkway, begun in 1924 and completed in 1963. Like the early turnpikes, toll roads continue today, though with new technology travelers can save time and money by using EZ-Pass.

Railroads

In 1831, the world's first steam passenger train made its inaugural trip from Albany to Schenectady in one hour and 45 minutes. Its route eventually joined many other lines to form the NY Central Railroad Company. The NY Central Railroad, Hudson River Railroad, and the Delaware & Hudson Rail & Steamer lines serviced the Hudson River Valley for over 100 years. These trains guaranteed travelers speed and luxury, transported goods and employed thousands of people. The largest private employer of black labor in the U.S. by the 1920s, the Pullman Company provided African-Americans stable jobs as waiters and porters on train lines including the NY Central.

Among the best known trains was the *Empire State Express* or the 999, which set the world's land speed record in 1893 by traveling 112 ½ miles per hour. Other popular trains were the *Commodore Vanderbilt*, the *20th Century Limited* and the *Lake Shore Limited,* which still operates today.

In 1971, faced with the collapse of passenger railroads, the U.S. created Amtrak (a blending of the words American and track), a government-owned and subsidized organization, to provide intercity passenger train service. Today passenger trains travel on the east side of the river and freight trains on the west side.

20th Century Limited

The *20th Century Limited* was the most celebrated passenger train in the country. Operated by the New York Central Railroad between 1902 and 1967, it ran between NYC and Chicago. In 1938 industrial designer Henry Dreyfuss redesigned the interior and exterior of the train to reflect the elegant, streamlined Art Deco style fashionable at the time. Dreyfuss incorporated the New York Central's colors (blue and gray), designing almost everything, the engine, the furniture, the place settings and the matchbooks.

Air Travel

In 1928 Albany provided the first municipal landing site in the country, and by 1930 was the "aerial crossroads" of the Northeast. Many early aviators including Charles Lindbergh and Amelia Earhart knew the airport. In 1927 a $10,000 "World Prize" was offered for the first sustained flight between NY and Albany. The winner, aviator Glenn H. Curtiss, began his flight in Albany in a biplane he called the "Albany Flyer."

Underground Railroad

The Hudson River Valley, with its network of roads, railroads and canals, played a significant role in the Underground Railroad. Key stations included Philadelphia, NYC, Albany, Troy, and Rochester. One of the principal figures of the movement in Albany, Stephen Myers, was born a slave in Rensselaer County. After his emancipation in 1827, Myers became an abolitionist, eloquent public speaker, lobbyist, and journalist. He was associated with at least two abolitionist newspapers published in Albany in the 1840s: *The Northern Star* and *The Freeman's Advocate*. Myers and his wife Harriet worked closely with other former slaves including Harriet Tubman, Sojourner Truth, Frederick Douglass, and Dr. William Henry Johnson.

FROM BANK TO BANK: CROSSING THE HUDSON RIVER

While the Hudson River provided excellent north-south travel opportunities, crossing the river from east side to west side was critically important for settlers in the Hudson Valley. Canoes, rafts, boats and ferries linked the east and west banks during the warmer months: when the river froze in winter, people used sleighs, skates, or walked. Today 18 bridges and two tunnels connect the east and west banks of the Hudson River between NYC and Troy. In Poughkeepsie, a former railroad bridge built in 1888 will become the longest pedestrian bridge in the world in 2009.

"General Washington's Watch Chain" or Hudson River Blockade

During the Revolutionary war both General George Washington and the British General William Howe recognized the immense value of controlling the Hudson River. With this in mind, Washington charged the Polish engineer, Colonel Thaddeus Kosciusko, to design and build the citadel at West Point. When the fort was completed, 60 cannons were pointed at the river. In 1778, a massive iron chain was stretched between West Point and Constitution Island in an attempt to block British warships from sailing to Albany.

This massive chain, made of 1,200 links, was 1,700 feet long, weighed 65 tons and took 40 men four days to install. Though it was never tested by British warships, West Point Cadets recently created a computer model that determined the chain would not have held back a ship. Over the years reproductions of the chain links were made and sold. In 1824, Charles R. Webster, publisher of the *Albany Gazette*, donated one of the original 1778 links to the Albany Institute. Today, a ring of 13 original links, representing the 13 colonies, is a popular tourist site on the grounds of West Point.

Summer Crossings: Boats and Ferries

One of the earliest documented ferry services in the country was a rowboat operated in 1642 between Albany and East Greenbush. Scows were poled by hand, often with guide ropes. Larger flat-bottom boats, or bateaus, were used to transport teams of horses, wagons and other goods. By the 1830s horse-powered ferry boats became popular, followed by steam ferries ten years later. By 1900, more than 30 scheduled ferries services operated on the river between NYC and Troy.

Winter Crossings: Sleighs and Skating

Ice formed regularly on the Hudson until the 1930s, when channels were dredged for year-round operation. A frozen river provided many opportunities to cross from one side to another. People walked or skated across, but one of the fastest and most popular was by horse-drawn sleigh. The popular *Albany Sleigh*, manufactured by James Goold & Co., was well known throughout this country and in Europe.

Bridges and Tunnels

A wooden railroad bridge built in 1832 at Troy by the Saratoga and Rensselaer Railroad was the first bridge to span the Hudson River. The railroad bridge at Albany opened in 1866; its iron double track was 2,025 feet long. Another railroad bridge south of Albany, the Alfred E. Smith Memorial Bridge at Castleton-on-Hudson, opened in 1923.

Increased automobile traffic led to the construction of bridges and tunnels in the 20th century. The earliest modern bridge for cars, the Bear Mountain Bridge, was at the time the largest suspension bridge in the world. The Holland Tunnel opened in 1927, followed by the Lincoln Tunnel ten years later.

TRADE, COMMERCE AND INDUSTRY

Consumer goods from around the world have flowed into the Hudson Valley on the River and along its banks. Products such as Chinese porcelain, Indian cotton cloth, and German automobiles create a cosmopolitan market. Trade and commercial interactions have also connected people, art, and design from diverse cultures. Hudson Valley industries and farms have likewise filled distant markets with industrial and consumer products, bringing economic benefit to the region.

IMPORTING THE WORLD

Before the arrival of Europeans, the Native inhabitants of the Hudson Valley traded for materials from outside the region. Europeans broadened the network by importing products from Europe, Asia, and other parts of the globe. Dutch and German ceramics have been excavated at sites of early forts and villages. Trade with China brought porcelains, tea, and silk cloth. International trade also opened the Hudson Valley to foreign styles, ideas, and beliefs. The Port of Albany continues to connect the region to the world.

New World Encounters Old

The arrival of the Dutch in the Hudson Valley in 1609 initiated a long and complex relationship between Native Americans and Europeans. A network of trade connections and military conquests joined tribes with European colonizers; the Huron and French became allies, as did the Iroquois and British. Food, tobacco, cloth, metal objects and land were among the earliest commodities of exchange. The fashion for furs in Europe and the great quantity of beaver and other fur-bearing animals provided Native Americans with a trade product that was highly sought by Europeans, and later Americans.

Traditional wampum beads made from clamshells served as mediums of exchange and symbols of friendship. When four Indian chiefs were invited to England in 1710 to reinforce political alliances, they presented Queen Anne with wampum. By the middle of the 1700s, silver medals, armbands, and jewelry became important trade goods.

After the American Revolution, most Northeast Native American tribes were located onto land reserves or pushed west, yet cultural and commercial interactions continued. Northeast Natives frequently sold baskets town to town, and beaded bags and birch bark souvenirs at fairs and resort destinations like Saratoga Springs. The production of Indian arts keeps alive cultural exchange in the 21st century and preserves age-old traditions and customs.

Goods from Around the World

For 400 years, the Hudson River has connected the people of the valley to the world beyond America's shores. At the site of Fort Orange in south Albany, archeological evidence shows that 17th century Dutch soldiers and traders drank from Dutch ceramic cups and poured their beer from German stoneware jugs. The 1695 will of

Albany resident Margaret Van Varick lists "1 China cupp bound with silver." By 1800, some families owned complete tea and dinner sets from China, some arriving on the small Albany sloop *Experiment*, which set sail for China in 1785 and returned 18 months later loaded with porcelain, tea, and silk cloth.

The Industrial Revolution in England transformed British potteries into manufacturing powerhouses. Staffordshire potters produced in such large quantities that British earthenware ceramics were affordable and available throughout the Hudson Valley. Shelves in today's stores are stocked with imported beverages and ceramics, maintaining the Hudson Valley's enduring connection to the world.

Importing Style

Along with products and people, the Hudson River has moved ideas and information, style and design trends. An interest in ancient Greek and Roman art, architecture, and culture, fueled by excavations at the Italian sites of Pompeii and Herculaneum, filtered into America from Europe during the late 18th and early 19th centuries giving birth to the "neoclassical" style. Tourists, artists, merchants, and immigrants brought this style to the Hudson Valley in home furnishings, artwork, and fashion.

In 1813, Stephen Van Rensselaer IV of Albany traveled through France, returning home with an ornate neoclassical clock. Four years later, he and his new bride, Harriet Bayard, received neoclassical furniture made by French emigrant cabinetmaker Charles-Honoré Lannuier of NY. Harriet's sister, Maria, received similar furniture made by Lannuier. The most prominent feature of the neoclassical style was the white cotton dress, resembling the ancient Greek chiton. The style was favored by nearly all women in the early 1800s.

The opening of Japan as a trading center in 1853 introduced Japanese arts and culture to the Western world, creating great interest in all things Japanese. Albany lawyer Robert Hewson Pruyn, appointed second minister to Japan in 1861 by Abraham Lincoln, sent home prints and photographs of Japanese buildings. These photographs are among the first images of Japan to be seen by Americans. By the 1870s and 1880s, Japanese parasols, fans, screens, and ceramics commonly appeared in American homes.

Wharves and Port

The Hudson River waterfront has been a zone of commercial activity since the early 17th century. Its wharves, docks, and ports have facilitated the shipment of goods and people from river to land and back and housed warehouses and commercial activity.

In 1794, the proprietors of Albany's wharves formed a joint stock company to care for upkeep and to collect duties legislated by the city. The wharves originally extended from the middle of Maiden Lane to the north side of State Street. President Calvin Coolidge helped transform Albany's waterfront in 1924 by signing legislation to dredge the Hudson River for ocean-going ships. Later that year he created the Albany Port District Commission and construction on Albany's port began in April 1926. On

June 7, 1932, Governor Franklin Delano Roosevelt dedicated the $18,000,000 project, which included warehouses, grain storage, rail connections, wharves, and a deepwater shipping channel. In 2007, the Port handled over 760,000 tons of goods including windmill blades, pipe, grain, and molasses.

EXPORTING THE VALLEY

The Hudson Valley has been a manufacturing powerhouse for hundreds of years, producing goods and consumer products for use locally and around the world. Its prominence has arisen from a wealth of natural resources, significant sources of power, critical transportation connections, and an enterprising and persevering labor force. At the beginning of the 21st century, the Hudson Valley has become a center of technology, securing the title "Tech Valley."

Textiles

The juncture of the Mohawk and Hudson Rivers became an ideal location for factories in the early 19th century; Cohoes Falls supplied the water power to operate equipment. In 1825, Stephen Van Rensselaer III and Canvass White founded the Cohoes Company, which bought rights to power from the falls. Within ten years the company was selling water power and mill privileges.

Water powered dozens of textile mills and machine shops in Cohoes. The Harmony Company, founded in 1837, became the largest cotton textile mill in the world by the 1870s. It used 250,000 pounds of cotton per week to produce 1,256,000 yards of cloth in 1872, and employed nearly 4,000 workers, more than 2,500 were women. Immigrants from Ireland and French Canada figured prominently on the employee rolls; many lived in tenement houses constructed near the mills.

Across the river in Troy, Ebenezer Brown opened a small factory to make detachable collars in 1829. The industry grew to such importance that Troy became known as the "Collar City." In 1893, the *North American Review* remarked, "All the really well dressed people you meet wear Troy collars, cuffs and shirts." 1n 1910, 17,000,000 collars were made in the city. As detachable collars declined in fashion, the Cluett, Peabody Company transitioned to making shirts, remaining in Troy until 1990.

Iron

Throughout the 19th century iron foundries in the Hudson Valley, from Manhattan to Lake Sanford, produced great quantities of iron goods. Raw materials were locally available – iron ore, limestone for flux, forests for charcoal, casting sand from Albany, and waterfalls to power furnace bellows.

In 1818, the West Point Foundry Association began casting armaments in Cold Spring. It was one of four foundries subsidized by the U.S. government. By the time of the Civil War, the foundry employed 1,400 men. In addition to armaments, it cast garden benches, pipe and equipment for sugar mills in the West Indies.

Farther north, Scottish immigrant Henry Burden established his own foundry in Troy. By 1835, Burden patented a machine to cast horseshoes — eventually casting one horseshoe per second. Also in Troy, the Rensselaer Iron Foundry produced the iron panels for the *Monitor*, the first U.S. ironclad ship used in the Civil War. Albany and Troy were also centers for cast iron stove manufacturing. Foundry owners like Joel Rathbone used the fine casting sand from the region to produce stoves that were both useful and beautiful.

The development of steel in the later 19th century led to decline of Hudson Valley iron. Only a few foundries remained into the 20th century, such as the Albany Foundry, which specialized in small decorative items such as bookends and doorstops.

Building Materials

Glacial deposits of clay and lime from a vast inland sea have made the Hudson River Valley an important center for brick and cement making. Stone and marble quarries at Peekskill and Sing-Sing, also supplied the building trades. NYC's great need for building materials fueled many of these industries well into the 20th century.

Hudson Valley brick making began in the 17th century with the Dutch, who brought to NY their preference for brick houses. By the 19th century, brickyards flourished, especially in Haverstraw because of its blue clay deposits. In 1852, Haverstraw resident Richard Ver Valen developed a packing machine that firmly pressed clay into molds. This invention smoothed the progress of brick production and 41 brick manufacturers were operating in Haverstraw by the end of the century, making 325 million bricks per year. Brick factories stretched north from Haverstraw to Saugerties, Coeymans, Castleton, and Mechanicville.

Kilns to burn lime for mortar and cement lined the Hudson River by the middle of the 19th century. The Newark Lime and Cement Manufacturing Company was one of several that thrived around Kingston. It initially quarried limestone from its Rondout mine for a factory in Newark, but from 1851 to 1929, it also manufactured cement in Rondout.

Brewing

Brewing beer was one of the earliest industries in the Hudson Valley. In 1632, the Dutch patroon Kiliaen Van Rensselaer wrote: "as soon as there is a supply of grain on hand, I intend to erect a brewery to provide all New Netherland with beer." Brewing began in Beverwyck, (Albany) the following year and continued on a small scale until the 1800s.

When Thomas McKenney, U. S. Superintendent of Indian Affairs, passed through Albany in 1826, he noticed the prominence of breweries, which produced nearly $200,000 worth of beer. Around the same time, John Taylor, an English immigrant, established what became the largest brewery in the U.S. In 1825, a local newspaper reported the Taylor brewery produced 250 barrels of beer a day. Even the accusations

of prohibitionist Edward C. Delavan, owner of Delavan's hotel, that Taylor used contaminated water, did not stop the growth of his business; Taylor's operated until 1910.

Other breweries opened in the region, including the Quinn and Nolan Brewery, established in 1866. It initially brewed English-style ales and porters, but in 1878 the company opened Beverwyck Brewery, which specialized in German lager, a response to the increase of German immigrants. Beverwyck and Hedrick's Breweries were two that survived prohibition in the 1920s. Beverwyck was eventually bought by Schaefer in 1950, and Hedrick's closed in 1965.

In the late 20th century, the opening of small microbreweries initiated a brewing revival. Today, microbreweries handcraft high-quality brews in limited quantities.

Nanotechnology

Working at the scale of 1/1,000,000,000 of a meter, nanoscale technology is the science of managing and manipulating matter at the atomic level in order to create products and systems that better our world.

The College of Nanoscale Science and Engineering (CNSE) of the University of Albany-SUNY, a $4.5 billion, 450,000-square-foot complex, is a key component in this technological revolution. Established in 2001, CNSE began as a combined vision of government, academia, and industry, with a common goal to propel NY State to a leadership position in technology and economic development. The College offers academic programs with the advantage of working with top industries in research and development. The facility also houses the only fully-integrated 300mm (12-inch) silicon wafer prototyping and demonstration line, which is state of the art in the nanoelectronics industry.

Products such as electronic semiconductors that speed the flow and processing of information and nano biochips that detect disease and monitor treatment exist because of nanotechnology. The science allows manufacturers to build better and more durable products, such as L.L. Bean's stain-repellent "Double L Chinos." Nanotechnology also enhances our leisure time and sports activities by making possible iPods, cell phones, and more responsive golf balls.

RIVER AS PRODUCT: ICE HARVESTING

Ice harvesting from the Hudson River, nearby ponds, lakes and canals was a major industry from about 1860 until 1910. Hudson River natural ice sold locally in NYC and as far away as India and China. As faster transportation systems and more reliable refrigeration developed, the demand for natural ice increased to service the growing market for fresh produce, meat, and dairy products. Refrigeration also significantly changed the type and quantity of fresh food available and enabled some industries such as brewing and meat-packing to operate year-round.

Ice Harvesting on the Hudson River

In 1880, 135 ice houses dotted the banks of the Hudson River; 30 years later there were almost 200. At the height of the natural ice industry over 20,000 men were employed seasonally along with 1,000 horses. Ice was harvested between January and early March. Depending on weather, the labor force and equipment, a large ice house could be filled in 10 to 20 days. Specialized tools and machinery aided the harvest. Snow plows or scrapers removed the snow; ice markers, cutters and saws cut the ice; and ice hooks, chisels, and hoisting-tongs moved the ice. Special steel spikes called ice creepers helped the workers and horses walk on the slippery surface.

A horse-pulled "shine" sled driven by a "shine" boy was responsible for picking up the horse droppings (manure) called "diamonds." A quick scraping of the ice followed by a dose of formaldehyde helped to "purify" the ice. In the ice house, sawdust-covered ice could last for up to three years.

Some ice harvesting operations were small, but others built massive ice houses equivalent in size to a 6-story building and used elevators or pulley systems to transport the blocks or cakes of ice into the house for storage and later removal. Many of the huge ice houses, made of wood, burned or were later used for growing mushrooms.

Refrigeration

The use of ice or snow for food preservation and cooling dates back to the Greeks and Romans. In colonial times, ice houses filled with large blocks of ice and insulated with salt hay were common in both rural and urban areas. During this time ice was used sparingly to cool dairy products and beverages. One method used to chill wine glasses was a Monteith; made of silver or ceramic, this bowl with its distinctive indented rims held the stems, keeping the bowls of the glasses suspended in ice or chilled water.

In 1793, a Maryland farmer obtained a patent for an ice box to transport butter to his customers. Since then a variety of large and small ice box or refrigerator designs have been developed. Most, made of wood, had a wall of insulation filled with charcoal, cork, flax or wool with an interior lining made of zinc, slate, porcelain or galvanized metal. A block of ice would last a day or two and water from the melting ice drained into a pan to be emptied or piped outside. Ice men delivered the goods by horse and wagon. By 1915 the electric or gas-powered refrigerator made its debut, manufactured by Frigidaire, General Electric, and other firms.

FISH TALES

Scientists have identified 210 species of fish in the Hudson River. A tidal estuary, the Hudson River has an ever-changing mix of salty ocean water and fresh water. It is among the most productive ecosystems on the planet. Salt tides reach as far north as Poughkeepsie. Both marine and fresh water species live in the river. For thousands of years people living along the river have fished from the Hudson River and its tributaries for food. Sturgeon, shad and striped bass have been important to commercial and sport fishing. Another significant but short-lived industry was whaling, established by an enterprising group of Nantucket whalers in the City of Hudson.

Fish in Abundance

On September 15, 1609, Robert Juet, Henry Hudson's first mate on the ship, *Half Moon*, recorded in his journal that "the river was full of fish." Twelve days later Juet wrote that after fishing for an hour 24 or 25 fish were caught including "mullets, breams, basses and barbils." Among other early unusual eyewitness accounts was Adriaen van der Donck's sighting of several whales near Troy, in 1647. Porpoises and dolphins were also recorded just south of Albany until the 19th century. Notable "marine strays" include sharks, skates, conger eels and Atlantic cod. Common year-round or seasonal fish include bass, perch, bluefish, shad, sturgeon, herring, carp, needle-fish, golden shiners, darters, tomcod and sunfish.

Albany Beef: A Sturgeon's Story

The sea-going Atlantic sturgeon is the largest fish found in the Hudson River. Of prehistoric origins, this fish has distinctive armored bony plates and can weigh up to 800 pounds with a length of 14 feet. Sturgeons are bottom feeders and use sensitive, whisker-like barbels on the underside of their snouts to find food—chiefly worms, insects, crustaceans, and small fish that are sucked up in their tube-like mouths.

Atlantic sturgeons were once so large and plentiful in the Hudson River that early 19th-century Albanians referred to the fish as "Albany Beef." To protect this fish, a 40-year sturgeon fishing suspension was declared by Atlantic coast states from Maine to Florida in 1998. Today, the distinctive image of the Atlantic sturgeon serves as the logo for the NY State Department of Environmental Conservation's Hudson River Estuary Program.

Commercial Fishing

Shad fishing is one of the oldest traditional industries found in the Hudson Valley. Each spring shad leave the Atlantic Ocean to spawn in the Hudson River. Its scientific name is *Alosa sapidissima* meaning "shad most delicious."

Plans are underway to impose greater regulations on commercial shad fishing in the Hudson to help preserve the species for future generations. Over the years dam construction, channel dredging, pollutants and increased fishing efficiency have severely reduced the amount of all fish in the River.

Sport Fishing

In fly-fishing, fish are caught using artificial flies created by tying natural fur and feathers, or synthetic materials, onto a hook with thread. These flies are tied in sizes, colors and patterns to match local insects, baitfish or other prey attractive to the particular sought-after species.

The Hudson River has provided many sport-fishing opportunities for recreation and competition. The fly fisherman and writer Theodore Gordon (1854–1915) was instrumental in establishing a selection of American flies for the Catskills. Gordon and others led a campaign to designate the Catskills as the Birthplace of American

Fly Fishing. Other popular sport fishing opportunities include annual trout and bass fishing tournaments and derbies.

Today, one of the top game fish in the Hudson River is striped bass. Like the American Shad, each spring the Atlantic Striped Bass swim up the Hudson as far as Troy, attracting anglers from around the world. These hard-fighting fish can weigh up to 40 pounds. In 1976 a commercial ban on striped bass fishing was imposed because of high levels of industrial chemicals linked to cancer. While the pollution levels have decreased significantly, new regulations adopted in 2008 limit the commercial and sport harvest to help protect the fish and consumers.

Whaling Industry on the Hudson

In 1783, a group of Quaker whalers known as the "Nantucket Navigators" sailed up the Hudson looking for a new whaling port. They wanted to avoid paying the tariffs imposed by the British for whale oil. As the demand for whale oil and blubber for lamps, candle wax and lubrication for machinery grew, so did the use of baleen (whalebone) for corsets stays, hoop-skirts, umbrella and parasol ribbing, and fishing rods. The city of Hudson became the most successful whaling port on the Hudson, although whaling companies also thrived in Poughkeepsie and Newburgh.

Romance of the Sea

In 1829 Alonzo Wheeler, a wagon-maker from Chatham, NY, moved to Hudson and joined the crew of the whaler, *Martha*. In his journal, Wheeler wrote: "killed and saved our first and second whales" or "we took a whale." Wheeler's decision to go to sea was likely influenced by the popularity and proliferation of romantic stories about life at sea. Such was the story of young Isaac Newton Eddy of Waterford, NY, who ran away to sea on the whaling vessel *Hector* and died in the Comoro Islands, near Madagascar aboard the ship *Eleanor* while bound for home.

REST STOP

Inns, hotels, and taverns have furnished room and board for travelers who journeyed up and down the Hudson Valley. They have been important service industries contributing to the regional economy and identity. Some hotels, such as the Catskill Mountain House, attracted artists, writers, and tourists who admired the spectacular scenery. Other hotels, including the Ten Eyck Hotel and the Delavan House, two prominent Albany establishments, provided accommodations for politicians and businessmen.

The First Great Resort Hotel

By the 1820s, regular and inexpensive steamboat travel; admiration of the American wilderness by artists and writers; and the rise of urban-based professionals and merchants who had the financial means to travel for pleasure led to the construction of the Catskill Mountain House. In 1823, a group of investors purchased 300 acres of land on the eastern escarpment of the Catskill Mountains. The following year they opened a small hotel, 2,000 feet up and 40 feet from the mountain's edge. It looked eastward onto an expansive scene.

Charles L. Beach, the owner of the stage line from Catskill Landing to the Mountain House, bought the hotel in 1845. Throughout the 19th century, the hotel attracted multitudes of tourists who enjoyed the view from the piazza, the scenery of North and South Lakes, and the various waterfalls at Kaaterskill Clove. Beach recognized the profits to be gained by co-owning transportation lines and a resort hotel. In 1882, he built the Catskill Mountain Railroad leading from the Hudson River to the base of the mountain. Ten years later, his Otis Elevated Railroad took visitors directly up the mountain to his hotel.

After 1918, attendance at the Mountain House declined. The hotel closed following the 1942 season and decayed until the NY State Conservation Department burned the structure to the ground on January 25, 1963.

Amenities for Travelers

Albany sits at the crossroads of a far-reaching commercial and transportation network. Traders, merchants, politicians, and tourists have come to Albany or passed through on their way to other destinations. To meet the needs of these visitors, numerous hotels, inns, and taverns have operated in the region.

Albany's Mansion House hotel noted in 1873 that it was "one block and a-half from steamboat landing, and on the direct route to all the railroad depots." The Mansion House, like other hotels, was strategically located close to the major arteries of transportation. Hotels also emphasized their home-like comforts, restaurants, ball-rooms, reading rooms, and lounges. The Cataract House, situated just below Cohoes Falls, took advantage of the scenery, but also noted its proximity to the Shaker Village a tourist destination in Watervliet.

Edward C. Delavan, a temperance advocate and anti-slavery proponent, opened the Delavan House in 1845 on Broadway in Albany, a hotel patronized by NY's anti-liquor legislators. Abraham Lincoln lodged at Delavan's in 1861 on his way to Washington D.C. for his inauguration.

Hotels continue to be important businesses in the Capital Region. Now located near highways, airports, and centers of business and politics, instead of river landings and railroads, they provide accommodations for thousands of travelers each year.

CULTURE AND SYMBOL

Ideas, social movements, and cultural creations have originated along the Hudson River from writers, artists, architects, and educators who were inspired by the region's landscape and history. This rich storehouse of inspiration initiated a national school of art, a distinctive style of architecture and landscape design, and provided visual and cultural commodities for tourism. The Hudson River directly contributed to the formation of regional and national identities.

RIP VAN WINKLE'S NEW YORK

"From an opening between the trees he could overlook all the lower country for many a mile of rich woodland. He saw at a distance the lordly Hudson, far, far below him, moving on its silent but majestic course, with the reflection of a purple cloud, or the sail of a lagging bark, here and there sleeping on its glassy bosom, and at last losing itself in the blue highlands."
– from *Rip Van Winkle* by Washington Irving

Hudson Valley Tales

During the 19th century, American writers began to look back on the history of the Hudson Valley and reflect on its significance. The Hudson River's central role in NY's Dutch colonial history, the Revolutionary War, and the growth of commerce and industry provided writers such as Washington Irving with captivating subjects and legendary, enduring characters that are associated with the region.

Rip Van Winkle in Art and Culture

Everyone knows the story of *Rip Van Winkle*, the lovable comic vagabond who wanders away from the drudgery of chores and his small Dutch village into the Catskill Mountains. He returned 20 years later saying he had just awakened after drinking from the flagon of Hendrick Hudson to find his village completely changed.

First published in 1819, "Rip Van Winkle" is more than just a fable about a changing society and local personalities set within the Hudson Valley immediately before and after the Revolutionary War. He is a literary hero who presided over the birth of the American nation. Rip Van Winkle still thrives in American folk culture, where his presence is commemorated in numerous anthologies, pictorial representations, and historic sites throughout the Hudson Valley. Readers continue to experience pleasure in Rip's escapade and vicarious relief in his mishaps. His failure to tend his "garden" is an amusing fantasy or cautionary tale in which readers examine, indirectly, much about cultural customs and human nature.

Washington Irving and Kindred Spirits

A short-story writer, essayist, poet, travel-book writer, biographer, and columnist, Washington Irving (1783–1859) has been called the father of the American short story. Often writing under a variety of pseudonyms such as Jonathan Oldstyle, Geoffrey Crayon, and Diedrich Knickerbocker, Irving's tales and characters, as well as his beloved Gothic Revival cottage, "Sunnyside," evoke and continue to excite interest in essential and enduring characteristics of the Hudson Valley region and its people.

Washington Irving encouraged many American authors, including Nathaniel Hawthorne, Herman Melville, Henry Wadsworth Longfellow, and Edgar Allan Poe. European writers also admired Irving, including Sir Walter Scott, Lord Byron, and Charles Dickens. As America's first internationally best-selling author, Irving advocated for writing as a legitimate profession, and argued for stronger laws to protect American writers from copyright infringement.

Sleepless in the Catskills
An ever-present folk figure, Rip Van Winkle is widely represented throughout NY just as Washington Irving's characters and popularity continue their influence on American culture. His pseudonym "Knickerbocker" traditionally represents Dutch culture. The term also signifies New Yorkers, and the "Knickerbockers" basketball team. "Sleepy Hollow" is a bonafide geographic location near Tarrytown, NY. Schools, campgrounds, and bridges are named for Rip Van Winkle.

RIVER OF NOSTALGIA

Human society often looks to the past to commemorate historic milestones, to learn from bygone people, events, and ideas, and to ease present anxieties by engaging in nostalgic reveries of an idyllic past. Military reenactments at Saratoga Battlefield and other historic sites connect re-enactors and spectators with momentous and decisive events in American history. Organizers of the 1909 Hudson Fulton Celebration planned events to praise America's past and promote its technological and industrial future.

Remembering the American Revolution
As both a dividing line and link between colonies, the Hudson River held a strategic position throughout the American Revolution. Soon after the signing of a peace treaty in 1784, Americans and British alike began recording and commemorating the heroic deeds and battles of the war.

Writers and artists on both sides of the Atlantic remembered the Battle of Saratoga and the defeat of British General John Burgoyne on the upper Hudson River as a turning point in the war. They memorialized the bravery of American troops as well as the selfless acts of certain civilians including Lady Harriet Ackland, whose husband, British officer Major John Dyke Ackland, was wounded and captured by American forces. In order to attend her husband, Lady Harriet crossed the Hudson River to the American camp where Major General Horatio Gates acknowledged her bravery and united her with her husband.

Other sites along the Hudson received recognition, including the site near Tarrytown where British officer John André was captured after receiving maps and plans of American fortifications at West Point from traitor Benedict Arnold. While diplomats negotiated a peace, General George Washington maintained headquarters on the Hudson River at the Hasbrouck House in Newburgh. In 1850 it became the first historic house museum open to the public.

1909 Hudson Fulton Celebration
Planned as a commemoration of Henry Hudson's arrival in the New World in 1609 and Robert Fulton's 1807 maiden voyage of his steamship *Clermont*, the Hudson Fulton Celebration of 1909 took four years of planning and cost more than $1 million. Festivities included flotillas, historical pageants, electrical light shows, and exhibitions of American antiques.

At the opening festivities on September 25, a replica of Henry Hudson's ship *Half Moon,* a gift from the Dutch government, sailed into NY Harbor, accompanied by a replica of Robert Fulton's *Clermont*, made by the Staten Island Ship Building Company. Over the following week and a half, the two ships sailed north on the Hudson River, stopping at communities along the way.

On September 28, a parade in NYC joined marchers with 54 floats that chronicled NY's history. Planners intended the parade to educate immigrants about American history and simultaneously celebrate the cultural diversity of America. Other events acknowledged new technologies. Wilbur Wright made four flights over NY harbor in his amazing airplane, and electrical lights illuminated ships and city streets.

SEEING THE SITES: HUDSON RIVER TOURISM

The combination of grand scenery, notable historic sites, and accessible transportation contributed to a thriving tourist trade in the Hudson River Valley by the second quarter of the 19th century. Hudson Valley tourism offered opportunities for cross-cultural encounters and aesthetic exploration. Twenty-first century tourists continue to find the Hudson Valley a source of inspiration and discovery.

The Hudson River Picturesque Tour

When describing his passage down the Hudson River in 1807, English traveler John Lambert observed: "nature and art have both contributed to render its shores at once sublime and beautiful." Lambert vocalized what most 19th-century tourists eagerly sought: stunning scenery, pleasant farmlands and gardens, and sites of historical significance.

By the time Lambert made his journey, Europeans and Americans began to appreciate the unique beauty of the American landscape. The Hudson River Valley became part of a circular itinerary that often began in NYC. Tourists journeyed up the Hudson River to Albany and then to Niagara Falls, Quebec, and eventually back to the Hudson River via Lake Champlain. Illustrations of Hudson River scenery in prints, books, and on English ceramics stimulated tourism throughout the valley. Today, through conservation efforts, much of the scenery of the Hudson River has been protected.

The Springs

"Life at the springs is a perpetual festival." When this statement appeared in *Frank Leslie's Illustrated Newspaper* in 1859, Saratoga Springs was the queen of American resorts. It was situated near a network of steamships and railroads and had nearly 50 hotels and boarding houses. The town boasted tree-lined streets and parks illuminated with gas lamps. Saratoga Springs had theaters, fancy shops, and a circular railroad amusement ride. Most prominently, it had mineral springs.

When Philip Schuyler cut a path from his house on the Hudson River to High Rock spring in 1783, he opened Saratoga Springs to visitors. Twenty years later, Connecticut native Gideon Putnam built the first tavern in town and began laying

out streets and diverting springs to fountains. As early as 1822, the water from Congress Springs was bottled and sold around the world.

Drinking the mineral waters remained a favored activity at Saratoga Springs, but by the 1820s most visitors also sought pleasure and entertainment. Annual horse races began in Saratoga in 1863, making it the oldest operating racing venue in the U.S.

Unlike other resorts, Saratoga Springs survived the Great Depression and World War II. The construction of the I-87 Northway in the 1960s kept Saratoga within easy reach of tourists. In 1966, the opening of the Saratoga Performing Arts Center (SPAC) established a venue for concerts and live performances. And six weeks of horse races lasting through Labor Day make Saratoga a popular destination.

Armchair Tourist

The charms of the Hudson River Valley—its scenery and historic sites—have attracted tourists since the 1820s. For those unable or little inclined to leave the comforts of parlor or living room, the "armchair tourist" has had a wealth of opportunities to visit the Hudson Valley vicariously through guidebooks, picture books, maps, prints, and photography.

In 1822, Saratoga Springs printer and newspaper editor Gideon Minor Davison, published the first guidebook for America, *The Fashionable Tour; or, A trip to the Springs, Niagara, Quebeck, and Boston, in the Summer of 1821*, which included the Hudson Valley. Popular picture books further popularized Hudson River scenery, especially Nathanial Parker Willis's *American Scenery* (1840) and William Cullen Bryant's *Picturesque America* (1872).

Between 1860 and 1920, the stereoscope was the most popular and far-reaching medium for bringing tourist sites into the home. The three-dimensional effect produced by the dual photographs provided entertainment and education.

Armchair tourism thrives today. With a keyboard and a click of a mouse, the Internet can take us anywhere; bring us images and sounds of tourist sites throughout the Hudson Valley.

ART & NATURE: HUDSON RIVER SCHOOL

The wilderness of the Hudson River Valley and the Catskill Mountains inspired English artist, Thomas Cole to paint pictures of the American landscape that captured the imagination of people living in the U.S. These distinctive American landscape paintings helped separate American culture from European culture. At the same time American writers began extolling the beauty of the American landscape and equating God with Nature. Other ingredients that helped to pave the way for the success of the Hudson River School were a reasonable transportation system (steamboats), satisfactory overnight accommodations in the mountains (hotels), and guidebooks about how to enjoy the mountains. A stable government and growing economy helped to support art patronage and a rise in tourism.

The Development of an American Landscape Movement

Throughout most of the 17th and 18th centuries, the American wilderness was portrayed as a dangerous, evil and untamed place. Americans believed that the land and its resources were meant to be used for food and shelter, rather than admired for their beauty. By the early 19th century a radical change occurred in the American perception of the natural environment. For the first time the untamed wilderness and American countryside became "landscape," a source of American pride viewed as a valuable economic resource.

Prior to 1825, the predominate genres of painting were portraiture, religious and history paintings. History paintings demanded that both artist and audience have a firm ground in literature, history and the classics. The rare landscape paintings executed during this time, such as the recording of natural wonders were often derived from a military tradition of topographical painting.

American literature figured largely in bringing about a change of opinion about the natural world. Prior to 1800, the main body of American writing focused on religion and politics. Beginning in 1819, three American writers, Washington Irving, James Fenimore Cooper, and William Cullen Bryant, often referred to as the "Knickerbockers" stressed the importance of the uniqueness of America, and Nature was their most popular subject.

The Hudson River School

Considered to be the first American school of painting, the term Hudson River School is used to describe paintings made by two generations of artists beginning in 1825 with Thomas Cole and flourishing for about 50 years. These artists are best known for their large panoramic views of landscapes throughout North and South America, Europe, and the Middle East. Their subject matter ranges from the sublime views of the wilderness, to beautiful pastoral scenes influenced by man, to allegorical pictures with moral messages.

After Cole's death in 1848, Asher B. Durand became the leader of the second-generation Hudson River school artists. While Cole promoted a naturalistic, but romanticized landscape formula, Durand focused on a more literal transcription of nature. Second-generation artists such as Frederic Church, Sanford Gifford, Jasper Cropsey, and James Hart specialized in dramatic light-filled landscapes.

The phrase, "Hudson River School" was first used by a critic from the *New York Herald Tribune* in 1872 to describe the "old fashion style" of American landscape painting as opposed to the new, more painterly and impressionistic style of the French Barbizon painters. Today, many artists continue to work in this neo-romantic style.

Thomas Cole: Founder of Hudson River School

Born in England and inspired by the distinctive quality of the American landscape, Thomas Cole developed a painting style based on a naturalistic, but romanticized view of nature. Common imagery found in Cole's work includes cascading water,

passing storm clouds with emerging sunlight, twisted and blasted tree trunks, and a lone individual. His work speaks to the rebirth and regeneration of nature.

Asher B. Durand and the Second-Generation Hudson River School Artists
Although Cole's idealistic Arcadian approach to the representation of landscape influenced him, Asher B. Durand was more interested in the direct observation of nature. Durand published his views on landscape painting in the form of a series of letters on landscape painting in the magazine *The Crayon* in 1855; these had a tremendous influence on second-generation Hudson River School artists.

Journey into the Landscape
Hudson River School artists made numerous and sometimes arduous sketching trips to the mountains, lakes and other exotic locations during the warmer months. They often travelled on foot, by small boat or on horseback with paint boxes, small canvases or sketch books and journals along with portable stools, easels and umbrellas. During the colder months, artists worked their studios, often in NYC, painting, participating in exhibitions, meeting patrons and selling their art. Painters often included color or atmospheric notations in their journals for future reference.

A key technological improvement for artists, particularly on sketching trips, was John Rand's 1841 invention of "collapsible, compressible metal tubes." These new tubes held portable, premixed pigments that did not dry out. Prior to this invention, artists often mixed their own paints and stored them in animal bladders.

Frederic Church
Frederic Church (1826–1900) was a master of the panoramic landscape. He was a gifted draftsman and a superb colorist. In 1844 he moved to Catskill and spent two years studying with Thomas Cole, one of only a few artists to do so. In 1860, Church bought farmland in Hudson, NY, with a commanding view of the Hudson River and the Catskill Mountains. Here he built the spectacular Persian-styled villa, *Olana*, which in Arabic means "Center of the World."

Jasper Cropsey
Jasper Cropsey is best known for his paintings that depict the vivid colors of the autumn landscape. Essential to his bright palette was the 1856 invention of synthetic dyes, which made it possible for artists to record a more accurate transcription of nature.

Sanford Gifford
Sanford Gifford, who hailed from Hudson, NY, was noted for his mastery of the different effects of light. He traveled extensively in this country both the Eastern and Western U.S. and throughout Europe and the Middle East. Gifford typically progressed from pencil sketch to oil sketch and then from a medium to large-size canvas, depending on the patron.

James Hart
Albany artist James M. Hart is known for his finely detailed and impressive landscapes that depict scenery in the Catskills, Adirondacks or White Mountains. In 1851, Hart traveled to Dusseldorf, Germany, and studied with Johann Wilhelm Schirmer. Hart's later work was inspired by the French Barbizon style.

George Inness
George Inness enjoyed a long artistic career, first exhibiting his paintings in 1844. While his early work was in the spirit of the second-generation Hudson River school artists, by the 1860s he moved away from the careful details advocated by Durand, and was greatly influenced by the more spontaneous, impressionistic and soft-edged technique of the French Barbizon style.

Neo-Hudson River School Painters
Artists today still turn to the American landscape for inspiration. Bill Sullivan's stunning landscapes range from iconic views of NY State, including the Hudson River, Catskill Mountains, Niagara Falls and NYC, to the mountains, volcanoes and waterfalls of Colombia, Ecuador and Venezuela.

ANDREW JACKSON DOWNING AND HUDSON RIVER ARCHITECTURE

The Hudson Valley is a distinctive architectural region representing more than four centuries of diverse building styles ranging from elaborate mansions to modest farmhouses and working-class dwellings in cities, rural towns, and villages. In the mid-19th century, Andrew Jackson Downing (1815–1852), a landscape architect and nurseryman from Newburgh, NY, wrote the first in a series of pattern books of home and garden plans. His ideas, which influenced the suburbanization of America, were originally inspired by the scenic beauty of the Hudson River Valley and contributed greatly to Downing's vision of community settings and planning as essential to a democratic ideal.

The Picturesque Ideal

Romantic artists in the 19th century inspired the enduring image of the Hudson Valley as a sublime landscape and it became known around the world. In architecture, the idea of the picturesque characterized a similar vision. Buildings were designed and settings composed to be appreciated as works of art. Andrew Jackson Downing's desire to create simple cottage dwellings accessible to all classes of society motivated a movement for community renewal. Architects responded with designs prompted by romantic revivals of "natural" architecture. A prolific writer, Downing popularized the new picturesque taste. His articles and books proved tremendously influential.

Public Spaces

Nineteenth century rural cemeteries were the precursors and models for large public parks. As cities grew and churchyard burial grounds became inadequate, city officials proposed alterative rural sites on the outskirts of town. Rural cemetery plans emphasized proximity to nature and, in keeping with the Romantic Movement, were based on models in France and the great landscaped estates of England. These cemeteries became social meeting grounds for citizens who would stroll or ride through ceremonial landscapes and sculptural monuments. Major D.B. Douglass designed Albany Rural Cemetery in 1841, the same year Andrew Jackson Downing published his treatise on the theory and practice of landscape gardening.

In 1850, Andrew Jackson Downing was awarded a commission to develop the landscape plan for the mall in Washington, D.C. This initiated a period where public spaces and parks received the attention of specialized designers. Following Downing's death in 1852, Frederick Law Olmsted of Boston assumed leadership of the project. Olmsted planned parks, parkways and suburbs throughout the country, including NY's Central Park, designed with Downing's protégé Calvert Vaux in 1858. Olmsted and Vaux designed other parks in the region including Washington Park in Albany and Downing Park in Newburgh.

The Birth of the Suburbs

Downing's promotion of the detached single-family house and landscape as ideal heralded the suburban movement. The growing middle class also looked for opportunities to relocate to that "border land" outside the built-up part of the town but not in the remote countryside. Transportation improvements, notably the railroad, made it possible for people to work in town and live in a more natural setting. Downing and his partner Alexander Jackson Davis published a plan for an ideal "country village" in 1850 with detached houses on tree-lined streets surrounding a public park. The publication included detailed sections on ventilation and heating, interiors and furniture.

The American Domestic Ideal

The idea of "home" in the middle of the 19th century carried cultural, moral, and political associations. For the fortunate, it meant a comfortable dwelling decorated with furniture and possessions; for others, it defined a modest cottage or simple cabin. Downing, and many architects who followed him, believed that to understand "home" as only a fulfillment of the human need for shelter meant overlooking the place it held in the imagination, and its powerful potential for cultural change. Beginning in the late 19th century architect George F. Barber (1854–1915) first personalized plans for individual clients at moderate costs. William A. Radford, known for his artistic bungalows, twin and double houses, and apartment buildings, also published plan books between 1880 and 1930. Perhaps the most revolutionary concept in home construction occurred when kit-homes were first marketed by Aladdin Company (1906–82) and then by Sears Modern Homes in 1908, making it possible for families to purchase homes sooner than if they had to pay the costs of standard building practices.

BIOGRAPHIES

Major John André (1751–1781)
John André was born 1751 in England and served as Adjunct General of the British army during the Revolutionary War. He was selected by Sir Henry Clinton to carry on secret negotiations with American traitor, General Benedict Arnold, then in command of West Point. On September 21, 1780, having concluded arrangements with Arnold, André, wearing civilian clothes, was apprehended and searched. Incriminating documents were found on him. Arnold, informed of André's capture, fled aboard the British sloop of war *Vulture*, which had brought him to the meeting place. Clinton sought André's release on the grounds that the negotiation had taken place under a flag of truce, but he did so in vain, for as André informed his chief, "The event of coming within an Enemy's posts and of changing my dress, which led to my present Situation, were contrary to my own Inclination as they were to your orders." He was tried by a military board on September 29, 1781, convicted, and hanged three days later.

Benedict Arnold (1741–1801)
General Benedict Arnold led several momentous battles during the Revolutionary War and became friends with the Commander in Chief, George Washington. Following his April 1779 marriage to British sympathizer Peggy Shippen, Arnold, hungry for a large sum of money that would come to him with surrender, began plotting treason. George Washington appointed Arnold commander of West Point in 1780, and soon after Arnold met secretly with British Major John André. André was captured and Arnold's treason was discovered. He escaped and became a British brigadier general but received only some of the promised money. After the war, the Arnolds lived in England and Canada, shunned even by loyalist exiles.

William Cullen Bryant (1749–1878)
Poet and Editor William Cullen Bryant graduated from Williams College and became a lawyer. He married Frances Fairchild in 1821, and they had two daughters. Bryant left his law practice and moved to NYC in 1825 to edit the *New York Review* before being hired by the *New York Evening Post* in 1827. Two years later he became editor in chief and part owner, positions he held for nearly 50 years, giving *The Post* a literary style with a free-trade, anti-slavery bent. His more than two dozen books of poetry and prose include his most famous poem "Thanatopsis" (1817). Bryant's broad range of civic activities included advocacy for the establishment of Central Park and the Metropolitan Museum of Art. Bryant Park, adjacent to the NY Public Library, bears his name. The restored Cedarmere, the Roslyn Harbor estate Bryant bought in 1843 and site of his many botanical experiments, is now the Nassau County Museum of Art.

Jesse Buel (1778–1839)
Publisher and agriculturalist Jesse Buel was the son of farmers and was apprenticed to a printer in 1792. He started his first newspaper, the *Northern Budget*, in Lansingburgh, NY. He moved to Albany in 1813 to launch *The Argus* which became an influential newspaper. Long interested in agriculture, in 1821 Buel purchased property west of Albany in what was known as Sandy Barrens and began to practice "scientific farming." In 1834 Buel established the weekly *Cultivator*, soon the most popular farm journal in the country and an important advocate for agricultural education and scientific farming. It helped break down the opposition to scientific approaches by presenting the results of the editor's own experiments and improvements, and by printing articles written by a variety of acknowledged experts.

John Bufford (1810–1870)
A lithographer and publisher of prints, John Bufford studied at the Boston Athenaeum and completed an apprenticeship at Pendleton's Print Shop. He moved to NYC, opened his own shop, and drew for other printers including George Endicott and Nathanial Currier. Bufford returned to Boston and, with his brother-in-law, Benjamin W. Thayer, set up the print firm of B.W. Thayer & Co., with Bufford acting as that firm's general and chief draftsman. From the years of 1845 to 1869, Bufford experimented with various names for the company with his sons, and they continued the tradition until 1910. Bufford's firm produced town and city views, became extremely successful as a publisher of prints, and developed a line of drawing-room chromolithographs created after paintings.

Henry Burden (1791–1871)
Ironmaster and inventor Henry Burden was born in Dunblane, Scotland, and came to America in 1819 with his wife Helen McQuat. Burden patented a machine for making wrought iron spikes in 1825, but his most widely known invention was the first machine to make horseshoes, patented in 1835. The machine was capable of making 60 horseshoes a minute. The Troy factory that housed his machinery and materials, the Burden Iron Works, once had the most powerful waterwheel in the world.

Frederic Edwin Church (1826–1900)
Frederic E. Church was a master of panoramic landscapes, a gifted artist, and a very successful Hudson River School landscape painter. Church began studying painting and drawing at age 16. In 1844, he moved to Catskill and began studying with Thomas Cole. Within the year, he exhibited at the National Academy of Design.

Like other artists of the period, Church traveled, hiked, and sketched from spring through autumn and painted in a NYC studio during the winter. In 1854, Church and Cyrus Field traveled to Ecuador and Columbia. Church's first finished South American landscape paintings drew great acclaim, which transformed his career. In 1860, Church bought farmland in Hudson, NY, and during the latter part of the decade he designed and redesigned Olana, his hilltop "Persian" villa.

DeWitt Clinton (1769–1828)
A Governor of NY and a Mayor of NYC, Dewitt Clinton married heiress and practicing Quaker Maria Franklin in 1796 and together they had 10 children. In 1787, he was appointed private secretary to his grandfather, George Clinton, the Governor of NY. He won the NY State Assembly seat for the NYC in 1797 and advanced to the NY State Senate the following year. He served as State Senator until 1802, when he was elected to the U.S. Senate. He resigned the following autumn, when the Council of Appointments named him Mayor of NYC, a post he held for almost 10 years. He was elected Governor of NY in 1817, 1820, 1824, and 1826.

As Governor, DeWitt Clinton was a strong advocate for the Erie Canal. On December 30, 1815, supporters of the Erie Canal held a meeting in NYC, and Clinton successfully argued that it would stimulate commerce in NY; an 1817 law authorized the beginning of construction. As Governor, Clinton marked the official opening of the Erie Canal by pouring the waters of Lake Erie into NY Harbor while standing aboard the boat, the *Seneca Chief,* on November 4, 1825.

Thomas Cole (1801–1848)
The work of Thomas Cole sparked the growth of the 19th-century school of American landscape painting. Born in England, Thomas Cole immigrated to Ohio with his family in 1818. Cole became familiar with every aspect of nature by hiking in the woods of Ohio and Pennsylvania. There he established detailed drawing habits that became the foundation of his painting style.

Cole was "discovered" in 1825, when a patron and artist saw three of his paintings of Hudson River Valley scenes in NYC. Four years later, Cole helped found the National Academy of Design, and secured his reputation as a leading American landscape painter. Cole settled in Catskill, NY, where his home is now open to the public.

Verplanck Colvin (1847–1920)
An Albany native, Verplanck Colvin studied law, geology, geodesy, and topography. In 1865 he conducted an exploration of the Adirondack wilderness at his own expense, and in 1872 Colvin determined the position and elevation of Lake Tear of the Clouds, the source of the Hudson River. He was a Trustee at the Albany Institute, the President and lifelong member of the Geological Society and the American Institutional Mining Engineers, in addition to a lifelong fellow of the American Association for the Advancement of Science. A 1905 survey he conducted determined the latitudes and longitudes of the Adirondack Mountains.

Jasper Francis Cropsey (1823–1900)
Cropsey began his artistic career as an architect. During his apprenticeship to the NYC architect Joseph Trench, Cropsey took lessons in watercolor as well as classes in life drawing at the National Academy of Design. In 1843, Cropsey opened his own architectural office in NYC, but after two years in practice, devoted his time exclusively to landscape painting. Cropsey settled in the lower Hudson Valley, and sketched during

the summers in the Hudson Valley, the White Mountains of New Hampshire, and the area around Greenwood Lake, New Jersey. Cropsey's early paintings were influenced by the work of Asher B. Durand and Thomas Cole.

Simeon DeWitt (1756–1834)
Surveyor and cartographer Simeon DeWitt received an early education from a local minister, and went on to Queen's College (now Rutgers University) in New Brunswick, New Jersey, graduating in 1776. He enlisted in the Continental Army in 1777 and was present at General John Burgoyne's surrender later that year. Trained in surveying by his uncle, Brigadier General James Clinton, DeWitt was appointed assistant to the army's geographer, Colonel Robert Erskine in June 1778. After Erskine's death, DeWitt, and a handful of surveyors produced over 250 sketches and maps during the Revolutionary War.

In 1784 DeWitt was appointed surveyor general of NY State, a post he held until his death. Required by law to maintain his office in Albany, DeWitt moved there after his appointment and later mapped the city in 1794. DeWitt was one of the three commissioners who designed the gridiron street pattern for the expansion of NYC in 1807 and an original Erie Canal commissioner (1810–1815).

Henry Dreyfuss (1904–1972)
U.S. industrial designer Henry Dreyfuss was born in Brooklyn, NY, to a family in the theatrical materials supply business. He produced 250 stage sets from 1924 to 1928 and opened his own office in 1929 for stage and industrial design activities. Many of America's best known 20th-century industrial products owe their design to Dreyfuss, including the first Bell telephones, the "princess" phone, the Westclox alarm clock, the Hoover upright vacuum cleaner, the first GE flat-top refrigerator, and many of the designs for NY World's Fair in 1939. In 1936 his Mercury diesel locomotive for New York Central Railroad's Hudson Valley Line debuted. In 1938 the railroad introduced 10 new engines and cars designed by Dreyfuss for its 20th Century Limited. His Mercury locomotives featured finned bullet-noses reminiscent of ancient warrior helmets.

Andrew Jackson Downing (1815–1852)
Landscape gardener and architect Andrew Jackson Downing and his brother Charles managed the nursery their father had established in Newburgh, NY. In 1838 Andrew married Caroline De Windt, daughter of a prominent family from Fishkill Landing (now Beacon, NY) and they lived at Highland Gardens, a Gothic Revival villa Downing built in 1839. Downing authored several highly influential pattern books in the 1840s. His focus expanded from horticulture to landscape design to architecture, and his adaptations of English cottage and Gothic Revival villa designs emphasized domestic convenience. By the time *The Architecture of Country Houses* was published in 1850, Downing was one of America's most influential designers in housing, furniture, interiors, and landscaping.

In collaboration with Calvert Vaux, Downing enjoyed architectural and landscape design commissions from wealthy Hudson Valley landowners. President Millard Fillmore commissioned Downing to landscape the Public Grounds (including what is now the Mall) in Washington, D.C. Traveling on the steamboat *Henry Clay* to Albany, Downing was killed when the boat caught fire and ran aground near Yonkers.

Asher Brown Durand (1796–1886)
Asher B. Durand, born in New Jersey, was the son of a watchmaker and silversmith. At age 16, he apprenticed with Peter Maverick, the leading engraver of that time. In 1820, Durand was selected to engrave John Trumbull's celebrated painting, "The Declaration of Independence." When it was completed in 1823, Durand had earned his reputation as a successful engraver. He formed his own company, which became a lucrative business. During the early 1830s, Durand became more interested in oil painting than engraving. Today he is best known for his landscape paintings and his pivotal role in developing the Hudson River School. Durand and Thomas Cole were kindred spirits who often hiked and sketched together in the Catskill and Adirondack mountains.

Amos Eaton (1776–1842)
Scientist and educator Amos Eaton was the son of farmers. At the age of 14 he was sent to live with an uncle, Russell Beebe, a blacksmith who taught him the basics of surveying and instrument making. In 1800 he published *Art without Science*, a surveying manual. He studied law and passed the bar exam in 1802. He opened an office in Catskill, NY, practiced law, engaged in land speculation and continued his interest in science. Involved in a questionable land deal, Eaton was convicted of forgery on August 26, 1811, and given a life sentence in Newgate prison in Manhattan's Greenwich Village.

While incarcerated, he studied geology and tutored the prison agent's son. On November 17, 1815, the Governor granted Eaton a pardon conditional upon him leaving the state. Eaton relocated to New Haven, Connecticut, and began studying natural history at Yale College. Two years later he was exonerated by Governor DeWitt Clinton. Eaton published *A Manual of Botany for the Northern States* (1817), which would go into eight editions, and in 1818 he published *An Index to the Geology of the Northern States.*

He moved to Troy in 1819 and lectured on botany, chemistry, and geology in New England and the Hudson Valley. In 1820 under the patronage of Stephen Van Rensselaer, Eaton began a survey of Albany and Rensselaer counties. Van Rensselaer backed Eaton in founding the Rensselaer School (now Rensselaer Polytechnic Institute) in 1824 where he worked until his death. In 1836 the NY State Geological and Natural History Survey was founded, largely based on Eaton's works.

Ebenezer Emmons (1799–1863)
Geologist Ebenezer Emmons studied at and graduated from Williams College and the Rensselaer School (now RPI). He also studied at Berkshire Medical Institution and gained financial independence by practicing and teaching medicine. In 1836 Emmons joined the NY State Geological and Natural History Survey; and served as professor of chemistry at Albany Medical College. While engaging in research for the state survey, Emmons named the Adirondacks after an Iroquois term. Emmons's discoveries in NY State agriculture led to the development of the Taconic System, a nomenclature for identifying geological formations. He held the position of NY State Agriculturalist from 1843 to 1849 but lost standing in American science when colleagues vehemently attacked his Taconic system in the 1850s. He accepted an appointment as state geologist of North Carolina in 1851. His mineral collection was given to the NY State Museum by Erastus Corning in 1870.

Robert Fulton (1765–1815)
Inventor of the first successful passenger steamboat, Robert Fulton was the son of Scottish-Irish immigrants and trained with a Philadelphia jeweler before becoming an independent painter. Traveling to England, he exhibited at the Royal Academy (1791–93) and worked on canal design and construction. His *Treatise on the Improvement of the Canal Navigation* (1796) won him fame as a civil engineer, and in 1797 he moved to France to experiment with submarines. There he met former NY State Chancellor Robert R. Livingston, who held the exclusive right to operate steamboats (then purely experimental vessels) in his home state. In 1802, after a hiatus of several years during which Fulton worked on naval mines, agreement between the two men led to the NYC-built *North River Steamboat* (often called the *Clermont*) completed in 1807. This craft made a trial run to Albany that August and, after improvements, began regular service between NYC and Albany the next year. Also in 1808, Fulton married his partner's cousin, Harriet Livingston. Within five years the Fulton-Livingston partnership controlled steamboats throughout the east and the Midwest. But Robert Livingston's death in 1813 spurred challenges to both the NY State monopoly and the company's patents (1809, 1811) on the steamboat. While embroiled in these battles, Fulton died of pneumonia.

Sanford Robinson Gifford (1823–1880)
Gifford was born in Greenfield, and was raised in Hudson, NY, where his father owned a successful iron foundry. He attended Brown University for two years (1842–1844), one of the few Hudson River School artists to attend college. A great admirer of the work of Thomas Cole, in 1854 he was elected to the National Academy of Design. He was one of a small number of artists who actively participated in the Civil War, serving as a member of the Seventh Regiment, NY State National Guard. Upon the completion of his military service, Gifford continued to work in his NY studio, making occasional sketching trips to Europe and the west coast of the U.S. before his death in NYC in 1880.

James McDonald Hart (1828–1901)
Albany artist James M. Hart, a leading member of the Hudson River School of artists, is known for his finely detailed and gently colored pastoral compositions. In 1852, the *Albany Evening Journal* praised his ability to see and portray the poetry of nature. James, and his older brother William, also a well known landscape painter, were born in Kilmarnock, Scotland, and immigrated with their parents to Albany in 1831. He began his artistic career at age 15 working for a sign and banner painter in Albany. Within three years, he exhibited his regional landscape paintings at the Albany Gallery of Fine Arts, a hub of artistic activity in Albany from 1846 to1854. He maintained a studio on the corner of State Street and Broadway and taught numerous artists, including Homer Dodge Martin, George Smillie, and Edward Gay.

William Hart (1823–1894)
William Hart, like his brother James, was a leading member of the Hudson River School of artists. William greatly admired Asher B. Durand, and his landscapes reflect that interest. Born in Scotland, he emigrated with his family to Albany in 1831. At age 14, he apprenticed to the firm of Eaton and Gilbert, coach and ornamental painters. After trying portraiture for a number of years, he began to focus on landscape painting. He exhibited in both Albany at the Albany Gallery of Fine Arts and in NYC between 1844 and 1849.

Robert Havell (1793–1878)
British-born engraver and painter Robert Havell learned his trade at the publishing firm of Colnaghi & Co. in England (1825–1827), and entered into an engraving partnership with his father (1827–1828). John James Audubon contracted with Havell to engrave the plates for Audubon's *Birds of America*, and worked on the Audubon engravings from 1828 to 1838. He came to the U.S. in 1838 and settled in Tarrytown, NY, painting and sketching in the Hudson River Valley for the rest of his life.

George Innes (1825–1894)
George Inness, born in Newburgh, NY, enjoyed a long and productive career as one of America's most important late-19th-century artists. Inness's early work reflects his interest in nature and the tight, smooth surfaces advocated by Thomas Cole and Asher B. Durand. In 1844 Inness began exhibiting at the National Academy of Design in NY. Following his marriage in 1850, the artist spent 15 months working in Italy. During a visit to Paris, Inness saw the work of the Barbizon painter, Theodore Rousseau, and this exposure to had a profound influence on his art.

As Inness's career progressed his brushwork became more spontaneous and painterly, influenced by the soft-edged technique of the French Barbizon painters. The Innesses settled in Montclair, New Jersey. Following a major exhibition of his work at the American Art Association in 1890, Inness was recognized as one of the leading figures in American landscape painting, a position he held until his death in 1894.

Washington Irving (1783–1859)
Author Washington Irving became the first internationally known writer from the U.S. Surrounded by Dutch American in-laws, neighbors, friends, and acquaintances, he acquired considerable familiarity with Dutch as it was spoken in the Hudson Valley of his day and his work reflects the romantic neo-classical style in English literature.

Irving contributed to newspapers edited by his brother Peter and became known for his satirical commentary on NY society. During the composition of his *History of New York* (1809) his fiancée Matilda Hoffman died, and Irving remained a bachelor for the rest of his life. While engaged in his family's merchant business and serving as a colonel in the NY State Militia during the War of 1812, he revised his *History*. In 1815 he left for Liverpool to assist his brother Peter in the family business, and wrote full-time thereafter. Irving held diplomatic posts to England and Spain and traveled frequently, settling in an old Dutch farmhouse on the banks of the Hudson River in 1846. The best known of his writings narrated by his alias Geoffrey Crayon are the "Knickerbocker" folktales. Set in NY, their content is faithful to the Dutch folk tales of Irving's youth and includes *Rip Van Winkle* and *The Legend of Sleepy Hollow*.

Charles Honore Lannuier (1779–1819)
Lannuier was born the youngest of 10 children in a small town in France. His generation was influenced by war, revolution, and a disastrous social and economic crisis. It is likely that by his 14th birthday he was apprenticed to his older brother Nicolas, a trained cabinetmaker, with his own shop in Paris. He left his homeland for America with hopes for a better future. Another elder brother, Maximilien, had escaped France before the revolution and was well established in NYC by the time of Charles Honore's arrival around the year 1800.

He never lost touch with his family and other contacts in France, allowing him to import luxury goods for sale on the NY market. Although Lannuier spent more than 16 years living in NYC, he never became a naturalized citizen. This choice might have been a conscious one (his will was written in French), and perhaps even a key to his success as he was looked upon by Americans for his European training, a rare commodity in early 19th century America.

George Perkins Marsh (1801–1882)
George Perkins Marsh is considered to be America's first environmentalist. Over 100 years ago he warned of our destructive ways in a remarkable book called *Man and Nature; or, Physical Geography as Modified by Human Action*. He was the first to raise concerns about the destructive impact of human activities on the environment.

Marsh was a lawyer, newspaper editor, sheep farmer, mill owner, lecturer, politician, and diplomat. He also tried his hand at various businesses, but failed miserably in all. He knew 20 languages, wrote a definitive book on the origin of the English language, and was known as the foremost Scandinavian scholar in North America.

He invented tools and designed buildings, including the Washington Monument. As a congressman in Washington (1843–49) Marsh helped to found and guide the Smithsonian Institution. He served as U.S. Minister to Turkey for five years and he spent the last 21 years of his life (1861–82) as U.S. Minister to the newly united Kingdom of Italy.

Homer Dodge Martin (1836–1897)
A second generation Hudson River school artist, Homer Dodge Martin's work links the Hudson River school painters to the American followers of the French Barbizon artists and, eventually, Impressionism. Martin, born and raised in Albany, NY, was encouraged to pursue an artistic career by Albany's celebrated sculptor, Erastus Dow Palmer. Martin had an Albany studio in the Museum Building (still standing) on the northwest corner of State Street and Broadway.

His early paintings (1850s) were detailed wilderness panoramas which emulated the work of Thomas Cole and other Hudson River school artists. By the 1860s and 1870s, Martin's silhouetted shapes, placement of masses, and luminous paint surfaces echoed his admiration of John F. Kensett. In 1876, Martin embarked on the first of two European tours which profoundly altered his painting style. Fascinated by the spontaneous and soft-edged technique of the French Barbizon style, Martin began using a palette knife, subtler colors, and a looser touch.

Jacques-Gerard Milbert (1766–1840)
Naturalist, geographer, and engineer Jacques-Gerard Milbert was born in Paris, France. In 1815, with the backing of the Museum of Natural History in Paris, he left his position of Professor of Drawing at the School of Mines to travel across the U.S. His instructions were to explore, record, and collect as much information as possible about the topography, social history, and flora and fauna of northeastern North America. The task took him seven years, and in addition to the 8,000 natural history specimens he sent back to France, he made a series of important sketches of the areas through which he traveled.

Milbert financed many of his own explorations, as his allowance provided by the French government did not cover his expenses. While touring the Alleghany and Rocky Mountains, he lived alone in huts, collecting specimens of every animal and numerous new plants for research that corrected European ideas about American flora. Before returning to Paris in 1825, Milbert completed a set of images titled *Amerique Septentrionale* (North America), which depict the upper regions of the Mohawk River in NY State shortly after the opening of the Erie Canal. Milbert loved to draw American landscapes, particularly those that showed the Hudson that he called the "King of Rivers," flowing majestically through the mountains.

Samuel F.B. Morse (1791–1872)
Artist and telegraph inventor Samuel F.B. Morse attended Yale College where he heard lectures on electricity, but was more enthusiastic about painting portraits. In 1811 his parents sent him to England to study painting. Upon returning home in 1815, he struggled to earn a living. Morse settled in NYC in 1823. To improve the status of artists, he helped found the National Academy of Design in 1826 and served as its president (1826–45). In 1832 he conceived of an electromagnetic telegraph. In the next few years while professor of art at what later was called New York University; he worked to develop a telegraph. In 1837 Morse abandoned painting for telegraphy, and by the following year he developed the dots and dashes that became known as Morse Code. In 1840 the telegraph was patented. In 1843 Morse secured Congressional funds to construct an experimental telegraph line between Washington and Baltimore, and on May 24, 1844, he sent the first message. In his later years he became a trustee of Vassar College and divided his time between his West 22nd St. brownstone in NYC and his farmhouse in Poughkeepsie.

Stephen Myers (1800–1870)
Stephen Myers was the most important leader of the Albany Underground Railroad movement from the 1830s through the 1850s. Other significant figures came and went, but Myers remained in Albany throughout the period. It is without a doubt that Stephen Myers assisted thousands of individuals to move through Albany to points west, north, and east on the Underground Railroad. At first, in the early 1840s, he used his own resources and the Northern Star Association, which he headed, and which published his newspaper. Later, in the 1850s, he was the principal agent of the Underground Railroad in Albany. Under his leadership the Albany branch of the Underground Railroad was regarded by some as the best run part of it in the whole state.

He was born in 1800 in Rensselaer County as a slave, and freed at age 18. Over his life he worked as a grocer, and steamboat steward, but started his journalistic enterprise in 1842. His wife, Harriet worked with him on the paper. He was a leading spokesperson for anti-slavery activity and rights for African Americans. His newspaper was called the *Northern Star and Freeman's Advocate*. In its pages he writes about temperance, the rights of African-Americans, and the need to abolish slavery.

Duncan Phyfe (1768–1854)
Phyfe came to the U.S. from Scotland in 1784. He settled with his family in Albany before relocating to NYC in 1791. By 1800, he had established himself as a cabinetmaker on the move. Over the next two decades, Phyfe purchased a number of properties on Fulton Street near City Hall to house his factory and warehouse. Only rarely did Phyfe attach a trade label to his furniture, and few objects in the "Phyfe style" can be conclusively linked to the cabinetmaker through documents or family histories. Historians presume that Phyfe's confidence in the skill of his craftsmen and the prominence of his style precluded the need to label his furnishings.

Seneca Ray Stoddard (1843–1917)
Photographer Seneca Ray Stoddard was trained as a decorative painter. He began work in 1862 for the Gilbert Car Co. in Watervliet, ornamenting railroad cars with scenic landscapes. Within two years he set out on his own and by 1867 was advertising as a photographer in Glens Falls. He began photographing scenes on Lake George in 1868. During the 1870s and 1880s, using the difficult glass-plate photographic technology of the era, he created hundreds of images of the Adirondack region, capturing not only the landscape but also the hotels and vacationers who bought his prints and stereographs as souvenirs. In 1874, Stoddard published a popular guidebook, *The Adirondacks Illustrated*, which was reprinted almost annually through 1893 and then less frequently until 1913. In 1880, he completed his *Maps of the Adirondacks*, which, along with the guidebooks, boosted tourism in the region. In 1892 he played a role in the establishment of the Adirondack Park by presenting state legislators with a dramatic show of his Adirondack images. From the late 1880s through the first years of the 20th century, he traveled and photographed in the American south and west, Alaska, Europe, and the Near East, and earned his living by presenting "illustrated" lectures on the different regions. Late in life he published *Stoddard's Adirondack Monthly*. The short-lived magazine (1906–08), whose first issue featured an unusual composite photograph of Stoddard's own face and arm from the trunk of a tree, advocated the conservation of Adirondack timber, waters, and wildlife.

Calvert Vaux (1824–1895)
Calvert Vaux was born in England and attended private schools on scholarship. At the age of 15 he began architectural training as an apprentice in the London office of Lewis N. Cottingham. Vaux became a skilled draftsman, and in 1850 a London gallery exhibition of his watercolors attracted Andrew Jackson Downing, who had come to England to find an assistant to run a new architectural department in his own thriving landscape gardening practice. He recruited Vaux, then 26, who welcomed the opportunity to emigrate to the U.S.

During the two years Vaux worked with Downing in Newburgh, NY, he devoted most of his energy to designing "rural" house plans. Vaux had become Downing's partner, also helping prepare plans for more formal, public grounds at the Smithsonian Institute in Washington, D.C., a project that inspired an article he wrote in 1852 for the *Horticulturalist* in which he called for government recognition and support of the arts. That summer Downing drowned in a steamboat accident. Vaux carried on his mentor's architectural practice, working with another English architect, Frederick Clarke Withers. He married Mary McEntee, and moved to NYC in 1856, where he became identified with the "the guild" artistic community. He joined the National Academy of Design and the Century Club. In 1857 he became a founding member of the American Institute of Architects and was instrumental in the democratic design and feel of Central Park in NYC. Vaux was found floating in Graveshead Bay, Brooklyn, on November 21, 1895.

GLOSSARY

Abolition	the ending of slavery
Abundant	plentiful, abounding with
Advocacy	the act of pleading or arguing in favor of something, such as a cause, idea or policy; active support
Adze	a cutting tool that has a thin arched blade set at right angles to the handle and is used chiefly for shaping wood
Aesthetics	the branch of philosophy concerned with the study of the concepts of beauty and taste; the study of the rules and principles of art
Allegory	a story, poem or picture with an underlying meaning as well as the literal one; the representation of abstract ideas or principles by characters, figures or events in narrative, dramatic, or pictorial form
Amateur	a person who engages in an art, science, study or athletic activity as a pastime rather than as a profession
Amenities	the quality of being pleasant or attractive; agreeableness; something that contributes to physical or material comfort
Apprentice	someone who works for a skilled person for a fixed period of time in order to learn his or her trade
Armaments	weaponry used by military or naval force
Atmospheric	the mass of gases surrounding the earth or any other heavenly body; a pervasive feeling or mood; intended to evoke a particular emotional tone or aesthetic quality
Aviator	someone who operates an aircraft
Baleen	a flexible, horn-like substance hanging in fringed plates from the upper jaw of baleen whales. It is used to strain plankton from seawater when feeding.
Bateau	a long, light, flat-bottom boat with a sharply pointed bow and stern
Botanist	a biologist specializing in the study of plants
Chiton	a tunic worn by men and women in ancient Greece
Commerce	the buying and selling of goods and services
Conservation	the protection, preservation, management or restoration of natural environments and the ecological communities that inhabit them

Convicted	to find or prove guilty of an offense or crime, especially by the verdict of a court
Cultivate	to prepare land to grow crops and plants: to develop or improve by giving special attention to it
Deforestation	the cutting down and removal of all or most of the trees in a forested area. Deforestation can erode soils, contribute to desertification and the pollution of waterways and decrease biodiversity through the destruction of habitat.
Depiction	to represent in a picture or sculpture; a graphic or vivid verbal description
Depletion	the use or consumption of a resource, especially a natural resource, faster than it is replenished
Dike	an embankment of earth and rock built to prevent floods or to hold irrigation water in for agricultural purposes
Discriminatory	marked by or showing prejudice; biased
Dock	the area of water between two piers or alongside a pier that receives a ship for loading, unloading, or repairs
Domestic	of or relating to the family or household; of or relating to a country's internal affairs; produced in or indigenous to a particular country
Dredging	any of various machines equipped with scooping or suction devices and used to deepen harbors and waterways and in underwater mining
Ecosystem	the relationships between animals and plants and their environment
Electromagnetic	magnetism produced by an electric current
Engineer	one who is trained or professionally engaged in a branch of engineering; one who operates an engine
Erosion	the group of natural processes, including weathering, dissolution, abrasion, corrosion, and transportation, by which material is worn away from the earth's surface
Escarpment	steep slope or long cliff formed by erosion or by vertical movement of the earth's crust along a fault; escarpments separate two relatively level areas of land
Excavation	the act of digging; the site of an archeological exploration
Extol	to praise highly
Fauna	all the animal life of a given place or time

Flagon	a large vessel, usually of metal or pottery, with a handle and spout and often a lid, used for holding wine or other liquors
Flora	all the plant life of a given place or time
Flux	a substance mixed with a metal oxide to assist in fusion
Foundry	a place where metal is melted and cast
Geodesy	the study of the shape and size of the earth
Geology	the study of the origin, structure and composition of the earth
Harbinger	something that precedes and indicates the approach of something or someone
Horticulture	the science or art of cultivating fruits, vegetables, flowers or ornamental plants; the cultivation of a garden
Husbandry	the act or practice of cultivating crops and breeding and raising livestock; the art or skill of farming
Hydroelectric	of the generation of electricity by water pressure
Hygrometer	an instrument for measuring humidity
Incarcerate	to confine or imprison
Journal	a personal record of occurrences, experiences and reflections kept on a regular basis; a diary; a newspaper or magazine
Kilowatt	a unit of power equal to 1,000 watts
Knickerbocker	a descendant of the Dutch settlers of NY; a native or inhabitant of NY
Lithographer	one who uses the method of printing from a metal or stone surface on which the printing areas are made ink-receptive
Litigation	a legal proceeding in a court; a judicial contest to determine and enforce legal rights
Lobbyist	a person engaged in trying to influence legislators or other public officials in favor of a specific cause
Lock	a section of a waterway, such as a canal, closed off with gates, in which vessels in transit are raised or lowered by raising or lowering the water level of that section
Magnate	a powerful or influential person, especially in business or industry
Maritime	relating to or involving ships or shipping or navigation or sea men; bordering on or living or characteristic of those near the sea
Meteorological	of or pertaining to atmospheric phenomena, especially weather and weather conditions

Monopoly	exclusive control by one group of the means of producing or selling a commodity or service
Nanotechnology	the science and technology of building electronic circuits and devices from single atoms and molecules
Naturalist	a person who specializes in natural history, especially in the study of plants and animals in their natural surroundings
Navigation	the guidance of ships or airplanes from place to place
Negotiations	a conferring, discussing or bargaining to reach agreement
Neoclassical	characteristic of a revival of an earlier classical style; a revival in literature in the late 17th and 18th centuries, characterized by a regard for the classical ideals of reason, form and restraint; a revival in the 18th and 19th centuries in architecture and art, especially in the decorative arts, characterized by order, symmetry and simplicity of style
Nomenclature	a system of names used in an art or science
Ornate	heavily or elaborately decorated
Panorama	a wide unbroken view in all directions
Patent	an official document granting the exclusive right to make, use and sell an invention for a limited period; an invention protected by such a grant
Patroon	a landholder in New Netherland who, under Dutch colonial rule, was granted proprietary and manorial rights to a large tract of land in exchange for bringing 50 new settlers to the colony
Predominate	to be of or have greater quantity or importance
Preservationist	a person who is concerned with or active in the preservation of wildlife, historical sites, natural habitats and other features of the environment
Profile	an outline, especially of the human face, as seen from the side; a short biographical sketch
Prohibition	the act of forbidding; a legal ban on the sale or drinking of alcohol; the period (1920–33) when making, selling, and transporting alcohol was banned in the U.S.
Proprietor	an owner of a business establishment
Proponent	a person who argues in favor of something
Prospect	something expected; a possibility; the act of surveying or examining
Quarrying	the extraction of building stone or slate from an open surface pit from which stone is obtained by digging, cutting or blasting

Restoration	the act of restoring to a former or original condition or place; the giving back of something lost or stolen
Romanticize	to describe or regard something or someone in an unrealistic and idealized way; to view or interpret romantically; make romantic
Rural	in or of the countryside; relating to or characteristic of the country; relating to people who live in the country; of or relating to farming; agricultural
Shard	a broken piece or fragment of pottery, glass or metal
Shoals	a shallow place in a body of water
Shunned	to avoid deliberately; keep away from
Sloop	a small sailing ship with a single mast
Spawn	to deposit eggs; produce offspring in large numbers
Speculation	the contemplation or consideration of some subject
Stylized	using artistic forms and conventions to create effects; not natural or spontaneous
Sublime	causing deep emotions and feelings of wonder or joy; of great moral, artistic or spiritual value
Subsidized	having partial financial support from public funds
Thermometer	an instrument for measuring temperature
Topography	the surface features of a region, such as its hills, valleys or rivers
Traitor	person who betrays friends, country, a cause; especially one who commits treason
Tributary	a stream or river that flows into a larger one
Truce	a temporary agreement to stop fighting or quarrelling
Wharf	a platform along the side of a waterfront for docking, loading and unloading ships

Sources for definitions:

http://www.artlex.com

http://www.askart.com

http://www.getty.edu

Webster's Seventh New Collegiate Dictionary

MEDIA GLOSSARY

Advertisement	public notices or paid announcements, especially those in print
Album	unpublished sets of pages, bound or loose-leaf, either intended to have, or assembled after having, material affixed to them or writing or other images made on them
Beaker	a large drinking cup with a wide mouth, used especially by chemists and pharmacists
Book	typically a set of written, printed, or blank paper pages, bound together on one edge, within protective covers. It usually has a significant amount of text, and may also be illustrated.
Broadside	in printing, a large sheet of paper on one side of which is printed text with little or no graphic, often an advertisement or an announcement, also called a broadsheet. Printed broadsides may have first been decrees intended for public posting, so they were necessarily printed on one side of large sheets of paper, but eventually matters printed on one side of smallish sheets were called broadsides. The broadside is closely related to the handbill, the brochure, and the pamphlet.
Brochure	a pamphlet or booklet. A very small book bound by staples or stitches; or unbound a trifold — one sheet of paper folded in two places.
Bust	representations of only the head and shoulders of a human figure. A portrait, sculpture or a painting representing a person's head, neck, shoulders and upper chest, and perhaps the upper arms.
Chromolithograph	the product of a lithographic process using several stones or plates one for each color, printed in register. These are to be distinguished from colored prints that have the color hand-applied after printing. A lithograph with color, it is the result of a late 19th-century process involving separate stones for each color. The biggest challenge in chromolithography is aligning the paper perfectly when moving to the respective stones holding each color.
Correspondence	any forms of addressed and written communication sent and received, including letters, postcards, memorandums, notes, telegrams, or cables

Drawing	the application of lines on a surface, often paper, by using a pencil, pen, chalk, or some other tracing instrument to focus on the delineation of form rather than the application of color. This term is often defined broadly to refer to computer-generated images as well. Drawing techniques vary widely with sharp delineation achieved with pencil and or pen/ink. Watercolor generally gives a more delicate effect, and more painterly effects can be created with wax crayon, chalk, pastel, and charcoal. Some drawings are the finished product, and others are sketches for another piece of work.
Engraving	printmaking method in which a sharp tool (burin) is used to scratch lines into a hard surface such as metal or wood. A pre-20th-century artist described as an engraver likely worked in any of the intaglio methods of etching, engraving, or drypoint. Most contemporary engraving is done in the production of currency, certificates, etc.
Ephemera	printed material, intended to have only fleeting interest, some examples are cards and receipts
Lithograph	a printing process in which a surface, such as a stone or sheet aluminum, is treated chemically so that the ink adheres only to selected portions. The resulting image, printed on a litho-press is a lithograph or lithographic print. Usually the design is made with a grease pencil on a special lithograph stone. The stone is then wetted, leaving an even layer of water over the surface, and the area marked by the grease pencil will accept a layer of ink.
Medallion	a large medal worn around the neck on a heavy chain, ribbon, or rope, or, a relief sculpture resembling a medal, usually of circular or oval design, used as a decoration
Model	the smaller first form of a sculpture, building or other object created, often finished in itself, but preceding the final casting or carving
Pamphlet	complete, non-periodical printed works generally of fewer than 80 pages, often with a paper cover, sometimes short treatises on arguments or topics of current interest
Panorama	a broad or widely inclusive view of a landscape that can have both a historical and current meaning. In the 18th and 19th centuries, panoramas were a popular form of entertainment and education. Usually accompanied by music and a lecture, a long roll of canvas was unveiled slowly on cylinders to show a wide view.
Pelt	a hide or skin with the hair left on. Some examples are mink, beaver and fox.

Photograph	a picture or likeness obtained by photography
Photography	the art or process of producing images on a sensitized surface by the action of light or other radiant energy
Pictographs	also called a pictogram, figurative drawing or picture representing a word, sound or idea, earliest form in the evolution of a system of writing
Pitcher	a vessel generally made of ceramic, glass, metal, or plastic. There is usually a wide mouth with a broad lip and a handle at one side or two ears. Often, pitchers are accompanied by a washbowl and used for personal hygiene.
Portrait	a painting, sculpture, drawing or photograph that is a likeness of a human being or animal, living or dead. Portraits can be full length, heads, torsos or portrait busts, life size or disproportionate, abstract or realistic and executed in many mediums.
Postcard	on which a message may be written or printed for mailing without an envelope, usually at a lower rate than that for letters in envelopes
Poster Notices	intended to be posted to advertise, promote, or publicize an activity, cause, product, or service; also, decorative, mass-produced prints intended for hanging
Print	a print is a shape or mark made from a block or plate or other object that is covered with wet color (usually ink) and then pressed onto a flat surface, such as paper or textile. Most prints can be produced over and over again by re-inking the printing block or plate. Printmaking can be done in many ways, including using an engraved block or stone, transfer paper, or a film negative. The making of fine prints is generally included in the graphic arts, while the work of artists whose designs are made to satisfy the needs of more commercial clients are included in graphic design.
Scale Model	representations or copies of an object that are larger or smaller than the actual size of the object being represented, and manufactured precisely according to relative size. Typically, the scale model is smaller than the original and used for illustrating the object, for a toy or collectible, or as a guide to constructing it in full size. Scale models may be one- or two-dimensional. Scale models are generally built according to a standard scale for the particular product.
Sculpture	a three-dimensional work of art, or the art of making it. Such works may be carved, modeled, constructed, or cast. Sculptures can also be described as assemblage, in the round, and relief, and made in a huge variety of media.

Silhouette	an outline filled with a solid color, typically black on a white background, and most often for a portrait. The outer shape of an object. An outline often filled in with color.
Sketchbook	books with blank paper pages used by artists to books sketch ideas for artwork with pencil, chalk, watercolor, charcoal or oil. Usually the sketch is not detailed.
Stereoview	refers to double pictures of the same scene that produce the effect of three dimensionality when viewed through a stereoscope. The method involved lenses spaced the same distance apart as human eyes, which, in turn provided the viewer with side-by-side images. When viewed through a stereoscopic apparatus, the effect was three-dimensional.
Stoneware	a buff, gray or brown clay which is mixed with other clays and ceramic materials to make a heavy, opaque, highly plastic clay body that is fired at a high temperature (above 1200 degrees F). It is in between earthenware and porcelain in its character. The term stoneware also refers to the clay body and objects made from it.
Trade card	small printed sheets, and later cards, bearing tradesmen's advertisements, often including an engraved illustration; produced from the 17th through the 19th century. For cards made later, bearing the name and address of a business concern and the name of its representative, and intended more for information than for advertising, use "business cards."
Treatise	formal and systematic written expositions of the principles of a subject, generally longer and more detailed than essays
Watercolor	refers to two-dimensional works of art, usually on a paper support, to which pigment suspended in water is applied with a brush to create an image or design
Wood	a plant product, fibrous material found as the primary content of the stems of such "woody" plants as trees and shrubs

WEB RESOURCES

Albany County Convention Center and Visitors Bureau	www.albany.org
A. Philip Randolph Pullman Porter Museum	www.aphiliprandolphmuseum.com
Albany Pine Bush Volunteer Naturalist Program	www.albanypinebush.org
Association for the Protection of the Adirondacks	www.protectadks.org
Cary Institute of Ecosystem Studies	www.ecostudies.org
Champlain/Hudson/Fulton Commemorations Online Resource—New York State Education Department	www.emsc.nysed.gov/ciai/socst/ssnews.htm#CHF
D & H Canal Historical Society	www.dhthc.org
Explore NY 400—Hudson-Fulton-Champlain	www.exploreny400.org
Junior Naturalists Program	www.dec.ny.gov/education
Half Moon	www.hudsonriver.com
Hudson River Maritime Museum	www.hrmm.org
Hudson River Museum	www.hrm.org
Hudson River Reserve	www.dec.ny.gov/lands/4915.html
Mohonk Preserve	www.mohonkpreserve.org
Museum of New York City	www.mcny.org
National Audubon Society	www.ny.audubon.org
Naturalist Intern Program	www.dec.ny.gov/education
Nakinna Education Center Greenfield Center, New York	www.ndakinnacenter.org
New York Natural Heritage Program	www.acris.nynhp.org
New York State Department of Environments Conservation	www.dec.ny.gov
New York State Museum	www.nysm.nysed.gov
Rensselaer County Historical	www.rchsonline.org
Teaching the Hudson Valley	www.teachingthehudsonvalley.org

POSTER RESOURCE

This resource package contains 12 two-sided posters in four sets of three which are perforated for easy separation. The posters are:

1. **Lake Tear of the Clouds** by Verplanck Colvin, 1880
2. **Storm King on the Hudson** by Homer Dodge Martin, 1862
3. ***The Cultivator*** a broadside, 1860
4. **Entrance to the Highlands on the Hudson** by Hippolyte-Louis Garnier, c.1845
5. **View on the Hudson River near Athens, New York** by George K. Nedtwick, c.1890
6. **Model of the New York Central Railroad Steam Locomotive 999 with Tender and Track Panel** by Frank DeSantis (1917–)
7. **Albany Yacht Club and Maiden Lane Railroad Bridge looking east** a photograph, c.1910
8. **The Steamer Clermont** by Robert Havell, 1840
9. **Half Moon** a sculpture, c.1927
10. **The Fugitive's Story** by John Rodgers, 1865
11. **Frank A. Jagger lumber boat at Albany Lumber District** a photograph, c. 1870
12. **Parasol with baleen ribs,** 1845–50
13. **Hudson River Landing** by Alburtis Del Orient Browere, c.1840
14. **Morning, Looking East over the Hudson Valley from the Catskill Mountains** by Frederic Edwin Church, 1848
15. **Panorama of Catskill Mountains** by by H. Schile, c.1870
16. **Coat of Arms of the City of Albany** by Ezra Ames, c.1811
17. **Snow Scene in Albany, New York** a colored woodblock print, 1850
18. **Patent model for a wheel harrow,** 1894
19. **Grandest Palace Drawing Room Steamers in the World, Drew and St. John of the People's Line Between New York and Albany** a Currier and Ives lithograph, c.1878
20. **Storm King in the Heart of Hudson Highlands** by Walter L. Green, 1925–1931
21. **Twilight at Olana** by Bill Sullivan, 1990
22. **Rip Van Winkle Returns from the Mountains** by Tompkins Matteson, 1860
23. **Drafting tools** owned by Simeon DeWitt, 1790–1830
24. **God Save the Union Emancipation Convention, The Friends of Freedom 1863, Frederick Douglass** a broadside, 1863