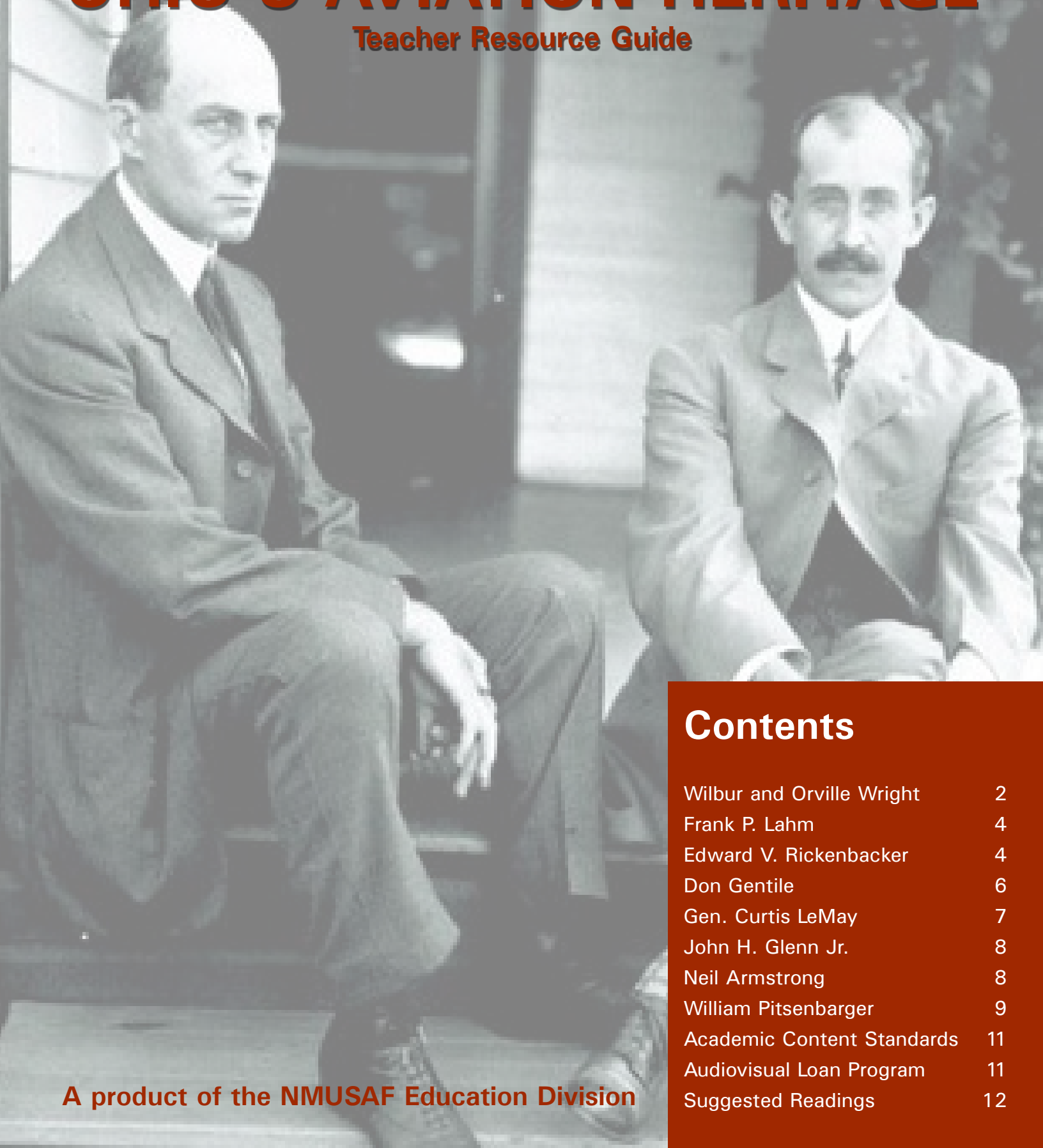




OHIO'S AVIATION HERITAGE

Teacher Resource Guide



Contents

Wilbur and Orville Wright	2
Frank P. Lahm	4
Edward V. Rickenbacker	4
Don Gentile	6
Gen. Curtis LeMay	7
John H. Glenn Jr.	8
Neil Armstrong	8
William Pitsenbarger	9
Academic Content Standards	11
Audiovisual Loan Program	11
Suggested Readings	12

An Introduction

Since the beginning of time people have been fascinated by the mystery and majesty of flight. Many Ohioans have played a major role in bringing the development of aviation to where it is today. All challenged the course of history and risked their lives for that progress.

Much as we watch birds in flight, Orville Wright also watched them and studied the exact position of

their wings while they were in flight. He used that principle as he as his brother Wilbur designed and experimented with their flying machines.

Many Ohioans have played an integral role in the history of the United States Air Force and its predecessor organizations. This guide highlights several of them and their stories at the National Museum of the United States Air Force.

Wilbur and Orville Wright

Wilbur Wright (1867-1912) was born near New Castle, Ind., and Orville Wright (1871-1948) was born in Dayton, Ohio, the third and fourth children of Milton and Susan Wright. They had two older brothers, Reuchlin and Lorin, and a younger sister named Katharine. Their father was a bishop in the United Brethren Church and the family moved several times before settling in Dayton. The Wrights were successful bicycle makers. According to Orville Wright, their interest in aviation began in 1899.

"In the spring of the year 1899, our interest in the subject was aroused through the reading of a book on ornithology. We could not understand that there was anything about a bird that would enable it to fly that could not be built on a larger scale and used by man. At this time our thought pertained more particularly to gliding flight and soaring. If the bird's wings would sustain it in the air without use of any muscular effort we did not see why man could not be sustained by the same means. We knew that the Smithsonian Institution had been interested in some work on the problem of flight and, accordingly, on the 30th of May 1899, my brother Wilbur wrote a letter to the Smithsonian inquiring about publications on the subject."



The Wright Brothers

In August 1899 the Wright brothers built a 5-foot span biplane kite to test their idea of warping wings for lateral control. Building on the success of this kite, they constructed a 17-foot span glider in September 1900. After a nationwide search for a location with high, steady winds, the Wrights chose a remote area known as Kill Devil Hills in the Outer Banks of North Carolina. In their test of this glider at Kill Devil Hills, the Wrights flew it both as a kite and a piloted glider. The aircraft was not completely satisfactory, however, because it flew poorly and proved difficult to control in a gusty wind. Encouraged by their experience with their first glider, the Wrights built a 22-foot span glider in 1901. It followed the basic design of their first glider but incorporated

a pilot's hip-cradle for operating the wing-warping control cables. The Wrights flew this glider at Kill Devil Hills in the summer of 1901, and on one flight they traveled 389 feet.

Even so, the glider's wings did not provide as much lift as they had calculated. As a result, the Wrights began to question the validity of the

(continued on next page)

(Wright Brothers continued)

Lilienthal aerodynamic tables they used. The Wrights decided to perfect their own mathematical tables for airfoil lift and drag -- this decision became a milestone on the way to success.

Between the fall of 1901 and the summer of 1902, the Wrights developed and tested more than 50 airfoil sections on a modified bicycle and in a homemade wind tunnel. At last they had solved the problem of calculating lift.

Using the tables they developed, the Wrights built a 32-foot span glider. In the fall of 1902, they made nearly a thousand flights with it at Kill Devil Hills. From this glider, the Wrights learned that to obtain adequate control in the air, they would have to install a movable rudder in place of fixed rudders. This last modification solved the problem of control. By 1903, the Wrights had solved two of the three basic problems associated with developing a successful flying machine -- lift and control. The problem of adding a lightweight power plant for propulsion remained.

In the summer of 1903, they built a 40-foot, 4-inch span airplane that incorporated all their aerodynamic knowledge. While their mechanic, Charlie Taylor, built a small, lightweight gasoline engine, they designed and built highly-efficient propellers -- a significant feat in itself. This engine was the last piece of the puzzle, and the Wrights traveled back to Kill Devil Hills to test their creation.

On Dec. 14, 1903, the Wrights flipped a coin to see who would be the first to try, and Wilbur won the toss. He attempted to fly the machine but over-corrected the elevator control and the airplane crashed. Three days later, after repairs, Orville flew it successfully for the first time.

The world's first powered, sustained and controlled heavier-than-air flight was on Dec. 17, 1903, at Kill Devil Hills, N.C. Piloted by Orville Wright, the airplane remained aloft for 12 seconds and flew a distance of 120 feet in a straight line. After Orville's first flight, Wilbur flew the aircraft 175 feet. Orville then took another turn, traveling 200 feet on his second flight. On the fourth flight of the day, Wilbur covered a distance of 852 feet, remaining aloft for 59 seconds. Although the landing from this last flight slightly damaged the aircraft, the Wrights intended to quickly fix the Flyer and attempt yet another flight. Unfortunately, a sudden gust of wind picked up the aircraft and tossed it along the beach, causing extensive damage -- the world's first successful airplane would

never fly again.

During 1904-1905, the Wrights continued researching the mysteries of flight at Huffman Prairie near the Simms Station trolley stop (now part of Wright-Patterson Air Force Base, Ohio).

In September 1904 Wilbur Wright reached a significant milestone. After ascending over Huffman Prairie in the Flyer II, Wilbur turned around and landed near his takeoff spot, making history's first full-circle airplane flight.

In October 1905, however, they decided to discontinue their flying experiments until they received a patent on their invention. Though this patent was not issued until May 22, 1906, the Wrights offered their invention to the U.S. government twice in 1905. Their offers were rejected, for few people actually believed they had invented a successful flying machine.

President Theodore Roosevelt heard of the Wrights and their flying machine and directed the U.S. Army to investigate their claims of having flown. This interest led to meetings with the Wrights, and on Dec. 23, 1907, Specification No. 486 was issued for a "Heavier-than-air Flying Machine." On Feb. 10, 1908, the Signal Corps and the Wrights signed their contract.

Orville Wright brought the 1908 Flyer to Fort Myer, Virginia, on Aug. 20, 1908. Beginning on Sept. 3, he made public flights almost daily, and as the word spread, people flocked to Fort Myer in droves. On Sept. 9, he stayed aloft more than an hour, establishing a record, and later the same day he took Lt. Frank P. Lahm aloft. Lahm thus became the first Army officer to fly as a passenger.

Tragedy struck during a flight on Sept. 17, 1908, when the right propeller on the 1908 Flyer fouled a guy wire, causing the plane to crash to earth. Orville Wright was seriously injured, while Lt. Thomas E. Selfridge, along on the flight as a passenger, was fatally injured, thus becoming the first person to die as the result of an airplane accident.

On June 20, 1909, the Wrights returned to Washington with a new and somewhat improved airplane, the 1909 Flyer. Official trials began on July 27 when Orville Wright flew 1 hour, 12 minutes, 40 seconds with Lt. Lahm on board as observer. The final trial flight was made on July 30 when Orville flew the airplane at an average speed of 42 mph with Lt. Foulois as observer. The 1909 Wright Flyer was formally accepted on Aug. 2 and was designated as Signal Corps Airplane No. 1, thereby becoming the world's first military airplane.

Frank P. Lahm

[1877-1963]

Frank Lahm was born in Mansfield, Ohio. He was rated as both a balloon pilot and airplane pilot in the U.S. Army. He was graduated from the U.S. Military Academy in 1901, served in the Philippines for two years, and instructed at West Point. In 1905 he went to France to study aeronautics and a year later won the International Balloon Race from Paris to York County, England.

On Sept. 9, 1908, the Wright Brothers brought their 1908 Wright Flyer at Fort Myer for acceptance trials, and on its second flight Lahm accompanied Orville as a passenger, the first U.S. military officer to fly in a powered airplane, on a flight of six minutes and 24 seconds. The Wrights returned to Washington with a new and somewhat improved airplane, the 1909 Flyer. Official trials began on July 27, 1909 when Orville Wright flew 1 hour, 12 minutes, 40 seconds with Lt. Lahm on board as observer.

Following the acceptance of the 1909 Flyer, aviation activities were moved to College Park, Md., where a larger flying field was available, and on Oct. 8, Wilbur Wright began giving flying lessons to Lts. Lahm and Frederick E. Humphreys. Lt. Humphreys soloed on Oct. 26, becoming the Army's first "pilot." Lt. Lahm soloed several minutes later. Within weeks,



Frank Lahm

both officers were ordered to return to duty with their respective Army units.

With the Signal Corps, Lahm investigated military aeronautics in France, England, Germany and Belgium. He was with the Office of the Chief Signal Officer's Aeronautics Division in Washington, D.C. when he began to fly. Prior to World War I he saw duty with the Cavalry and ran aviation schools. He went to Britain with the American Expeditionary Forces (AEF) in August 1917, and headed balloon outfits in the grade of captain. Lahm was on the First Army General Staff during the St. Mihiel and Muese-Argonne battles and later commanded the

1st and 2nd Army Air Services.

He later served on the War Department General Staff and was promoted to brigadier general in July 1926 as Assistant Chief of Air Corps. In 1930 he organized and commanded the Air Corps Training Center at San Antonio, Texas. He was back in France by 1931 as Assistant Military Attaché for Air. Four years later he was Chief of Aviation for the First Army at Governors Island, New York and went to the Gulf Coast Air Corps Training Center at Randolph Field, Texas where he retired from active duty in 1941.

Edward V. Rickenbacker

[1890-1973]

Columbus native Eddie Rickenbacker was a racing driver who went into World War I as a staff driver and emerged as the leading U.S. ace with 26 confirmed victories over the enemy. At his insistence he was permitted to join a flight unit, being assigned as a student at the Aviation Training School at Tours, France. In March 1918 he was assigned to the 1st Pursuit Group's 94th Aero Squadron, the famed "Hat-in-the-Ring Squadron," as a pilot under Maj. Raoul Lufbery. Rickenbacker was in action the next month, flying his

Nieuport fighter over the lines against the enemy. On April 25, 1918 he shot down a German Pfalz. By June 1, 1918, Rickenbacker had become an ace, with five victories to his credit. He was put in command of the famed 94th Aero Squadron on Sept. 25, 1918, and on Oct. 28 received a promotion to captain. He continued as Hat-in-the-Ring Squadron leader until his return to the United States on Jan. 27, 1919, when he was

(continued on next page)

(Rickenbacker continued)

hailed as America's Ace of Aces with 26 victories. He was awarded the nation's highest honor, the Medal of Honor with the following citation:

"For conspicuous gallantry and intrepidity above and beyond the call of duty in citation against the enemy near Billy, France, September 25, 1918. While on a voluntary patrol over the lines, Lt. Rickenbacker attacked seven enemy planes (five type Fokker, protecting two type Halberstadt). Disregarding the odds against him, he dived on them and shot down one of the Fokkers out of control. He then attacked one of the Halberstadts and sent it down also."

After World War I he returned to auto racing and became president of the Indianapolis Speedway. In 1929 he took a colonel's commission as a Specialist in the Officers Reserve Corps, but he gave it up at the end of the five year appointment -- he had often stated he always wanted to be remembered as "Captain Eddie."

During the early part of World War II he served as the personal observer of Secretary of War Henry L. Stimson to tour bases in England and seek out evidence of espionage. In October 1942, leaving from Hawaii on a mission to deliver a top secret message from Secretary Stimson to Gen. Douglas MacArthur, Rickenbacker and his aide, Col. Hans Adamson, boarded a B-17. Along with pilot Capt. William Cherry, co-pilot Lt. James Whittaker, navigator John De Angelis, radio operator Sgt. James Reynolds and flight mechanics Private John Bartek and Sgt. Alex Kaczmarczyk, the B-17 took off for a refueling stop



Eddie Rickenbacker

on Canton Island. Due to inadequate navigational equipment and a faulty weather report, the B-17 overshoot its mark. Hundreds of miles off-course and out of fuel, Cherry ditched the plane in the Pacific.

The eight men lashed together the three rubber rafts so they would not get separated. They thought that rescue would come quickly because of Rickenbacker's fame, but they remained lost at sea for 24 days. Their meager supply of food ran out after three days, but on the eighth day a sea gull lighted on Rickenbacker's head. The bird became dinner and fishing bait. Navy pilots finally found and rescued the crew in the Ellice Island chain on Friday, Nov. 13, 1942, more than 500 miles beyond Canton Island. Suffering from exposure, dehydration and starvation, Rickenbacker rested a few days then proceeded on his original mission, including inspections at facilities at Port Moresby, Guadalcanal and Upola. He reported to Secretary Stimson and General Arnold on Dec. 19, and then returned to New York the following day where he was reunited with his family.

**DID YOU
KNOW?**

**Ohioan Charles F. Kettering
invented the unmanned
Kettering Aerial Torpedo
in 1917? It was
nicknamed the "Bug."**

Don Gentile

[1920-1951]



Don Gentile

Don Gentile (Dominic Salvatore Gentile) was born in Piqua, Ohio, on Dec. 6, 1920. He learned to fly in high school. After graduation, he tried to enlist in the Air Corps but was refused because he lacked the required two years of college (although he did have 300 hours flying time). He turned to the Royal Air Force and by December 1941 became a Pilot Officer, flying with various RAF Squadrons out of England. He was assigned to combat in 1942 as a member of No. 133 Eagle Squadron and on Aug. 1, 1942 during the Dieppe raid, destroyed his first German planes, an FW-190 and a JU-88, within 10 minutes of each other. In September 1942 when the three Eagle Squadrons were transferred to the AAF as the 4th Fighter Group, Gentile was commissioned a second lieutenant and began a fabulous combat career flying Spitfires, P-47s and lastly P-51s.

At the same time another young pilot, Capt. John Godfrey transferred from the RAF to the AAF. He was assigned to the same squadron and became Gentile's wingman. The two formed a combination which Gen. Hap Arnold praised as the greatest in any war. Unlike the usual wingman, Godfrey alternated with

Gentile as leader. Gentile is credited with shooting down a fraction less than 20 German planes and destroying six on the ground in 182 combat mission and 350 hours in the air. Godfrey was credited with 18 enemy plane in the air, 18 on the ground, 5 probably destroyed, 12 damaged and 15 locomotives destroyed during 150 combat hours. Their teamwork against the German forces prompted Hermann Goring to be quoted as saying, "I would gladly give two of my best squadrons for the capture of the Italian Gentile and the Englishman Godfrey." They earned high praise from President Roosevelt, Winston Churchill and Gen. Arnold. Gen. Dwight D. Eisenhower called Capt. Don S. Gentile a "one man Air Force" upon presenting the Distinguished Flying Cross to him in April 1942.

By April 1944, he was the AAF's leading ace with 27.8* enemy planes destroyed in the air and on the ground. The next month he was ordered back to the United States because of the risk he might be lost in battle. Gentile agreed to take a one month rest from the rigors of combat with the understanding that he would be permitted to return to his unit.

Following his arrival in the United States, however, Gentile was not permitted to rejoin the 4th Fighter Group. Rather, he was permanently assigned to Wright Field as a test pilot until after the war. In 1947 he accepted a commission in the Regular Air Force. On Jan. 23, 1951, this great combat pilot who had survived all the enemy could muster against him, was killed in the crash of a T-33 jet trainer near Andrews Air Force Base, Md. He was posthumously promoted to major.

**Note: Don Gentile was officially credited with 21.88 aerial victories and six ground victories. He also had two victories while assigned to No. 133 Eagle Squadron.*

Gen. Curtis LeMay

[1906-1990]

Curtis Emerson LeMay has been called the father of modern strategic bombing and is considered to be one of America's most famous air commanders. The Columbus native attended Columbus public schools and The Ohio State University, graduating with a bachelor's degree in civil engineering. In 1928 he entered the Armed Services as a flying cadet. He completed pilot training at Kelly Field, Texas, and was commissioned a second lieutenant in the Air Corps Reserve in October 1929. He received a regular commission on Feb. 1, 1930.



General Curtis LeMay

Gen. LeMay's first tour of duty was with the 27th Pursuit Squadron at Selfridge Field, Mich. He served in various assignments in fighter operations before transferring to bomber aircraft in 1937. LeMay participated in the first mass flight of B-17 Flying Fortresses to South America in 1938. This won for the 2nd Bomb Group the Mackay Trophy for outstanding aerial achievement. Prior to the United States' entry into World War II, Gen. LeMay pioneered air routes over the South Atlantic to Africa and over the North Atlantic to England.

LeMay organized and trained the 305th Bombardment Group in 1942 and led that organization to combat in the European theater.

To improve bombing accuracy, LeMay initiated straight-in bomb runs and formation patterns, new techniques and procedures which were eventually used by all B-17 Flying Fortress bomber units throughout the European theater, and later by the B-29 Superfortress bombers against Japan. As commanding general of the Third Bombardment Division (England), he led the famed Regensburg raid, a B-17 shuttle mission that originated in England, struck deep in Germany and terminated in Africa.

After promotion to major general in 1944, LeMay was transferred to the Pacific and later became Chief of Staff of the Strategic Air Forces in the Pacific. In the B-29 operations from the Mariana Islands, he

made the decision to strip the B-29, which was built for high-altitude mission, down to lighter weight for low-level round-trip night attacks on Japan, armed with fire bombs. Using this technique on March 9, 1945, a force of 335 B-29s destroyed a large portion of Tokyo and the industrial area. These fire bomb raids contributed to the rapid defeat of Japan.

At the conclusion of World War II, he returned to the United States piloting a B-29 Superfortress on a nonstop, record flight from Hokkaido Island, Japan, to Chicago, Ill. He was then transferred to the Pentagon in Washington, D.C., to become

the first Deputy Chief of Air Staff for Research and Development.

In October 1947 LeMay was selected to command the U.S. Air Forces in Europe with headquarters at Wiesbaden, Germany. He organized air operations for the Berlin Airlift. A year later he returned to the United States, assumed command of the newly formed Strategic Air Command and established its headquarters at Offutt Air Force Base, Neb. This central location was to become the nerve center of a worldwide bomber-missile force.

The general built, from the remnants of World War II, an all jet bomber force, manned and supported by professional airmen dedicated to the preservation of peace. The general commanded SAC for nearly 10 years, and under his leadership and supervision, plans were laid for the development and integration of an intercontinental ballistic missile capability.

In July 1957, Gen. LeMay was appointed Vice Chief of Staff of the United States Air Force and helped direct the missile and military space program. He served as Chief of Staff of the United States Air Force from 1961 to 1965.

Gen. LeMay received the Distinguished Service Cross, the Distinguished Service Medal with two oak leaf clusters, the Distinguished Flying Cross with two clusters and the Air Medal with three clusters.

John H. Glenn Jr.

[1921-]

John H. Glenn Jr. was born in Cambridge, Ohio, and grew up in New Concord, Ohio. In his long aviation career, he flew with the U.S. Marines and the U.S. Air Force, set a speed record, and shot down enemy aircraft. But he is best known as the first American to orbit the earth and, later in life, as the oldest person to fly in space.

In World War II, Glenn volunteered for naval aviation training and became a Marine pilot. He flew 59 combat missions in F4U Corsair fighters and received the Distinguished Flying Cross (DFC) and two Air Medals. In the Korean War, he was one of a handful of Marines selected to fly USAF F-86 Sabre jets in a pilot exchange program. Glenn shot down three North Korean MiG-15 fighters and soon became known as the “MiG Mad Marine.” He flew 27 of his 90 missions in USAF jets, earning another DFC and eight Air Medals. Following the war, Glenn became known as the first “supersonic Marine.” He set a speed record flying a Chance Vought F8U Crusader coast-to-coast across the United States in 3 hours, 23 minutes, 8.4 seconds in July 1957. His average speed was 723.52 mph or Mach 1.1, bettering the previous coast to coast records by 21 minutes.

In April 1959 he was selected as one of the original seven Project Mercury astronauts. On Feb. 20, 1962, Glenn piloted the Mercury-Atlas 6 “Friendship 7” spacecraft on the first manned orbital mission of



John Glenn

the United States. Launched from Kennedy Space Center, Florida, he completed a successful three-orbit mission around the earth, reaching a maximum altitude (apogee) of approximately 162 statute miles and an orbital velocity of approximately 17,500 miles per hour. Glenn’s “Friendship 7” Mercury spacecraft landed approximately 800 miles southeast of KSC in the vicinity of Grand Turk Island. Mission duration from launch to impact was 4 hours, 55 minutes, and 23 seconds. The USAF’s Atlas rocket made his historic flight possible. At that time, the Atlas was the only booster powerful enough to put the Mercury spacecraft into orbit.

Col. Glenn also served as U.S. Senator from Ohio for four terms.

On Oct. 29, 1998, the first American to orbit the Earth made history again. John Glenn became the oldest man to fly in space by serving as a payload specialist on STS-95 aboard the Space Shuttle *Discovery*. Glenn spent most of his time in space participating in investigations on the aging process. Scientists recognize several parallels between the effects of spaceflight on the human body and the natural changes that take place as a person ages. Glenn’s experiments were designed to test how his body responded to the microgravity environment. They focused on balance, perception, immune system response, bone and muscle density, metabolism, blood flow and sleep patterns.

Neil Armstrong

[1930-]

Neil A. Armstrong, of Wapakoneta, Ohio, took his first plane ride in a Ford Tri-Motor at the age of 6. He developed an interest in aviation and astronomy and earned his private pilot’s license at age 16, before he learned to drive an automobile. In 1947 he entered Purdue University majoring in aeronautical engineering. In 1949, the United States Navy called him to ac-

tive duty. He became a Navy pilot and served during the Korean War, flying 78 combat missions in Navy Panther jets.

Armstrong returned to Purdue University in 1952, earning a bachelor’s degree in aeronautical engineer

(continued on next page)

(Armstrong continued)

ing in 1955. He then joined NASA's Lewis Research Center and later transferred to the NASA High Speed Flight Station (now NASA's Dryden Flight Research Center) at Edwards Air Force Base, Calif., as an aeronautical research pilot. In this capacity, he performed as an X-15 project pilot. He reached the altitude of 207,500 feet and the speed of 3,989 (Mach 4). He made seven flights in the X-15 rocket plane between December 1960 and July 1962. Other flight test work included piloting the X-1, F-100, F-101, F-102, F-104, B-47 and others. He had a total of over 2,450 flying hours by the time he left Dryden. Before it was cancelled, Armstrong was a member of the USAF-NASA Dyna-Soar Pilot Consultant Group. He studied the X-20 Dyna-Soar approaches and abort maneuvers using F-102A and F5D aircraft.

Armstrong was selected as the first civilian astronaut by NASA in September 1962. He served as back-up command pilot for the Gemini V flight. As command pilot for the Gemini XIII mission, launched on March 16, 1966, he performed the first successful docking of two vehicles in space- the Gemini spacecraft and the Agena Target Vehicle. After having completed a perfect linkup, the Gemini VIII capsule, still docked to the Agena, began rolling continuously. Never having faced this in simulation, the crew undocked from the Agena. The problem was a stuck thruster on the spacecraft, which now tumbled even faster at the dizzying rate of one revolution per second. The only way to stop the motion was to use the capsule's reentry control thrusters, which meant that Armstrong and crew member David Scott had to



Neil Armstrong

cut short their mission and make an emergency return to Earth 10 hours after launch. He subsequently served as backup command pilot for the Gemini XI mission and was backup commander on Apollo VIII.

Neil Armstrong was the commander for Apollo XI from July 16-24, 1969 -- the first manned lunar landing mission. He holds the distinction of being the first man to walk on the moon. On July 20, 1969, a Lunar Module camera provided live television coverage of Armstrong setting foot on the lunar surface at 10:56 p.m. EDT. Just as he stepped off the

Lunar Module, Neil Armstrong proclaimed, "That's one small step for a man, one giant leap for mankind." Lunar module pilot Buzz Aldrin emerged soon after, setting foot on the lunar surface at 11:16 p.m. They completed a 2 hour and 40 minute extravehicular activity which resulted in the collection of lunar surface samples, the deployment of lunar surface experiments and an extensive evaluation of the life supporting extravehicular mobility unit. Following completion of their activities, they maneuvered the lunar module to a rendezvous with command module pilot Michael Collins who had remained in lunar orbit in the command module.

Armstrong resigned from the United States astronaut program in 1970. He earned a master's degree in aerospace engineering at the University of Southern California in 1970 and was a professor of aerospace engineering at the University of Cincinnati from 1971-1979. In 1986 he was named vice chairman of a presidential commission investigating the breakup of the Space Shuttle *Challenger*.

William Pitsenbarger

[1944-1966]

Born in 1944 in Piqua, Ohio, William H. Pitsenbarger was an ambitious only child. He wanted to quit high school to join the U.S. Army Special Forces' "Green Berets," but his parents convinced him to stay in school. After graduating in 1962, Pitsenbarger joined the Air Force.

Airman 1st Class Pitsenbarger learned his mili-

tary skills in a series of demanding schools. After Air Force basic training, he volunteered for pararescue work and embarked on a rigorous training program, which included U.S. Army parachute school, survival school, a rescue and survival medical course, and the U.S. Navy's scuba diving school. More Air Force rescue training and jungle survival school followed. His



William Pitsenbarger

final training was in air crash rescue and firefighting, with assignment to the HH-43 Huskie helicopter.

Arriving in Vietnam in August 1965, Pitsenbarger completed more than 250 missions, including one in which he hung from an HH-43's cable to rescue a wounded South Vietnamese soldier from a burning minefield. This action earned him the Airman's Medal and the Republic of Vietnam's Medal of Military Merit and Gallantry Cross with Bronze Palm.

William H. Pitsenbarger was only 21 years old when he was killed in action. But in his short life and valorous Air Force career, he was an example of dedication, compassion and tenacity for all those with whom he served. In his work, and especially on his final mission, Pitsenbarger embodied the pararescueman's motto: "That Others May Live."

The Last Mission

"There was only one man on the ground that day that would have turned down a ride out of that hell-

hole -- and that man was Pitsenbarger."

- F. David Peters, Charlie Company, 2nd Battalion, 16th Infantry, 1st Infantry Division

In Vietnam Airman 1st Class William H. "Bill" Pitsenbarger gave his life so that others might live. A pararescueman, Pitsenbarger saved lives in an example of selfless heroism worthy of the Medal of Honor.

On April 11, 1966, in thick jungle near Saigon, an infantry company on 134 soldiers from the 1st Infantry Division (the "Big Red One") was surrounded by a Viet Cong battalion of approximately 500 troops. In a fierce firefight, the North Vietnamese surrounded and pinned down the Americans. As the battle went on, the number of U.S. casualties grew steadily.

Detachment 6 of the USAF's 38th Aerospace Rescue and Recovery Squadron received an urgent call to evacuate the wounded. Army helicopters could not land in the battle zone because there were no clearings in the tall, dense "triple canopy" forest. The tallest trees rose 150 feet, and a second layer stood at about 100 feet, with a third layer below. Only U.S. Air Force HH-43 Huskie helicopters with cables and winches could hoist the injured from the jungle.

Airman Pitsenbarger was the rescue and survival specialist aboard "Pedro 73," one of the two Huskies on the mission. The Huskies were to take turns hoisting litters with critically wounded patients through the forest canopy and delivering them to a nearby airfield. Pedro 73's crew, while under fire and hovering in a hole in the forest below the tallest trees and barely large enough for the Huskie, saw that the ground troops desperately needed help loading wounded into the litter. Pitsenbarger volunteered to be lowered to the ground to help. He descended a hundred feet into the firefight with a medical bag, a supply of splints, a rifle and a pistol.

On the ground, Pitsenbarger organized and speeded the evacuation, enabling the Huskies to rescue nine soldiers on several trips. Normally, pararescuemen return to the helicopter, but Pitsenbarger chose to stay and help the beleaguered troops. As the fight continued, Pedro 73 was badly damaged by ground fire and forced to withdraw. Rather than escape with the last Huskie, Pitsenbarger chose to stay on the ground and aid the wounded. Soon the firefight grew too intense for the helicopters to return.

As darkness fell, Pitsenbarger not only cared for the wounded, but also collected and distributed ammunition to the surviving soldiers several times under enemy fire. In the early evening he was mortally

wounded fighting alongside the remaining infantrymen. The Viet Cong withdrew during the night, and the following morning U.S. forces were able to recover survivors and the fallen. Charlie Company had suffered 80 percent casualties.

For coordinating the successful rescues, caring for the wounded and sacrificing his life while aggressively defending his comrades, William H. Pitsenbarger received the Air Force Cross on June 30, 1966. After review, the original award was upgraded, and on Dec. 8, 2000, the Medal of Honor was presented to his family in a ceremony at the U.S. Air Force Museum. Airman Pitsenbarger is the 59th Medal of Honor recipient, and sixth enlisted recipient, from the Air Force and its predecessor organizations.

Ohio Academic Content Standards

Social Studies — Grade 4 Ohio: Its Past, Its Location, Its Government

History

Chronology – Construct time lines with evenly spaced intervals for years, decades and centuries to show the significant events in Ohio history

Growth – Explain the importance of inventors such as the Wright Brothers, Charles Kettering, Garrett Morgan, Granville Woods and Thomas Edison.

Citizenship Rights and Responsibilities

Participation – Describe the ways in which citizens can promote the common good and influence their government including: Performing voluntary service.

Rights and Responsibilities- Explain the importance of leadership and public service; explain why characteristics such as respect for the rights of others, fairness, reliability, honesty, wisdom and courage are desirable qualities in the people citizens select as their leaders.

AV loan program

Ohio's Contribution to Flight [V071] *Grades 3-12*

Highlights the contributions of Wilbur and Orville Wright, Capt. Eddie Rickenbacker, Maj. Don Gentile, Gen. Curtis LeMay, Col. John Glenn, Neil Armstrong and Dr. Judith Resnick. [20 min.]

The Wright Brothers at Huffman Prairie [V073] *Grades 3-12*

Traces the story of the Wright brothers after the historic flights at Kitty Hawk, N.C., in 1903. Uses original photographs and film footage. Also includes oral histories by the niece and nephew of the Wright brothers. [25 min.]

Dayton Codebreakers *Grades 6-12*

History of the role of the city and its natives in breaking secret enemy codes through World War II. Focuses on National Cash Register (NCR) and the engineer Joe Desch who played significant roles in helping to quell these treats. [From ThinkTV, 60 min.]

Pioneers in Space [V099] *Grades 6-12*

From Alan Shepard's sub-orbital journey in 1961 to John Glenn's latest mission in 1998, this video depicts the wondrous development of space flight in America as well as in the Soviet Union. [From the History Channel, 50 min.]

Audiovisual programs may be borrowed at no charge for showing to school and youth groups. Programs should be ordered at least 30 days in advance and only one program can be loaned to a requestor within a three week period. Submit requests at www.nationalmuseum.af.mil/education/avloan/index.asp.

Suggested Readings

- Freedman, Russell. *The Wright Brothers: How They Invented the Airplane*. New York: Scholastic, 1991.
- Glines, Carroll V. *The Wright Brothers: Pioneers of Power Flight*. New York: Franklin Watts, Inc., 1968.
- Haynes, Richard M. *The Wright Brothers*. Englewood Cliffs, NJ: Silver-Burdett Press, 1991.
- King, Dorothy. *The Wright Brothers: The Story of the Conquest of the Air*. London: Blackie & Son, Lt., 1958.
- MacLeod, Elizabeth. *The Wright Brothers: A Flying Start*. Toronto: Kids Can Press, 2002.
- Marquardt, Max. *Wilbur and Orville and the Flying Machine*. Austin: Raintree Steck-Vaughn, 1992.
- Parker, Steve. *The Wright Brothers and Aviation (a Science Discoveries book)*. New York: Chelsea House Publishers, 1995.
- Quackenbush, Robert. *Take Me Out to the Airfield: How the Wright Brothers' Invented the Airplane*. New York: Parent's Magazine Press, 1976.
- Reynolds, Quentin. *The Wright Brothers*. New York: Random House, 1981.
- Ruehrwein, Dick. *Discover the Wright Brothers and Flight*. Greendale, IN: The Creative Company, 1995.
- Sabin, Louis. *Wilbur and Orville Wright: The Flight to Adventure*. Mahwah, NJ: Troll Associates, 1983.
- Schulz, Walter A. *Will and Orv*. Minneapolis: Carolrhoda Books, 1991.
- Sobol, Donald J. *The Wright Brothers at Kitty Hawk*. New York: Scholastic, 1961.
- Sproule, Anna. *The Wright Brothers: The Story of the Struggle to Build and Fly the First Successful Aeroplane*. Toronto: Irwin Publishing, 1991.
- Stevenson, Augusta. *Wilbur and Orville Wright: Young Fliers*. New York: Aladdin Paperbacks, 1986.
- Woods, Andrew. *Young Orville and Wilbur Wright: First to Fly*. Mahwah, NJ: Troll Associates, 1992.
- Cleven, Catherine. *Eddie Rickenbacker: Boy Pilot and Racer*. Indianapolis: Bobbs-Merrill, 1974.
- Gold, Ned. *Eight Who Wrestled with Death*. Milwaukee: Raintree Publishers, 1980.
- Koestler-Grack, Rachel. *Eddie Rickenbacker*. Philadelphia: Chelsea House Publishers, 2003.
- Bredson, Carmen. *John Glenn: Space Pioneer*. Brookfield, CT: Millbrook Press, 2000.
- Kramer, Barbara. *John Glenn: A Space Biography*. Springfield, NJ: Enslow Publishing, 1998.
- Mitchell, Don. *Liftoff: A Photobiography of John Glenn*. Washington, D.C.: National Geographic, 2006.
- Streissguth, Thomas. *John Glenn*. Mankato, MN: Bridgestone Books, 2003.
- Dunham, Montrew. *Neil Armstrong: Young Flyer*. New York: Aladdin Paperback, 1996.
- Kramer, Barbara. *Neil Armstrong: Meet the Famous Astronaut*. Berkeley Height, NJ: Enslow Publishers, 2002.
- Rau, Dana Meachen. *Neil Armstrong*. New York: Children's Press, 2003.
- Zemlicka, Shannon. *Neil Armstrong*. Minneapolis: Lerner, 2003.

**DID YOU
KNOW?**

**Lt. Mac Ross of Dayton
was one of the first five
Tuskegee Airmen.**



**NATIONAL MUSEUM
OF THE UNITED STATES AIR FORCE®**

"We are the keepers of their stories"®