

VULCAN

PARK & MUSEUM

TEACHER GUIDE

A Resource for Understanding Exhibits



BOLT TWO OF VULCAN'S
EDUCATIONAL TOOLKIT

HOW TO USE THIS GUIDE

Thank you for choosing to visit Vulcan Park and Museum - an exciting way to make history come to life for your students!

Inspired by Birmingham's great civic symbol, Vulcan Park and Museum unfolds a comprehensive story of Birmingham, offering lessons in social studies, language arts, math, science, and fine arts. To help teachers connect our educational programs to their classroom goals, we have created this Teachers' Guide designed to:

- Foster student participation in guided tours
- Equip teachers to design their own self-guided tours
- Provide pre- and post-visit classroom activities that enliven both guided and self-guided tours

For more information about Vulcan Park and Museum resources, including information on upcoming events and changing exhibits in Linn-Henley Gallery, visit us online at visitvulcan.com.

Admission includes entrance to park grounds, Vulcan Center Museum, Vulcan's Observation Tower and The Anvil gift shop.

We hope you enjoy your visit!



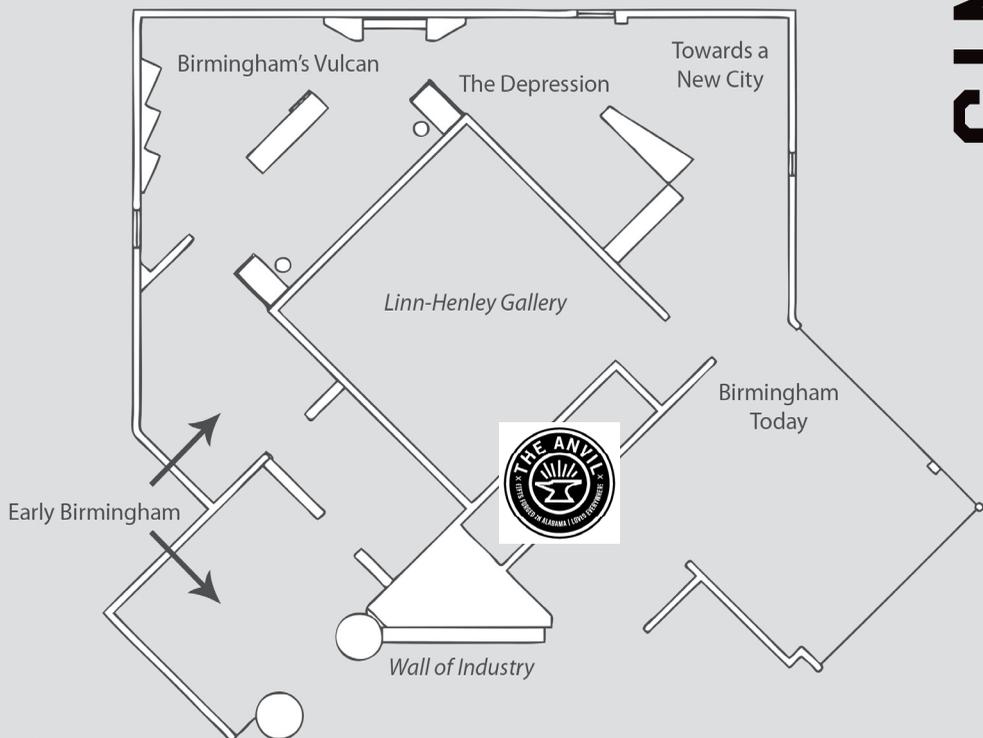
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@VisitVulcan MUSEUM EXPERIENCES WITH US!**

#LearnWithVulcan #ForgeTheFuture

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Vulcan Center Museum



OUTDOORS & LOBBY



Vulcan Park and Museum's outdoor information stations, the Vulcan Plaza Map, and the Wall of Industry sculpture speak of the area's natural resources and people's responses to them.

The Birmingham region contains iron ore, limestone, and coal, the three ingredients necessary to produce iron. The region also contains deposits of sandstone, the material found in the walkways and pedestal of Vulcan Park and Museum.

Red ore, also known as hematite, came out of the Lone Pine Mine No. 3, one of more than one hundred mines on Red Mountain. Red ore went to furnaces by way of the Mineral Railroad, today's Vulcan Trail, to be refined and turned into pig iron, and then to factories to be fashioned into useful objects. The mines of Red Mountain were connected to foundries by a network of railways.

Students can see modern day examples of Birmingham's iron and steel industry at places like Sloss Furnaces, ACIPCO, McWane, U.S. Pipe, and U.S. Steel, even as a new Birmingham with an economy based on healthcare and education, evolves within those boundaries.

OUTDOOR STATION: GIUSEPPE MORETTI

Italian-born sculptor Giuseppe Moretti was known for his sculptures in bronze and marble before gaining his greatest fame as the designer of Vulcan. Moretti became a great proponent of Alabama marble; his Head of Christ, made from Sylacauga white marble, was one of his personal favorites.

OUTDOOR STATION: MINERAL RAILROAD TRESTLE

Transport of raw materials and products by rail was essential to the iron industry. L&N Railroad's Mineral Railroad, which ran along the northern edge of Vulcan Park, formed a 156-mile loop around Red Mountain to carry these materials. The Mineral Railroad was also connected to the nationwide rail network that was used to ship finished iron and steel.

OUTDOOR STATION: CITY VIEWS

This area provides a panoramic view of the city's industrial borders and the city within. The financial, Civil Rights, and Fourth Avenue districts, the "Heaviest Corner in the South," and Regions Field are easily viewed. New developments such as Railroad Park can be viewed from this site, as well.

OUTDOOR STATION: LONE PINE MINE NO. 3

Lone Pine Mine No. 3 was one of more than one hundred mines on Red Mountain. In the early twentieth century, iron ore was extracted from this mine and carried in ore carts to the Mineral Railroad.

VULCAN PLAZA

Vulcan Plaza features a giant base map of the region's natural resources, and of the mines, factories, and communities that emerged around these resources.

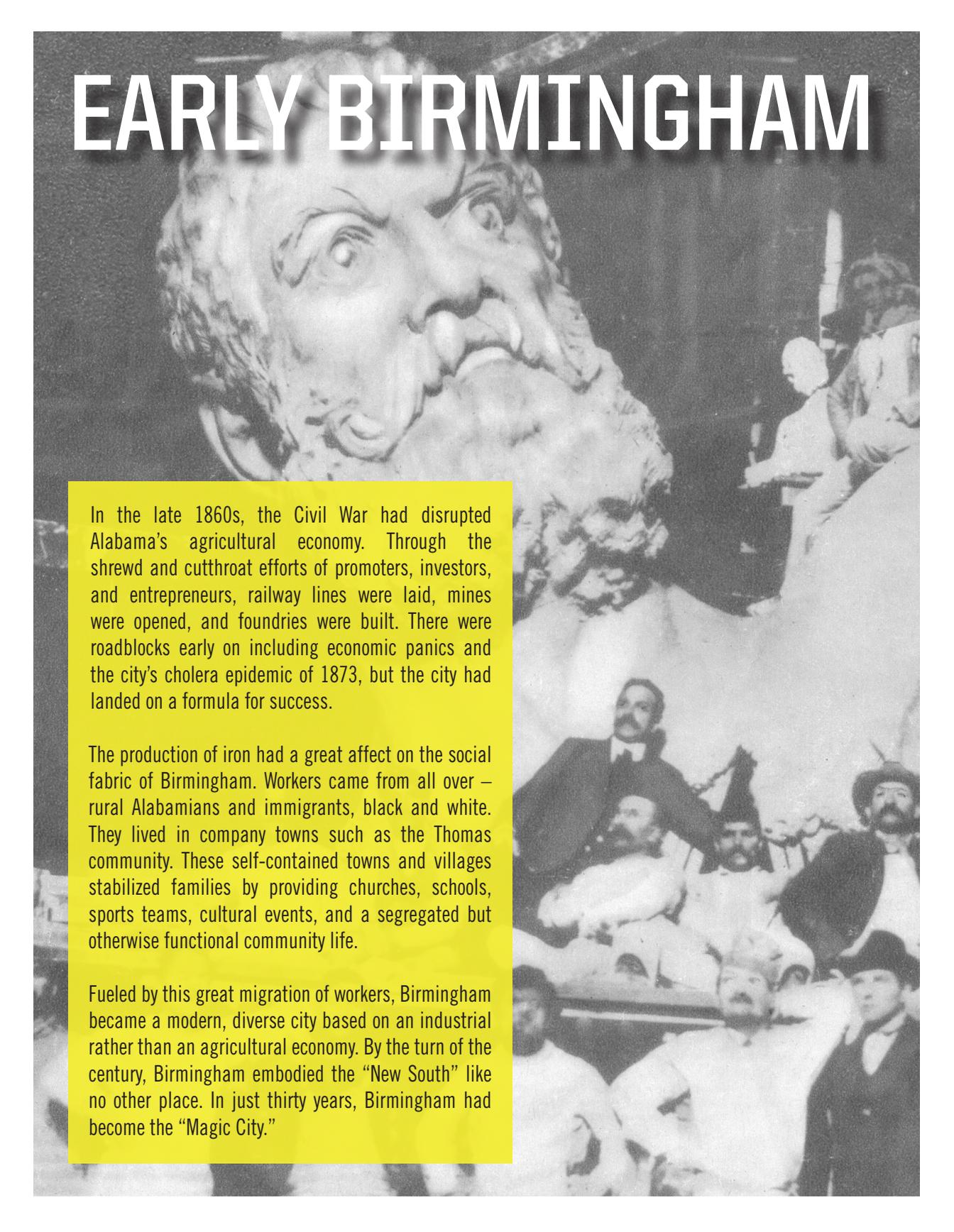
Tip: Ask students to find on the map the area of Red Mountain upon which they are now standing. If you come from an area school, ask students to find where they live and where their school is located.

WALL OF INDUSTRY

Located in the entry to Vulcan Center Lobby, the Wall of Industry is an artistic interpretation of the diverse products made in Birmingham.

Tip: Ask students to identify as many objects as they can. Who has benefited from Birmingham's iron products? How do these objects reflect the everyday lives of previous generations?

EARLY BIRMINGHAM



In the late 1860s, the Civil War had disrupted Alabama's agricultural economy. Through the shrewd and cutthroat efforts of promoters, investors, and entrepreneurs, railway lines were laid, mines were opened, and foundries were built. There were roadblocks early on including economic panics and the city's cholera epidemic of 1873, but the city had landed on a formula for success.

The production of iron had a great affect on the social fabric of Birmingham. Workers came from all over – rural Alabamians and immigrants, black and white. They lived in company towns such as the Thomas community. These self-contained towns and villages stabilized families by providing churches, schools, sports teams, cultural events, and a segregated but otherwise functional community life.

Fueled by this great migration of workers, Birmingham became a modern, diverse city based on an industrial rather than an agricultural economy. By the turn of the century, Birmingham embodied the "New South" like no other place. In just thirty years, Birmingham had become the "Magic City."

FURNACE ROOM

In the Furnace Room, students encounter the three raw materials needed for iron production – limestone, coal, and iron ore. Students see how the furnace produces pig iron and a leftover product called slag. Students also see that coal must first be turned into coke. Laborers from all over were, in a real sense, the fourth ingredient.

Tip: Encourage students to touch the different ingredients.

VULCAN COMMISSARY

The Vulcan Commissary depicts several aspects of life in a company town. In this exhibit, students encounter sports teams and community pageants. By clicking through the radio, students hear an old-time baseball game and a cooking show. The cash register and clacker are reminders that the company store also offered the temptation of running up debt. Some local company towns include the Thomas community, Sloss Quarters, and Docena.

Tip: Make sure students take time to turn on the radio.

INVESTORS, PROMOTERS AND ENTREPRENEURS

In 1871, Birmingham was “just an old cornfield,” but investors from the North and South saw it as much more. Through energetic promotion and boosterism, these men worked to build a city based on the manufacturing of iron. Men like John Milner and Daniel Pratt ensured that rail lines would cross at the future location of Birmingham.

Tip: Go over the last names with your students. Ask if they can recall a place in the area with one of those last names. Powell Elementary School, Sloss Furnaces, and the McWane Science Center may be mentioned.

BUILDING BIRMINGHAM

After an initial struggle, Birmingham quickly became the industrial center of the South. The late nineteenth and early twentieth centuries saw the rapid growth of industry, the first steel production, and the development of Birmingham’s metropolitan area and infrastructure.

Tip: What national events were going on as Birmingham was being built? When was the streetcar invented? The light bulb?

Tip: Ask students to look at the men on the skyscraper. Ask students where the workers might have come from. Birmingham’s population grew as people came from the rural South and from other countries.

BIRMINGHAM'S VULCAN



To tell the world that Birmingham had risen from the ashes of the Civil War and had the potential to be an industrial powerhouse, Birmingham's civic leaders concocted a grand scheme to build a colossal statue to send to the St. Louis World's Fair. Vulcan's construction was a Herculean feat. The multi-step process began in Moretti's New Jersey studio, continued in a Birmingham foundry, and was completed in the Palace of Mines and Metallurgy at the St. Louis World's Fair in 1904.

As a member of the Greco-Roman pantheon, Vulcan was responsible for forging tools, weapons, armor, and jewelry for other gods and heroes. As the god of iron and the forge, Vulcan has corollaries in many religious traditions, including the West African god Ogun.

Upon its return to Birmingham, Vulcan languished in the rail yard for two years before being erected, incorrectly, at the Alabama State Fairgrounds, where he was used as an advertisement for overalls and pickles. In 1939, a WPA project placed Vulcan at its current site. A few years later, Vulcan was once again turned from a civic symbol into a mascot – for traffic safety through the addition of the famous green and red torch.

A restoration effort in 1971 placed marble cladding over Vulcan's original sandstone pedestal. The expanding concrete poured inside to anchor him to the pedestal caused cracks. In 1999, Vulcan Park was closed and a \$15 million campaign to save Vulcan was launched. Through those efforts, Vulcan was painstakingly restored and the statue's original pedestal and surrounding park were recreated and the Museum was built.

A GRAND SCHEME

Journalist and promoter, James MacKnight conceived the idea of a giant man of iron to send to the St. Louis World's Fair. Making MacKnight's vision a reality required both money and an artist equal to the task. The Commercial Club (today's Birmingham Business Alliance) organized fundraising efforts like baseball games, concerts, and art shows. Rufus Rhodes, editor and publisher of The Birmingham News, rallied public support, as well. A total of \$15,000 was raised. After a number of sculptors refused the task, MacKnight approached Italian-born Giuseppe Moretti, who was eager to accept the challenge of building a giant iron statue of Vulcan in nine months.

Tip: It was the foot that first arrived at the World's Fair as a promise that the rest of Vulcan would follow. Students are encouraged to sit on the life-size cast of Vulcan's foot, just as young people did in 1904!

AT THE FAIR – AFTER THE FAIR

This display charts Vulcan from his earliest days at the St. Louis World's Fair to his lengthy and sometimes troubled stay atop Red Mountain. The Fairground, the WPA-era pedestal and its subsequent marble cladding, and the torch are all addressed here.

VULCAN'S MORETTI

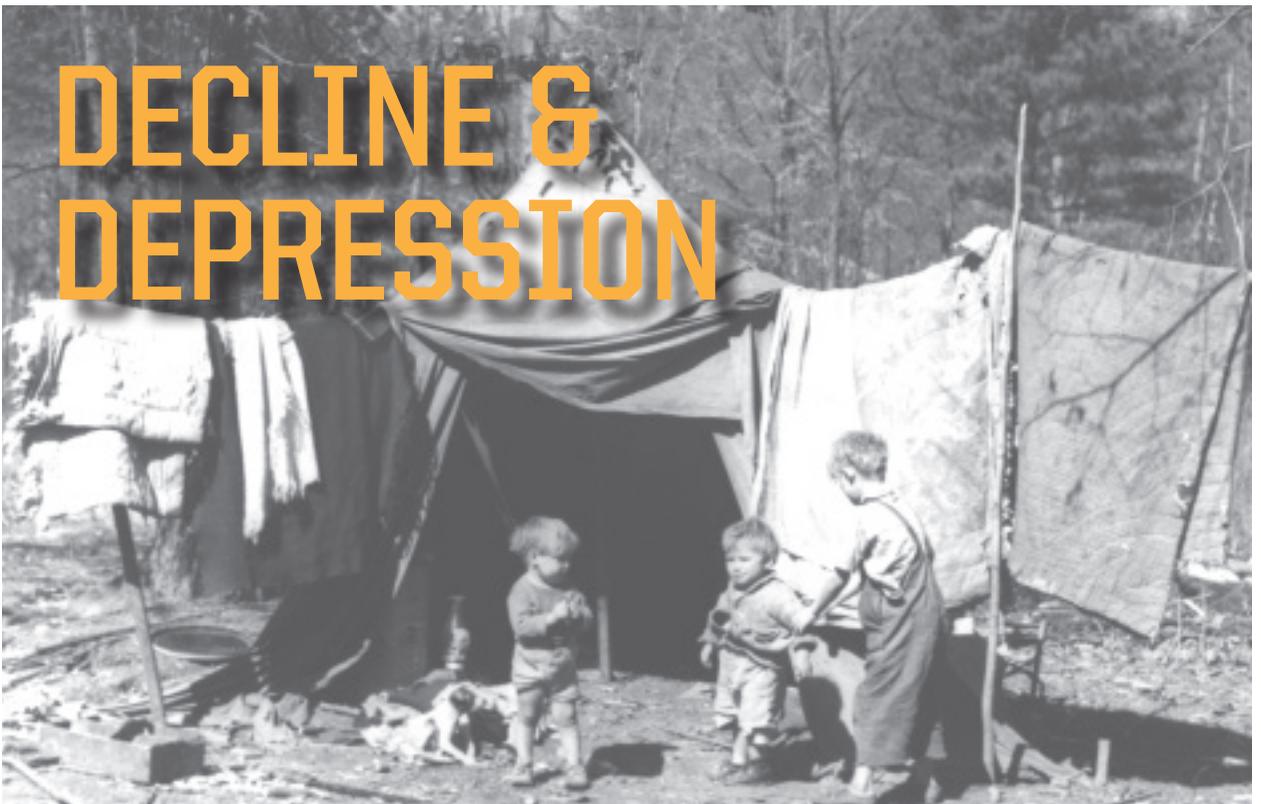
Giuseppe Moretti completed his monument to Birmingham in record time. Cast in 21 pieces of iron, Vulcan is a technical marvel. This exhibit demonstrates the statue's creation from Moretti's first clay model to the unprecedented casting of over 100,000 pounds of iron. While in Birmingham, Moretti discovered Sylacauga marble. He used this material to sculpt several pieces, including an untitled bas relief on view in the Birmingham's Vulcan gallery.

Tip: In 1904, Moretti created a bas relief in Sylacauga marble as a gift to Vulcan commissioner James A. MacKnight. Ask students to press the button to see the translucent quality of this local material.

RESTORATION

In 1999, Vulcan was determined unstable and was removed from his pedestal. Civic leaders and the local community came together to create Vulcan Park Foundation, a 501(c)3 organization, and raised nearly \$16 million to restore Vulcan, its grounds, and to build Vulcan Center Museum. The restoration was completed and the park reopened in 2004.

DECLINE & DEPRESSION



By the time the Great Depression hit, Birmingham's economy was already in a major slump. Unemployment and financial hardship fueled already mounting social and racial tension. The Ku Klux Klan was reactivated and strikes and violent strikebreaking were commonplace. Despite these overwhelming conditions, people in Birmingham found ways to make do, hope, and survive. At the lowest point of the Depression, only 8,000 of Birmingham's approximately 108,000 workers had full-time employment. President Franklin Delano Roosevelt called Birmingham the "hardest hit city in America." The longed-for economic recovery did not begin until World War II, when military orders flooded the city and revived Birmingham's sagging industry. However, it would be many years before Birmingham confronted its social and racial schisms.

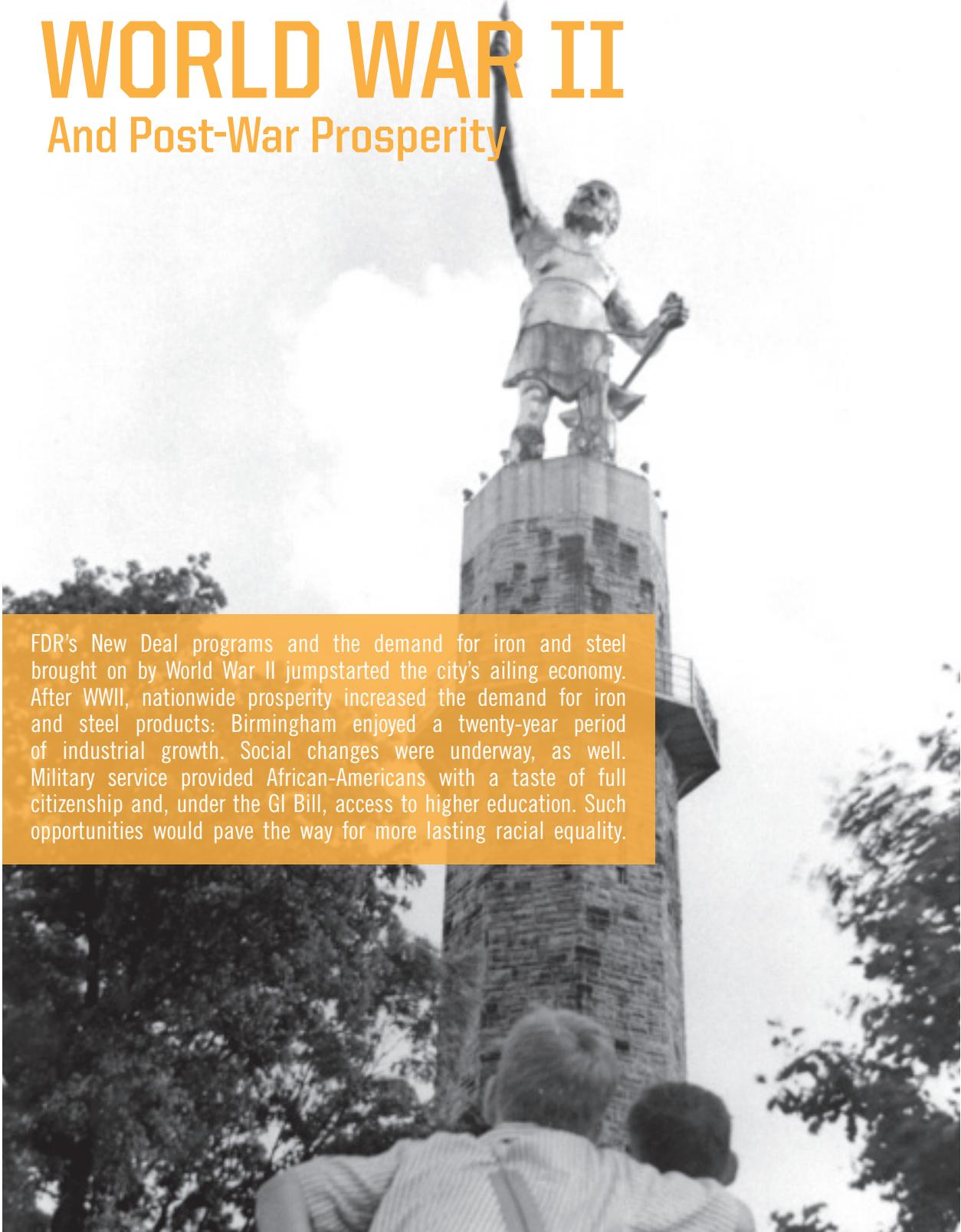
Besides unemployment, issues such as the humane treatment of workers and racial equality began to gain attention in Birmingham. In 1938, black and white progressives from across the south held the Southern Conference for Human Welfare in Birmingham's Municipal Auditorium (now known as Boutwell Auditorium). Alabama U.S. Senator John H. Bankhead chaired an integrated panel on farm tenancy that included Charles S. Johnson, the famous black sociologist from Fisk University, and Donald Comer, the owner of Avondale Mills. U.S. Senator Claude Pepper of Florida, Birmingham native and U.S. Supreme Court Justice Hugo Black, activist and Birmingham native Virginia Foster Durr, and noted African American educator Mary McLeod Bethune also attended.

In an act that foreshadowed his later role in the Civil Rights struggle, Birmingham City Commissioner T. Eugene "Bull" Connor interrupted the proceedings to demand that the integrated audience segregate. First Lady Eleanor Roosevelt responded, famously, by moving her chair to the middle of the aisle.

WORLD WAR II

And Post-War Prosperity

FDR's New Deal programs and the demand for iron and steel brought on by World War II jumpstarted the city's ailing economy. After WWII, nationwide prosperity increased the demand for iron and steel products: Birmingham enjoyed a twenty-year period of industrial growth. Social changes were underway, as well. Military service provided African-Americans with a taste of full citizenship and, under the GI Bill, access to higher education. Such opportunities would pave the way for more lasting racial equality.

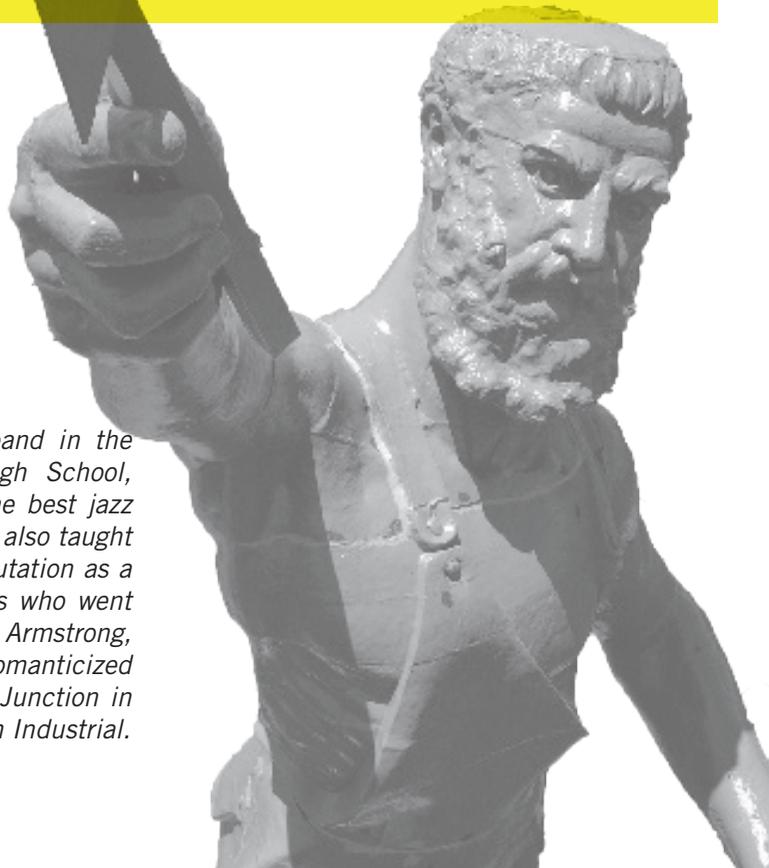


TOWARDS A NEW CITY

Towards a New City delves into the major changes of the second half of the twentieth century. In the 1950s and 60s, African American leaders became increasingly committed to eliminating segregation in the South. Birmingham was an important center of this struggle. Activism and violent responses drew national attention. Fred Shuttlesworth led boycotts of businesses that discriminated against African Americans. Dr. Martin Luther King, Jr. led protest marches and many foot soldiers from places like Miles College joined the effort.

As elsewhere in the United States, the iron and steel industry in Birmingham became less important and the city mounted a determined effort to diversify its economy. UAB fostered growth in the field of medicine. Fields like banking, auto manufacturing, biotech, engineering, and construction also developed during this period. The city at this time saw continued growth, pollution controls, and city investment in the civic landscape.

Tip: Ask students to notice the jazz band in the photograph. Birmingham Industrial High School, now Parker High School, had one of the best jazz bands in the country. Fess Whatley, who also taught printmaking at the school, gained a reputation as a strict teacher who turned out musicians who went on to perform for Duke Ellington, Louis Armstrong, and others. Erskine Hawkins, who romanticized Birmingham's famous jazz club Tuxedo Junction in his famous song, came from Birmingham Industrial.



Civil Rights

In the 1950s and 60s, racial inequality and social unrest placed Birmingham in the national spotlight. Dr. Martin Luther King, Jr. called Birmingham the most segregated city in America. In May 1963, less than three weeks after King penned one of his most influential writings, "Letter from Birmingham Jail," King organized the Children's Crusade to focus attention on racial inequality in Birmingham. On the first day of the Crusade, approximately 900 children were arrested. Another 2500 joined the march the second day. It was this second wave of protestors that prompted Birmingham's notorious Public Safety Commissioner, T. Eugene "Bull" Connor to respond with fire hoses and police dogs. Connor's actions created one of the most lasting images of the Civil Rights movement.

National media coverage of the 1963 Children's Crusade brought intense scrutiny on the city. Motivated by events in Birmingham, President John F. Kennedy pushed for sweeping civil rights legislation, the Civil Rights Act of 1964. King's efforts were preceded and bolstered by those of Reverend Fred Shuttlesworth, who founded the Alabama Christian Movement for Human Rights in 1956. Montgomery pastor and King advisor, Ralph David Abernathy, also joined King in efforts to desegregate Birmingham.

New Beginnings

After the Civil Rights struggles of the 1960s, Birmingham faced profound socioeconomic changes. White flight to suburbs such as Homewood, Mountain Brook, Vestavia, and Hoover intensified Birmingham's African American population. Birmingham's economy was challenged by cheaper, higher grades of iron and steel from overseas. In 1979, Richard Arrington was elected the city's first African American mayor. Arrington and his successors faced the challenge of rebuilding the city in the wake of the protests of the 1960s and the economic shifts of the 1970s.

As iron and steel declined, a new economic force, UAB, was forming. Once a branch campus, UAB by the late 1970s had quickly become a nationally recognized leader in healthcare.

BIRMINGHAM TODAY

Birmingham Today looks at what Birmingham is today: a place of commerce; a place of ingenuity and leadership in finance, medicine, technology; a place with world class visitor attractions and institutions; and a place that a diverse group of people calls home.

Birmingham is a modern city with a high quality of life and a diverse, growing economy. Birmingham has a wealth of attractions that highlight the area's history and celebrate its natural resources and beauty, including the Birmingham Museum of Art, Sloss Furnaces National Historic Landmark, Birmingham Public Library, Birmingham Civil Rights Institute, Birmingham Botanical Gardens, McWane Science Center, and Rickwood Field.

Birmingham's city center is an especially important place for architecture, arts and culture, and entertainment. Most recently, renewed interest in the city center has fostered new housing, cultural and entertainment opportunities, revitalization of landmarks.



FROM VULCAN'S VIEW



Sending Vulcan to the St. Louis World's Fair in 1904 was the result of a remarkable city-wide effort. During the late 1930s, the city would once again unite to bring Vulcan from the Alabama State Fairgrounds to his permanent home atop Red Mountain.

Finding a site people agreed upon took time. One early plan was to place Vulcan in Capitol Park, now Linn Park, but some citizens protested Vulcan's exposed backside and general homeliness as ill-suited for such an important location. After more than 30 years of deliberation, support for locating Vulcan on Red Mountain, a site owned by Tennessee Coal and Iron Co.(TCI), gained momentum. TCI agreed to sell the land to the city for \$5.

The Great Depression hit Birmingham especially hard, and finding money to build the tower and park was difficult in the 1930s. Fortunately, the Works Progress Administration (WPA) provided the vast majority of funding for the park and pedestal. The total cost for building the sandstone pedestal and surrounding park was just under \$45,000. The WPA funded approximately \$39,000.

The Park's opening was a joyous occasion for the city of Birmingham. City leaders organized a grand pageant in which future Birmingham mayor, George Siebels, Jr. played the part of Vulcan. Birmingham's first and only Miss Vulcan, Evelyn Tully, was crowned.

Since arriving on Red Mountain, Vulcan and the surrounding park have faced many challenges, including a 1971 renovation effort and a \$15 million restoration project that was completed in 2004.

Vulcan's Observation Deck

The elevator ride to the top of Vulcan offers a breathtaking view of the multi-tiered lawn that was at one time the site for the park's cascading water feature. Once on the observation deck, students can see the entire Birmingham region. The view from Vulcan is an effective summary of the themes found throughout Vulcan Park and Museum. By the time they arrive at the top of Vulcan, students will have learned that topography, geology, and transportation are important factors in Birmingham's growth as a city.

Topography

Atop Vulcan, students can see Red Mountain as it stretches to the east and west. Facing north, they can see Jones Valley, the site of Birmingham's earliest business district and the modern-day city center. Immediately to the south, they can see Shades Valley. Beyond that lies a ridge known as Shades Mountain, and even further south lies Oak Mountain.

Geology

Students can also imagine several geological features necessary to iron and steel production in the region. To the north and northwest lie important coal mining operations, which extend on into Walker and Blount counties. Students will have learned that iron ore can be found on Red Mountain; they can now see how vast Red Mountain is. Limestone can be found to the south, in places such as Alabaster, and in parts of north Alabama.

Transportation

Highways are the most effective tools for pointing out Tuscaloosa, Blount, Shelby, Bibb, and St. Clair counties – all important to the story of iron and steel in Birmingham. Facing north, students can see the major north-south interstate, I-65, intersecting with the city's major east-west highway, I-20/59. Smaller highways to Blount County (Highway 79) and Walker County (Highway 78) are also visible. Additionally, students can see major rail lines running through the center of Birmingham, and an important intermodal station adjacent to Highway 78 on Finley Boulevard.

Tip: While the open-air experience is perfectly safe, it is scary for some. There should only be eight students on the elevator at a time. Limiting the number of students on the deck prevents crowding. Encourage students to take the elevator up and the stairs down, to create a better flow. Ask students to count the steps and compare numbers!

Tip: Students are often curious to know Vulcan-related facts – how tall, how heavy. Vulcan, the world's largest cast iron statue, weighs 101,200 pounds and stands approximately 56 feet tall. His sandstone pedestal, built in 1939, is approximately 125 feet tall and contains 159 steps.

ACTIVITIES

As an aid to solidify the lessons learned from your visit to Vulcan Park and Museum, we encourage you to lead a related activity with your students. These are just a few suggestions to help you get started. Each speaks to a different topic ranging from geology to language arts. Please consider sending us photos of your students participating in these activities or share on social media by using the hashtags:

Make Your Own Sedimentary Rock

This activity is a simple way of understanding how limestone is formed. Limestone is among the most important and abundant types of sedimentary rocks in Alabama. Limestone rocks are made from the mineral calcite which came from the beds of evaporated seas and lakes and from sea animal shells. This rock is used in concrete and is an excellent building stone for humid regions. It is also used as a flux for refining iron ore. It is one of three ingredients in the Birmingham region that contributed to the growth of the iron industry.

Add $\frac{1}{4}$ cup of Epsom salts to a mason jar. Fill the jar with various earth materials, described below. Add water until about two inches remain at the top of the jar. Seal the lid and shake until all the materials are thoroughly mixed. Check on the jar every hour or so to see which are settling first and to watch as layers are formed. Once the layers are established, carefully pour the water out of the jar. Let the homemade rock dry completely.

What You'll Need...

- Mason jar with lid
- Various earth materials – leaves, twigs, pebbles, and sand work well
- $\frac{1}{4}$ cup of Epsom salts
- Water

Making a Streetcar Map

Streetcars were the main mode of transportation in the 1920s and 30s. This activity develops map skills and fosters an awareness of Birmingham's street layout, streetcar lines, and local landmarks. This activity also develops research skills, especially research using an online library database.

Create a diagram of the city's main streetcar lines. It is not necessary to show every street, only those that have a streetcar line. Indicate the most logical direction and where the main stops might be. Also, indicate a weekly schedule for each line. When would the line need to be more active? When could it slow down? Consider such factors as factory schedules, whether or not there was a factory town, downtown business activity, and the desire for nightlife and weekend activities.

What You'll Need...

- Construction paper or poster board
- Scissors
- Old and current maps of the city of Birmingham

Recreating Vulcan's Forge

This activity introduces students to the explosive force of Vulcan's forge: a volcano! In Roman mythology, Vulcan served humans and the other gods by making useful items in his forge. People believed that Mount Etna was Vulcan's forge and that the smoke it emitted was because Vulcan was hard at work. Ironically, the people of Pompeii had just ended a festival in honor of Vulcan, a Vulcanalia, when Mt. Vesuvius erupted and destroyed the ancient city. This activity recreates the explosive force of a volcano.

Place a bottle in the middle of a cake pan and mold soil or clay around it to look like a mountain. Use a funnel to pour baking soda into the bottle, and then add a squirt of dishwashing liquid. Mix vinegar with a few drops of red food coloring, and then pour the mixture into the bottle. Watch the volcano erupt!

What You'll Need...

- Bottle with a narrow neck
- ¼ cup baking soda
- Round cake pan
- Dishwashing liquid
- Soil or clay
- ¼ cup vinegar
- Funnel
- Red food coloring



FIRE THE IMAGINATION. FORGE THE FUTURE.



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