



FRESHMAN YEAR OF HIGH SCHOOL

WINNER

## WHY MIKEY LOVES ARIZONA

WRITTEN BY MIKEY, A FRESHMAN AT THE GARY K. HERBERGER YOUNG SCHOLARS ACADEMY

The Grand Canyon State has no lack of natural beauty. With natural parks and reservations abound, Arizona has more than earned the widespread appreciation it receives for its stunning geological features. But in our rush to praise its terrific gorges and gorgeous terrain, we often overlook some of the equally beautiful marks that humankind has left on this magnificent state. Arizona's eye-catching views have attracted the attention of some of the world's leading architects, and thus its celebrated natural landscape is also the setting for some truly incredible marvels of engineering and design. Given my interest in civil engineering, I have decided to devote this paper to appreciating what our state has to offer architecturally, presenting the buildings that have shaped and been shaped by the wonder of Arizona.

One shining example of Arizonan architecture is acclaimed architect Frank Lloyd Wright's winter home and studio, Taliesin West. Located in the foothills of Scottsdale's McDowell Mountains, Taliesin West is a UNESCO World Heritage site and National Historic Landmark, distinctions also awarded to its Taliesin East, its Wisconsinite sister building and namesake. Following Wright's philosophy of creating structures that smoothly integrate into the environment, Taliesin West was designed to display and augment the pre-existing desert scenery. The building is partly constructed from materials gathered nearby, and its windows are deliberately placed to frame desert views chosen by Wright. Taliesin West's layout is expertly arranged to regulate and redirect light and heat, and all water it requires is drawn from a nearby reservoir of natural groundwater; clearly, Wright designed his home with the harsh climate of the Arizona desert in mind. Overall, I am amazed and impressed that Wright matched Mother Nature's blessing of beauty with one of his own, a structure that not only displays and accentuates the landscape around it, but functions almost as a part of the desert.

Another incredible structure in Arizona is Arcosanti, a desert city designed by architect Paolo Soleri. In his book *The City in the Image of Man*, Soleri introduced the concept of "Arcology," a portmanteau of "architecture" and "ecology." As its base words suggest, Arcology is a field of civil engineering that involves designing high-population urban layouts that work with, preserve, and even nurture the natural environment. While not a full Arcology in its own right, Arcosanti was intended to test, prototype, demonstrate, and teach Arcology principles. Window placement, wall thickness, building shape, and similar design elements aid in controlling, directing, and mitigating light, heat and sound within Arcosanti without the need of electronic or mechanical components. For example, the iconic apse of the city's bronze foundry is positioned so that it blocks the sun's heat and light as it arcs high across the sky during summer, but allows the winter sun's lower angled rays to enter, thus providing a cool shady spot in the summer, and a hearth of warmth in the winter. Additionally, Arcosanti emulates the Arcology archetype of a compact walking city, with close-packed, vertically-oriented buildings allowing shoes to replace wheels and thus avoiding the large carbon footprint of vehicle traffic. Beyond its eighty permanent residents, forty thousand people visit Arcosanti each year, to take workshops on design, aid in its ongoing construction (although it possesses a twenty-five-acre plot of land, the city is only about ten percent complete), and be amazed by its stunning fusion of form and function.



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As a great lover of both architecture and libraries myself, I had to include the Burton Barr Central Library in my catalog of Arizona's most outstanding buildings. Architect Will Bruder's five-story Brutalist masterpiece is the central library of Arizona's capital, Phoenix, as well as the largest library in the state by far. Copper, a symbol of Arizona as well as one of its "Five C's," adorns bookend-esque "saddlebags" that flank the building and house its electrical systems and similar utilities. This clever arrangement means that the library building can easily be added to and expanded upon, should the need arise, as its key systems can be easily reached, modified, and extended. Additionally, it allows for more room inside the library, letting the bookstockers make full use of the library's five massive floors, the largest of which are an acre in size. Bruder had great interest in Paolo Soleri's aforementioned "Arcology" philosophy, and attempted to incorporate it (and therefore nature) into his library's design; the ground floor is dominated by an eye-catching water feature, and skylights provide the building with ample natural illumination during the day. However, the most breathtaking demonstration of the building's sisterhood with Mother Nature comes on the summer solstice. Each year, more than a thousand people gather on the fifth floor at solar noon to witness a natural light show, as the sun's position makes its rays filter through the skylights in choreographed patterns of Bruder's design, causing the building's pillars to glow like so many massive candles, and spectacularly illuminating the walls and elevators. Truly, Bruder has harnessed the sun and used his building to bend its light to his will!

As a fan of architecture and civil engineering, and an aspiring architect myself, what I find most endearing about Arizona is its cleverly designed and breathtakingly beautiful buildings and structures. With its harsh climate and broad expanses of undeveloped desert, our state can be a difficult place to tame, but with the help of the great architects who saw Arizona's natural beauty and potential, humankind has created buildings here that don't just provide oases of shelter and safety, but of art, culture, and expression as well.