



Allen Memorial
Art Museum

Family Self-Guide: STEAM

STEAM (science, technology, engineering, arts, and math) represents a movement to integrate the arts into other classroom subjects. But artists have long considered their work as a natural way to express and understand concepts from the sciences.



NORD GALLERY

*During the Renaissance, artists often worked in a variety of media and made creations that tried to show realistically the natural world—even when depicting stories of the supernatural, as seen in *The Mystic Marriage of Saint Catherine*.*

As an architect and draftsman, Baldassarre Peruzzi well understood how to portray buildings in two dimensions, which he perfectly rendered down to the last detail.

Although this is an imaginary view of the ancient harbor of Alexandria, Egypt, there are a few recognizable buildings and architectural types, including a triumphal Arch, a feature quite familiar to Italians, and the Fabricius' Bridge, the oldest bridge in Rome.

WILLIARD-NEWELL GALLERY

*Often called the “first professional painter to express the spirit of the Industrial Revolution,” Wright of Derby met leading thinkers of his time through his membership in the Lunar Society, which seems appropriate considering our next stop: *Dovedale by Moonlight*.*

A product of the Enlightenment, Wright was captivated by its promises of scientific and industrial progress. The delicately detailed full moon and rock formations show his interest in rendering geological and astronomical phenomena. Wright stays true to how this landscape looked at night. The moonlight would have been pale and rather weak, not picking up much detail, causing the extreme lights and darks that we see here.





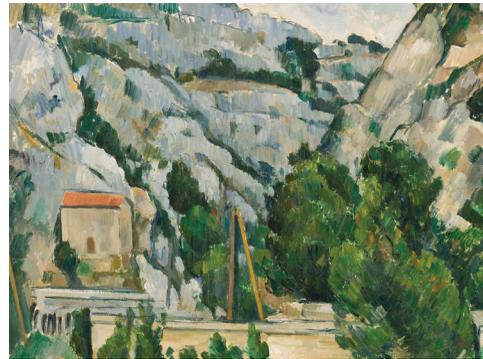
CURRENTLY NOT ON VIEW

Speaking of astronomy, our next stop examines an Astrolabe, an object that had a very specific scientific function, but was crafted with such skill that it must also be considered a work of art.

The astrolabe, an instrument that measures the positions and altitudes of planets, stars, and the sun, originated in ancient Greece and was perfected by medieval Arab astronomers. It was crucial for exploration and trade. In the Islamic world, astrolabes had added religious significance due to their ability to calculate the direction of Mecca for daily prayers. The front of the astrolabe here includes a removable, recessed plate with stereographic projections of the northern celestial hemisphere.

CURRENTLY NOT ON VIEW

Artists, as thinkers, were often in tune with the latest scientific developments of their time. However, it is also possible to see those instances where artists anticipated discoveries, or even new branches of science. Take a look at Viaduct at L'Estaque.



Paul Cézanne's short, fragmented brushstrokes create a dense landscape that resists any attempt to find much detail. As such, the work is analogous to the way neuroscientists now think the vision centers of the brain work. Seeing depends on the brain making an interpretation in a "top down" manner. As the brain receives some information and begins to make an interpretation, it imposes sense on the rest of the incoming information.



EAST GALLERY

We tend to think of technology as that which is new or cutting-edge, but some of the most sophisticated technology has been around for thousands of years. And some of the details and mastery of that knowledge has been lost to us forever. A good example is this Ritual Wine Vessel, or jue.

Ancient Chinese bronze vessels required a great amount of both artistic and technical skill to create. The metalworker had to understand how to handle the materials—from the separation of the copper and tin metals from the ore, to the proportions of each to create a bronze alloy (nine parts copper to one part tin).

The copper first had to be melted at more than 1,832 degrees before adding the tin. The still-molten metal was then poured into a piece-mold cast. This process gave artisans a high level of control in creating intricate designs.