

FRANK GEHRY

The *Frank Gehry* exhibition covers the acclaimed architect's work from his early career in the 1960s through his adoption of new technology in the 80s and 90s up to his most recent, contemporary projects. At every stage, Frank Gehry's accomplishments demonstrate the power of art to change a landscape, even revitalize a city, and his process exemplifies perseverance, flexibility, and collaboration. The accompanying curriculum materials are intended to help explore Gehry's work and creative process and illuminate the intersection of art, technology, math, science, and social studies represented by this work. The lesson plans will introduce students to both architectural concepts and a dialogue about the urban environment, and the essays will offer teachers an opportunity to show students how the abstract concepts they learn in the classroom can be applied in the world around them.

Los Angeles–based architect Frank Gehry is known for his unique forms in architectural projects which span the globe. From his early residential work to his most recent and ongoing projects, Gehry has stretched the boundaries of materials and form to create architecture with a greater sense of humanity and movement. His structures can thus be viewed as sculptural artworks that serve practical purposes, combining the disciplines of art, city planning, and computer technology. Gehry utilizes traditional methods like drawing and model-making, as well as cutting-edge technology like CATIA (Computer Aided Three-Dimensional Interactive Application), which was first adopted by the Gehry office and has since become standard industry practice.

Born in Toronto in 1929, Gehry moved to Los Angeles in 1947 and went on to earn a degree in architecture from USC. After spending several years studying urban planning at Harvard and working in Paris, he opened his own small architecture firm in Santa Monica in 1962. Initially his firm worked primarily on domestic architecture projects, and Gehry made his mark using inexpensive materials ubiquitous in L.A., such as plywood, corrugated metal and chain-link fencing, in innovative ways. His first such project to receive widespread attention was the groundbreaking renovation of his own home in Santa Monica in 1977–78, which brought urban materials like chain-link fencing to a suburban residential site. Since then, the architect's

practice has expanded to over 140 employees with projects around the world in North America, Europe, Asia, and the Middle East.

Gehry's success has been catalyzed by his firm's 1991 adoption of CATIA, a computer program originally developed by a French aviation company to design fighter jets and adapted for architectural uses. The program is now an integral part of Gehry's design process. CATIA allows him to scan handmade models with a laser stylus and feed digitized information into a software program that can draw, make calculations, engineer, and construct a building. The same technology that has been used for automobile, aerospace, and ship design as well as animation allows Gehry to compose curved walls on any scale, as demonstrated in buildings like the Guggenheim Museum Bilbao and the Walt Disney Concert Hall. CATIA also allows Gehry to maintain control over all aspects of a project, rather than relinquishing it to contractors who might not fully understand his unconventional designs.

Rather than stifling his creativity, Gehry's embrace of computer technology has been instrumental in realizing the spontaneous, gestural, human quality of his designs. CATIA also allows the architect to explore multiple ideas before settling on a particular solution.

"When the artists and sculptors I know work, there's a sort of free-play idea. You try things; you experiment...Scientists work that way too...It's kind of throwing things out and then following ideas, rather than predicting where you're going to go."

Despite the firm's reliance on digital technology, Gehry still begins each project with a quick sketch and a handmade model. He refers to his drawings as "thinking aloud," and he places great value on the speed and freshness of a freehand drawing and the gestural, handmade quality of the physical model.

As Gehry himself has said, there is a difference between buildings and architecture. More than just the physical buildings, architecture is art; it's an act of personal expression and collaboration that also serves a practical

purpose. Still, there are many constraints inherent to architecture. In addition to creating lasting monuments that are durable, beautiful, and functional, the architect must make his clients happy. When creating a design, Gehry must also take the site and context into consideration. Besides spatial limitations, often there are tight time schedules, budgets, and the additional considerations of climate and local culture. Some projects, like the Lewis Residence, are never realized, and many, like the Walt Disney Concert Hall, go through radical processes of evolution.

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CREDITS

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