

Discover Steampunk Gallery Guide

Introduction to the Exhibit

Imagine a futuristic world powered by old technology. Imagine an alternative history that was inspired by Victorian ideals where steam power drove innovation. Imagine these possibilities, and you have steampunk. Steampunk is a movement and an aesthetic as varied as the individuals within it. It has become a form of artistic expression and an educational tool that teaches ingenuity, collaboration, and self-reliance, and above all, it truly embraces the concept of **S.T.E.A.M.** (Science, Technology, Engineering, Art, and Mathematics).

In this dynamic exhibition, steampunk is explored and explained through the central sculptures of artist Bruce Rosenbaum and steampunk-inspired exhibits. The Exhibition is divided into eight galleries, each focused around a different historical visionary and how that visionary's art, innovations, and ideas have shaped our modern world. The Exhibition offers a wide array of learning across many S.T.E.A.M. subjects such as creative expression, interchangeable parts, photography, automation, and much more.

Origins Gallery – The Giant Clock is the fixture of this gallery. It is in constant motion to represent the interplay and connection of the past and future concepts in Steampunk. Check out the representation of the point of view that the artist, Bruce Rosenbaum, wanted to bring alive with the exhibit and the Italian made mannequins that were his blank canvas for each Steampunk visionary.

- Steampunk is a movement that seeks to understand the innerworkings of things in order to make them and the world better. The “punk” term emphasizes the historical element of Steampunk that makes things relevant to the viewer with our shared past.
- The Artist, Bruce Rosenbaum, created his Humachines to connect the viewer on an intellectual as well as visceral level and to introduce people to the world of Steampunk. He brings to life the Steampunk ideal of collaboration by working with other artists for the exhibit to make things more beautiful and functionally better.
- One of the main points of the exhibit is to inspire the patron to “follow your gut and passion, no matter where it leads”. – Artist, Bruce Rosenbaum.
- The Steampunk aesthetic is all about connecting Victorian style with a futuristic twist, often combining opposite ideas into one intricate and detailed piece. Check out the cell phone in the corner that has the older technology of gears adorning the outside to bring these two disparate ideas together.
- Steampunk “tinkering” is all about the journey of discovery and innovation that comes when you do not establish a plan at the beginning of a process and instead let the project help you find it.

H.G. Wells Gallery – H.G. Wells’ Humachine brings to life the journey in his first novel, *The Time Machine*. The clock directly behind Wells has the inscription *International Time Recording Company*. This company would eventually evolve into the IBM company and develop technology that led to some of Wells’ imagined “fiction” becoming a reality.

- The imagination of H.G. Wells often “showed” him the future and let him predict many of the conventions of our modern world; like the internet, wireless communication, and even the use of lasers and modern flying technology in combat.
- Herbert George Wells was a man that had to go on his own journey of discovery when he was trying to make his mark on the world. He worked as a draper-maker, teacher, chemist, and artist before using his massive creative potential as a writer.
- H.G. Wells was a huge inspiration to many writers and inventors, such as Isaac Asimov, one of the most important science fiction writers of the 20th century, who is most famous for his “Three Laws of Robotics”.
- “Laser” has become just a common word in our language today, but it originated as an acronym – “Light Amplification by Stimulated Emission of Radiation”.
- H.G. Wells predicted the invention and use of “aeroplanes” and even the use of parachutes. Both inventions were made possible with the better understanding of aerodynamics; how air moves over an airfoil (a wing) and air resistance.
- There are several communication devices located in the trunk case by H.G. Wells’ Humachine that are from the Franklin Institute that illustrate the evolution of modern communication and can spark the imagination of adults and kids alike.

Thomas Blanchard Gallery – The Thomas Blanchard Humachine showcases his greatest invention: the reproduction lathe. If you look closely, the Humachine is not creating an exact replica of the model. See if you can find the difference!

- The biggest variance between the current lathes in use at the time and Thomas Blanchard’s lathe is that it could work off a model; “copying” an irregular shape with accuracy rather than only being able to produce shapes on an industrial scale.
- Thomas Blanchard had the “makers spirit”: always striving to find a better, more efficient way of doing anything. He started out his inventing career with an apple-paring machine, a tack-making machine, and he created the first steam-powered automobile.
- The ability to mass produce many different parts led to a drastic change in the way machines were repaired. There was now a way to replace individual parts instead of having to repair or replace a whole machine when it broke down.
- Blanchard is now considered to be the “Father of Interchangeable Parts” because of his breakthrough with the copying lathe. It led to a revolution in the production of intricate parts and made convenient and quality machines more affordable for the masses.

Thomas Blanchard Gallery – continued

- The main culture shift that came out of the birth of modern convenience was the concept of leisure time for more than the rich elite. The middle to low class could be more efficient in their work so that they had more time to relax, imagine and create, and make the world a better place.

Isaac Singer Gallery – The Isaac Singer Humachine is adorned with many familiar pieces of the machine that became a household fixture in the late 1800's. This Humachine really emphasizes the complexity of the human spirit by being made up of many different parts that don't quite line up perfectly but work together nonetheless.

- Isaac Singer built on the breakthrough of Blanchard and was able to mass produce his improved sewing machine with replaceable and interchangeable parts, making the time saving machine very cost effective for the growing middle class.
- The Singer Sewing machine made using this convenience safer and even faster. Instead of hand sewing that only produced, on average, 40 stitches a minute; one could now produce a mind blowing 900 stitches per minute.
- The Singer company thrived on the collaborative process. Singer's business partner, Edward Clark, proposed a "patent pool" concept which kept the cost of producing the sewing machine down for all involved parties.
- Singer's affordability was also due to the creative selling options that were provided to the consumer. There were rent-to-own options as well as the option to trade in an old machine to off-set the cost of a new machine, thus creating repeat customers.
- Aggressive advertising was the vehicle that Singer used to grow his company. Singer was not only a household name in America but could be found in many cultures around the world. Check out the Singer Machine Advert Cards in the trunk case in the corner to see the scope of Singer's world appeal.

Jan Matzeliger Gallery – This Humachine really embodies the hopeful, creative spirit of the exhibit. The big shoe at the back of the machine was an advertisement piece in an old cobbler's shop, adding to the whimsy of the piece. Make sure that you listen to all that Jan has to say about the perseverance of dreams and beautiful ideas.

- No one believed at the time that shoe making could be mechanized or automated, but Jan Matzeliger spent years perfecting the first Shoe Lasting Machine that mechanically attached the upper shoe to its sole, revolutionizing the industry.
- This breakthrough in machinery increased the output of shoes tenfold and reduced the cost by half versus the handmade method. The machine could calculate the best way to draw the pattern on the leather for each size reducing waste in production.

Jan Matzeliger Gallery – continued

- Jan had to persevere through many hardships as a young immigrant from Dutch Guyana. Being a man of color, the patent office sent a representative in order to confirm that such a device worked or even existed because it was so unbelievable.
- Often people would create scale models for the U.S. Patent office to demonstrate their inventions more clearly. There is a patent model of an 1872 printing press to illustrate this very time consuming and expensive practice. The cost limited the amount of people who could submit a patent and get approval, making it a long, arduous process.
- Make sure that you and the students check out the patent area of the gallery at the top of the ramp. Encourage the students to imagine and draw out any ideas that they have for new inventions and submit them in the box in the center of the alcove.
- There are several examples of a cobbler's lasts in the gallery. This is a model form that helps shape the shoe to the specific size and shape for the customer. The term "last" comes from the Dutch word "leest", which means 'shape' or 'boot tree'.

Mary Shelley Gallery – This Humachine has all the electricity and mystery of what made Mary Shelley's book, *Frankenstein*, so famous. When her husband died and was cremated, part of him wasn't fully burned, due to calcification. Mary kept this part in her desk drawer, believing that it was his heart. The Humachine has a large, electrified heart to symbolize this fantastical legend of Mary Shelley's life.

- Mary Shelley was no stranger to death and that exposure at a young age had a lasting impact on her life and the themes in her literary work, *Frankenstein*. She lost her mother at only 10-days-old, her half-sister committed suicide, she lost all but one of her children, and her husband died after only a few years of marriage.
- Mary Shelley was also inspired by advancements in the medical and science research of her day. She witnessed a medical experiment with electricity at a very young age where electricity was applied to a corpse and the body opened its eyes, literally sparking her idea for the gothic horror novel, *Frankenstein*. Encourage the students to explore all of the electrifying interactives that can be found in the brightly lit archway of this gallery.
- This year marks the 200th anniversary of Mary Shelley's work, *Frankenstein*. The moral quandaries that are found in Mary Shelley's novel are ones that still ring true today. She brings to life the dilemma of power vs. responsibility. Just because we have the power to do something, does not necessarily mean that we *should* do it.
- There is a direct interplay that flows from the literary work of *Frankenstein*. The monster is not named in the book, just referred to as a monster, creature, or thing. It is in fact, Dr. Frankenstein that creates the "monster" and this brings up the question of which is the true monster, creator or creation?

Mary Shelley Gallery – continued

- A shared ancient belief that was accepted at the time was that the human body had 4 fluids that had to be kept in balance to be well. A common practice in the Victorian era was bloodletting, which had the hope of restoring this balance in someone who was ill. Make sure you check out the bloodletting tools in the trunk case on the far wall.
- The Theremin, invented by Leon Theremin, is the only musical instrument that you do not have to touch to play it. In fact, not touching it is a good reminder for your students. You become the grounding plate for the low level electrical radio signals that control the instrument's volume and pitch. It was originally thought that they would replace pianos in the home because of how compact they are, but that obviously did not come to pass.

Jules Verne Gallery – Always one for the dramatic, Jules Verne's Humachine depicts the two sides of the infamous Captain Nemo, from his book *20,000 Leagues Under the Sea*. On the front is the undersea explorer and conservationist, while on the back you have the evil Nemo pulling the strings. A lot of the pieces on this Humachine are direct components off real submarines.

- The spirit of adventure and traveling permeates all 54 of Jules Verne's books. He has such a passion for science, geography and travel that he transports the reader to whatever land or even separate world that he can devise.
- A hallmark of Jules Verne's writing is the amount of detail and research that he put into every subject he wrote about. Not only did he make the science and engineering of his time come to life, but he even inspired new designs for the future, including many modern submarine designs.
- One of Jules Verne's insatiable interests was cartography: the study and practice of making maps. He created many fictional maps for his novels and elaborately mapped his characters' courses which enhanced the realism of his books in a whole new way.
- Jules Verne was inspired by two juxtaposed worlds that had just started to be explored: the ocean and the sky. He chose to dive to the depths and soar to new heights in his books, in order to bring to life new backdrops for his adventures.
- Underwater exploration, like the world of Captain Nemo, is only possible if light and air could be brought into the equation. There are several examples of underwater diving technology, like a diving helmet and an underwater camera light housing, that have been developed to reach new depths and explore the world under the sea.

George Eastman Gallery – The irony of this Humachine is that the giant camera that is being used in the piece is not big for effect. The actual camera had to be that size to accommodate the large plates for bigger photos. George Eastman invented flexible film, thus eliminating the need for these large, bulky plates.

- George Eastman was driven by the same desire to make the world a better place by bringing more ease and therefore more popularity to taking photographs. He developed a new paper film that replaced the big plates that were used previously.
- This breakthrough would eventually lead to the development of motion pictures when, later in his career, Eastman developed a flexible film that did not easily break.
- George Eastman's company, Kodak grew into an empire after the development of the Kodak Brownie camera in 1900. This was the first point-and-shoot camera and came preloaded with enough flexible film for 100 photographs and only cost \$1 to buy. The Museum of Idaho has an impressive collection of early Brownie cameras as well as other cameras throughout the evolution of the photographic artform and film industry.
- The genius of Eastman's slogan "You push the button, we do the rest" was embodied when the Brownie camera was designed and marketed to be sent back into Kodak. They would develop the film and send the developed pictures and camera back to the consumer, reloaded and ready to take another 100 shots.
- George Eastman created the possibility for photography to be a mass medium, thus helping the past to shape the future. With the aid of photographic evidence and documentation we can understand the past in more accurate detail and learn from it to create a better future.