



The Statue of Liberty By Beth Frede

America's STATUE OF LIBERTY is arguably one of the world's most iconic EMBLEMS of freedom, peace, and opportunity. Just hearing her name evokes the image of "Lady Liberty" with flowing robes and holding her torch ALOFT (upwards). Standing 305 feet tall and weighing 225 tons, she has graced New York's ELLIS ISLAND since 1886. Today, we'll learn about the time, effort, and incredible resources it took to create and install this epic feat of engineering.

Spell: EMBLEMS INSTALL EPIC

When was the statue built? 1886

Where is the Statue of Liberty located in New York? ELLIS ISLAND

What is "Lady Liberty" holding aloft? TORCH

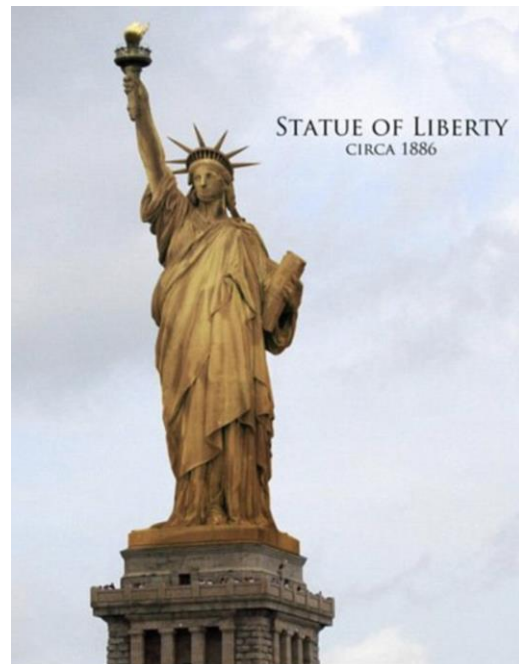
The Statue of Liberty is one of the world's most iconic emblems of freedom, peace, and what? OPPORTUNITY

How many feet tall is the statue? 305

How many tons does the statue weigh?
225

VAKT Imitate the Statue of Liberty's stance.

Image from <https://www.dailymail.co.uk>



In 1870, French sculptor FRÉDÉRIC AUGUSTE BARTHOLDI (bar-toll-dee) began drafting designs of the Statue of Liberty, formally titled "*Liberty Enlightening the World*," as a gift for America's CENTENNIAL (100 year) anniversary. France had assisted the US in the American REVOLUTIONARY WAR, and the statue was meant to honor America's and France's ALLIANCE (mutually beneficial association).

It also represented France's recognition of America's COMMITMENT to peace and liberty and the hope that France would adopt the same IDEALS.

Spell: CENTENNIAL LIBERTY ALLIANCE

Which country gifted the United States with the Statue of Liberty? FRANCE

The Statue of Liberty's formal title is? LIBERTY ENLIGHTENING THE WORLD

The statue was a gift in celebration of America's _____ anniversary.

CENTENNIAL

Who designed the Statute of Liberty? BARTHOLDI, FREDERIC AUGUSTE BARTHOLDI

The statue was given to America in recognition of America's commitment to _____. PEACE, LIBERTY

France assisted the US in which war? AMERICAN REVOLUTION, REVOLUTIONARY WAR, THE AMERICAN REVOLUTIONARY WAR

What's another word for commitment? RESPONSIBILITY, DEDICATION

There are different THEORIES (hypotheses) about the INSPIRATION for the design of the statue. Some say the figure was based on Bartholdi's mother, particularly her stern and serious face. The Roman GODDESS of freedom, LIBERTAS, was also popular at the time and would've been a fitting model for his creation. Other figures and monuments around the world that represented freedom could have influenced Bartholdi's design choices too. Likely, it was some combination of these.

Spell: HYPOTHESES MONUMENTS STERN

The word from the lesson meaning hypotheses is? THEORIES

The name of the Roman goddess of freedom is? LIBERTAS

Besides Libertas, name one other thing mentioned that might've inspired the design of the statue. BARTHOLDI'S MOTHER, OTHER MONUMENTS REPRESENTING FREEDOM

Bartholdi's mother's face is described as being _____. SERIOUS, STERN

Name another symbol of freedom. THE LIBERTY BELL, BALD EAGLE, etc.

VAKT Watch this video showing what the Statue of Liberty would look like as a real woman: <https://youtu.be/xrGwjo7p80Q> (3.03 min)

If you were to make a statue, what would it represent?

A lot of preparation happened before the actual statue was built. Bartholdi created a series of increasingly larger MOCK-UPS (models or PROTOTYPES) of the statue to finalize details and work out any issues with its STRUCTURE. The first was a four-foot-tall clay model, followed by several larger versions made of PLASTER. The last model was made of copper because the actual statue would be made of that material.

Spell: STRUCTURE

FINALIZE

PLASTER

The lesson says a lot of what happened before the actual statue was built?

PREPARATION

The word is another word for “mock-up”?

MODEL, PROTOTYPE

What material was the first mock-up made of? CLAY

The clay mock-up was followed by several larger versions made of what? PLASTER

The last model was made of which material? COPPER

How tall was the first mock-up? 4 FEET

How many inches are in four feet?

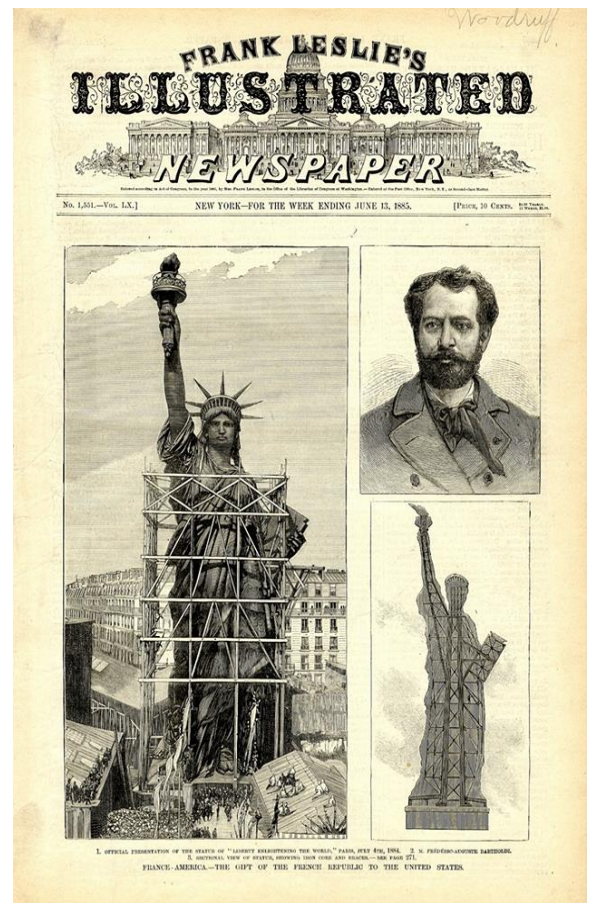
$4 \times 12 = 48$ INCHES

Name one reason why mock-ups of the statue were made. TO FINALIZE DETAILS; TO WORK OUT ISSUES WITH ITS STRUCTURE

Name something else made of copper.

PIPES, POTS, PENNIES

What is the name of the patina when copper turns green? VERDIGRIS



Woodcut illustrations by unknown artists showing what the statue would look like.
<https://commons.wikimedia.org/w/index.php?curid=18770532>

One key piece of the original design that failed and had to be reworked was a supportive UNDERSTRUCTURE. The statue needed an underlying form upon which the outer copper layer could be attached. It would need to help the statue withstand strong winds, maintain its shape, and ensure that it

would be both secure and flexible. An iron PYLON (tower-like support structure) was created for this purpose by ALEXANDRE-GUSTAVE EIFFEL. Does his name sound familiar? If so, you probably already guessed the incredible French landmark *he* was responsible for!

Spell: UNDERLYING ENSURE SECURE

One key piece of the original design that had to be reworked was a supportive what? UNDERSTRUCTURE

The word used for a tower-like structure is? PYLON

What material was Eiffel's central pylon made of? IRON

The supportive understructure needed to help the statue withstand strong what? WINDS

The understructure would also help the statue maintain its what? SHAPE

Who created the understructure?

ALEXANDRE-GUSTAVE EIFFEL, EIFFEL

The understructure was made to ensure that the statue would be what? SECURE, FLEXIBLE

What is the French landmark

Eiffel was responsible for?

THE EIFFEL TOWER

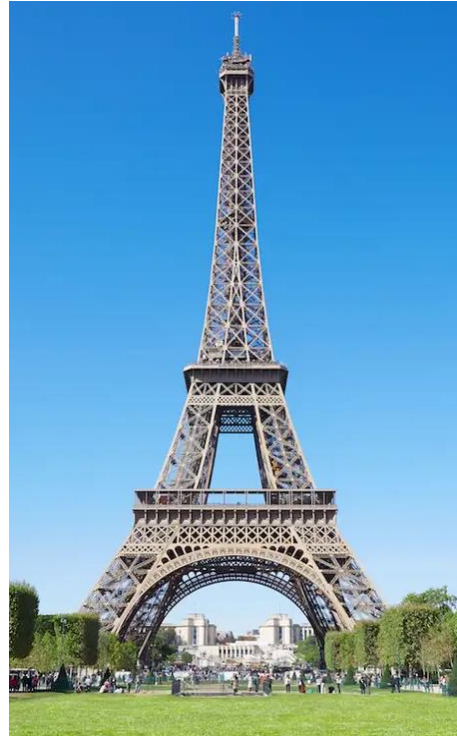


Image from www.insider.com

There would also be a second skeleton of sorts built around the Eiffel's central pylon. This ARMATURE (metal framework) was created by a mesh network of individual metal straps that would be riveted to the statue's copper SKIN (meaning the outer layer). Laid end-to-end, the straps would be a mile long. To prevent CORROSION between the iron and copper, Eiffel insulated the skin with ASBESTOS and SHELLAC. These were labor-intensive steps but would give the statue LONGEVITY (long life).

Spell: LONGEVITY INSULATE NETWORK

The layer acting as a second skeleton was created by a mesh network of individual __ __. METAL STRAPS

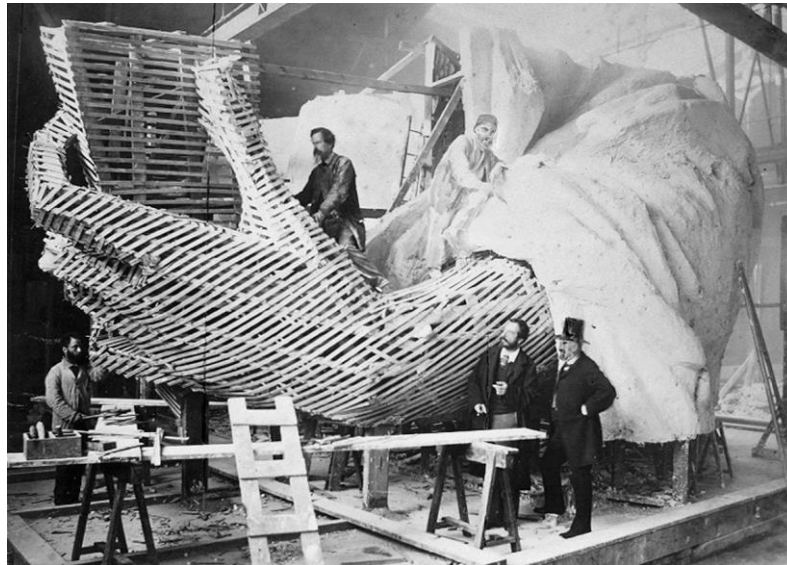
The word used for metal framework is? ARMATURE

Eiffel insulated the skin to prevent ___ between the iron and copper.

CORROSION

Name one material Eiffel insulated the skin with. ASBESTOS, SHELLAC

How would you describe the opposite of longevity?



AP Photo showing the metal strap “skeleton”/Agence Papyrus

On top of the iron strap framework, the outer copper “skin” layer would be applied. ARTISANS (craftsmen) would shape it using a technique called REPOUSSAGE (pronounced reh-poo-sahzh). This involved hammering the MALLEABLE (moldable) copper from the reverse side into wooden molds of the statue to create its folds and features.

Spell: OUTER

TECHNIQUE

MALLEABLE

Who did I say would shape the outer copper skin layer? ARTISANS

The technique used to shape the copper was what? REPOUSSAGE

The word used that means moldable is? MALLEABLE

The artisans hammered the copper into wooden molds to create the statue’s what? FOLDS, FEATURES

What’s another material a statue might be made of? ICE, STONE, BRASS, WOOD

After practice and prototypes, the actual statue was ready to be built. Like the Eiffel Tower, it would be constructed in Paris, France, then shipped to

America. It had to be made in pieces due to its massive size. First, the arm with the torch was constructed; next came the head and shoulders; and finally, the rest of the body. These were displayed at various venues to raise funds for further construction. People were fascinated by their sheer ENORMITY, and the promise of what the finished product would look like.

Spell: VENUES SHEER FASCINATED

The statue was ready to be built after practice and what? PROTOTYPES

After construction, the statue would be shipped to where? AMERICA

The statue had to be made in pieces due to its massive what? SIZE

After the arm with the torch was built, the head and what were built?
SHOULDERS

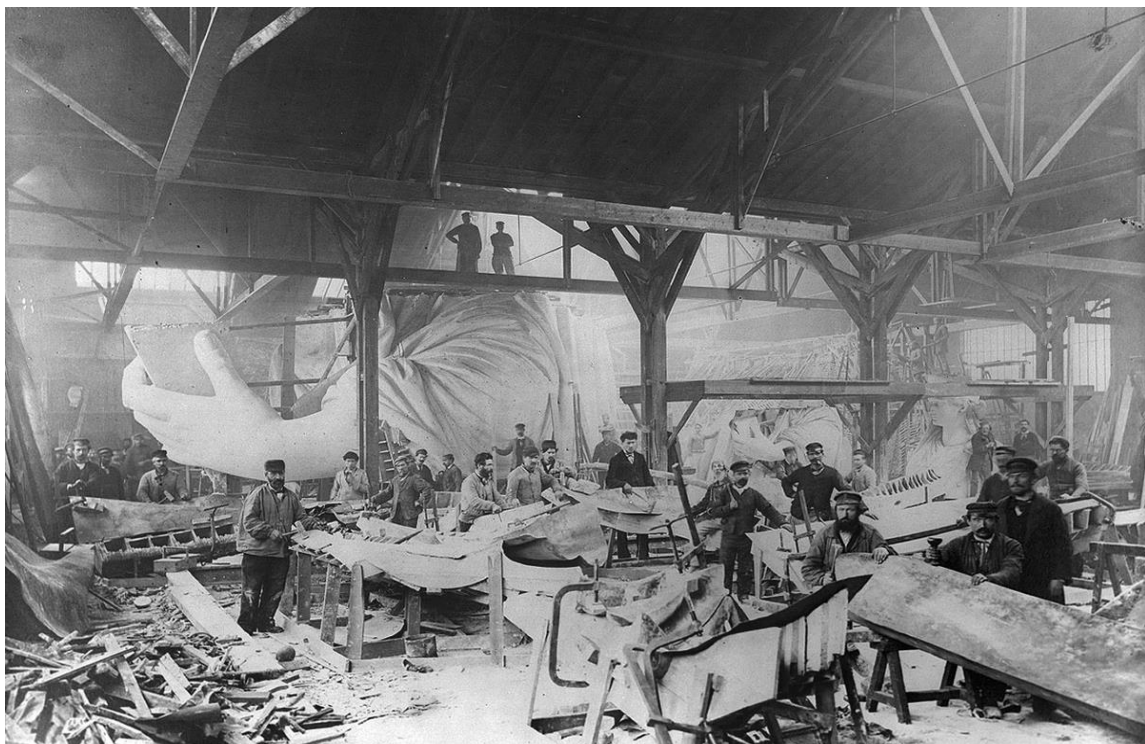
People were fascinated by the sheer ___ of the statue pieces. ENORMITY

Where would the Statue of Liberty be constructed? PARIS, FRANCE

Which part of the statue was constructed first? THE ARM WITH THE
TORCH, ARM, TORCH

What's a synonym for massive? GINORMOUS, HUGE, GIGANTIC,
ENORMOUS, GIANT

VAKT: In the picture below, point to someone without a beard or mustache.
Point to the smaller head and arm models of the statue that are behind the
giant arm of the statue.



Albert Fernique/Library of Congress

After nine years of construction and funding issues, the statue was finally complete and ready to be shipped to her permanent home in New York Harbor. She was broken down into 350 pieces, packed into 214 crates, and sent to the U.S. aboard a French Navy ship called the *ISÈRE* (pronounced uh-**zair**). The statue's PEDESTAL (base) was still under construction when the crates arrived in New York. Six months later it was finished, and the statue was ready to be reassembled atop it.

Spell: CRATES CONSTRUCTION ATOP

The statue was ready to be shipped to her permanent home in where?

NEW YORK HARBOR

The statue was sent to the U.S. aboard a ship called the what? ISÈRE

The Isère was from which of France's military branches? NAVY

When the crates arrived in New York, the statue's ___ was still under construction. PEDESTAL

The statue was broken down into how many pieces? 350

The final ASSEMBLY took place over four months and went more quickly than expected. First Eiffel's support structure was installed, and then the rest of the elements were added. Steam cranes and DERRICKS (another type of crane) hoisted all the materials to where they needed to go without the use of SCAFFOLDING (a temporary support structure on the outside of a building that workers use for construction or cleaning the building). Spiral staircases were constructed within the statue which would eventually allow the public to climb to the torch and view the Manhattan SKYLINE. Finally, the copper skin was added piece by piece. The last section was the face, which was hidden from public view until the statue's DEDICATION.

Spell: ELEMENTS SPIRAL DERRICKS

Spiral___ were constructed within the statue which would eventually allow the public to climb up to the torch. STAIRCASES

The last section of copper skin was put onto the statue's what? FACE

The face was hidden from public view until the statue's what?

DEDICATION

The final ASSEMBLY took place over how long? 4 MONTHS

Two types of cranes were used to reassemble the statue; what are they?

STEAM CRANES, DERRICKS

From the torch, you could view what? MANHATTAN, SKYLINE

On October 28, 1886, Lady Liberty was officially UNVEILED to the public and dedicated by President GROVER CLEVELAND. In the end, the cost of the statue including its base was \$800,000, which would be \$25,363,000 in today's dollars. Other costs associated with the statue include a major restoration and improvement project in the 1980s, as well as maintenance fees which run several million dollars a year. Besides the monetary cost, it took literally tons of materials and years of labor to see the statue to FRUITION (completion). 136 years later, she's still standing tall.

Spell: ASSOCIATED FRUITION UNVEILED
Which US president dedicated the Statue of Liberty? GROVER
CLEVELAND

Another cost associated with the statue was a major ___ in the 1980's.
RESTORATION

The ___ fees run several million dollars a year. MAINTENANCE

What was the final cost of the statue and its base in 1886? \$800,000

Creative Writing: Do you think spending millions of dollars a year to upkeep the Statue of Liberty is a worthwhile expense? Why or why not?

Would you want to climb up to the top of the Statue of Liberty? Why or why not?

Beth Frede is an S2C Practitioner based in New Hampshire where she lives with her husband and dog. She loves painting, puttering in the kitchen, and learning about new things while writing lessons.

Resources:

https://en.wikipedia.org/wiki/Statue_of_Liberty

<https://www.statueoflibertytour.com/blog/the-woman-behind-the-statue-of-liberty-who-is-lady-liberty/>

<https://history.state.gov/milestones/1776-1783/french-alliance>

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<https://obamawhitehouse.archives.gov/blog/2015/06/17/day-history-statue-liberty-came-america>

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<https://nerdist.com/article/statue-of-liberty-how-it-was-built/>

<https://www.theatlantic.com/photo/2013/07/the-statue-of-liberty-standing-at-america->

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<https://www.in2013dollars.com/us/inflation/1886?amount=800000>
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<https://www.dailymail.co.uk/news/article-2037582/The-copper-Statue-Liberty-appeared-New-York-1880s.html>