

### Inclusion and Diversity in STEAM



"All creative people want to do the unexpected."

#### Hedy Lamarr: Redefining Innovation Beyond the Silver Screen

Hedy Lamarr's legacy stands as a testament to a visionary mind whose impact extended far beyond the realms of Hollywood glamour. Beyond her iconic persona as a silver screen star, she was a pioneering scientist whose inventive brilliance reshaped the world of technology.

#### **General Information:**

Hedy Lamarr, born Hedwig Eva Maria Kiesler in 1914, was a remarkable Austrian-American actress and inventor. While her acting career garnered fame, her work in technological innovation revolutionized modern communication systems.

Throughout her life, Lamarr showed an early fascination with science and technology, seeking knowledge beyond her acting pursuits. Her collaborative efforts with composer George Antheil led to the invention of a frequency-hopping spread spectrum system during World War II, aimed







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at creating a secure method for guiding torpedoes. This groundbreaking invention laid the foundation for various wireless communication technologies we use today.

Her visionary mind and determination to contribute to the war effort defined her scientific journey. Despite initial challenges in gaining recognition for her invention during her lifetime, her work's significance was acknowledged posthumously, earning her recognition as a pioneering figure in technology.

#### Script for digital story:

I am Hedy Lamarr—a persona often celebrated for my elegance on the silver screen, but few know of my deep passion for science and innovation. My story spans beyond the glamour of Hollywood, venturing into uncharted territories of technology.

My fascination with science began long before the spotlight embraced me. A relentless curiosity fueled my desire to explore the unexplored, to delve into realms not often associated with a screen legend. My collaboration with George Antheil birthed a technology that aimed to safeguard nations during wartime—a frequency-hopping spread spectrum designed to thwart enemies' interception of torpedo guidance signals.

In the chaotic backdrop of World War II, I strived to contribute to the greater good, using my scientific acumen to design a secure communication system for the Navy. Despite the hurdles in gaining immediate recognition, my work laid the foundation for numerous modern wireless technologies—transforming how we communicate and connect in today's digital era.

My journey was marked by an unyielding dedication to innovation, a quest to reshape the world not only on the screen but also through transformative technological breakthroughs. Today, I stand as a testament to the power of relentless pursuit, reminding the world that within every star shines the spark of scientific brilliance.

**Keywords**:Visionary InventorCollaborative Innovator Trailblazer in Technology Overlooked Genius

#### Source

https://www.scientificamerican.com/article/hedy-lamarr-not-just-a-pr/







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#### **Multiple choice questions**

- 1. What was one of Hedy Lamarr's notable contributions during World War II?
- A) Inventing the microwave oven
- B) Designing a secure communication system using frequency hopping
- C) Developing the first television remote control
- D) Creating an early version of the internet

Answer: B) Designing a secure communication system using frequency hopping

- 2. What inspired Hedy Lamarr to delve into scientific innovation?
- A) Her passion for acting
- B) Collaborative efforts with a mathematician
- C) Childhood fascination with technology
- D) A bet with a fellow actress

Answer: C) Childhood fascination with technology

- 3. How did Hedy Lamarr's invention impact modern technology?
- A) It led to the invention of the microwave oven







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- B) It influenced the development of radar technology
- C) It revolutionized wireless communication systems
- D) It enabled the creation of the first computer

Answer: C) It revolutionized wireless communication systems

- 4. Why did Hedy Lamarr's contribution face challenges in gaining recognition?
- A) Her invention was not significant
- B) Lack of collaborative effort with other scientists
- C) It was overshadowed by her acting career
- D) Gender biases and underestimation in a male-dominated field

Answer: D) Gender biases and underestimation in a male-dominated field

- 5. What is Hedy Lamarr's legacy in modern technology?
- A) Pioneering wireless communication systems
- B) Inventing the first television
- C) Creating the first supercomputer
- D) Revolutionizing transportation systems

Answer: A) Pioneering wireless communication systems

- 6. Besides being an actress, what title is Hedy Lamarr also known for?
- A) Astrophysicist
- B) Inventor and Scientist
- C) Professional Dancer
- D) Political Activist

Answer: B) Inventor and Scientist







# **blooming**

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#### **Answers:**

#### **Multiple choice questions**

- 1. What was one of Hedy Lamarr's notable contributions during World War II?
- B) Designing a secure communication system using frequency hopping
- 2. What inspired Hedy Lamarr to delve into scientific innovation?
- C) Childhood fascination with technology
- 3. How did Hedy Lamarr's invention impact modern technology?
- C) It revolutionized wireless communication systems
- 4. Why did Hedy Lamarr's contribution face challenges in gaining recognition?
- D) Gender biases and underestimation in a male-dominated field
- 5. What is Hedy Lamarr's legacy in modern technology?
- A) Pioneering wireless communication systems
- 6. Besides being an actress, what title is Hedy Lamarr also known for?
- B) Inventor and Scientist







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#### Discussion questions

- 1. How did Hedy Lamarr's career transition from acting into scientific innovation challenge societal perceptions of women's roles and contributions in male-dominated fields?
- 2.In what ways did Hedy Lamarr's collaborative efforts, particularly with George Antheil, demonstrate the power of interdisciplinary partnerships in driving technological advancements?
- 3. What impact did Hedy Lamarr's invention of frequency hopping technology have on modern-day communication and its influence on subsequent technological advancements?
- 4. How did Hedy Lamarr's empathetic understanding of societal needs and her vision for a sustainable future through technology contribute to her groundbreaking inventions?







# 2) BLOOMING

## **Inclusion and Diversity in STEAM**



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#### Hedy Lamarr: Redefining Innovation Beyond the Big Screen

Hedy Lamarr's legacy is a testament to a visionary spirit whose influence extended far beyond the glitter of Hollywood. Beyond her iconic presence as a star of the big screen, she was a pioneering scientist whose inventive genius reshaped the world of technology.

Read Hedy Lamarr's story and complete her empathy map.

Can you find any similarities or differences with your own empathy map?







## Inclusion and Diversity in STEAM

Hear

## **Hedy Lamarr**

Receiving accolades for her performances on screen, with much

Praise for Acting:

Engaging with scientific beers and collaborators Scientific Discussions focus on her beauty and charm rather than her intellect.

discussing complex concepts and innovations

Advocating for Her Ideas:

Collaborative Invention

Continuous Learning and Experimentation:

to aid the war effort

Encountering
skepticism about her
capabilities in
science and
technology due to
her status as a
Hollywood actress.

Say and Do

demonstrating her ability to co-create impactful requency-hopping spread spectrum technology, Partnering with George Antheil to develop the

Actively promoting her ideas and seeking recognition for her contributions, despite the challenges posed by her Hollywood

persona

learning more about emerging technologies, and applying this knowledge to her own inventions. Continually exploring new scientific territories,

Experiencing the glitz and glamour of Hollywood, while also facing the stereotypes often associated with actresses, which likely undermined her intellectual pursuits.

Witnessing the global turmoil of World War II, feeling a responsibility to contribute her skills Observing potential technological advancements and anvisioning how her ideas could contribute to these levelopments, particularly in communication **World Events:** technologies.

Technological Possibilities:

Hollywood Glamour and Stereotypes:

Frustration Over Being Underestimated:

Think and Feel

Determination and Resilience:

Feeling frustrated and confined by the limitations imposed by societal expectations regarding her role as an actress versus

technology, driven by a desire to prove her intellectual worth and make Having a deep-seated passion for science and Passion for Innovation:

meaningful contributions

significant obstacles and lack of recognition during her lifetime interests despite facing

Maintaining a resilient determination to pursue her scientific

See



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