

Name \_\_\_\_\_

## Hedy Lamarr: The Hollywood Star Who Pioneered Wireless Communication

### Short Answer Key

1. Hedy Lamarr was born in Vienna, Austria, in 1914. She became involved in acting at a young age, pursuing a career in Hollywood and becoming a renowned actress in the 1930s and 1940s.
2. Frequency hopping spread spectrum technology involves rapidly changing the frequency of radio signals between sender and receiver to create secure and unjammable communication. It became the basis for modern wireless communication technologies, offering improved security and interference resistance.
3. Hedy Lamarr's motivation to collaborate with George Antheil was rooted in her desire to contribute to the war effort during World War II. She wanted to develop a technology that could secure communication for torpedoes against enemy interference.
4. Initially, the U.S. Navy rejected Hedy Lamarr and George Antheil's invention. However, their perspective changed when the technology was recognized for its military value during the Cuban Missile Crisis.
5. Hedy Lamarr's invention of frequency hopping spread spectrum technology laid the foundation for modern wireless communication technologies, including Wi-Fi, Bluetooth, and GPS. It significantly improved the security and effectiveness of wireless communication.

