

Process Paper

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We stumbled upon this topic when talking to a teacher about the history of female coders in our advanced topics computer science class. Additionally, in AP US history, we learned about the intersectionalities of World War II, discussing the implications of race and gender. Our project is a highly interdisciplinary topic, combining both history and technology, and can be used as a vessel to engender an interest in technology, especially for aspiring girls like ourselves.

We began our research by reading Code Girls, a historical book by Liza Mundy, revealing the previously overlooked triumphs of women codebreakers during World War II. After identifying our deep connection with these women, especially given our background at an all girls High School, we looked for primary sources surrounding the topic, including testimonials by the female cryptologists, propaganda posters, and newspaper clippings. We also reached out to many scholars and professors, particularly experts in this area of study and conducted a phone interview with Susan Holmes, a Stanford professor of cryptology. After receiving feedback from county judges, we changed three main facets of our website to improve both the clarity and the quality of our content. First, we enhanced our website by adding a diversity of perspectives, such as including a clip of our interview with Professor Holmes. In addition, we ensured that the majority of our student produced words were analytical, using primary sources as summary. Finally, we added a simulation of the enigma machine to demonstrate the excitement and challenge involved in breaking code.

There were three reasons we chose to display our project on a website. First, we wanted to include visuals such as pictures and videos to make our project more interactive, which a website would allow us to do. Additionally, we wanted to include a large amount of information as our topic was unfamiliar to many we presented it to. While exhibits, another category we were interested in, have a limit of 500 student composed words, websites have a limit of 1,200 words. This

difference in word count allowed us to delve deeper into specific topics that strengthened our project holistically. Finally, we believe that learning to navigate different types of technology is an important skill in our current world. Creating a website would be a great opportunity for us to grow and learn.

This year's NHD theme "Breaking Barriers" emphasizes the power of individuals resisting, changing societal norms, and fighting against institutions to create lasting legacies. The American female code-breakers of World War II broke both societal barriers that narrowly defined the role of women in America and language barriers in their immense contribution to breaking specifically Japanese codes. Just because a barrier is broken does not mean it is seen. Due to the secrecy of their operations, the extent of these women's impact on reducing the war effort was largely hidden until recently. These hidden figures broke boundaries that have now helped today's women continue to expand their roles in society and pursue careers in STEM.