

Things to Try at Home

Websites We Used

The websites we used today are:

- National Geographic Kids - Crack the Code: <https://kids.nationalgeographic.com/games/action-adventure/article/crack-the-code-1>
- Greg Bard Cryptograms: <http://gregorybard.com/cryptogram.html>
- Quantum Tic Tac Toe: <https://quantumtictactoe.com/play/>
- The physics simulation and many others can be found here: <https://phet.colorado.edu/en/simulations/filter?subjects=physics&type=html,prototype,cheerpj>

Cryptograms

The Puzzle Baron website has many cryptograms of varying difficulty for you to try: <https://cryptograms.puzzlebaron.com/>

Prof. Greg Bard has even more resources on cryptograms based on his work with the Codebusters section of Science Olympiad: <http://gregorybard.com/cryptogram.html>

PigPen Cipher

Try your hand at the pigpen cipher which uses symbols instead of letters: <https://crypto.interactive-maths.com/pigpen-cipher.html#act>

Cracking Codes

The story of how the Nazi Enigma code was cracked was a great example of how mathematics and information theory can be used to save lives:

- 158,962,555,217,826,360,000 (Enigma Machine) - Numberphile
- Flaw in the Enigma Code - Numberphile

The Numberphile channel has a lot of good videos on fun math problems.

Learn More About Quantum Computing

Check out the following videos on YouTube:

- Quantum Computing Expert Explains One Concept in 5 Levels of Difficulty — WIRED
- How Does a Quantum Computer Work? by Veritasium
- Intro to Information Theory — Digital Communication — Information Technology