



A DOT AND DASH, A PING, AND A FLASH

Project abridged from curriculum created by Alissa Doyle, 2018
USS Hornet Sea, Air & Space Museum

OVERVIEW

The history of naval communication relies on the non-verbal and multi-sensory. Stripes or stars on an officer's uniform automatically dictated an enlisted man's actions, flashing lights relayed invaluable information to a landing pilot, and bells signaled between ships through an otherwise impenetrable fog. Today, we'll explore non-traditional forms of communication, like you would see on USS *Hornet*. This type of communication, talking to each other without using words, is how many things in the world communicate, including computers through coding!

GOALS

- Work with someone or a group (a sibling, family member, or even a neighbor or friend at a distance!) to communicate using unconventional methods!
- Create and employ your own code to navigate your partner through an obstacle course or set of actions!

SUPPLIES

- Flashlights or Colored Lights
- Colored Paper
- Whistles/Bells/Clapping Hands/Etc.

STEPS

1. Figure out the rules of the code! Coding relies on IF/THEN statements like "IF you see a blue light, THEN you move forward." Coding relies on patterns and repetition to relay information. You can create meanings from patterns of flashing light; whistles, bells, or clapping; or even different pieces of paper held in different positions around your body (like a ship's Landing Signal Officer below!).
2. One person acts as THE PROGRAMMER, the other(s) as THE COMPUTER. THE PROGRAMMER inputs information while the other responds accordingly to the information received.
3. If you're working with people in your house, you can even set up an obstacle course! It could be as simple as walking around a table and chairs or following a path around the house. Can THE

PROGRAMMER successfully lead THE COMPUTER through the right motions and complete the course? If you're working with neighbors or friends, can you communicate messages back and forth without using words?

4. To make things harder, can you (safely!) eliminate one of your senses and still understand the message? If you're using colors, can THE COMPUTER put on noise-cancelling headphones and still respond correctly? If you're using sounds, could you blindfold THE COMPUTER and still respond?

WHAT DID YOU NOTICE?

- As THE PROGRAMMER, what did you find challenging?
- As THE COMPUTER, what did you find hard?
- What was it like to eliminate one of the five senses?
- Why do you think the Navy developed such a range of communication tactics?
- Look around your house and neighborhood and try to spot all the ways colors, lights, sounds, and other things relay information without using words!



A Landing Signal Officer aboard an aircraft carrier used to use colored paddles held in different positions to communicate information with pilots landing on the carrier!