

## MATERIALS

### Student Folders:

- QR code for network notebook
- QR code for morse code notebook
- Documentation packet
- Morse code cheat sheet

### Timeline folders x10:

- hint
- envelope with answer

### Timeline Supplies:

- rope with labels and rings
- timeline envelopes x10
- my cheat sheet with dates, order

### Misc

- my laptop for nx documentation

## ACTIVITY OUTLINE

<b>Introduction</b>	10 min	- short fun videos about telegraphs
<b>Make a timeline</b>	30 min	- students talk about their envelopes in groups of 2-3 - share guesses briefly - students open and talk through answer envelopes - each group shares and assembles their part of timeline
<b>Network Concepts Discussion</b>	15 min	- Network Concepts: -- nodes & edges -- adjacency & neighbors -- connectedness & components -- paths & cycles
<b>Networks Notebook</b>	45 min	- students work through a jupyter notebook, which is like an interactive worksheet that lets them run, alter, and create python code from an iPad
<b>Debrief, Data Structures Discussion</b>	15 min	- Data Structures Concepts -- a data structure organized information in a way a computer can understand -- every structure has pros and cons -- dictionaries!

<b>Data Structures Notebook</b>	45 min	- students work through another jupyter notebook
<b>Debrief Discussion</b>	15 min	- ask for favorites, challenges, observations...
<b>Free Time (notebooks, papers)</b>	?	- students can keep playing with the notebooks or read about more network theory concepts