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| **Skill 8.01 Exercise 1** |
| What is the Internet? |
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| How do you use the Internet? Think about your typical day. When are you using the Internet? For what purposes? What role does it have in your life? |
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| **Skill 8.02 Exercise 1** |
| Define network topology. |
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| **Skill 8.03 Exercise 1** | |
| Identify what each acronym below represents | |
| WAN |  |
| DCN |  |
| LAN |  |
| What type of network is the Internet? | |
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| **Skill 8.04 Exercise 1** |
| For each of the physical network connections, identify the type of signal it transmits, along with the advantages and disadvantages of each technology.   |  |  |  |  | | --- | --- | --- | --- | |  | Type of signal | Advantage | Disadvantage | | Copper wires |  |  |  | | Wireless |  |  |  | | Fiber-optic |  |  |  | |

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| **Skill 8.05 Exercise 1** |
| How many wires would be required to send the number 20 |
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| What if only 1 wire were available? How could you send the number 20? |
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| **Skill 8.06 Exercise 1** | |
| Navigate to the flashlight test: <https://docs.google.com/presentation/d/1JxWSa791amkTUqyr-q9E0K4vNg_vk8pb/edit?usp=sharing&ouid=106299719430157487465&rtpof=true&sd=true>  The flashlight binary signal test simulates a flashlight turning on and off. Let the letter B represents the off position and the letter A represents the on position. Play the slide show and watch the first test, then decide on the message being sent in terms of A and B | |
| **Test 1** |  |
| Now watch the second test and decide on the message being sent, | |
| **Test 2** |  |
| After seeing Test 2, how might you revise test 1? Indicate your revised version below. | |
| **Test 1 Revised** |  |
| What additional information let you to revise your message? | |
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| **Skill 8.06 Exercise 2** |
| Below is a screen shot of the results of an Internet speed test on my home computer, |
| How many bits per second can I download? How many bits per second can I upload? |
| I want to download a video that is 1.5 GB… How long will it take? |

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| **Skill 8.06 Exercise 3** |
| Josiah used a tool to measure how many bits he could transfer over his home connection to the Internet. What is the bandwidth? |

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| **Skill 8.06 Exercise 4** |
| What is latency? |
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| Navigate to <http://ping-test.net/> and run the ping test.  For which location did the ping test take the longest? The shortest? |
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