|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Sending Text** |  |

|  |
| --- |
| **Your Tasks** |
| * Develop a protocol to represent the 50 states * Write a protocol for sending letters * Get acquainted with the Internet simulator * Complete Challenge 1 * Complete Challenge 2 * Complete Challenge 3 * Complete Challenge 4 * Compare yoru protocol to the ASCII System * Define key vocabulary |

* **Develop a protocol to represent the 50 states**

Imagine we wanted to create a system that would allow you to represent each of the 50 states.

* What's the smallest number of bits you would need to ensure you'd have unique patterns for each state?
* Write down how you would represent these 3 different states in your system. Then add two more of your own.

|  |  |  |
| --- | --- | --- |
| Smallest number of bits |  | |
|  | **Binary** | **Decimal** |
| Vermont |  |  |
| Idaho |  |  |
| Arizona |  |  |
|  |  |  |
|  |  |  |

* **Develop a protocol to send letters**

**When we communicate on the Internet we're not usually sending numbers back and forth, we're sending text! The version of the Internet Simulator you're using only lets you send numbers, but that doesn't mean we can't figure out our own way to send text.**

**Get Acquainted with the Internet Simulator**

When we communicate on the Internet we're not usually sending numbers back and forth, we're sending text! The version of the Internet Simulator you're using only lets you send numbers, but that doesn't mean we can't figure out our own way to send text. Navigate to the link below to explore the the latest Internet Simulator,

<https://studio.code.org/s/csp1-2018/stage/7/puzzle/2>

**Challenge 1**

*Consider the three text messages below:*

*- omg*

*- hey*

*- morning*

Discuss with your partner a protocol for sending the messages shown. Write your protocol in the space below.

|  |
| --- |
|  |

One member of your group should obtain a mystery text message from the “challenge 1” container. Without talking, the member with the message should send the text to their partner.

Each member should try sending a mystery text to their partner. Write your results below.

|  |  |
| --- | --- |
| **Message sent** | **Message received** |
|  |  |
|  |  |

**Challenge 2**

*Consider the three text messages below:*

*- OMG*

*- How are YOU*

*- Good Morning*

Discuss with your partner a protocol for sending the messages shown. Write your protocol in the space below. How did your modify your initial protocol?

|  |
| --- |
|  |

One member of your group should obtain a mystery text message from the “challenge 2” container. Without talking, the member with the message should send the text to their partner.

Each member should try sending a mystery text to their partner. Write your results below.

|  |  |
| --- | --- |
| **Message sent** | **Message received** |
|  |  |
|  |  |

**Challenge 3**

*Consider the three text messages below:*

*- GREAT!*

*- What’s Up?*

*- How’s it going?*

Discuss with your partner a protocol for sending the messages shown. Write your protocol in the space below. How did your modify your initial protocol?

|  |
| --- |
|  |

One member of your group should obtain a mystery text message from the “challenge 3” container. Without talking, the member with the message should send the text to their partner.

Each member should try sending a mystery text to their partner. Write your results below.

|  |  |
| --- | --- |
| **Message sent** | **Message received** |
|  |  |
|  |  |

**Challenge 4**

*Consider the three text messages below:*

*- CU@2*

*- Shows at 8:00 pm*

*- Cya 2nite!*

Discuss with your partner a protocol for sending the messages shown. Write your protocol in the space below. How did your modify your initial protocol?

|  |
| --- |
|  |

One member of your group should obtain a mystery text message from the “challenge 4” container. Without talking, the member with the message should send the text to their partner.

Each member should try sending a mystery text to their partner. Write your results below.

|  |  |
| --- | --- |
| **Message sent** | **Message received** |
|  |  |
|  |  |

**Compare your protocol to the ASCII System**

Compare ASCII to the system you developed.

* What's the same as the systems you created?
* What's different?
* What is most interesting or surprising about this system?

Write your response below

|  |
| --- |
|  |

**Define Key Vocabulary**

Write definitions for the following

|  |
| --- |
| **ASCII** |
|  |
| **Protcol** |
|  |
| **Abstraction** |
|  |