DEBUGGING INSTRUCTIONS CHALLENGE
STUDENT WORKSHEET

Find the errors in each set of instructions below. Then, correct the error so that the instructions will work correctly! You might want to act out the activity or puzzle to help you find the bug.

As you work, ask yourself the following questions:
- What is supposed to happen?
- What is going wrong?
- How can it be fixed?

Round 1: Escape the Maze

Goal: Help the mouse navigate from the start to the end of the maze.

Buggy Instructions:

1. Move forward until you hit a wall.
2. Turn right 90 degrees.
3. Move forward until you hit a wall.
4. Turn right 90 degrees.
5. Move forward until you hit a wall.
6. Turn left 90 degrees.
7. Move forward until you hit a wall.
8. Turn left 90 degrees.
9. Move forward until you reach the end.
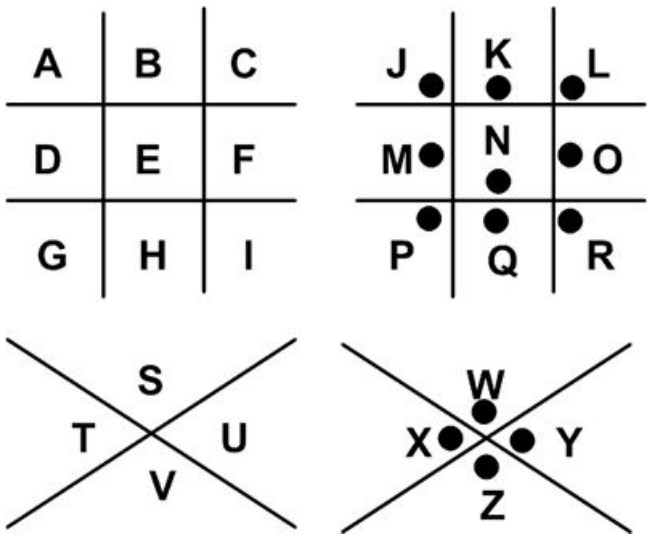
Correct Instructions

Part 2: Encode Your Own Message

1. Find a partner.
2. Write a short message to this partner using normal letters on a scrap piece of paper.
3. Then, encode it using the key.
4. Finally, swap papers with your partner and decode their secret message.

Key	Message

Part 3: Decode Your Partner's Message

Use the key to decode your partner's message that is written above. As you work, ask yourself: how might computers make encryption faster or easier?

Decoded Message