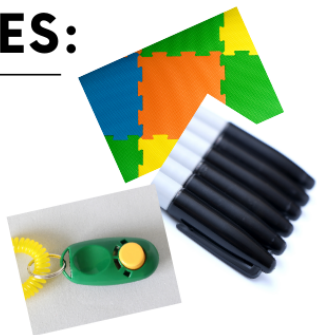


# PROGRAMMING @ CAREER DAY

## Printable Instructions

### SUPPLIES:

Floor Mat Tiles  
Sharpie  
Clicker  
Clicker Counter



### PREPARE:

2 floor mats with YES  
2 floor mats with NO  
1 floor mat with girl figure on one side and lunchbox on the other side  
1 floor mat with picture of pizza



### DIRECTIONS

#### 1) Introduce yourself and "What is Programming?"

- Keep it simple and summarize: programming is the words and set of rules for telling a computer or computing device to perform specific tasks.
- Ask students: "Are computers smart?"
- Explain humans must tell the computers what to do and how to carry out the actions and tasks.

#### 2) Explain Initial Coding- for example when you want your figure in a game to move you use a command to make the figure move. There is a code that does that.

- Set up mat tiles in a single row.
- Select a student to hold a clicker and a student to move through the tiles.
- Each time the student clicks the clicker, the other student moves up the tiles. Explain that this simulates the coding entered that the gamer then uses.

#### 3) Explain IF/THEN Logic- In programming we set conditions to keep your game character moving.

- Find a simple task the kids do everyday and show how to "automate" it.
- Setup the tiles like a hopscotch course where they come to a question.
- "Are you a girl?"
- Ask one student to demonstrate.
- One student hops up to the question tile, and goes left/green for YES and right/red for NO.

#### 4) Add a Loop-explain that loops allows all the characters (or in this case students) to run the course.

- Line all students up and repeat the course where they come to a question until all students have gone through.
- Flip the girl icon to the lunch box and repeat. "Are you a girl?" and "Did you bring your lunch?"

#### 5) Add a Counter-explain that a counter can be used to find out totals. For example, we would like to know how many students packed a lunch, want pizza, or are eating something else.

- Using the course "did you bring a lunch" add an additional fork to the side "NO" with a new question "Cheese pizza?" YES/NO.
- Put a student at the end of each fork with an old style counter.
- Run the course with all students and have the students with the clickers count after each person.
- Now have the students with the clickers announce how many students either brought lunch, are buying cheese pizza or eating something else!

#### 6) Explain Errors- tell students that sometimes they will see a pop up for an error or the game will freeze. Coders can have you retry, so that your game doesn't have to restart.

- Using the original straight line mat tiles, line them up so that they end at a wall.
- Select a student to hold a clicker and a student to move through the tiles.
- Each time the student clicks the clicker, the other student moves up the tiles.
- When the student "hits" the wall the class yells "Error!"

