

# Code a Rocket Launch Speaker Notes

## **Slide 1: “Code a Rocket Launch”**

- Briefly introduce the workshop

## **Slide 2: “Volunteer Introductions”**

- Each volunteer will introduce themselves with their major, and why they chose STEM
- Invite the students to write down their name on the white board

## **Slide 3: “Margaret Hamilton”**

- Briefly introduce the purpose of video
- Play the video
- Ask the students to write down any experiences when they have been doubted
  - Invite some students to share their experience

## **Slide 4: “Majors Offered at UConn”**

- Read slide information relatively verbatim
- Ask for any questions

## **Slide 5: “Problem Statement”**

- Define problem statement
- Explain that Hamilton is asking us for help to check if the rocket will make it to the moon, but ensure that they understand it is a simplified program that we will be running

## **Slide 6: “Algorithms”**

- Discuss what algorithms are and how they relate to computer science
- Mention that algorithms can sometimes be simple in structure, similar to cooking recipes
- Mention how we interact with algorithms on social media on a day to day basis. (ex. recommended posts or people/channels on TikTok, YouTube, Instagram, etc...)

### **Slide 7: “Programming Languages”**

- Read slide information relatively verbatim

### **Slide 8: “Variables”**

- Explain what variables are and how this may differ from what they know as variables
- Ask students to write down some example variables

### **Slide 9: “Output”**

- Introduce what a print statement is and how it can be used
- Ask the students to write two print statements that will output their name and age on the white board

### **Slide 10: “Input”**

- Introduce how to prompt the user for an input
- Take the provided example, explain it verbally
  - Emphasize the example that uses `int()` for numerical inputs

### **Slide 11: “Gif”**

#### **MAKE SURE SLIDE IS NOT IN PDF FORMAT SO GIF CAN RUN**

- Direct Students eyes to the terminal side and explain how program works from user standpoint
- Explain to students how the code works

### **Slide 12: “Problem” (note: Save at least 20 mins to do activity portion)**

- Ask students to perform each step, and write it on their white board (5-7 mins)
  - Walk around and assist
- Open and present Python Compiler and problem side by side. Run through the problem line by line with students. (10-13 mins)

- Ask and encourage the students to give ideas as you write the code
- Progress through slowly so the students can understand each line and how they all connect to form program

**Slide 13: “The Rocket Made it to the Moon”**

- Congratulate the students for doing a great job