

# Maya Codes Robots with Measurement

Grade 4

Math

Nonfiction

Coding kids Theme

~149 words

CCSS.MATH.4.MD.A.1

Name: \_\_\_\_\_ Date: \_\_\_\_\_

 **READ — READ THIS PASSAGE CAREFULLY. YOU MAY READ IT TWICE.**

Maya joined the Coding Kids Club at her school. The club built robots and wrote programs together. One day, Maya measured parts for her robot arm. She learned that measurement uses standard units. In the United States, people use customary units. These units include inches, feet, yards, and miles. Maya measured a short wire in inches first. Then she used a ruler to check her work. She found that 12 inches equal exactly one foot. Next, Maya needed a bigger measurement. She learned that 3 feet equal one yard. Her robot arm needed to reach one full yard. She also learned that 5,280 feet equal one mile. Her robot sensor could detect objects within one mile. Maya practiced **\*\*conversion\*\***, which means changing one unit into another. She converted inches into feet many times. Finally, she programmed her robot with the right numbers. Maya discovered that measurement units made her code work perfectly.

 *Tip: Read the passage twice before turning to the questions on the next page.*

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Questions

 **ANSWER** USE THE PASSAGE ON PAGE 1 TO HELP FIND YOUR ANSWERS.

## MAIN IDEA

1. What is this passage mostly about?

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## TEXT EVIDENCE

2. According to the passage, what customary units did Maya learn about in the United States?

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## VOCABULARY

3. What does the word conversion mean as it is used in this passage?

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## INFERENCE

4. Why would Maya's robot stop working correctly if she used the wrong measurement units in her code?

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## CAUSE AND EFFECT

5. What happened as a result of Maya practicing conversion many times?

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## TEXT EVIDENCE

6. What did the passage say Maya's robot sensor could do?

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# ✓ ANSWER KEY — Maya Codes Robots with Measurement

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TEACHER / PARENT USE ONLY — Suggested answers shown below each question

Maya joined the Coding Kids Club at her school. The club built robots and wrote programs together. One day, Maya measured parts for her robot arm. She learned that measurement uses standard units. In the United States, people use customary units. These units include inches, feet, yards, and miles. Maya measured a short wire in inches first. Then she used a ruler to check her work. She found that 12 inches equal exactly one foot. Next, Maya needed a bigger measurement. She learned that 3 feet equal one yard. Her robot arm needed to reach one full yard. She also learned that 5,280 feet equal one mile. Her robot sensor could detect objects within one mile. Maya practiced **conversion**, which means changing one unit into another. She converted inches into feet many times. Finally, she programmed her robot with the right numbers. Maya discovered that measurement units made her code work perfectly.

## MAIN IDEA

### 1. What is this passage mostly about?

This passage is mostly about Maya learning customary measurement units and how to convert between them while building a robot in her Coding Kids Club.

## TEXT EVIDENCE

### 2. According to the passage, what customary units did Maya learn about in the United States?

The passage states that 'these units include inches, feet, yards, and miles,' which are the customary units Maya learned about.

## VOCABULARY

### 3. What does the word conversion mean as it is used in this passage?

In this passage, conversion means changing one unit of measurement into a different unit, such as changing inches into feet.

## INFERENCE

### 4. Why would Maya's robot stop working correctly if she used the wrong measurement units in her code?

If Maya used the wrong units, the robot's movements and sensor range would be the wrong size, causing the robot to make mistakes because computers follow instructions exactly as they are written.

## CAUSE AND EFFECT

### 5. What happened as a result of Maya practicing conversion many times?

Because Maya practiced conversion many times, she was able to program her robot with the right numbers and make her code work perfectly.

## TEXT EVIDENCE

### 6. What did the passage say Maya's robot sensor could do?

The passage states that 'her robot sensor could detect objects within one mile,' showing how Maya used large measurement units in her project.