Learn Taste with Cozmo!

Contents

Summary

The purpose of this game is to educate children about the sense of taste with nutrition.

The game uses a Cozmo robot, a laptop, and various plastic food items.

The children will be tasked with creating a healthy plate of food for Cozmo, also called a Rainbow Plate. They will learn by thinking critically and selecting foods based on their color and Cozmo's reactions.

Requirements

You will need the following items provided by the IT department:

- A laptop that has been set up for you by your IT department. This laptop should have the game installed, as well as other necessary software.

- A cell phone and USB cable.

- A Cozmo robot with USB dock.

- A game mat and white backdrop.

- Various plastic food objects that Cozmo has learned. These can be found at the link below:

  https://www.amazon.com/gp/product/B078F1HYZM/ref=oh_aui_detailpage_o03_s00?ie=UTF8&psc=1

Walkthrough

Before you begin make sure you have been given a laptop, cell phone, and Cozmo robot that have been properly set up by the IT department. They should handle hooking up the phone and Cozmo to the laptop for you, as well as any installation needs. You will also need the plastic food objects that Cozmo will identify and a game mat.

1. To start, make sure Cozmo is on and ready. Then **place Cozmo on the mat** facing the provided white backdrop (arm lift on the line). You will also **place the food objects on the table**, however be sure they are not in front of Cozmo. If they are, he might recognize them too early. Finally, put the plates on the correct labeled spot on the mat.

2. At this point you should have both Cozmo and the plastic food on the table, waiting to begin the game. You should **launch the game** from the laptop screen by double clicking main.py.

3. Once the game has started, Cozmo is ready to try to identify foods. Have the children **select a food and place it on the test plate in front of Cozmo** as seen below. The food should be about 5 inches from his screen.

4. **Wait** approximately 5 seconds. If Cozmo identifies the food, he will let you know whether it's a healthy option for his plate or not by his reaction. If it is healthy then **place the food on the final plate**, otherwise do not. If his plate is complete he will let you know by walking up to it. You can **remove all the food from the final plate** to play again. If it's not complete, go back to step 3 and repeat.
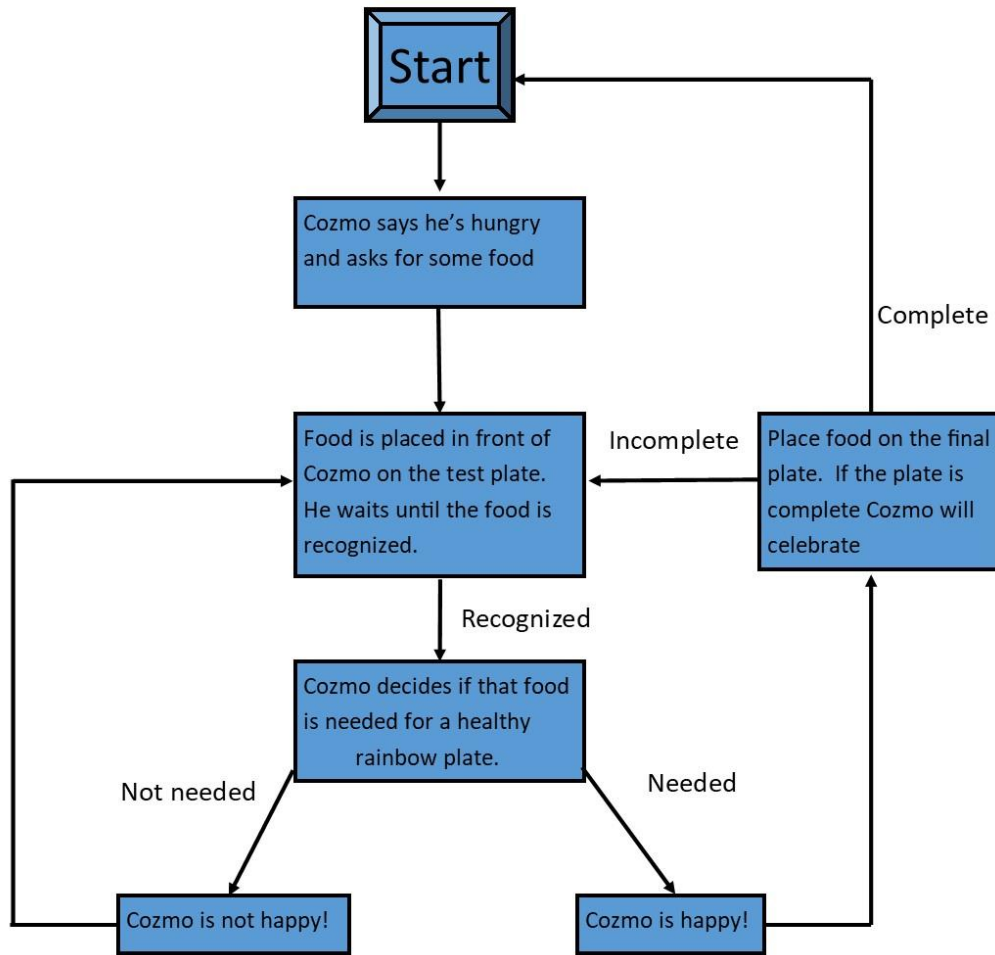
A Complete Plate

One easy way to create a diverse healthy plate is to make it a "Rainbow Plate".

There should never be more than 1 of each color food on the plate.

A plate is considered complete when it has 4 pieces of food of different colors.

Walkthrough Figure

Start

Cozmo says he's hungry and asks for some food

Food is placed in front of Cozmo on the test plate. He waits until the food is recognized.

Incomplete

Place food on the final plate. If the plate is complete Cozmo will celebrate

Complete

Recognized

Cozmo decides if that food is needed for a healthy rainbow plate.

Not needed

Needed

Cozmo is not happy!

Cozmo is happy!

<u>Script</u>

This is a sample script you can use for the game.

Educator: "This is Cozmo, he's a robot. Cozmo is hungry, we should make him a rainbow plate of food. Let's take turns putting food on the plate in front of him and see if he likes it."

Scenario: Cozmo likes food

Educator: "It looks like Cozmo likes it! Let's put that on his final plate"

Scenario: Cozmo doesn't like food

Educator: "Cozmo doesn't want that food. Let's put it back and try another!"

Scenario: The plate is full

Educator: "We have a full plate of food for Cozmo now! All the food is different colors like a rainbow."

FAQ

Q: Why doesn't Cozmo recognize my food?

A: It's possible Cozmo was trained wrong, or that you have been given the wrong plastic food pieces. Contact your IT department.

Q: Why doesn't the game run?

A: Make sure that the phone and Cozmo are both charged. Also make sure you're clicking the right icon on the desktop. Ask your IT department if they've set up the computer properly.

Q: How long does Cozmo run on a single charge when doing the activity?

A: Cozmo has 1 to 2 hours of play time!

Q: How long does it take Cozmo to fully charge?

A: Cozmo takes about 12 minutes to fully charge.
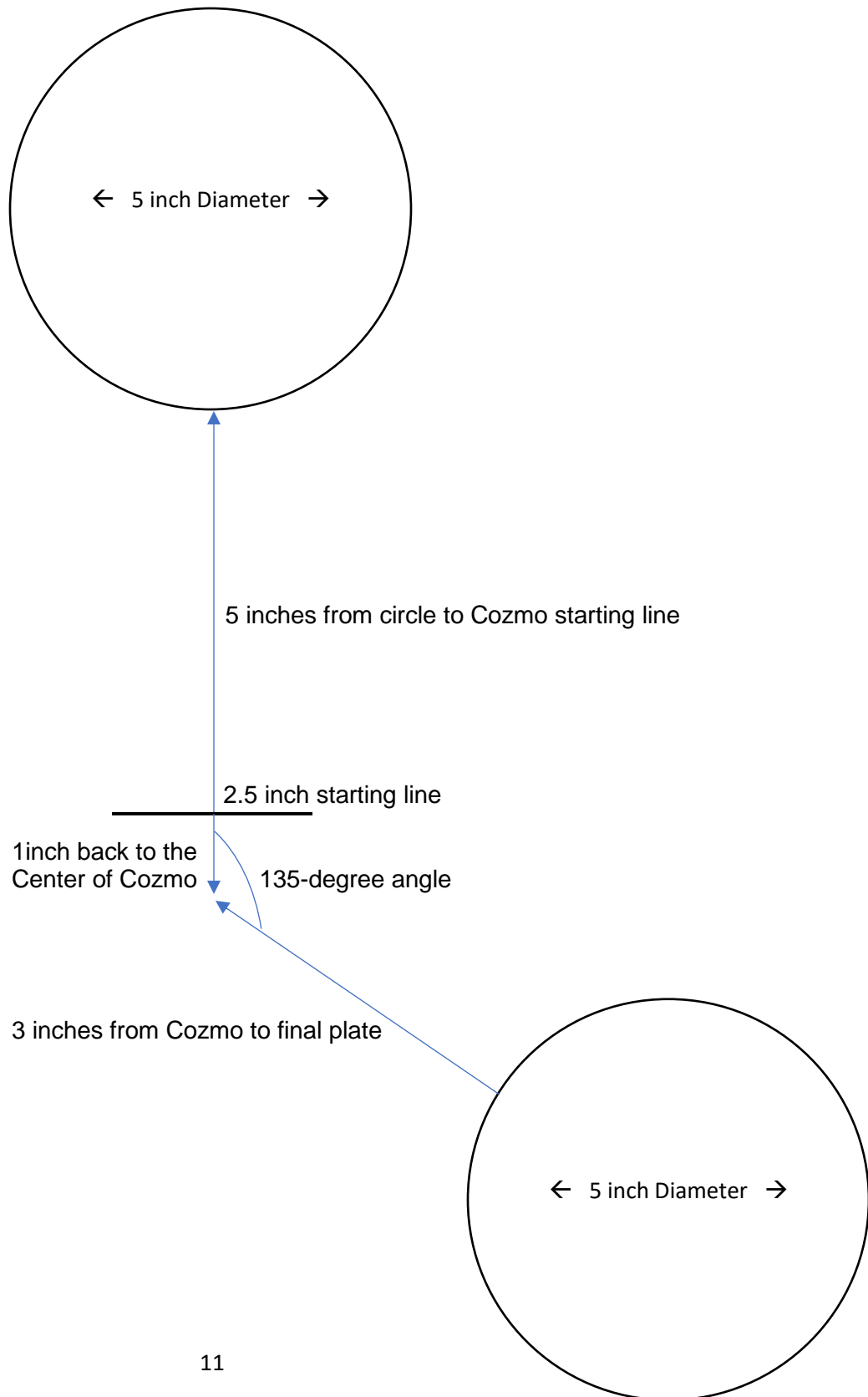
Q: How do I work?

A: Cozmo recognizes the food props using his camera and image recognition with Google's tensor flow API.

Q: Where can I buy the food models?

A: Food props can be purchased at :

https://www.amazon.com/gp/product/B078F1HYZM

Mat Schematics

← 5 inch Diameter →

5 inches from circle to Cozmo starting line

2.5 inch starting line

1inch back to the
Center of Cozmo

135-degree angle

3 inches from Cozmo to final plate

← 5 inch Diameter →

Resources

If you want to learn more about the Cozmo project you can visit:

http://cozmotasteproject.readthedocs.io/en/latest/

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