8.2 Catch the Candies

Intro

Mike's so happy that he finally learnt how to control Mike No.1 via video. Now he wants to catch the rest of the candies by using this function.

Task

1. Enable Mike to control Mike No.1 by video, hence to realize the goal of catching candies.

Start Learning

Design the script for the scenario of catching candies by hands in the video.

Sprite	Animation Scene	Scratch Script
Candy	The number of the candy is 0 when the green flag is clicked; Turn on the video and set the transparency at 50; When the motion value of the sprite on the video is detected to be over 30, hide itself and increase the candy number to 1. After 1 to 2 seconds, the sprite will re-appear on the stage and repeat the same process. My plan_____	Events: When Green Flag is Clicked Data: Variable Looks: Hide, Show Control: Repeat, If... then Motion: Coordinate Operator: Pick random ... to .. , ..>.. Sensing: Turn video on, Set video transparency to.., Video motion on sprite My Script_____

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☆ Explore
Try to create a game of catching candies by hand in video.

Achieve

Import "Candy 5.png"

Sprite	Program	Effect

Sprite	Program	Effect

Candy 5	when 🚩 clicked
	set numbers to 0
	turn video on
	set video transparency to 50 %
	forever
	  if < video motion on this sprite > 30 > then
	    hide
	    change numbers by 1
	    wait pick random 1 to 2 secs
	    show
	    go to x: pick random -240 to 240 y: pick random -180 to 180	

If any candy is not collected within 2 seconds, it will disappear and one point will be deducted.

Sprite	Program	Effect

Candy 5	when 🚩 clicked
	set numbers to 0
	turn video on
	set video transparency to 50 %
	reset timer
	forever
	  go to x: pick random -240 to 240 y: pick random -180 to 180
	  show
	  set current to timer
	  wait until < touched = 1 or < timer - current > 2 > >
	  if < touched = 1 > then
	    change numbers by 1
	    hide
	    wait pick random 1 to 2 secs
	  else
	    change numbers by -1
	  set touched to 0
	
	when 🚩 clicked
	show
	set touched to 0
	forever
	  if < video motion on this sprite > 50 > then
	    set touched to 1	

Tips

The lower the motion value of the video is, the more sensitive the image is. Factors including illumination, posture, obstacle will affect the value of the motion detection from the video. Therefore our head portrait should stay away from the video area and stay put while catching candies with hands.

Homework

1. Create more candies on the stage using the clone function
2. Program like this: Variety types of candies will appear on the stage and

corresponding points will be deducted if a "bad candy" is touched.

What You've Learnt?

Adventure Diary (Self-Assessment)

Gas Station (Other's Assessment)