

## 7.2 Catch the Candies

### Intro

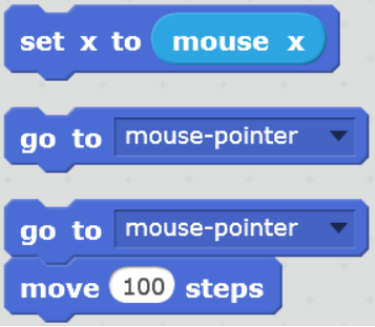

Mike has arrived beside the volcano already and he wants to catch the candies by controlling Mike No.1 with mouse.

### Task

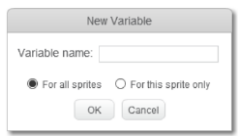
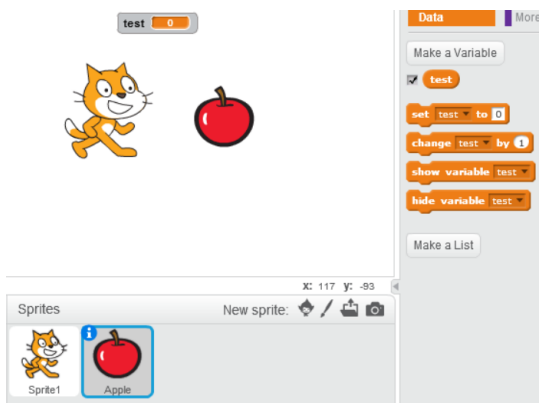
1. Design a program that enables the mouse to control Mike No.1 to catch candies. Meanwhile, add scoring function.

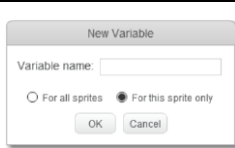
### Start Learning

#### 1. Make the sprite move with the mouse

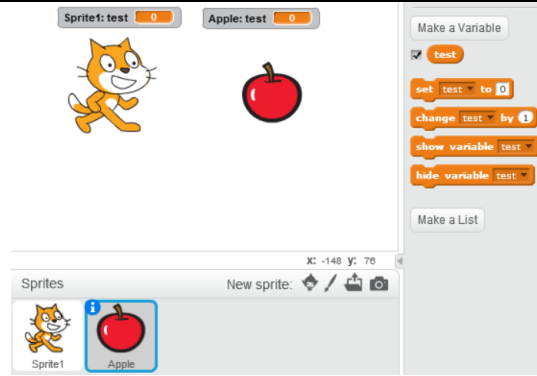
Sprite	Explanation	Example
	<p>There are total 3 ways to control a sprite with mouse. Compare the similarities and differences among the 3 methods.</p>	

#### 2. Private Variable of a Clone

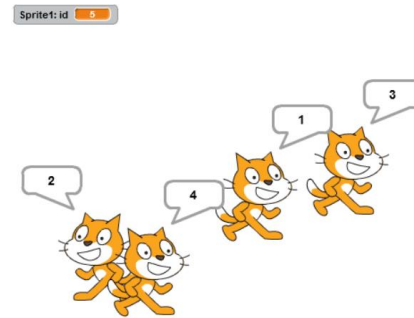
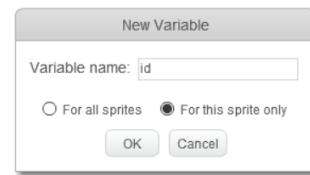
Block	Explanation	Example
	<p>While creating a new variable, "For all sprites" refers to the variable that can be visited and modified by all sprites in this program. Thus no duplication of names is allowed.</p>	



"For this sprite only" refers to the internal variable of one sprite that can be only visited but not modified by the other sprites. Thus the name can be duplicated. Pay attention to the changes of the name of the variables on the stage.





When variable "for the sprite only" is used with clone block, every clone will possess the variable. In this case, we call it "the private variable" of the Clone. The initial value of the private variable equals to the then-value of the Clone when the Clone is created.



## Achieve


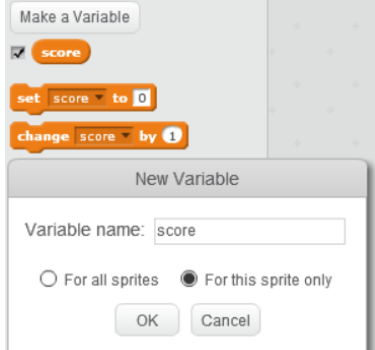


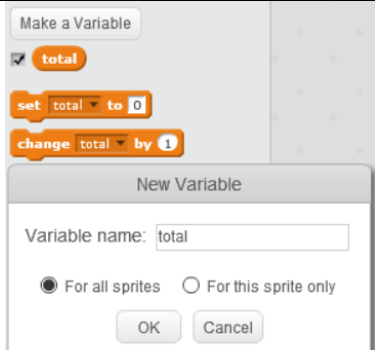
### 1. Control the Spaceship with mouse

Import "Mike in Spaceship 2.png".

Sprite	Program	Effect
 <p>Mike in Spaceship 2</p>	<pre> when green flag clicked   set rotation style to left-right   forever loop     move 10 steps     point towards mouse-pointer           </pre>	


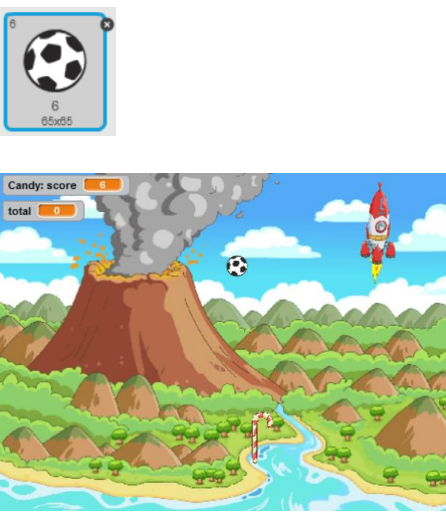
## 2. Achieve the Functionality of Scoring

Assume every candy stands for different scores, 1 point for Candy 1, 2 points for Candy 2, and so on. Then each clone of the candy requires a private variable to represent its score. In the meantime, we also need an overall variable "for all sprites".

Sprite	Program	Effect
 <p>Candy</p>	<pre> when green flag clicked   hide   go to x: -90 y: 100   forever loop     set score to pick random 1 to 5     switch costume to score     create clone of myself     wait pick random 0.5 to 1 secs  when I start as a clone   show   glide 0.5 secs to x: pick random -200 to 200 y: 150   glide 1 secs to x: pick random -200 to 200 y: -150   delete this clone  when I start as a clone   forever loop     if touching Mike in Spaceship 2 then       change total by score       delete this clone           </pre>	 
 <p>Mike in Spaceship 2</p>	<pre> when green flag clicked   set total to 0           </pre>	

## Additional Training

To get a point-deduction sprite, all we need is to do some modifications on the program.

Sprite	Program	Effect
 <p>Candy</p>	<pre> when I start as a clone   forever     if touching Mike in Spaceship 2 ? then       if score = 6 then         change total by -5       else         change total by score       delete this clone  when flag clicked   hide   go to x: -90 y: 100   forever     set score to pick random 1 to 6     switch costume to score     create clone of myself     wait pick random 0.5 to 1 secs </pre>	

## Homework

1. Achieve the effect of candies falling down and rotating simultaneously.
2. Utter a sound every time one candy is collected.

## What You've Learnt?

Adventure Diary (Self-Assessment)



Gas Station (Other's Assessment)

