

Learn to program on phone with Pocket Code

Lesson 5: Catch the Fruit

About CEL

Code to Enhance Learning is nonprofit uses coding as a tool to build critical thinking, creativity, collaboration and perseverance in children in grade 5-9.

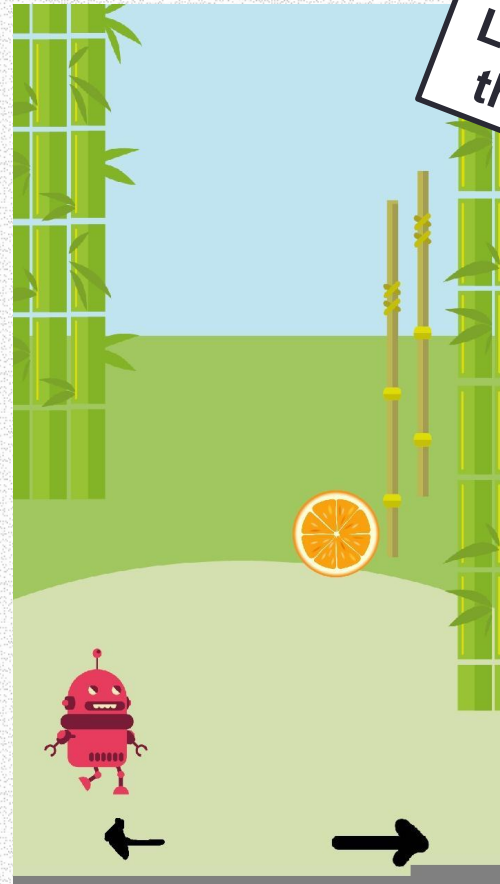


Lesson 5

Catch The Fruit

Objective:

We will make an application in which we will make a robot catch the fruits falling from the sky.



Let's Recall:

1. What is Sequence?

A logical Order

2. What is Events?

An event in an action due to which something happens.

3. What is Loop?

Repeats a sequence of instructions

4. What is Nested Loop?

Loop within a Loop.

Conditionals

- We have to take sometimes so many decisions which is very tedious. For example, students that have passed in a class of 60 students.
- Once we code a computer with conditionals then they would be able to make decisions on their own and things will become less tedious for us.
- Also, underlined things are called conditions and *italics* things are called decisions. Both together are called conditional statements.

If you pick a red color card then
you will get 10 points

If you pick a red jack/queen/king then
you will get 15 points

Conditionals in real life



Talk to your partner:

1) Think of at least one example when you see conditionals in real life?



Let's share.



Catch The Fruit: (Teacher Models)

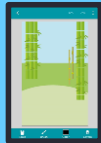
Let's do abstraction (i.e. to identify important details) to make understand project and make it simple

1) What will happen on the stage?

- 1) Move the robot with the arrow keys
- 2) Fruits will fall from the sky.
- 3) If the apple touches the robot it will "I got an apple" and same will happen for the orange as well

2) What sprite and backdrop will be needed on the stage?

Backdrop



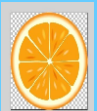
Sprite 1



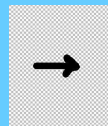
Sprite 2



Sprite 3



Sprite 4



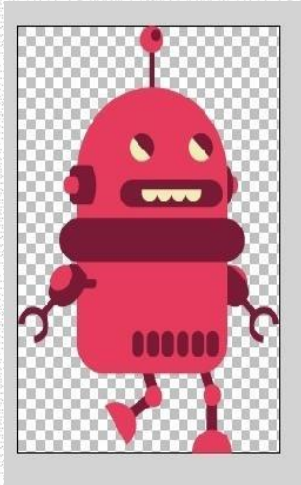
Sprite 5



Catch The Fruit : (Teacher Models)

Let's make the project and write codes for the sprites...

Sprite



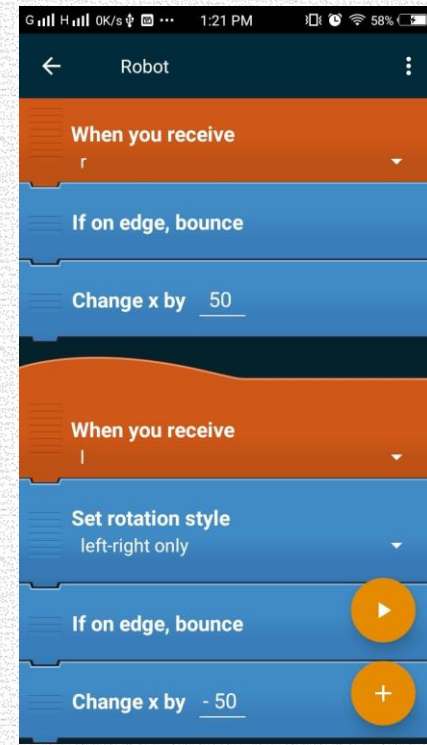
Codes/Programs



```
Robot  
When scene starts  
Set size to 80 %  
Place at  
x: -300 y: -500  
Forever  
If touches actor or object is true then  
Say 'Got an apple'  
for 1 second  
End if  
If touches actor or object is true then
```



```
Robot  
If touches actor or object is true then  
Say 'Got an orange'  
for 1 second  
End if  
End of loop  
When you receive  
If on edge, bounce  
Change x by 50
```

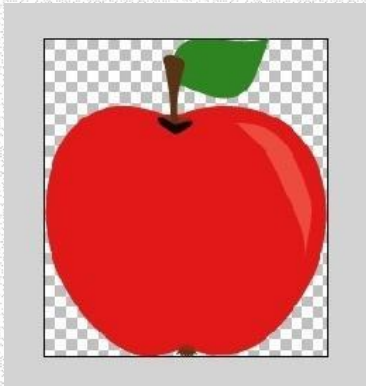


```
Robot  
When you receive  
If on edge, bounce  
Change x by 50  
When you receive  
Set rotation style  
left-right only  
If on edge, bounce  
Change x by -50
```

Catch The Fruit : (Teacher Models)

Let's make the project and write codes for the sprites...

Sprite



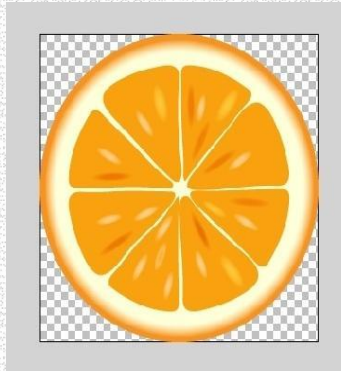
Codes/Programs



Catch The Fruit : (Teacher Models)

Let's make the project and write codes for the sprites...

Sprite



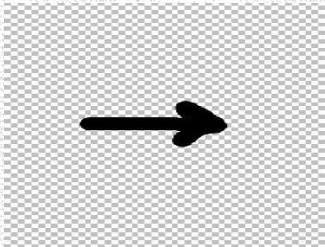
Codes/Programs



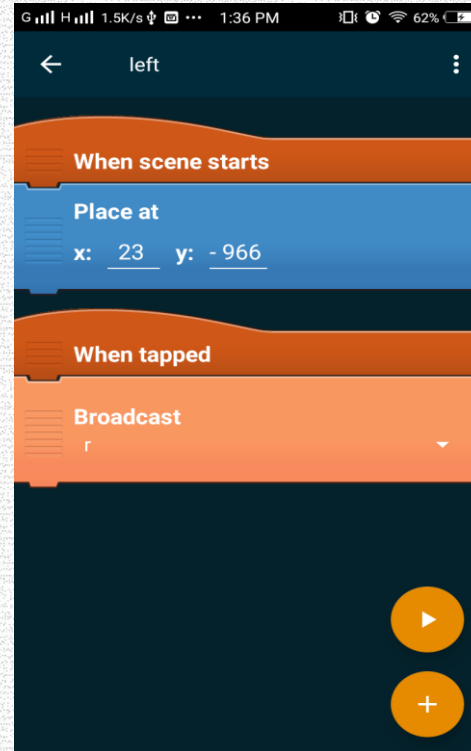
Catch The Fruit : (Teacher Models)

Let's make the project and write codes for the sprites...

Sprite



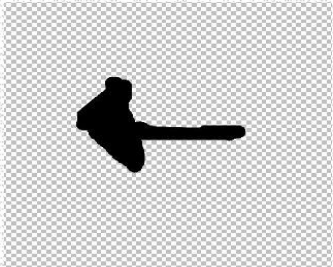
Codes/Programs



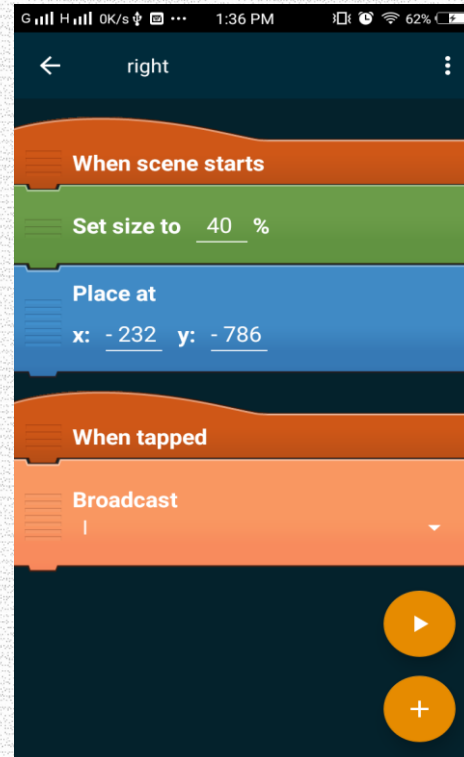
Catch The Fruit : (Teacher Models)

Let's make the project and write codes for the sprites...

Sprite



Codes/Programs

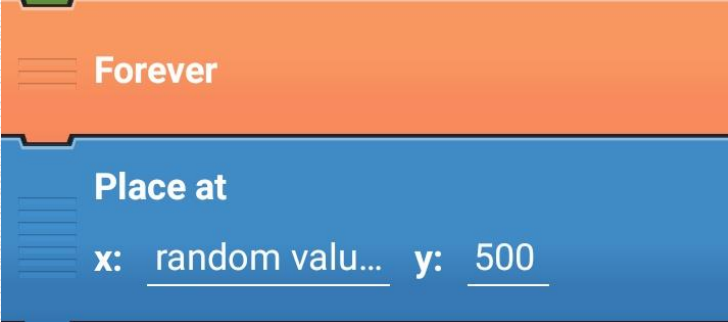


Quiz:

1. What is Conditionals?

Quiz:

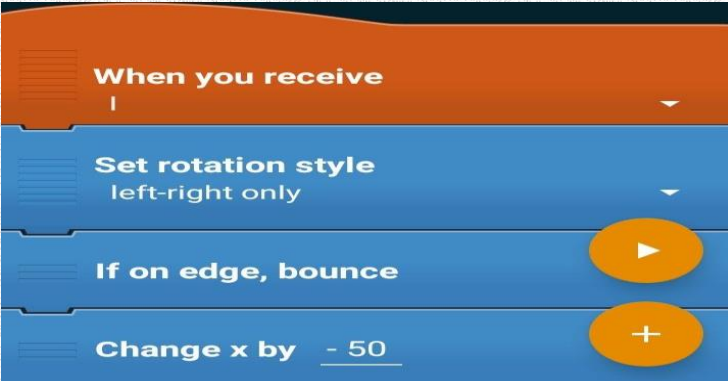
2. Which of the following code is the example of conditions:

A) 


The code block for A) is a 'Forever' loop (orange) containing a 'Place at' block (blue) with 'x: random valu...' and 'y: 500'.

B) 

The code block for B) is a 'When you receive' event block (orange) with 'r' as the message, containing an 'If on edge, bounce' block (blue) and a 'Change x by 50' block (blue).

C) 

The code block for C) is a 'When you receive |' event block (orange) containing a 'Set rotation style' block (blue) set to 'left-right only', an 'If on edge, bounce' block (blue), and a 'Change x by -50' block (blue).

D) 

The code block for D) is an 'If touches actor or obje... is true then' conditional block (orange) containing a 'Say 'Got an orange' for 1 second' block (green), an 'End if' block (orange), and an 'End of loop' block (orange).

Closing:

- What did we do today?
- What is one thing that you liked in the class the most?
- What did you learn?

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Website: www.codetoenhancelearning.org