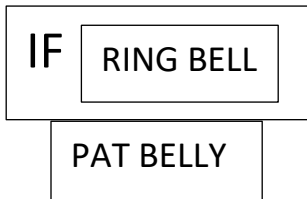

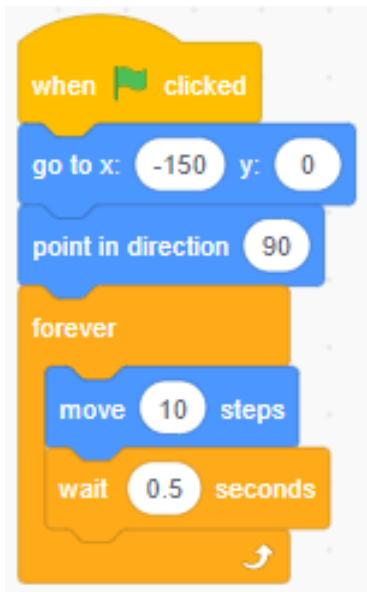


Coding Using Scratch – If Statements

- 1) In this lesson you will be introduced to IF statements.
Try this: when I ring my bell I want you to pat your belly.
If I ring my bell what will you do?
If I do not ring my bell what will you do?
The key word is IF.
If I ring the bell then pat your belly.
Only if I ring my bell. Otherwise do nothing.
Let's think about that as if we were using coding blocks.



- 2) Now let's code in Scratch.
 - a) Add the sprite **Apple**. 
 - b) Add another sprite. You choose the character.
 - c) **Click on the sprite you chose.** Make sure you are coding for your character.
Add the following coding blocks to create a program for your character.



What does this code do?

Show Mr. Desmond how this works.

d) Go to the Control Blocks. Add the If then block.



e) Go to the Sensing Blocks.

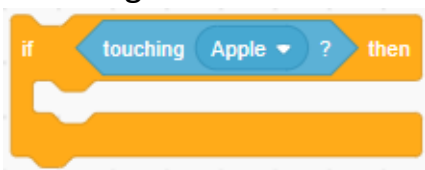


Add the touching block.



Change touching mouse pointer to touching Apple.

f) Put the touching block inside of the shape of the If then block.



g) Go to the Looks Blocks.



Add the say ___ for ___ seconds block.



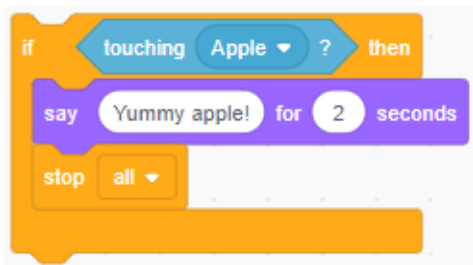
Change the say Hello! to Yummy apple!

h) Go to the Control Blocks.

Add the stop all block.

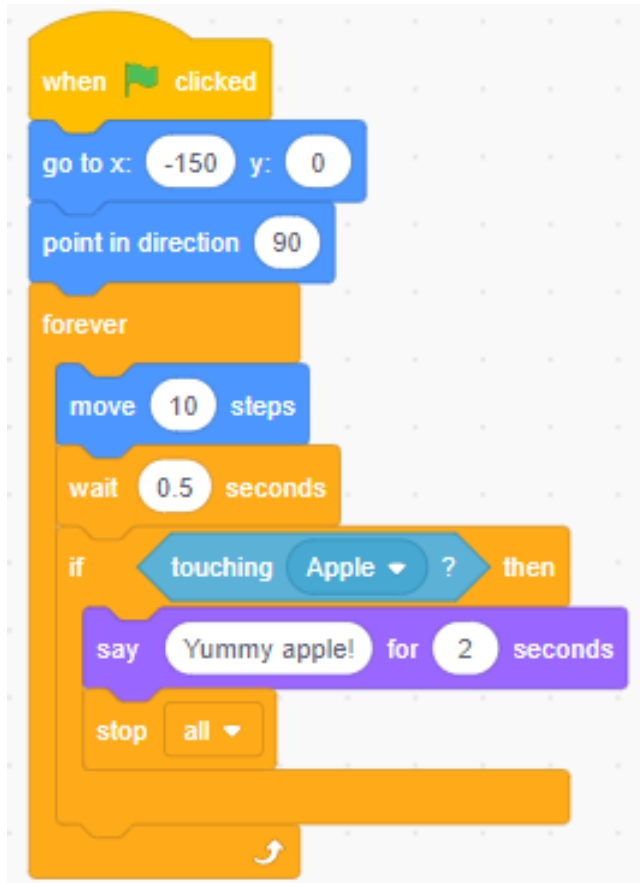


i) Place the say block and the stop all block inside the If then block.



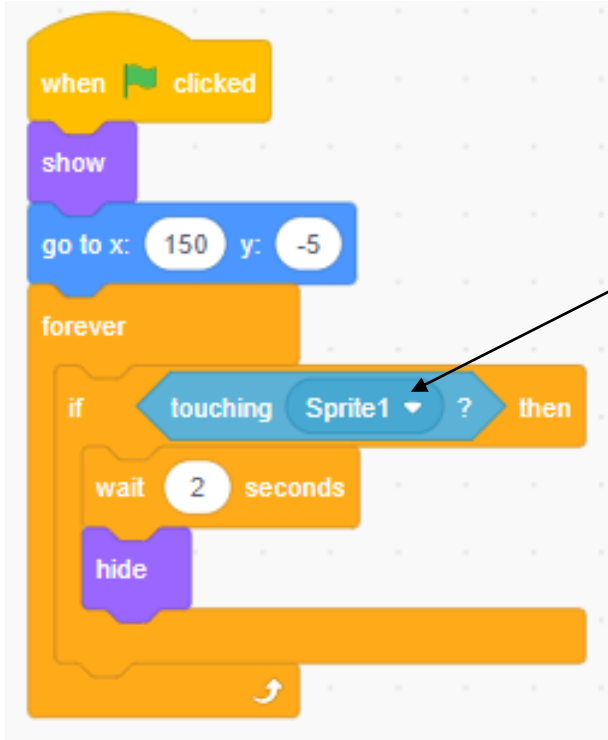
j) Add the If then block (with all the blocks inside it) to your program for the sprite that you chose.

Your code sequence should look like this.



3) Click on the **Apple** sprite. 

a) Add the following coding blocks.



```
when clicked clicked
show
go to x: 150 y: -5
forever
  if touching Sprite 1 ? then
    wait 2 seconds
    hide
```

You will not be touching "Sprite 1".
You must use the name of the sprite you chose.

b) Test your program.

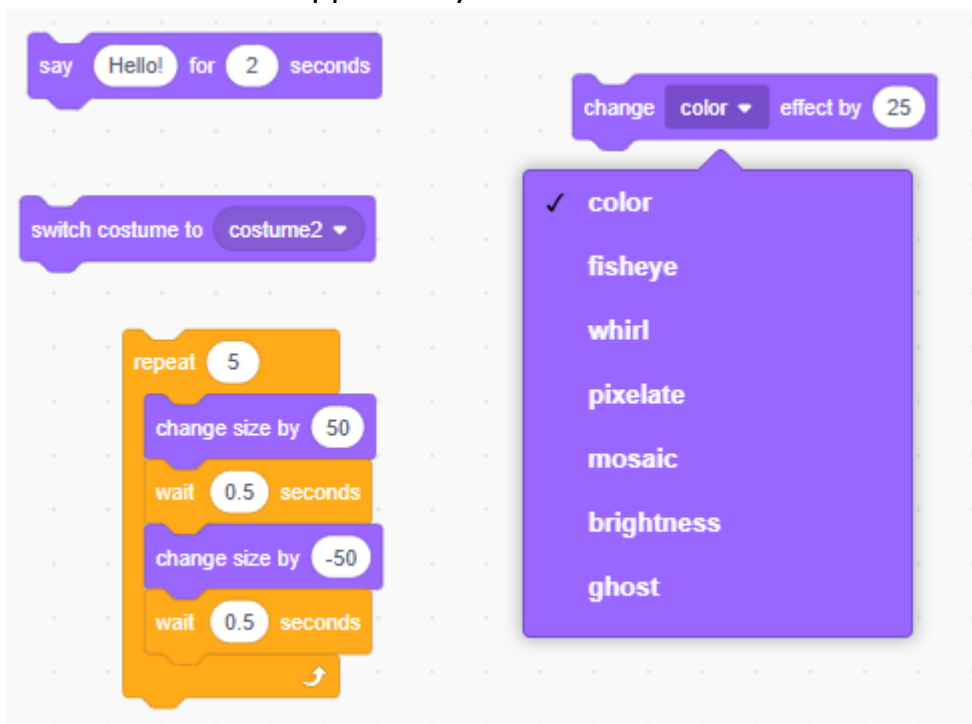
Does your sprite walk forward?

If your sprite is touching the Apple sprite what does it do?

If the Apple sprite is touching your sprite what happens?

c) Show Mr. Desmond how your program works.

- 4) Your challenge is to create a new program to make two sprites touch and then when they touch something happens.
- Choose two new sprites.
 - Choose a background.
 - Have each sprite start at a different position on the stage.
Spread your sprites out left to right across the stage.
Have one sprite stay still and code the other one to move.
 - Give each one of your sprites an action to perform when they are touched.
You choose what happens. Try some of these ideas.



- Test your program.
Is only one of your sprites moving?
Do both of your sprites have an "If then" statement?
Do both of your sprites have an action to perform if they are touching?
If you answered no to any of these questions you need to fix your code.
- Show Mr. Desmond what you have done.