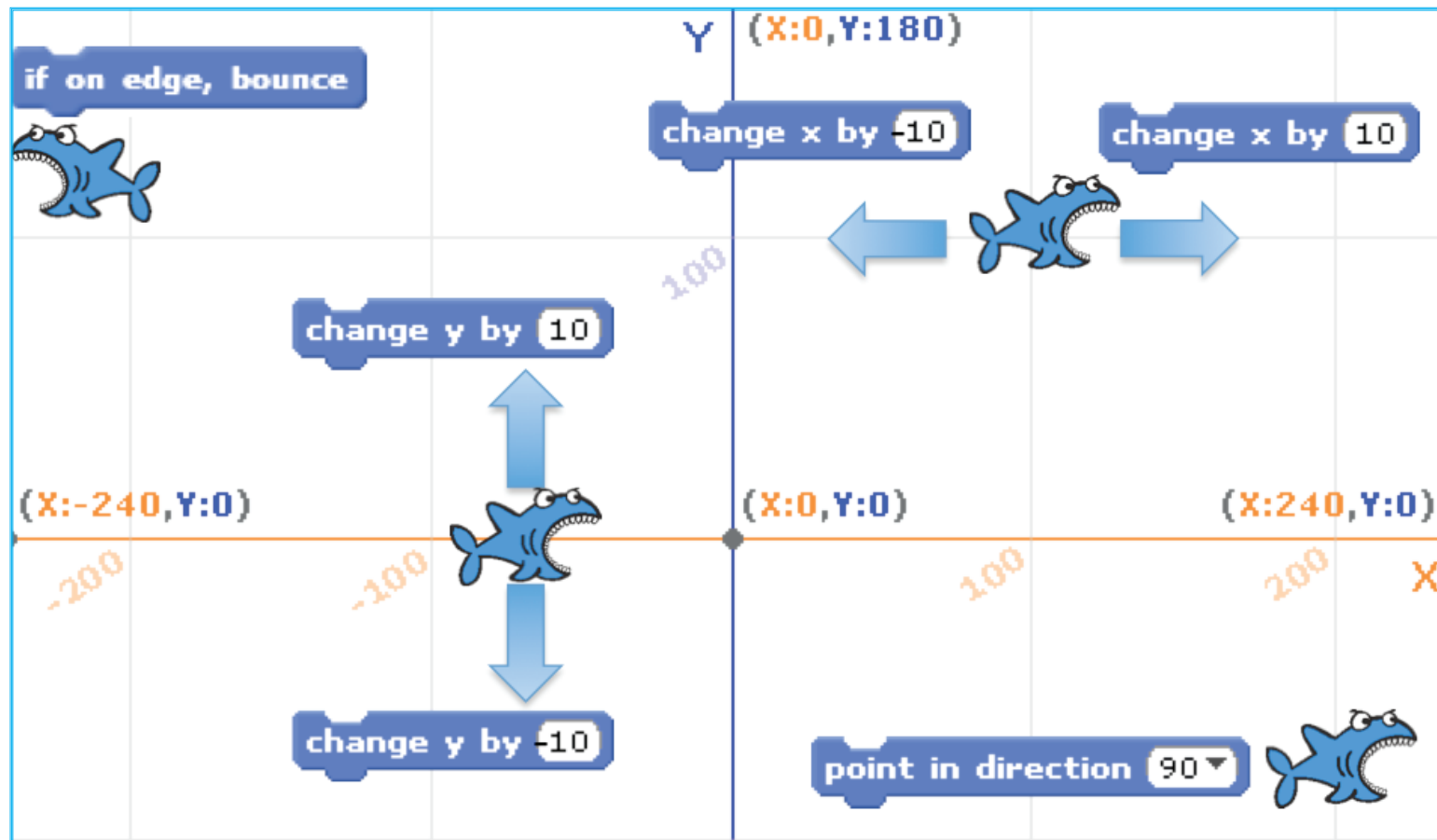# Scratch Tips

The Screen Grid
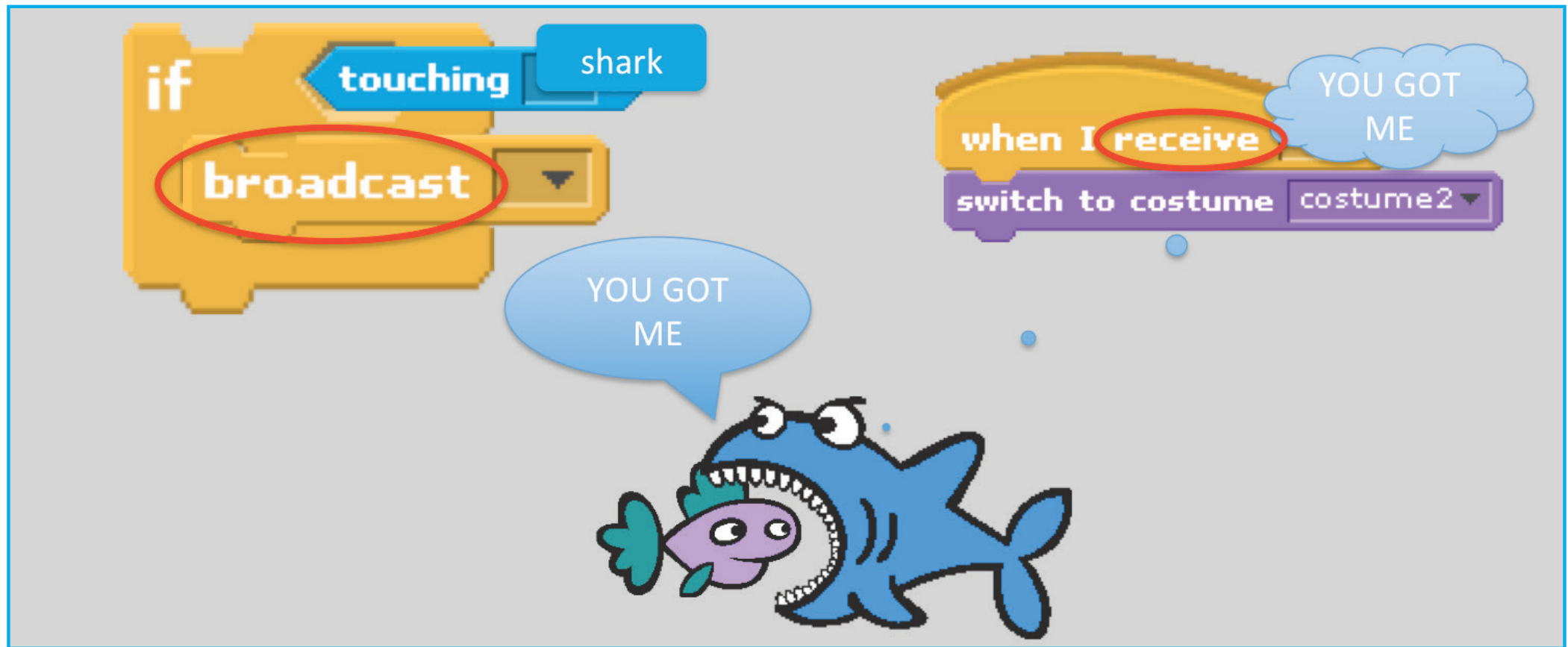
This will help you work out where things are on the screen and how the x,y co-ordinates work in some of your Motion commands !

if on edge, bounce

(X:0,Y:180)

change x by -10   change x by 10

change y by 10

(X:-240,Y:0)   (X:0,Y:0)   (X:240,Y:0)

change y by -10

point in direction 90

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Scratch Tips

Broadcast and receive - Sprites 'talking' to each other

This will help you work out how to use the broadcast command to allow one sprite to 'send out' a message which any sprite or scene can 'hear' and respond to!
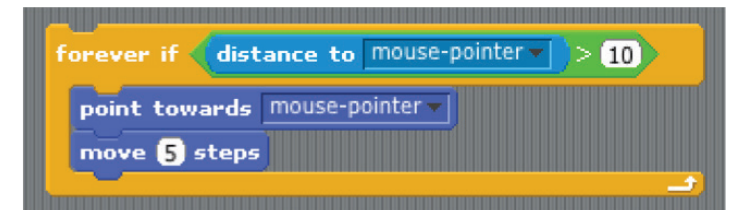
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Scratch Tips

Controlling Sprites

This will help you work out the different ways to control your sprite – either by pressing the arrow keys or by making your sprite move towards the mouse pointer!

when up arrow key pressed
change y by 10

when down arrow key pressed
change y by -10

when right arrow key pressed
point in direction 90
move 10 steps

when left arrow key pressed
point in direction -90
move 10 steps

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forever if distance to mouse-pointer > 10
point towards mouse-pointer
move 5 steps

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Scratch Tips

The Screen Grid

This will help you work out where things are on the screen and how the x,y co-ordinates work in some of your Motion commands !
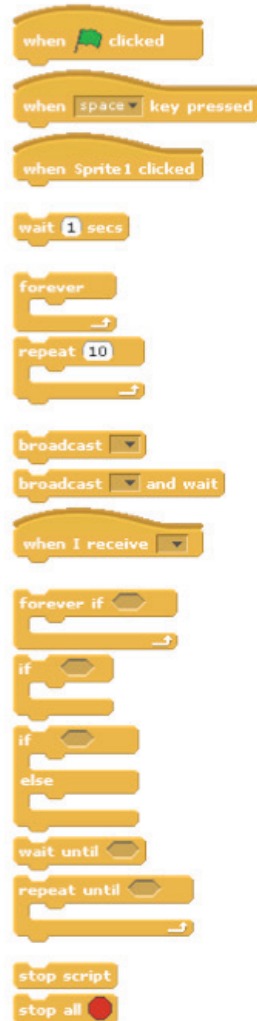

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Scratch Tips

Control

- when [flag] clicked
- when [space] key pressed
- when Sprite1 clicked
- wait 1 secs
- forever
- repeat 10
- broadcast [ ]
- broadcast [ ] and wait
- when I receive [ ]
- forever if ◇
- if ◇
- if ◇ else
- wait until ◇
- repeat until ◇
- stop script
- stop all ●

Motion

- move 10 steps
- turn ↻ 15 degrees
- turn ↺ 15 degrees
- point in direction 90▼
- point towards [ ]
- go to x: 0 y: 0
- go to mouse-pointer ▼
- glide 1 secs to x: 0 y: 0
- change x by 10
- set x to 0
- change y by 10
- set y to 0
- if on edge, bounce
- set rotation style left-right ▼
- ☐ x position
- ☐ y position
- ☐ direction

Sensing

- touching [ ] ?
- touching color ■ ?
- color ■ is touching ■ ?
- ask What's your name? and wait
- answer
- mouse x
- mouse y
- mouse down?
- key space ▼ pressed?
- distance to [ ]
- reset timer
- timer
- x position ▼ of Sprite1 ▼
- loudness
- loud?
- slider ▼ sensor value
- sensor button pressed ▼ ?

Operators

- [ ] + [ ]
- [ ] - [ ]
- [ ] * [ ]
- [ ] / [ ]
- pick random 1 to 10
- [ ] < [ ]
- [ ] = [ ]
- [ ] > [ ]
- ◇ and ◇
- ◇ or ◇
- not ◇
- join hello world
- letter 1 of world
- length of world
- [ ] mod [ ]
- round [ ]
- sqrt ▼ of 10

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Scratch Tips

Looks

```
say [Hello!] for (2) secs
say [Hello!]
think [Hmm...] for (2) secs
think [Hmm...]

show
hide

switch costume to [costume2 ▾]
next costume
switch backdrop to [backdrop1 ▾]

change [color ▾] effect by (25)
set [color ▾] effect to (0)
clear graphic effects

change size by (10)
set size to (100) %

go to front
go back (1) layers

□ costume #
□ backdrop name
□ size
```

Variables

```
Make a Variable

☑  Variable
☑  ☁ Cloud Variable

set [☁ Cloud Variable ▾] to [0]
change [☁ Cloud Variable ▾] by (1)
show variable [☁ Cloud Variable ▾]
hide variable [☁ Cloud Variable ▾]
```

Sound

```
play sound [pop ▾]
play sound [pop ▾] until done
stop all sounds

play drum (48▾) for (0.2) beats
rest for (0.2) beats

play note (60▾) for (0.5) beats
set instrument to (1▾)

change volume by (-10)
set volume to (100) %
volume

change tempo by (20)
set tempo to (60) bpm
tempo
```

Pen

```
clear

pen down
pen up

set pen color to [ ]
change pen color by (10)
set pen color to (0)

change pen shade by (10)
set pen shade to (50)

change pen size by (1)
set pen size to (1)

stamp
```

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