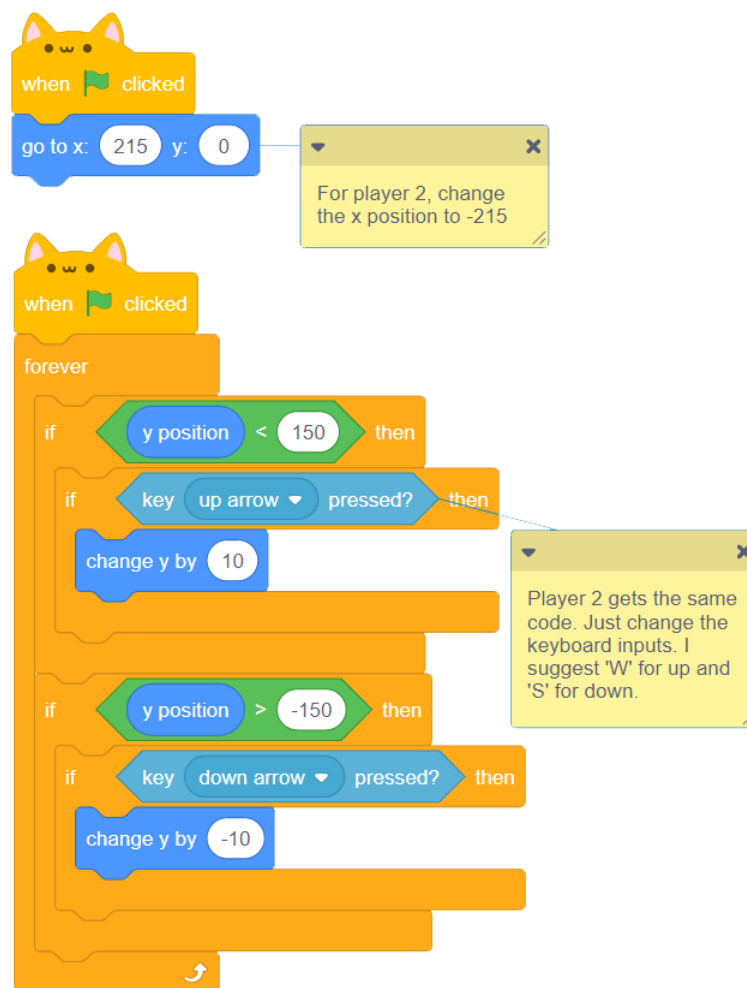**CHROME WORKS**
e-Learning Lab

PONG!

In today's lesson, we're going to remake the grandaddy of video games, Pong. Created way back in 1972 by Atari, this simple block-based video game was the template that inspired thousands of arcade games that came after. New coding concepts introduced in this lesson include how to make custom blocks -- a handy technique for organizing your code so it makes more sense to others.

CODE FOR PADDLES


```
when [flag] clicked
go to x: 215 y: 0
```

> For player 2, change the x position to -215

```
when [flag] clicked
forever
  if  y position < 150  then
    if  key up arrow pressed?  then
      change y by 10

  if  y position > -150  then
    if  key down arrow pressed?  then
      change y by -10
```

> Player 2 gets the same code. Just change the keyboard inputs. I suggest 'W' for up and 'S' for down.

CODE FOR BALL

when 🏳 clicked
set p1score ▾ to 0
set p2score ▾ to 0

when I receive start round ▾
go to x: 0 y: 0
wait 1 seconds
Set Ball Direction
forever
  move 13 steps
  if on edge, bounce
  Collision detection
  check if game over

define Set Ball Direction
set start direction ▾ to pick random 1 to 4
if start direction = 1 then
  point in direction 45
if start direction = 2 then
  point in direction 135
if start direction = 3 then
  point in direction -45
if start direction = 4 then
  point in direction -135

define check if game over
if p1score = 5 then
  broadcast P1 wins ▾
  stop other scripts in sprite ▾
if p2score = 5 then
  broadcast P2 wins! ▾
  stop other scripts in sprite ▾

define Collision detection
if touching Player 1 ▾ ? then
  start sound Suction Cup ▾
  point towards Player 1 ▾
  turn ↻ 180 degrees
if touching Player 2 ▾ ? then
  start sound Suction Cup ▾
  point towards Player 2 ▾
  turn ↻ 180 degrees
if touching left line ▾ ? then
  start sound Buzz Whir ▾
  change p2score ▾ by 1
  go to x: 0 y: 0
  broadcast start round ▾
if touching right line ▾ ? then
  start sound Buzz Whir ▾
  change p1score ▾ by 1
  go to x: 0 y: 0
  broadcast start round ▾

CODE FOR CAT

Script 1:
```
when [flag] clicked
start sound (Alert)
show
say (Good Luck!) for (2) seconds
broadcast (start round)
start sound (Ricochet)
hide
```

Script 2:
```
when I receive (P1 wins)
show
start sound (Win)
say (Player 1 wins!) for (2) seconds
stop (all)
```

Script 3:
```
when I receive (P2 wins!)
show
start sound (Win)
say (Player 2 wins!) for (2) seconds
stop (all)
```