

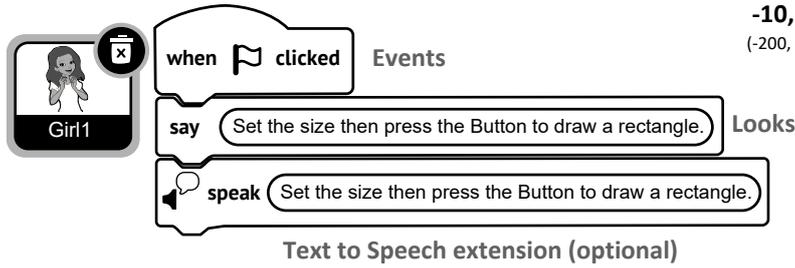
# Primary level

## Area and Perimeter of a Rectangle

Extra features at:  
<https://scratch.mit.edu/projects/321176565>

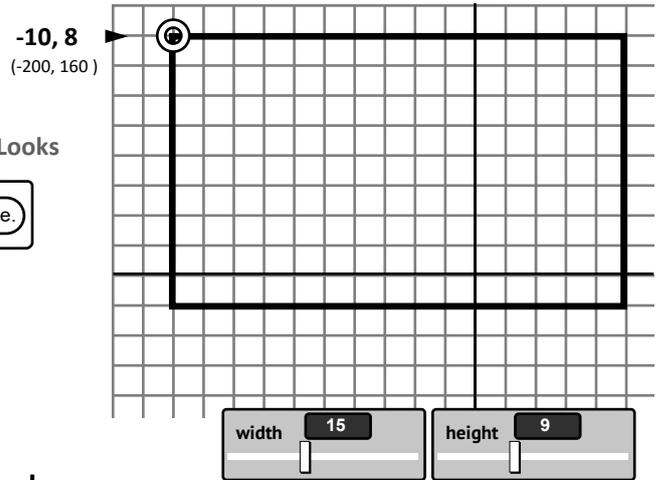
<https://scratch.mit.edu/projects/330670639>

### 1. Code an Instruction sprite (with text to speech)



when clicked Events  
 say Set the size then press the Button to draw a rectangle. Looks  
 speak Set the size then press the Button to draw a rectangle.  
 Text to Speech extension (optional)

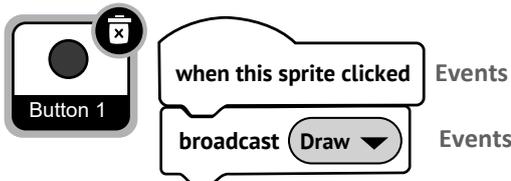
### Get the 20 pixel backdrop grid



-10, 8  
 (-200, 160)

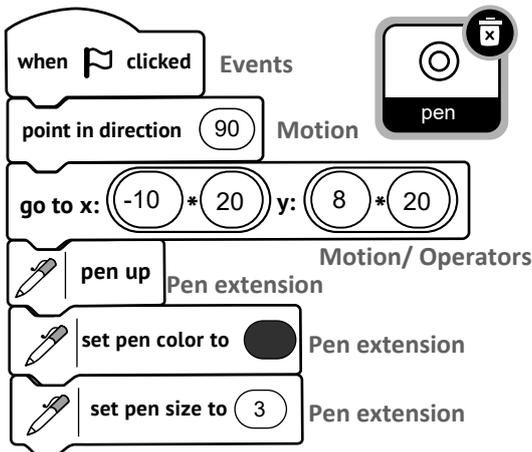
width 15 height 9

### 2. Code a Button



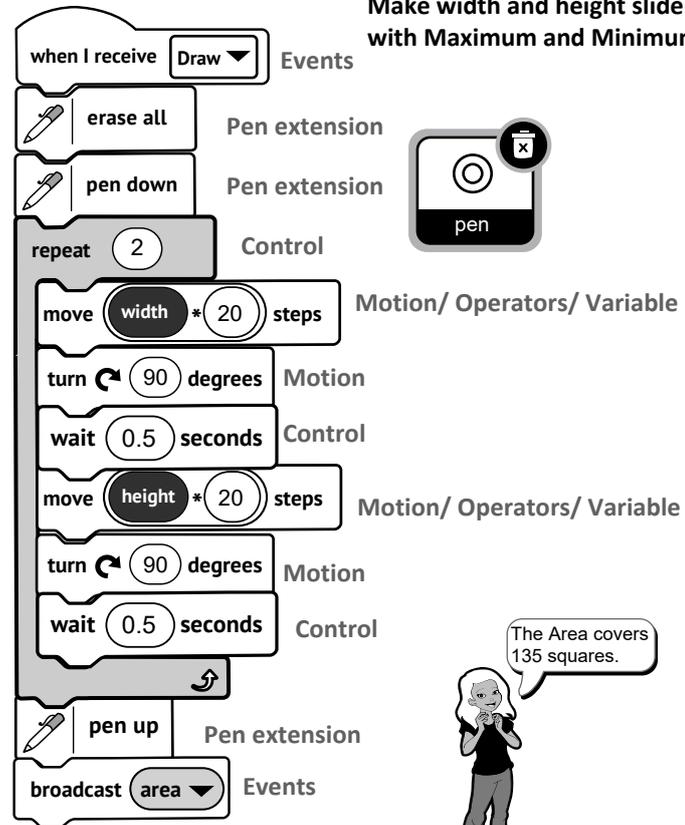
when this sprite clicked Events  
 broadcast Draw Events

### 3. Initialise and position your pen sprite



when clicked Events  
 point in direction 90 Motion  
 go to x: (-10 \* 20) y: (8 \* 20) Motion/ Operators  
 pen up Pen extension  
 set pen color to Pen extension  
 set pen size to 3 Pen extension

### 4. Draw the shape

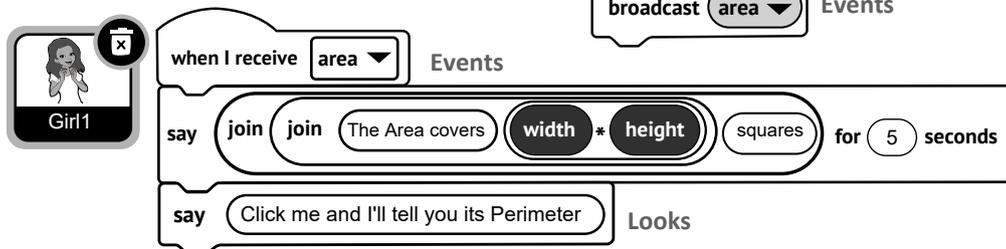


when I receive Draw Events  
 erase all Pen extension  
 pen down Pen extension  
 repeat 2 Control  
 move width \* 20 steps Motion/ Operators/ Variable  
 turn 90 degrees Motion  
 wait 0.5 seconds Control  
 move height \* 20 steps Motion/ Operators/ Variable  
 turn 90 degrees Motion  
 wait 0.5 seconds Control  
 pen up Pen extension  
 broadcast area Events

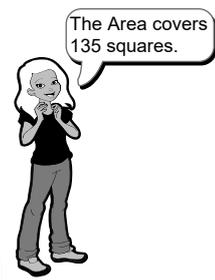
Make width and height slider variables with Maximum and Minimum values

### 5. Code the instruction sprite to report the AREA of the rectangle

using join Operators to concatenate numeric data and text strings

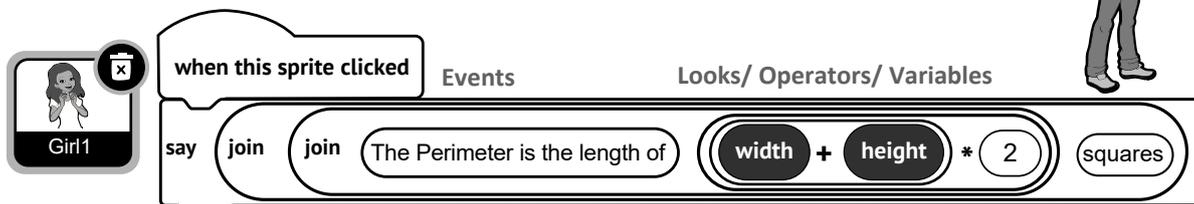


when I receive area Events  
 say join join The Area covers width \* height squares for 5 seconds Looks/ Operators/ Variables  
 say Click me and I'll tell you its Perimeter Looks



### 6. Code the sprite to report the PERIMETER of the rectangle

using join Operators to concatenate numeric data and text strings



when this sprite clicked Events  
 say join join The Perimeter is the length of width + height \* 2 squares Looks/ Operators/ Variables

