
Break the Spell Challenge

Go to <https://scratch.mit.edu/>

Log in to your Scratch account.

Create a new project.

Title the project: Breaking The Spell

#2 Challenge

Add the xy-grid backdrop to your stage.

#3 Challenge

Set Scratchy to go to X:0; Y: 125 when the game begins.

#4 Challenge

We are going to make Scratchy move in a pentagon shape.

Set Scratchy to go to each of the following points in a row.

X:150;Y:30

X:100; Y:-120

X:-100; Y:-120

X:-150; Y:30

#5 Challenge

Scratchy is moving too fast for us to see! Add a wait block for 0.1 seconds after each go to block to slow him down.

#6 Challenge

Make Scratchy repeat the pentagon shape forever.

#7 Challenge

Now we're going to have Scratchy make a star shape inside the pentagon. This time we will make him GLIDE to each point.

Use glide blocks to make Scratchy move for 0.1 seconds to each set of coordinates below:

X:150;Y:30

X:-100;Y:-120

X:0;Y:125

X:100;Y:-120

X:-150;Y:30

#8 Challenge

Move the glide blocks into your algorithm so that Scratchy makes the pentagon shape, then glides the star and repeats that pattern forever.

#9 Challenge

Add the Pen palette to your blocks pane.

#10 Challenge

Add blocks to your algorithm so that the following is true when the game begins:

- The pen color is set to red
 - The pen size is set to 10
 - The pen is down
 - The game erases everything that was already on the stage
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#11 Challenge

Test your program by starting it and stopping it.

Start your program a second time. What happens?

You have a BUG. Scratchy is starting at a random point and moving to the first spot. He leaves a random line behind him somewhere in the drawing.

What should you do to fix it? See if you can figure it out.

Try dragging Scratchy around to multiple places and running the program to see if you can spot the bug.

#12 Challenge

We are going to fix it by making Scratchy start the game at a specific point.

Add a block to the beginning of your game to make Scratchy go to X:-150; Y:30.

(You might notice that these is also the coordinates for Scratchy's last glide block? Why do you think we have to add them again at the beginning?)

#13 Challenge

Add a new script so that Scratchy's magic star web changes colors. Code the new script to forever change the pen color by 1.

Congratulations on your Breaking the Spell game!

Activity taken from The Lead Project. Super Scratch Programming Adventure! No Starch Press: San Francisco, 2012.