Bug infestation

Thanks to CodeClub Rik

https://scratch.mit.edu/projects/36359872/
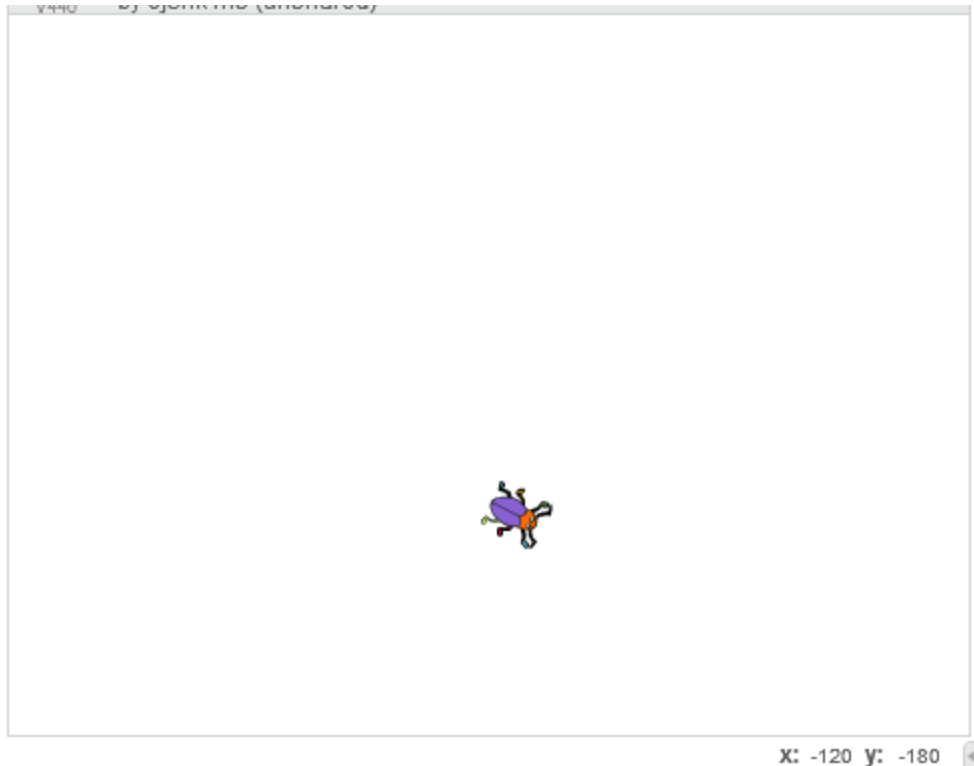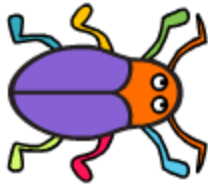
In this project we are going to infest your screen with bugs!

Step 1: Code a bug

- Start a new Scratch project, and delete that poor cat.

- We will keep the background plain white (for now…).

- Choose a bug sprite from the Scratch library; try selecting the Animals Category to make this easier. Here are some possible ones:
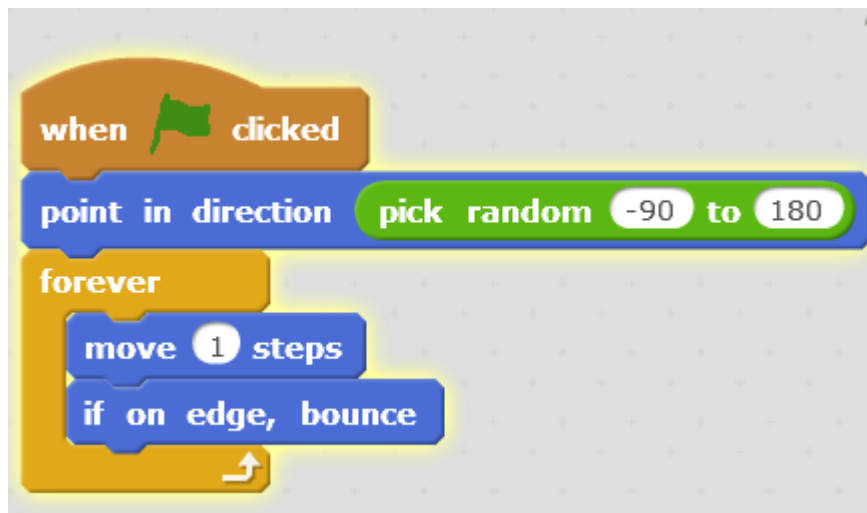
Beetle

Butterfly2

Ladybug1

or even

Mouse1   !

- You will need to use the Shrink button to make your bug quite small

- Add the following code, to get your bug moving about the screen:

```
when 🚩 clicked
point in direction  pick random  -90  to  180
forever
    move  1  steps
    if on edge, bounce
```

Do you understand what each instruction is doing?

- Run your program to test that it works.

Save your project

Step 2: Leave a trail

We want our bug to leave a trail, so that we can see where it has been. So add these two blocks from the Pen section:
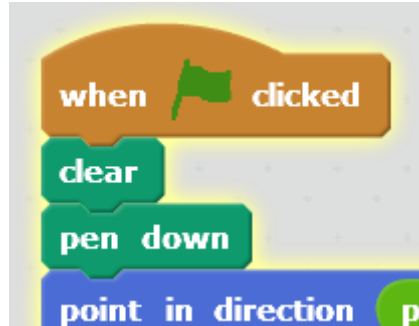
- Choose whatever pen colour you like for your bug trail

- Test your project again. Does your bug make a pattern? If you start the program again, does it make a different pattern?
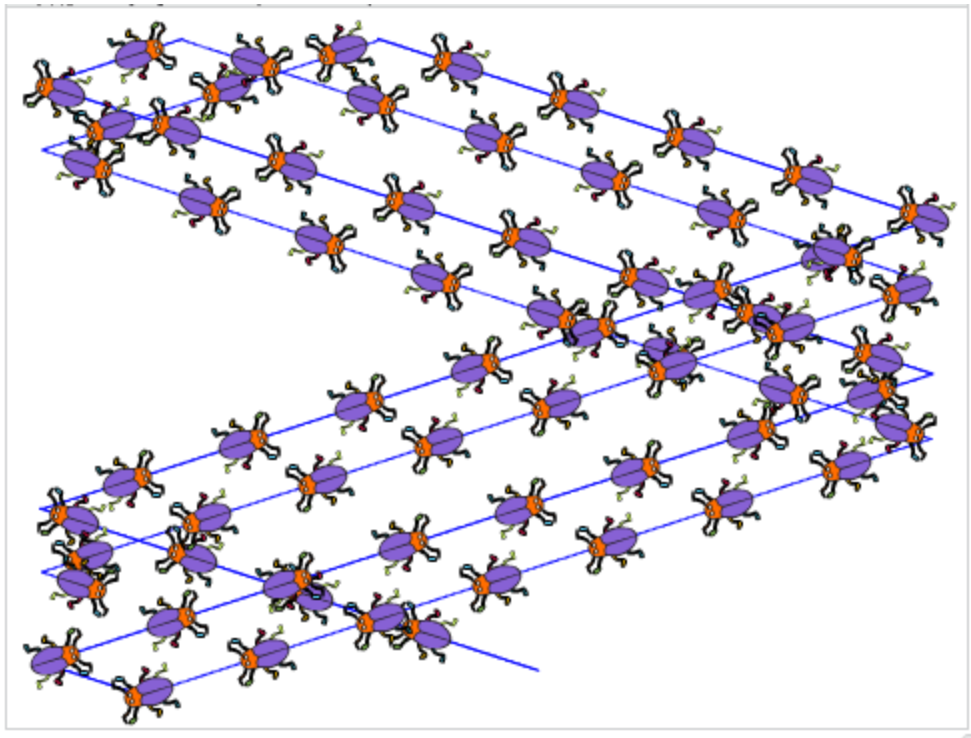
Save your project

Step 3: More bugs

OK, so we have a bug, but that is hardly an infestation! Let's clone our bug so that we have lots:
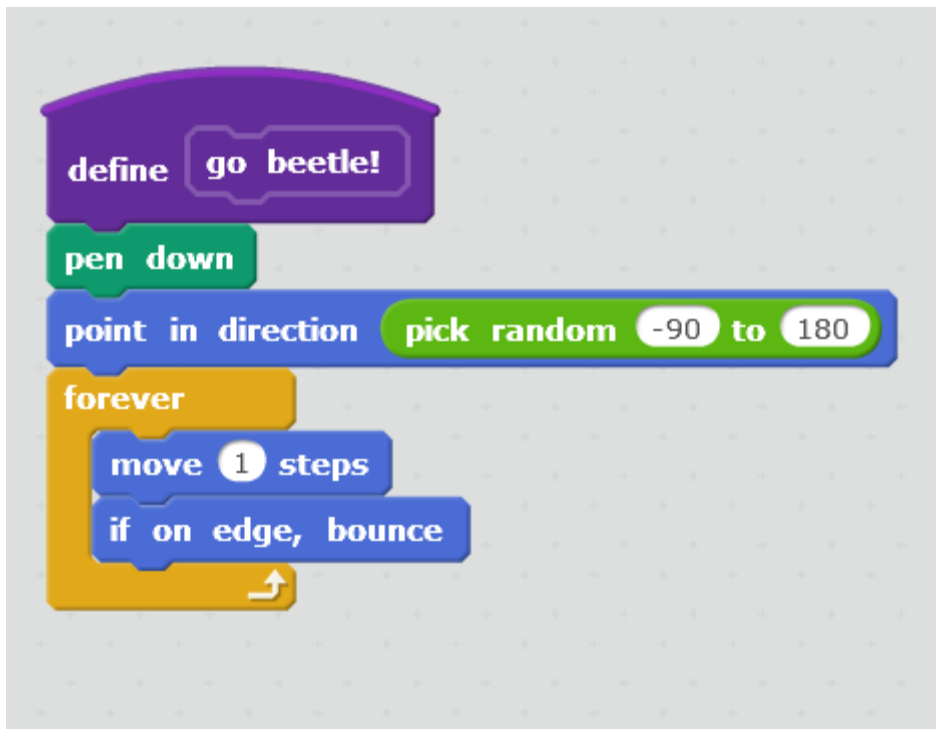
When you run your program, your screen might look something like this:

- Lots of bugs – but we haven't told them how to move yet! We want the cloned bugs to move exactly like the first bug, so we could copy the code… Or we could create a new block:

- Move all the code for moving the bug to our new block, like this:

- And then drag the `go beetle!` block to replace the code you moved – this will make the first bug move:

- And finally, use the `go beetle!` block to move the cloned beetles:
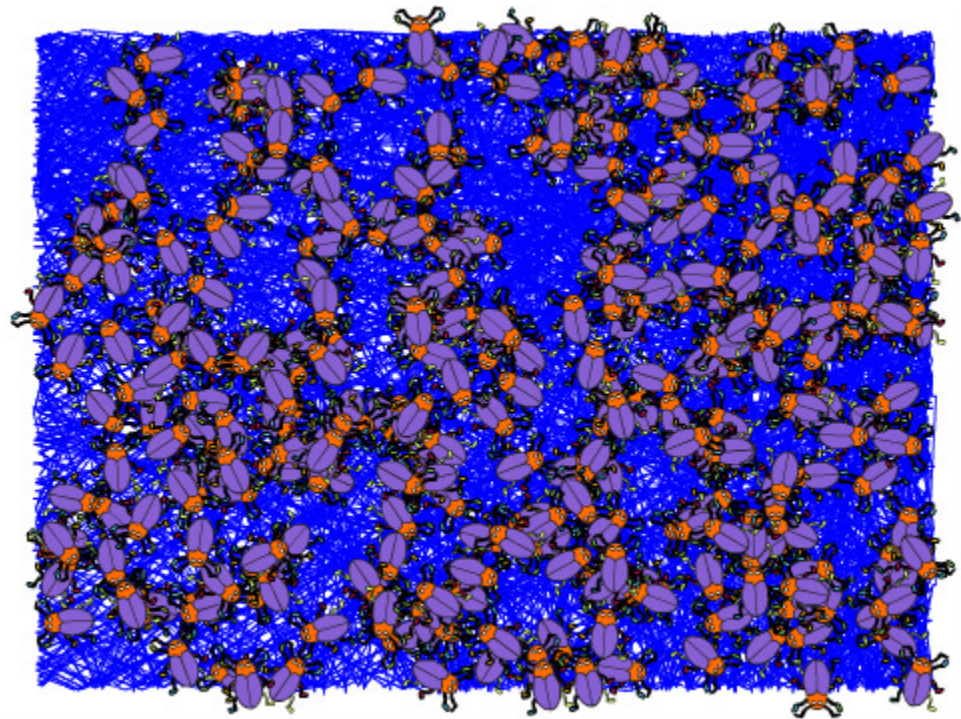

- Test it out!

Save your project

Step 4: Bug infestation!

This is more like an infestation, but it still isn't enough! Have you noticed that it is only the first beetle that makes clones? What if we got all the cloned beetles to make clones of themselves too?

That's more like it!

- Let your project run for a while – can the bugs colour in the whole screen?

Save your project

More ideas

- Can you change the colour of the trail that your bug leaves behind it? Can you change its width?

- Can you play a sound every time a new clone is created? 'Cricket' is a good choice.

- What happens if you change the time to wait between making clones? If you make it too short, your computer might get very laggy, so save your project first!

- What if it wasn't a bug infestation, but an attack of mutant alien cheesy puffs?

Cheesy-Puffs

But be careful – if you want to change your sprite, don't delete the bug – all your scripts will go too! Add the new sprite you have chosen, and then drag the code to it, so that you have a copy of it all.

You will also need to add a new sound for your new sprite, and hide the old sprite.

If you want to keep the original bug for later, just separate the code blocks from the green flag block, like this:

```
when [flag] clicked

set pen size to 1
clear
go beetle!


when [flag] clicked


forever
    wait 2 secs
    create clone of myself ▼
    play sound cricket ▼
```

This will stop your old sprite from interfering with your new sprite, and you can re-attach the blocks later, if you want to run the bug again.

Save your project