



The Bug Hunter Game

In this lesson we are going to learn how to make the bug catching game!

You can find the finished game online: [Click here!](#) See how many bugs you can catch in 30 seconds!

STEP 1: OPENING SCRATCH

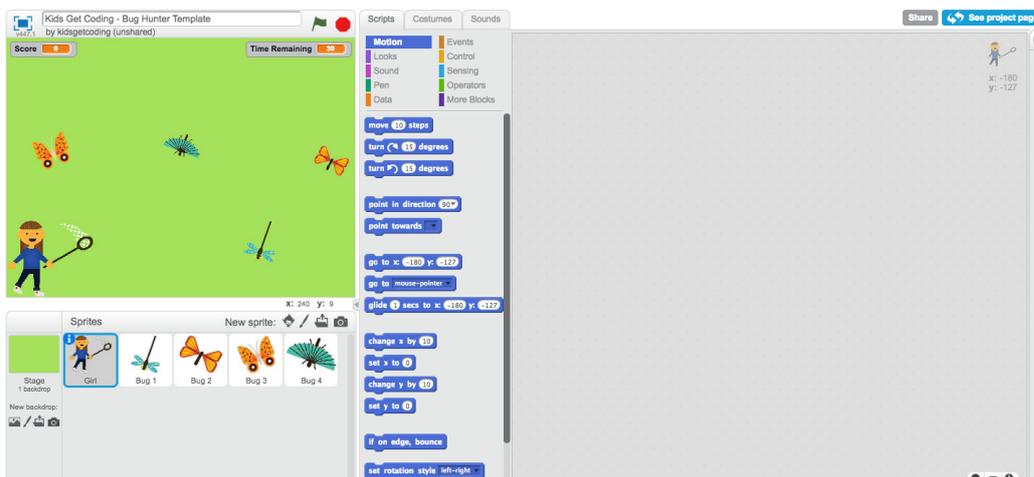
In order to get started we will need to open a program on the internet, called Scratch.

Click this link > [Take me to Scratch!](#)

Or enter the text below in your browser address bar:



Now you should see this:



If you are new to Scratch go ahead and have a look around.

To the left of the screen is your window with your sprites and backdrop which we will be animating.

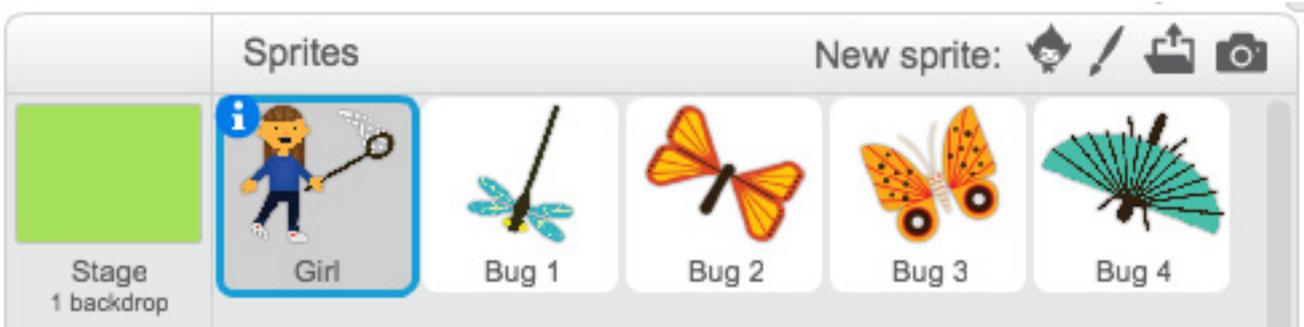
We will control them by dragging the blocks that you see in the middle of the screen to the right window.

Now, let's give our bug catcher instructions to get moving!

STEP 2: MOVING THE BUG CATCHER

We are going to use the left and the right keys on your computer to move the bug catcher across the screen.

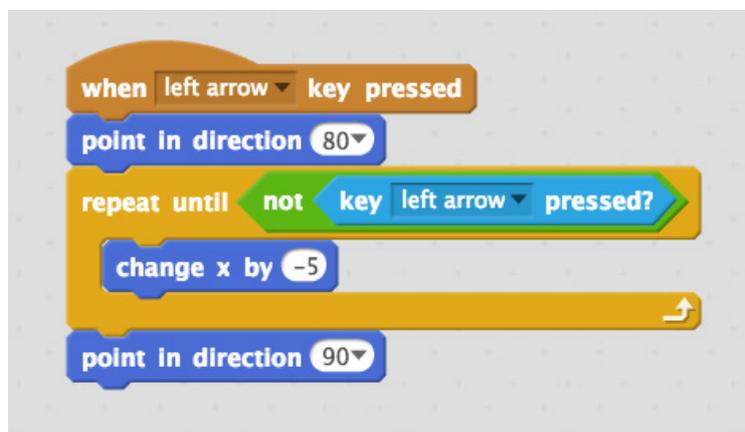
Make sure you have selected your bug catcher sprite.



Hint: When your sprite is selected it will have a blue glowing border around its thumbnail like in the picture above!

Once you have selected your bug catcher you will need to give her some script to make her move to the left.

Drag the blocks below into your stage.



Press your left arrow key. What happens?

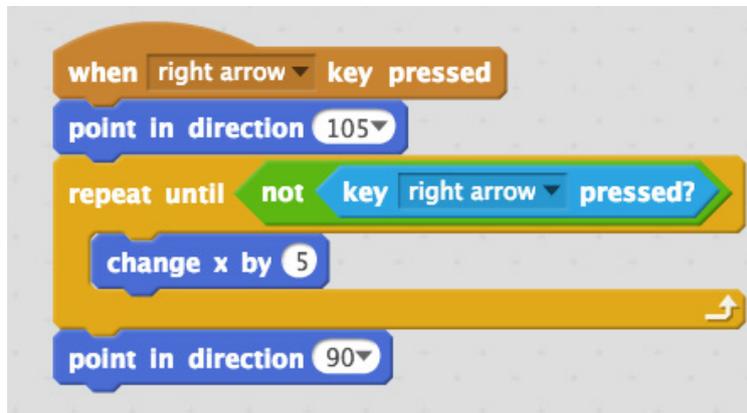
Press your right arrow key. What happens?

You will notice that when you press the left key the bug catcher moves to the left, but when you press the right key, nothing happens. Can you say why this might be?

Go to the next step to make the bug catcher move right!

Hint: If you are having trouble finding the right block, pay attention to their colour. For example, the  block is blue, so you will find it in the  category!

Add the script below to make your bug catcher move right.



Look at the two scripts. What is similar about them? What is different?

STEP 3: MOVING YOUR BUGS

Let's make your bugs fall from the sky! To start, select your Bug 1 sprite.

Hint: Remember to make sure that Bug 1 sprite's thumbnail has a blue glowing border to show that it is selected!

Once selected, add the following script.



Click the green flag above your animation window. What happens?

How do you think you might make the other bugs move?

One by one, select the other 3 bug sprites and add in the exact same script. Once you have added the scripts click the green flag again.

Congratulations, you should now see all of your bugs flying on the screen!

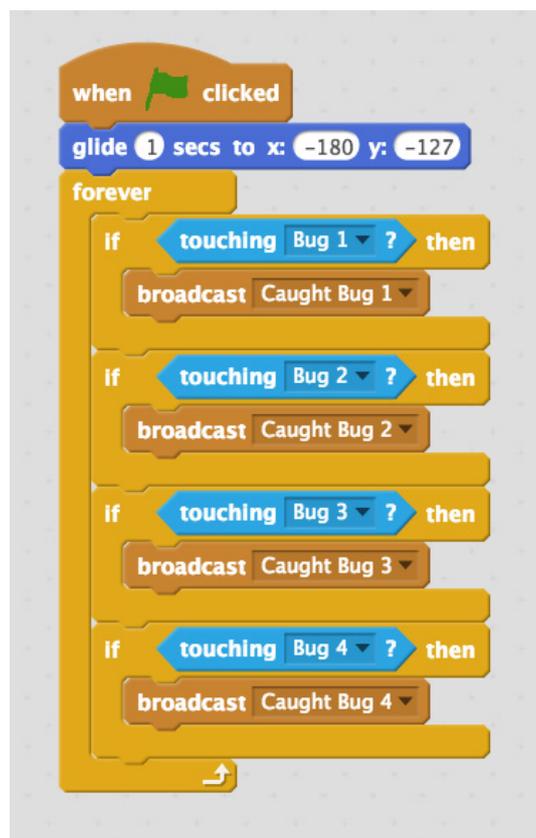


STEP FOUR: CATCHING THE BUGS

Now that our sprites are all moving, we need to figure out how to make the bug catcher catch the bugs!

To do this we will need to use if statements to find out if our bugs are touching our catcher!

Select your bug catcher sprite again, and add the following script:



Hint: To add a new broadcast message click the dropdown arrow in the box next to the word broadcast. You will see a menu, select the "new message" option.

Add the following scripts to each of the bug sprites:

What happens when you press the green flag now?

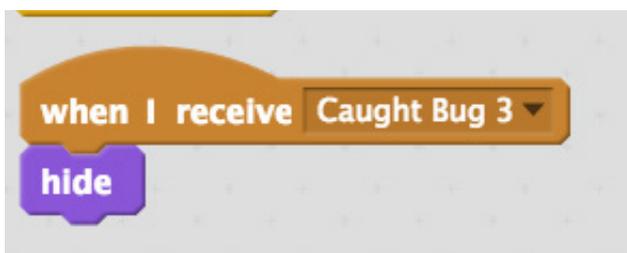
Bug 1



Bug 2



Bug 3



Bug 4



Your bug catcher should be able to catch bugs! How can we keep track of how many she has caught? Go to the next step to find out!

STEP 5: KEEPING SCORE

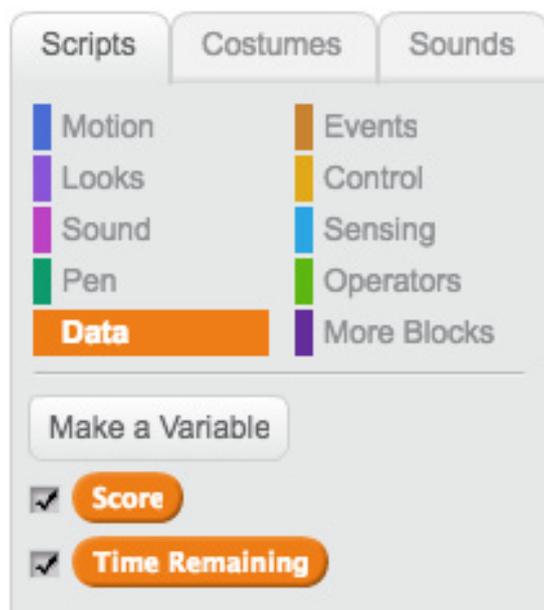
To keep score we are going to add some scripts to our backdrop. Click on your backdrop thumbnail to select it.

Hint: You will find it to the left of your bug catcher's thumbnail!

We will now add some variables. Variables are numbers that can vary, or change. You will need to make two variables to keep track of:

- 1) A variable named **Score** to keep track of how many bugs you have caught
- 2) A variable named **Time Remaining** to keep track of how much time has passed.

Hint: Use the Make a Variable Button in the Data category to make your variables.



Now that you have made your variables, let's use them. Add the following script to your backdrop:



If you click the green flag you should see the **Time Remaining** variable on your stage count down from 30!



Now let's keep track of our score:



Your score variable should now change every time a bug is caught!

CHALLENGES

Congratulations for making it this far. How many bugs can you catch in 30 seconds?
See if you can complete the challenges below!

Say your score



The script above instructs your sprite to say the score.

Can you put it in the right place so that your bug catcher tells you your score when your time is up?

Make your bugs fly faster

How might you make your bugs fly faster?

Hint: Look at the block below, which you will find in all of your bug sprites. What should you change?

