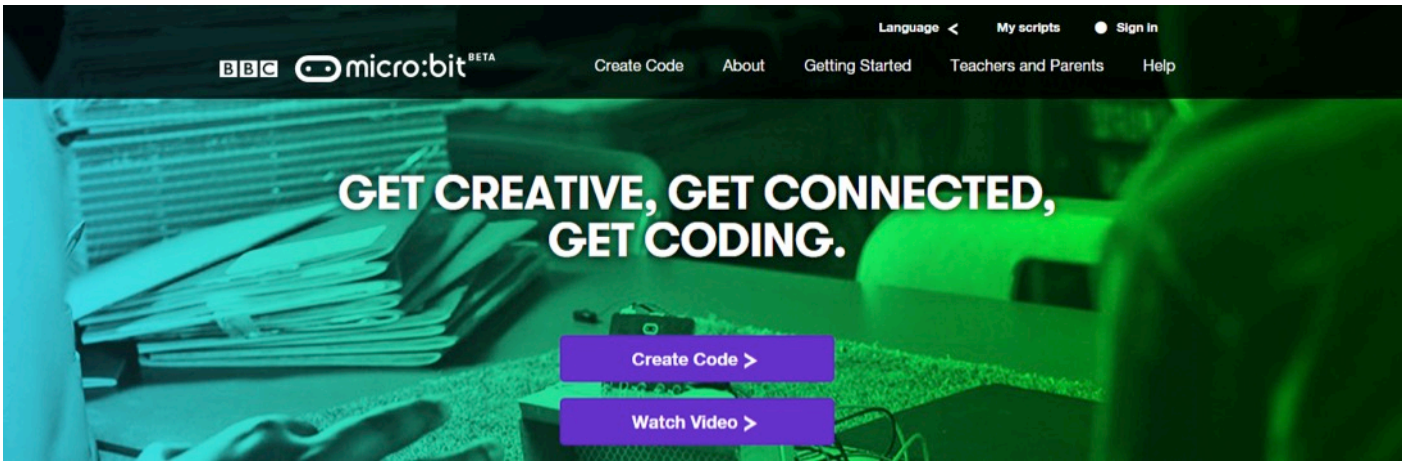
Make your very own hot potato game (basic)

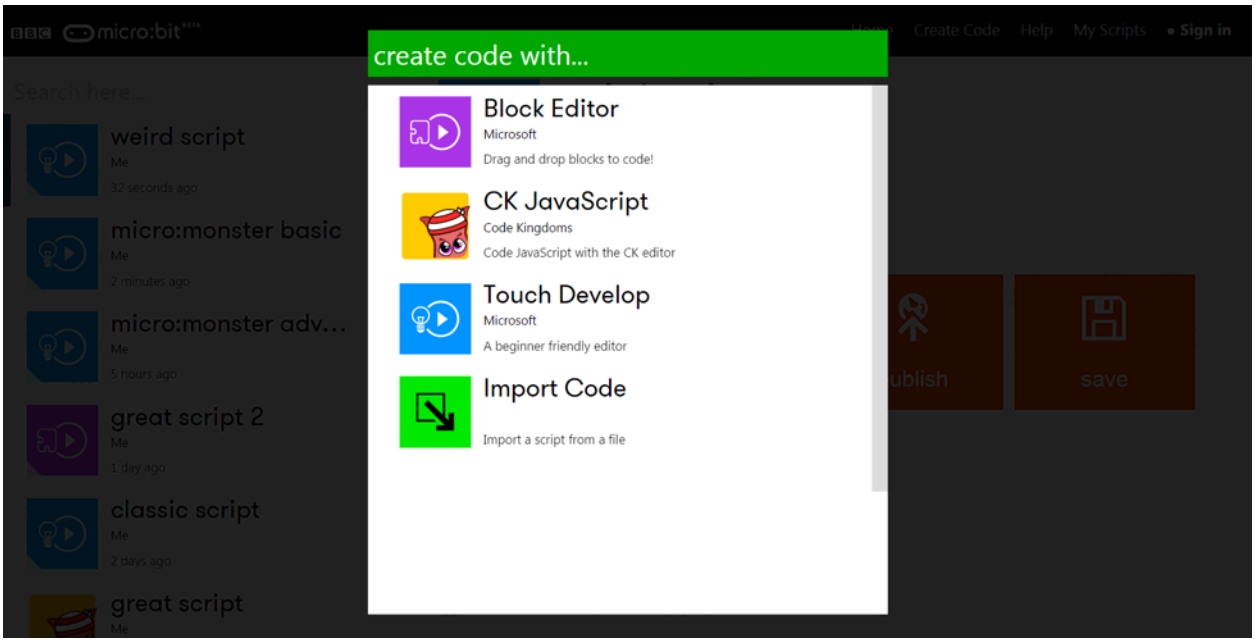
Step 1: Import the code

Download the hex file from our Live Lessons website.

Firstly, select **'My scripts'** on the top navigation on the micro:bit website (**www.microbit.co.uk**), and choose **'Create code'**.



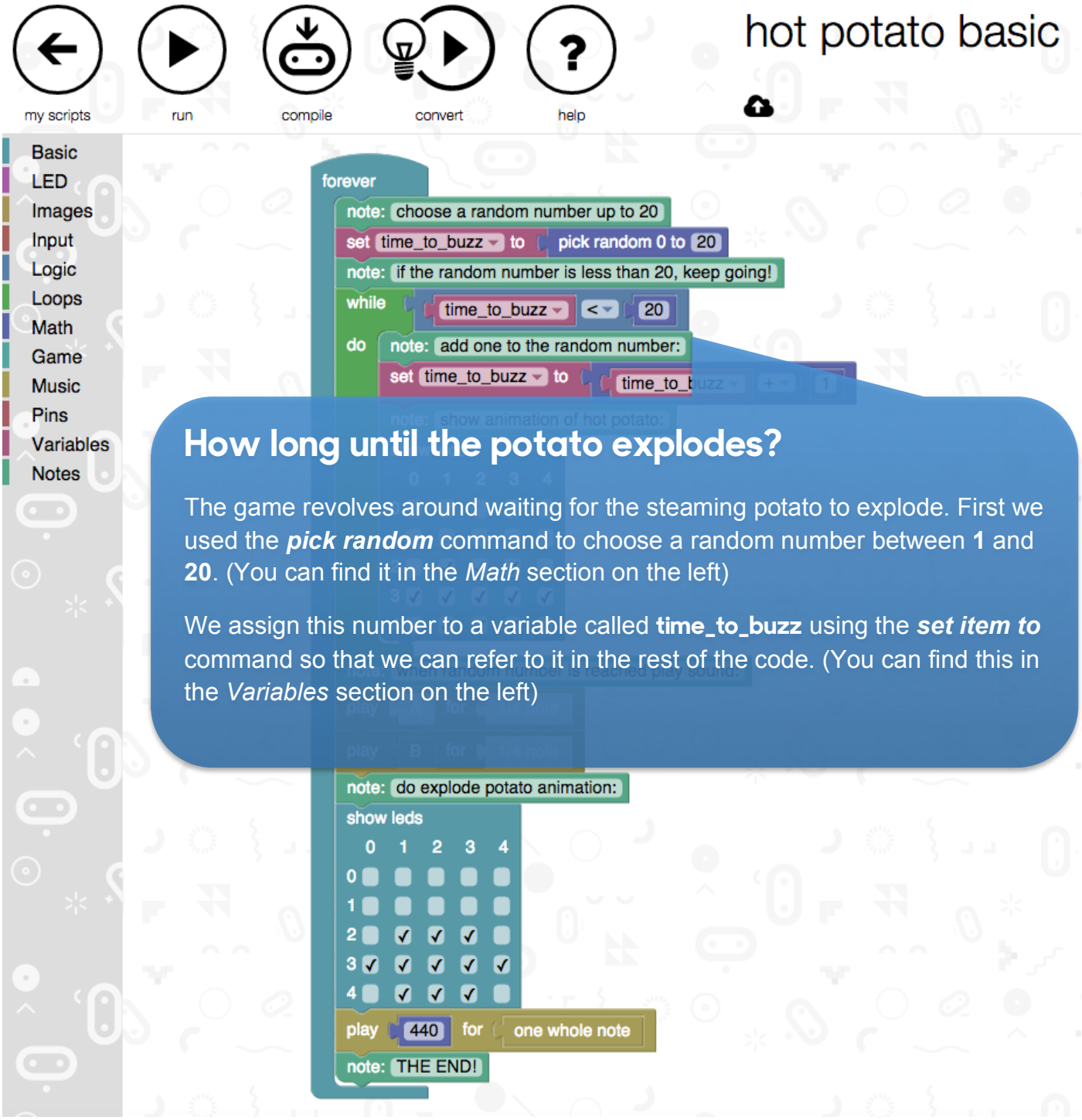
Choose **'Import Code'** and upload the hex file that you've downloaded from the Live Lessons website.



The code for your hot potato game should now appear in your code window.

Hit **'run'** to see it in action on the simulator, or plug in your micro:bit, hit '**compile**' and drag your hex file onto your micro:bit to try out your hot potato game.

Step 2: Understanding the code

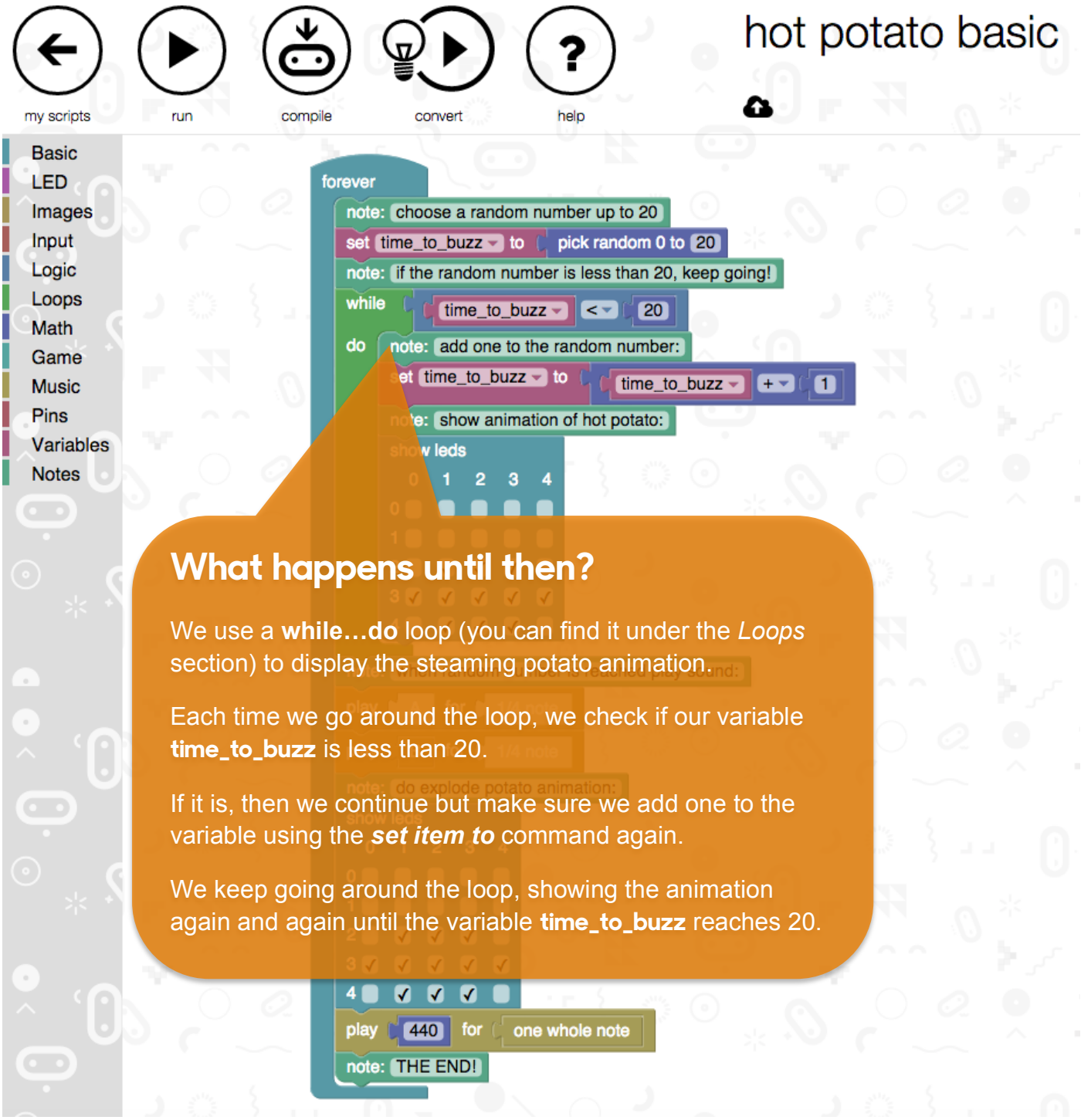


How long until the potato explodes?

The game revolves around waiting for the steaming potato to explode. First we used the ***pick random*** command to choose a random number between **1** and **20**. (You can find it in the *Math* section on the left)

We assign this number to a variable called **time_to_buzz** using the ***set item to*** command so that we can refer to it in the rest of the code. (You can find this in the *Variables* section on the left)

Please note that we've removed most of the ***show leds*** commands so that the code fits on the page. You should see the full animation when you import the hex file you downloaded from our website.



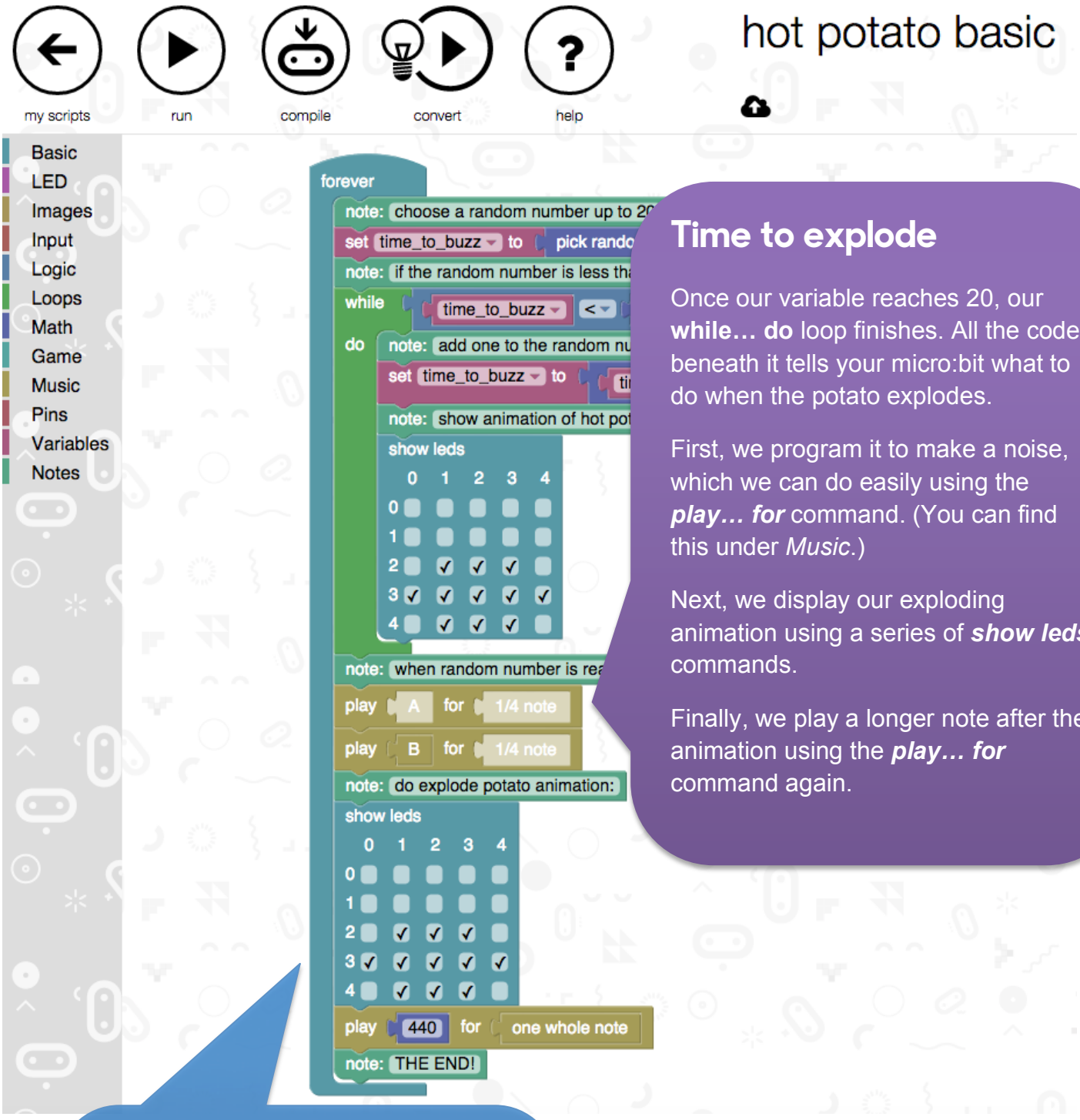
What happens until then?

We use a **while…do** loop (you can find it under the *Loops* section) to display the steaming potato animation.

Each time we go around the loop, we check if our variable **time_to_buzz** is less than 20.

If it is, then we continue but make sure we add one to the variable using the ***set item to*** command again.

We keep going around the loop, showing the animation again and again until the variable **time_to_buzz** reaches 20.



Time to explode

Once our variable reaches 20, our **while… do** loop finishes. All the code beneath it tells your micro:bit what to do when the potato explodes.

First, we program it to make a noise, which we can do easily using the ***play… for*** command. (You can find this under *Music*.)

Next, we display our exploding animation using a series of ***show leds*** commands.

Finally, we play a longer note after the animation using the ***play… for*** command again.

Play forever..

Because we put all of our code inside a **forever** loop, our game will start again after the potato explodes.

This time it will choose a new random number between 1 and 20, so you never know how long it will be before the potato explodes.

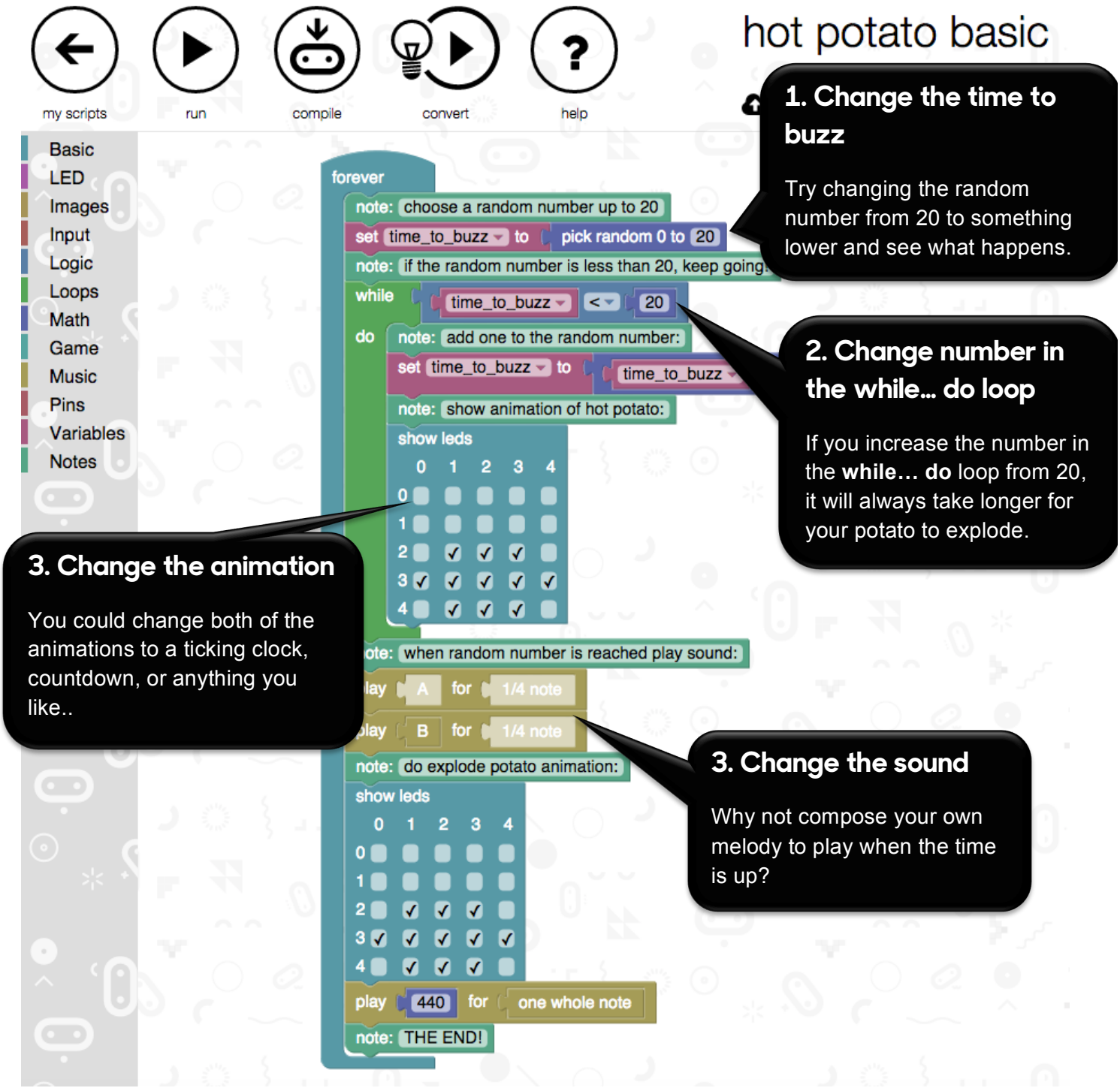
Step 3: Modifying the code

There are lots of things you can do to adapt your hot potato game and make it your own.

You can change the longest time until the potato explodes, make your own animations for the potato or even write your own music to play at the end.

You can make it easier or harder to take care of your hot potato game, and can also change the way your hot potato game looks and acts.

Have a look at the instructions on the next page to see what you can do.



Test, play and show us what you've done

Now that you've made your very own hot potato game, click '**run**' to test it on the simulator and '**compile**' to see it working on your micro:bit.

Click '**export**' to save off your code and send it to us at **live.lessons@bbc.co.uk**. You could see your hot potato game featured on our **micro:bit Live Lesson** in February.

Note: If you want to be able to hear the sound your micro:bit plays when the time is up, you will need to connect a small speaker or buzzer to Pin0 and GND pins on the edge of your micro:bit.