



CODE YOUR HUSTLE

**UNRULY
FITNESS**

VOL. 1



UNRULY FITNESS

BUILDING AN UNRULY FITNESS MACHINE

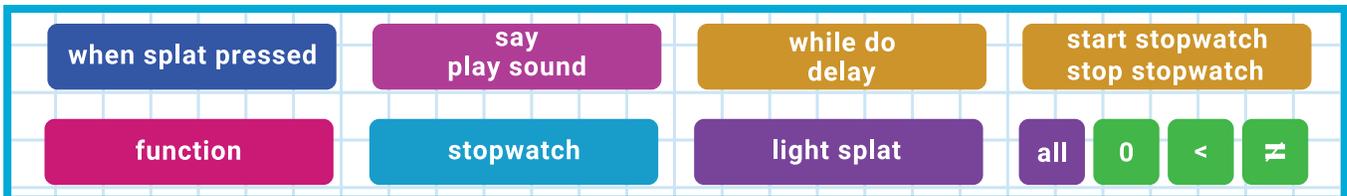
Make sure to check out or [Unruly Fitness Videos!](#) 👍

There is a logbook for this activity. Find the [logbook](#) here or on Page 7.

Trouble sharing projects? Check out Virtual Splats Guides for [Chrome](#) or [iPad](#)

Activity 1: How to Fitness

Blocks you will use during this activity:



Part 1 - Simple Countdown with 'Say'

Let's code a countdown timer for some fitness challenges! We will use our countdown code to see how many of an exercise you can do before the timer runs out. In our example, we will use jumping jacks, but you can use whatever exercise you want!

Here are some options to choose from:

- Jumping Jacks
- Sit-ups
- Burpees
- Jumping 'rope'
- Squats

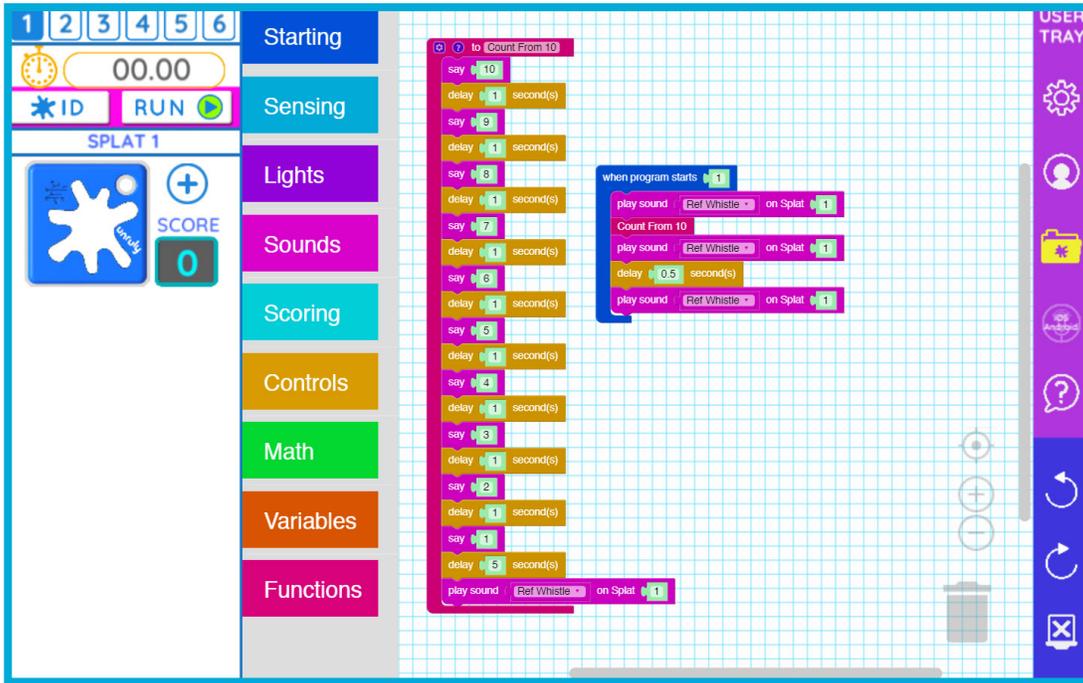
You will track your exercise everyday in the log – linked on the top of this page or shown on page 7.

Try to improve that number every day!

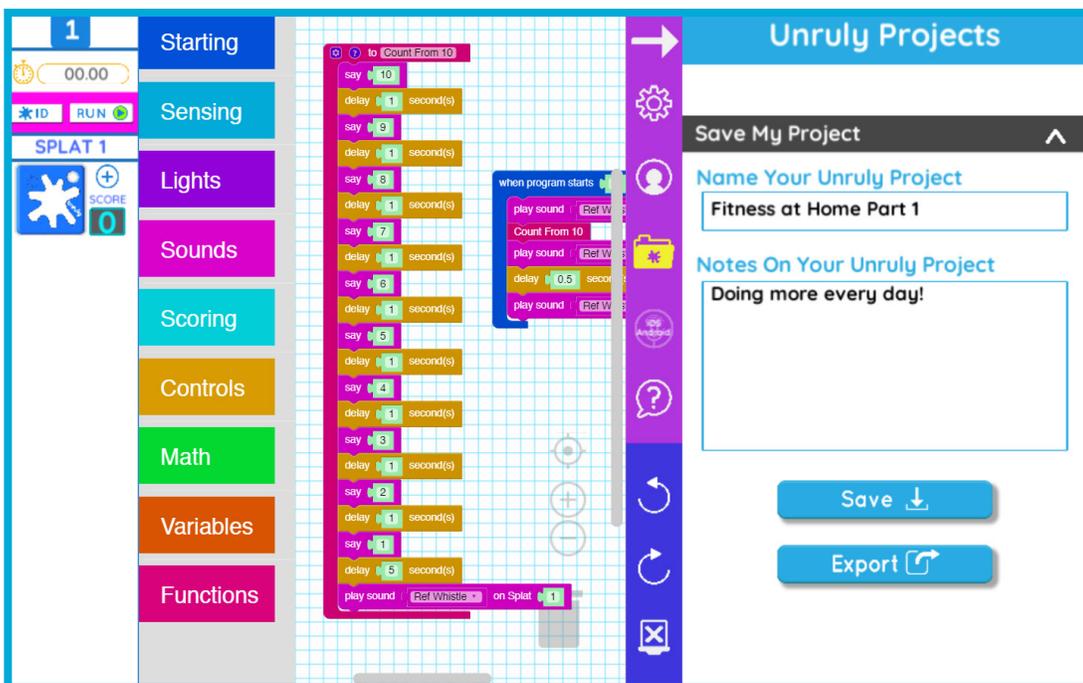


Let's start building the countdown. We will need to be able to hear our program counting down while we are doing our exercises. To do this, we will use the say and delay blocks. We will set our blocks up in a function so we can use it more easily, and keep the rest of our code easier to read!

We've also used a Ref Whistle sound to know when the time begins and ends. After one whistle, we call our count down function, and after the function, we add a few more whistles to make sure we know when to stop.



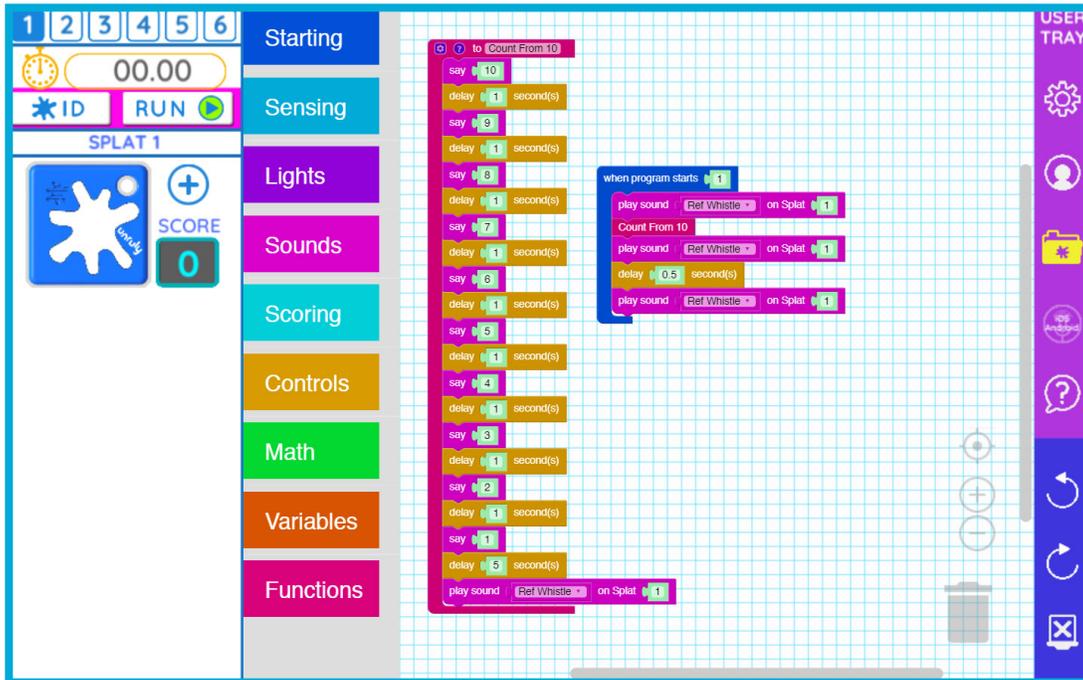
Don't forget to save your code, and name it something easy to remember!



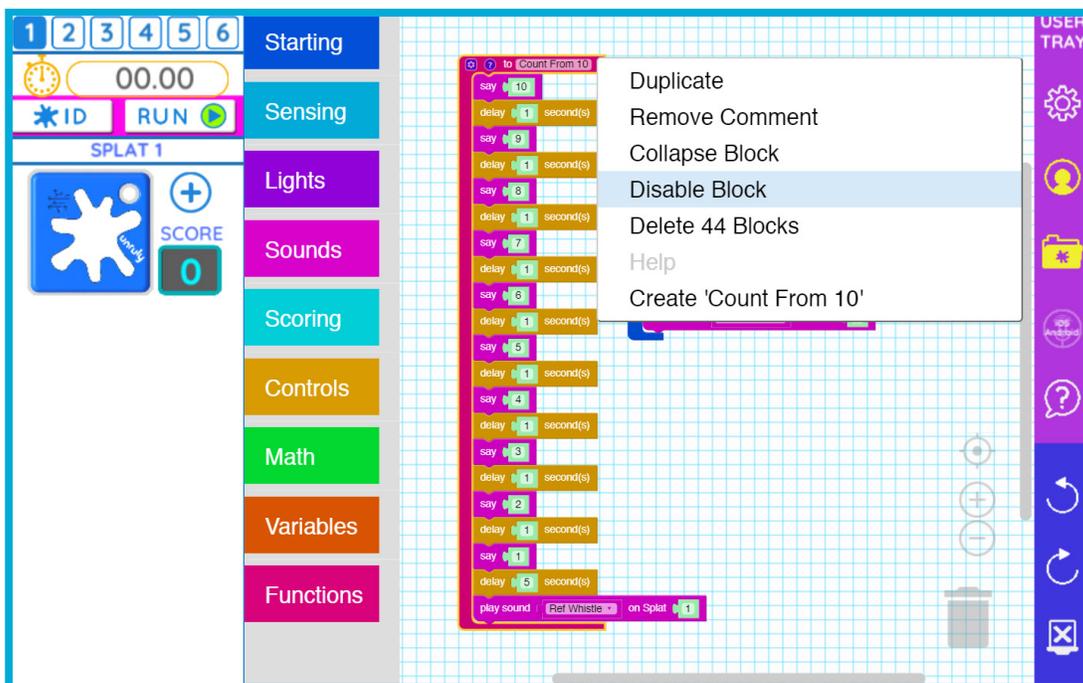
Part 2 - Stopwatch with Buttons

Sometimes we want to use a stopwatch to measure how long it takes to do something. For example, how long it takes to run one mile, crab-walk across the room, or even to complete ten phenomenal push-ups.

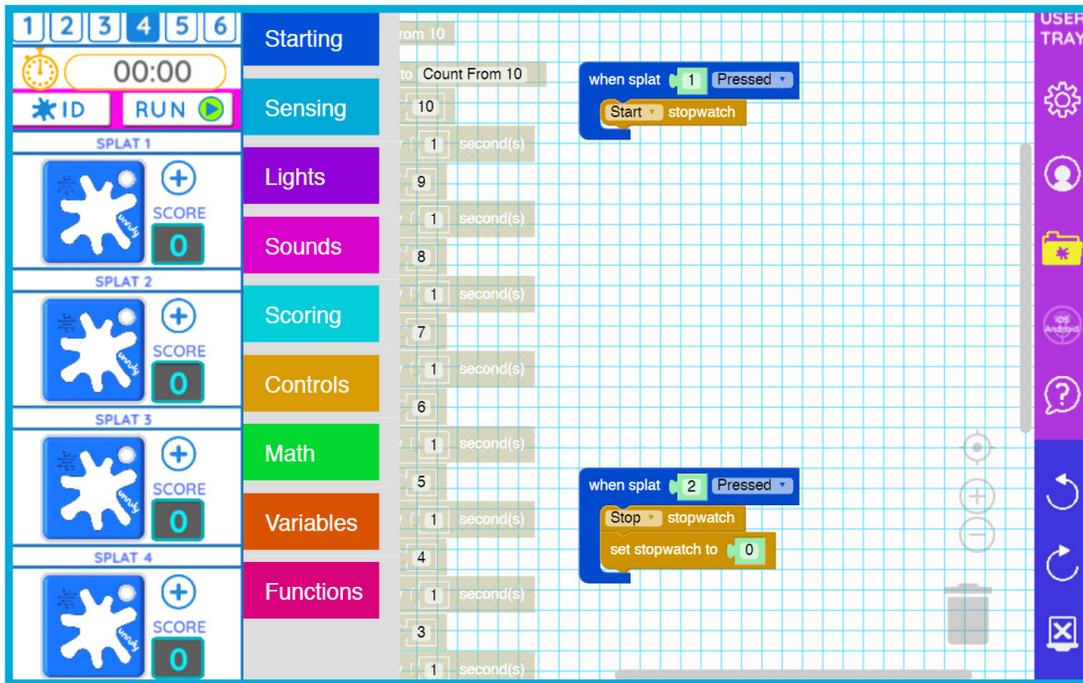
We can build a program to help with this too! Let's continue from Part 1:



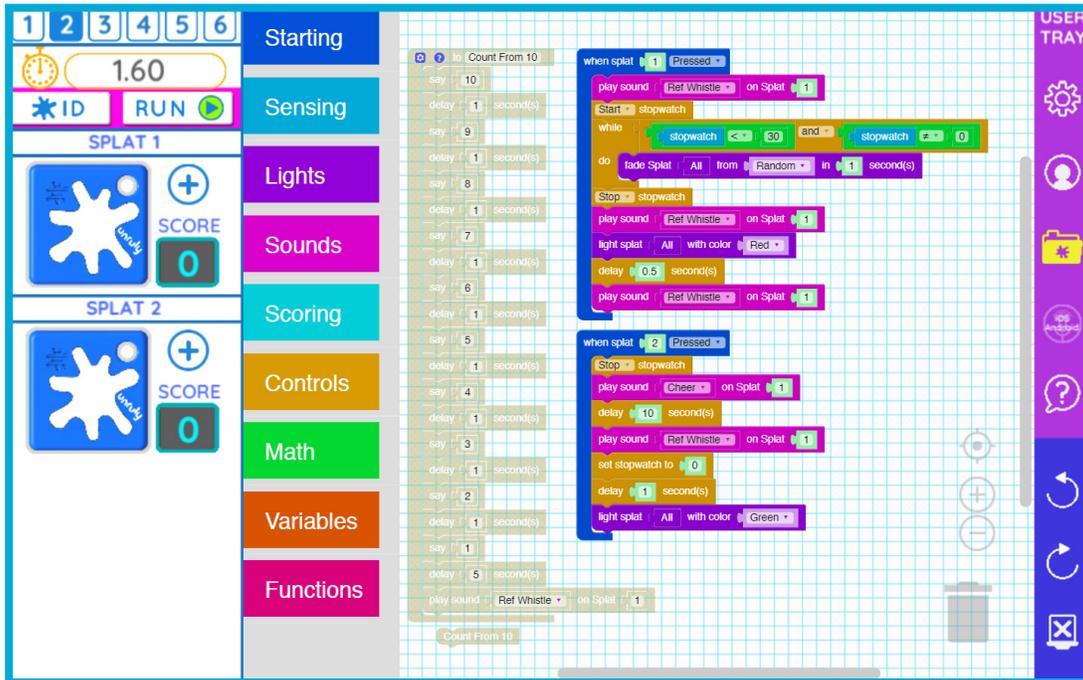
We won't need our countdown function for a bit, so let's disable it. Right-click on your function block and select disable. This will save them for us to use later without them getting in the way!



Now, let's add two **when splat pressed** blocks, for Splats 1 and 2. Add a **stopwatch** that is started by Splat 1 and stopped by 2. Try your code out. Once it starts and stops as it should, we need to add some feedback to let us know it is working and when our time is up!



Here, we've used a **while do** block, and a **light splat** block, to show us when the timer is running, and to make sure we don't go over 30 seconds. We've also used a ten second delay block to give you a chance to write down your time before the stopwatch resets. Make sure your program matches ours!

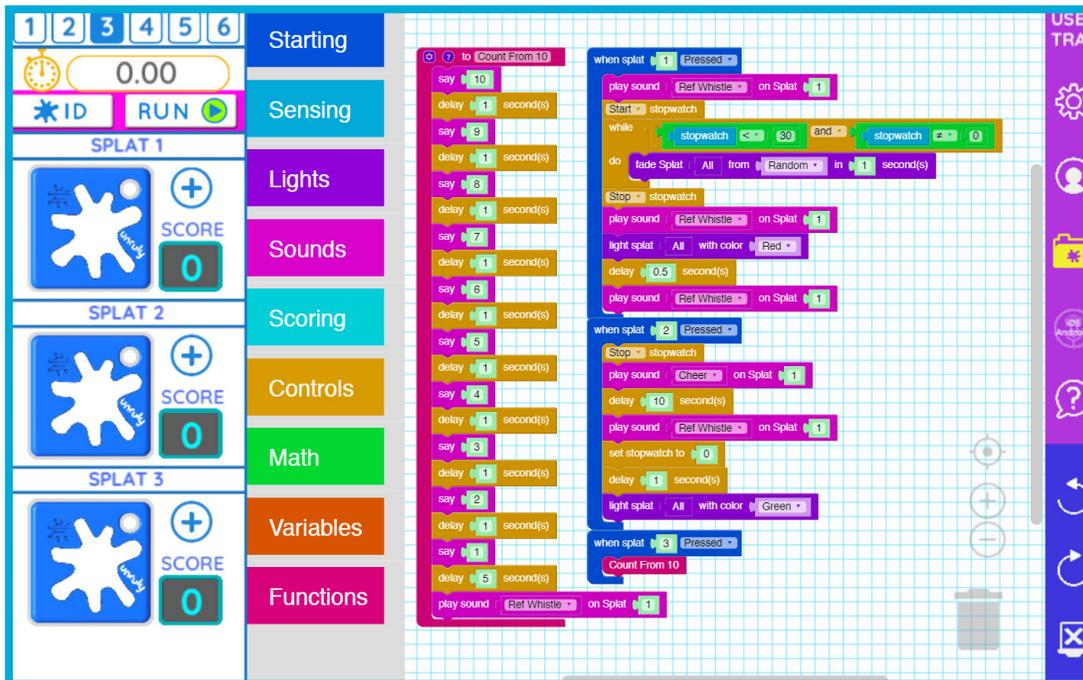


Press Splat 1 to start your stopwatch and Splat 2 to stop. You have 10 seconds to log your time before the stopwatch clears!



Part 3 - Building the Fitness Machine

Let's build on part 2 and build a fitness circuit! Re-enable your function, **Count From Ten**, and recall the function in a fresh **when splat pressed** block.



Now you can create your own fitness circuit with two different types of timers: a stopwatch and a countdown. Use your tracking sheet to [record your exercises!](#)

Don't forget to save your code!!



HOW TO USE YOUR CODE:

Part 3: Fitness Machine

Pick your exercises! Use the table below to select exercises for your circuit. Check out [this video](#) for a demonstration of the exercises.

Click Splat 1 to start your stopwatch – You have 30 seconds to complete your exercise!

Click Splat 2 to stop your stopwatch – You have 10 seconds to record your time in your log!

Click Splat 3 to start playing the countdown – This is our count from ten Function!

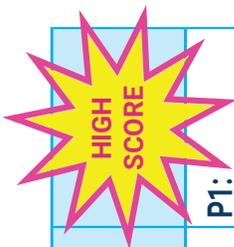
Pick a color, or program your Splat to choose a random color:	Find an animal that matches the color you chose:	Where does your animal live? Their home is the exercise you should do!
RED	SHEEP	Paddock – Crab Walk
ORANGE	PIG	COOP – JUMPING JACKS
YELLOW	DOG	PASTURE – PUSH-UPS
GREEN	CHICKEN	GRASSLAND – CRUNCHES
BLUE	DONKEY	STY – LUNGES
PURPLE	HORSE	HOUSE – RUN IN PLACE
PINK	ELEPHANT	FARM – BURPEES
CYAN	CAT	YARD – MOUNTAIN CLIMBERS
GOLD	DUCK	STABLE – AIR PUNCHES
WHITE	COW	POND – TOE TOUCHES

SPLATS FITNESS CHALLENGE LOG

Fill in the chart below with your fitness results for **part one (P1)** and **part two (P2)**. You can take the Fitness Challenge every day, or just a few days a week. At the end of the week, fill in your best results! We recommend you do the challenge at least once a week so you can track your progress.

Feel free to print this form, fill-in directly, or make your own version on a piece of paper. **Get Unruly!**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	
WEEK 1	P1: P2:							
WEEK 2	P1: P2:							
WEEK 3	P1: P2:							
WEEK 4	P1: P2:							





UNRULY FITNESS

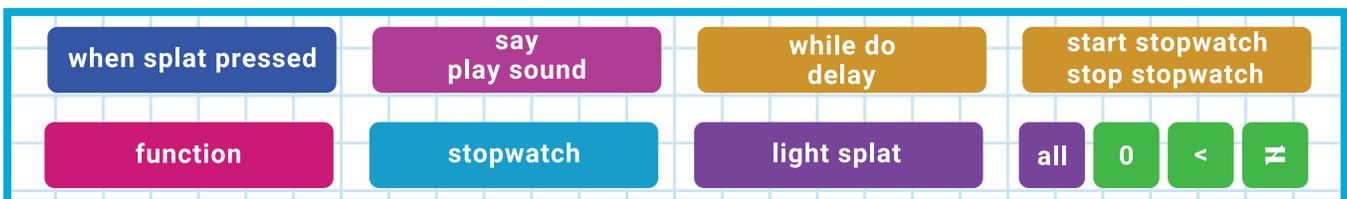
BEING AN UNRULY FITNESS MACHINE

Make sure to check out the [Unruly Fitness Videos!](#)

Trouble sharing projects? Check out Virtual Splats Guides for [Chrome](#) or [iPad](#)

Activity 2: Splats in Action

Blocks you will use during this activity:



Part 1 - Found Art Sculpture

Found Art Sculpture describes artwork made from objects not commonly used in art making. These objects are arranged in interesting ways while still remaining recognizable, meaning the artist does little to change how they look.

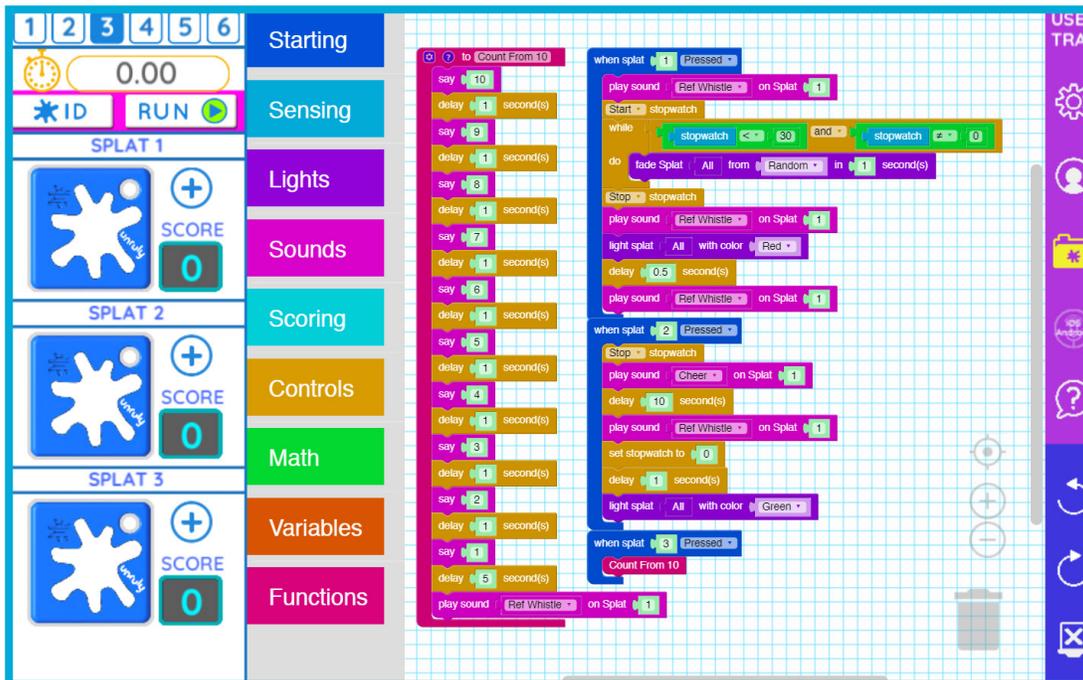
Take a look at these sculptures created using found art. Notice how the artists create something new and exciting with just a few objects!





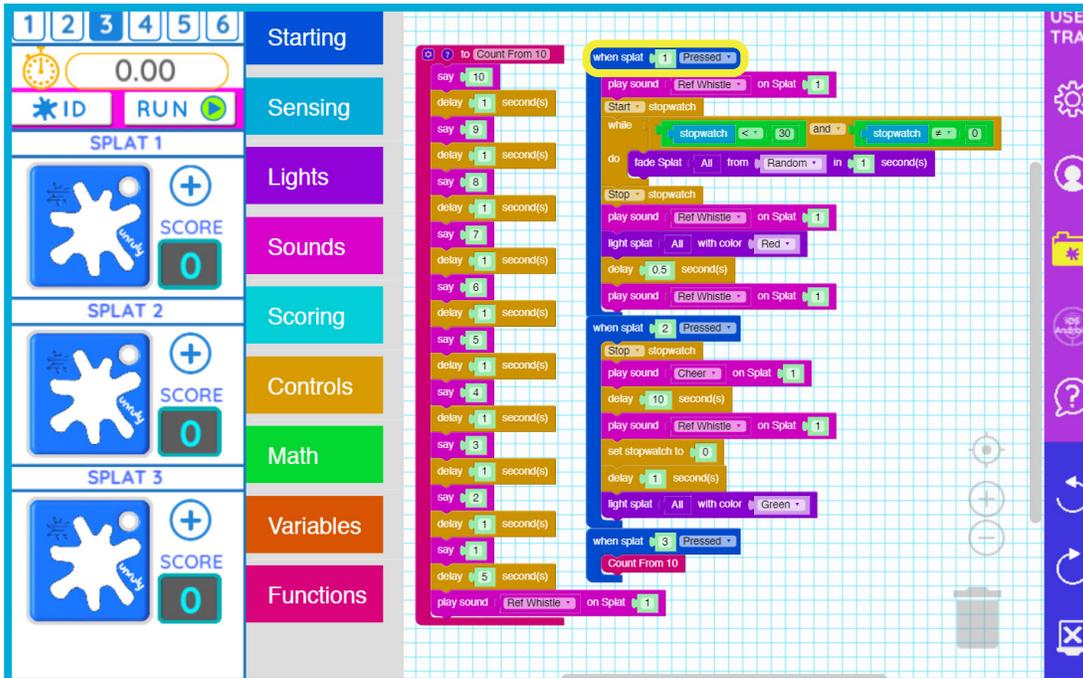
Today, you'll be making your own found art sculpture with some help from Splats. We'll be using a stopwatch to help us make quick decisions, some sounds to keep us on track, and random colors to help us choose objects!

To begin, load the code you created in Activity 1-3. Review what your code does, notice you already have a **stopwatch**, **sounds**, and a **countdown**. We'll keep our countdown the same, so you can just move it to the side. For the rest, we will be adapting-which means changing-this code for activity.

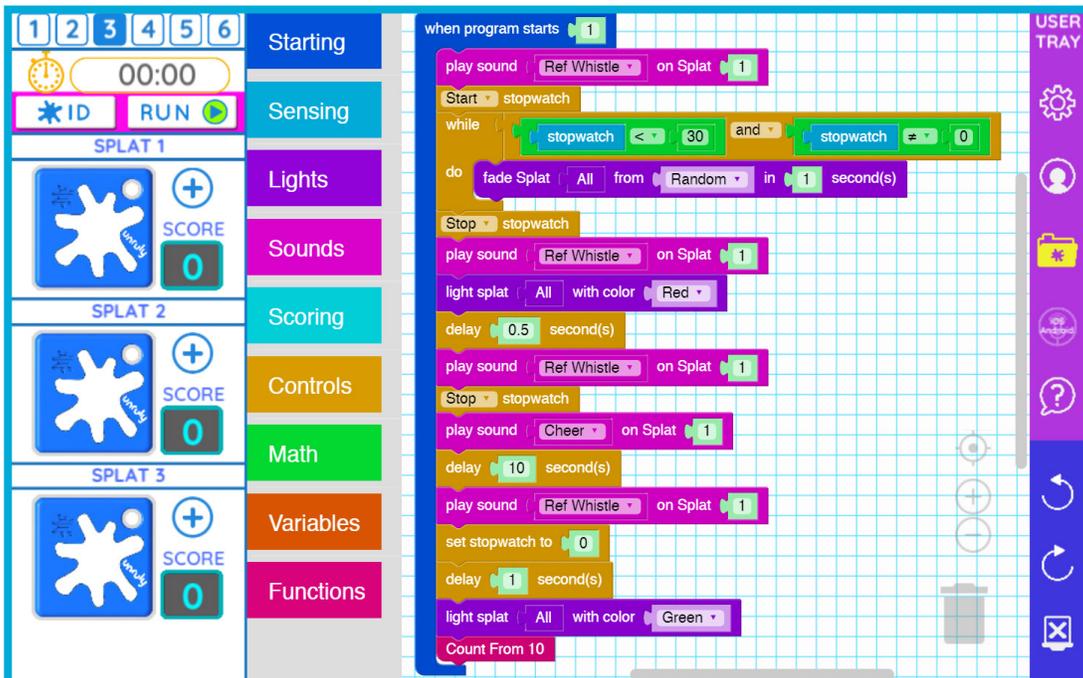


Let's start at the top!

Instead of **when splat pressed** blocks, let's run our code using the **when program starts** block.



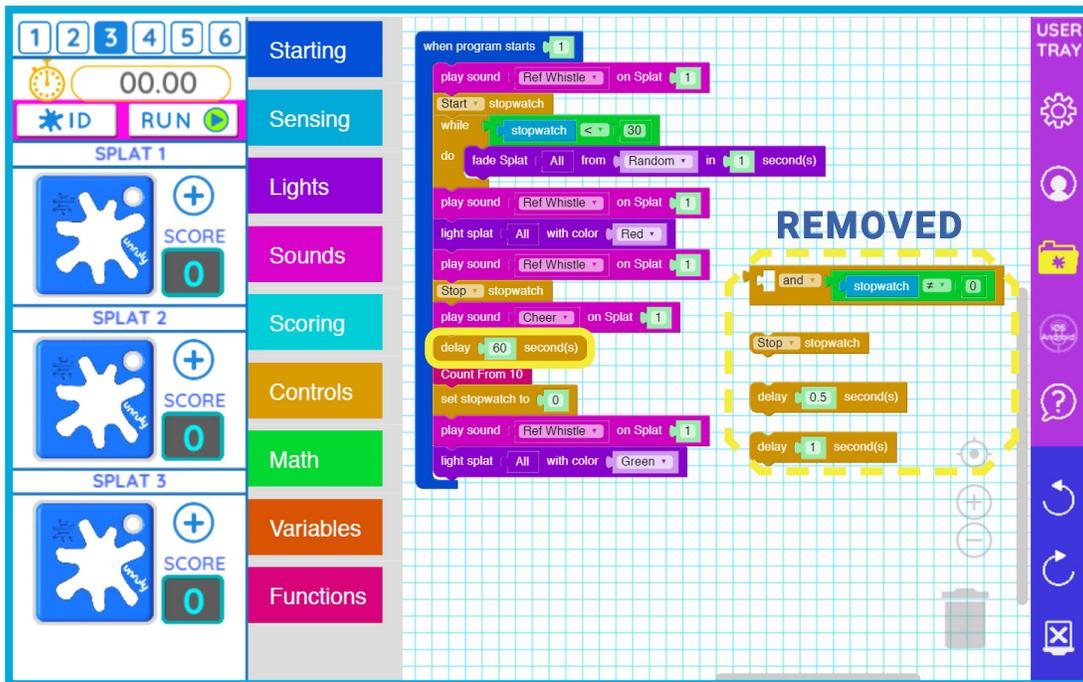
Next, let's add the code from Splats 2 and 3 to **when program starts**. Now we only need to press run to start our program.



Now let's give ourselves some wiggle room in the timing!

When the stopwatch starts, your job is to quickly grab an object for your sculpture before time runs out. We need to make sure our program gives us at least one minute (60 seconds) to search for each object!

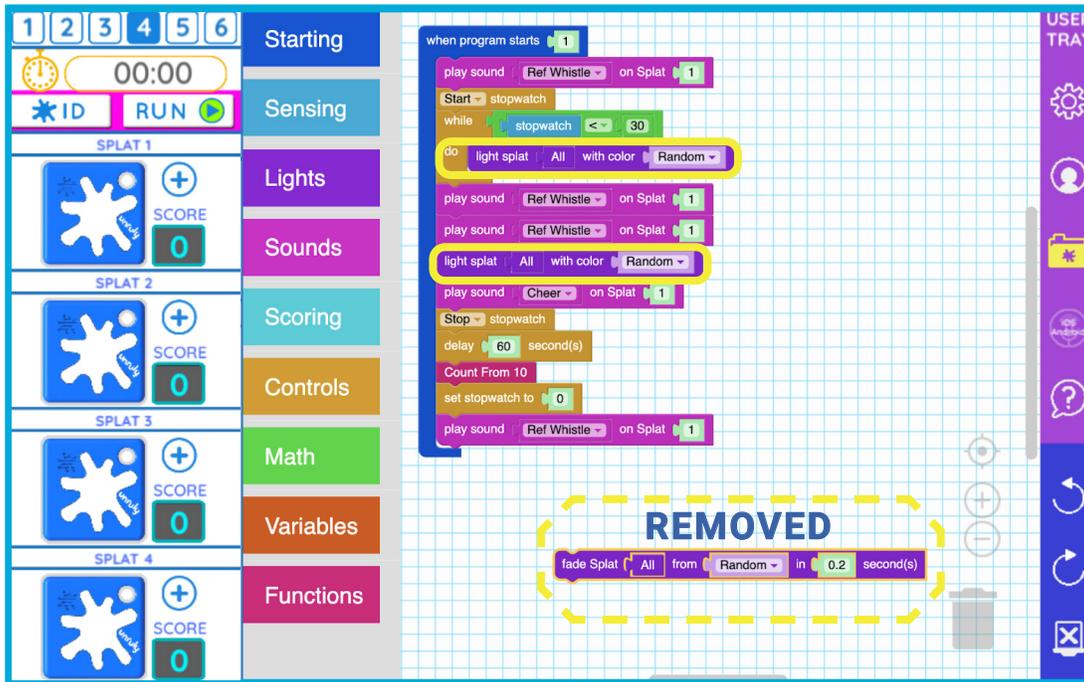
We'll give ourselves this time by moving the **start, stop, delay, and set** blocks for our stopwatch. Notice in the image below how there are extra buttons we're getting rid of because they are no longer necessary. Make sure you set your delay for 60 seconds or more so that you have time to search for your objects. Before moving on, make sure your code matches the image below!



Next we'll be adding some random color lights to the mix. Here is a list of what color objects might end up being needed for your sculpture:

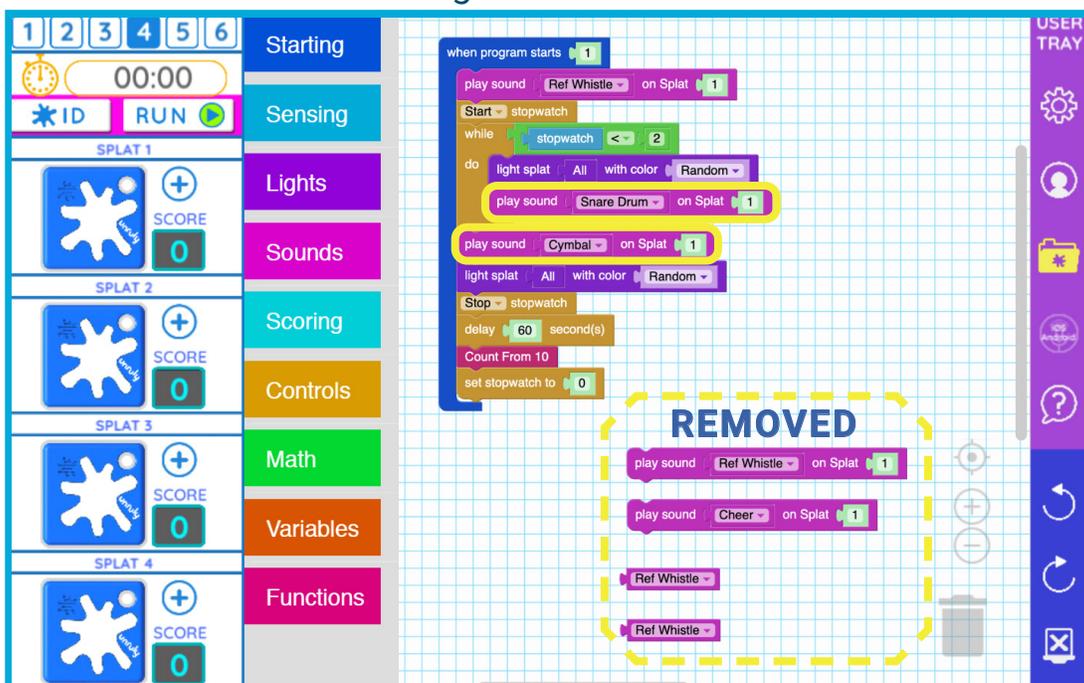
- Green
- Red
- Blue
- Purple
- Orange
- Yellow
- Cyan
- Pink
- Gold
- White

To challenge ourselves even more, let's have our code choose what color objects we search for. In order to do this, we need to code the Splats to light up a random color and stay that way while we go searching. This means we need to move our **light splat** blocks around and remove our **fade splat** block.

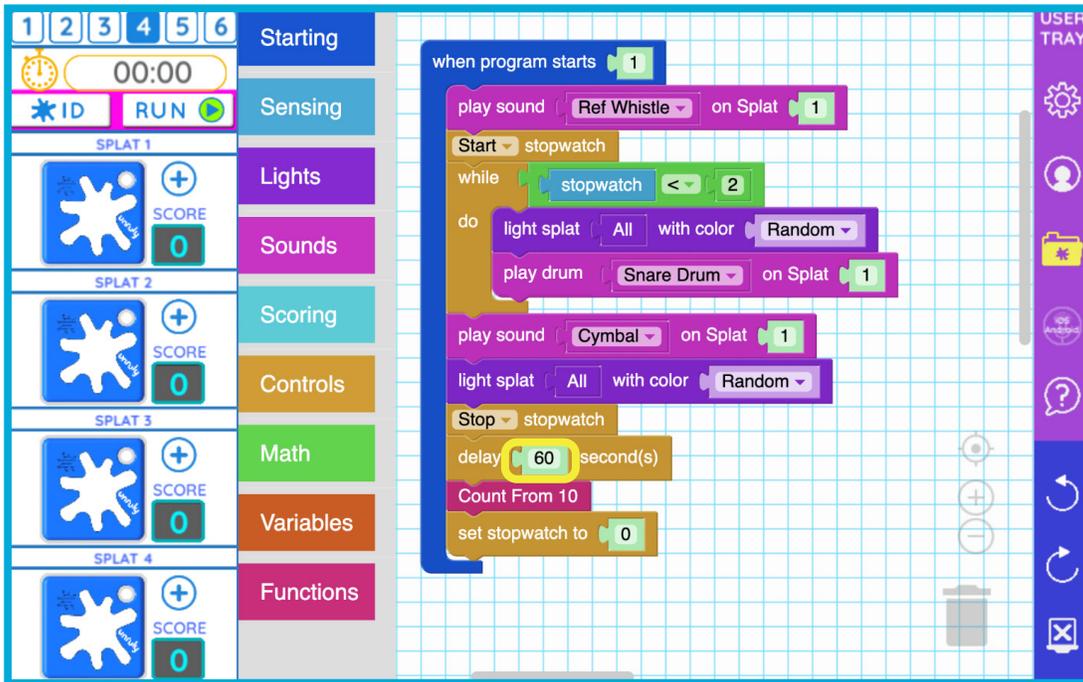


You might notice we have a lot of **play sound** blocks. There are more than we need, and they are not in the right order.

We want to keep a few of them so they can alert us when to start searching and when to stop. Let's get rid of the unnecessary ones, and change the sounds around so that they're not all the same. Before moving on make sure your code matches the code image below!

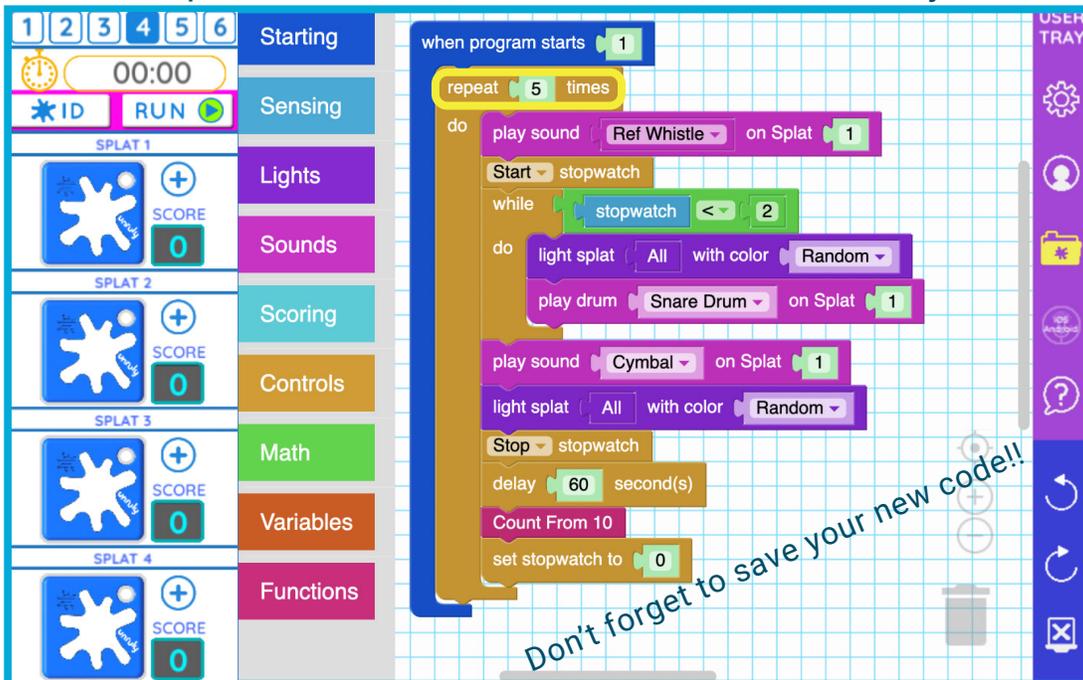


The blocks that we kept, we changed and moved around so their placement makes more sense. Also, notice how we had to swap our play sound block for a play drum block for the snare drum. Now is a great time to test your program. Before you do, shorten your delay to make the test faster!



Run your program to check that A) the ref whistle signals the program start, B) the snare drum plays while the Splats switch colors, and C) the cymbal plays at the end to let you know the colors have been chosen.

If your program does all that, you're in the homestretch! We can add a repeat block to repeat five times, that means we'll have 5 objects!

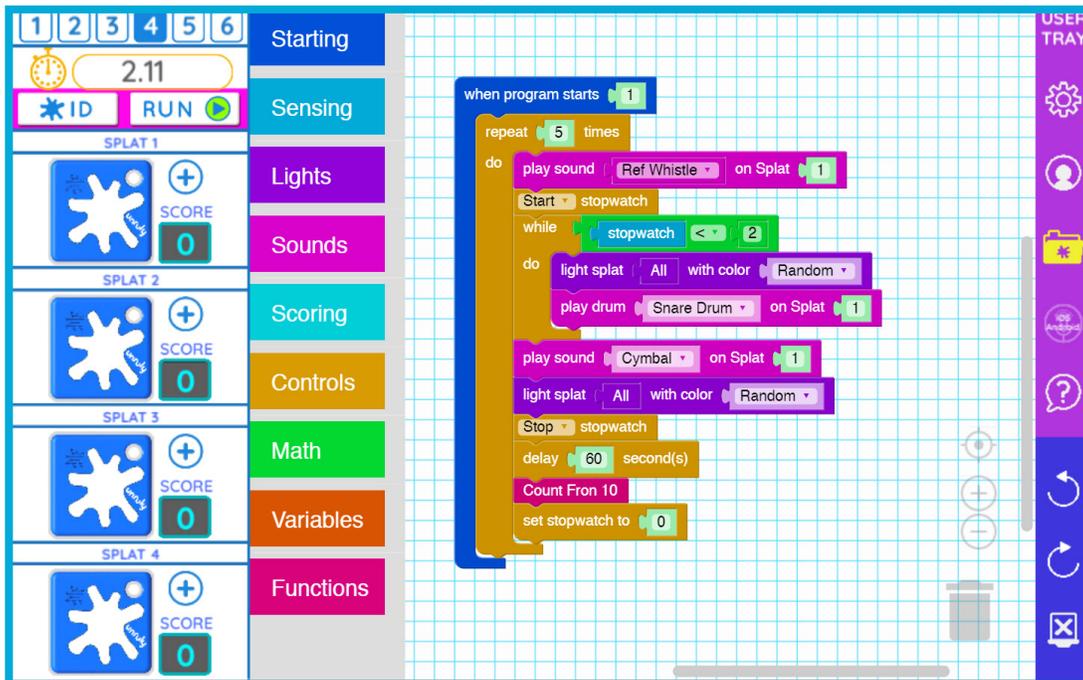


Don't forget to save your new code!!

Found Art *Coding Tip*

As you might have noticed, a large part of our code blocks for this activity are used for a drum-roll effect! We can put this drum-roll into a function to organize our code.

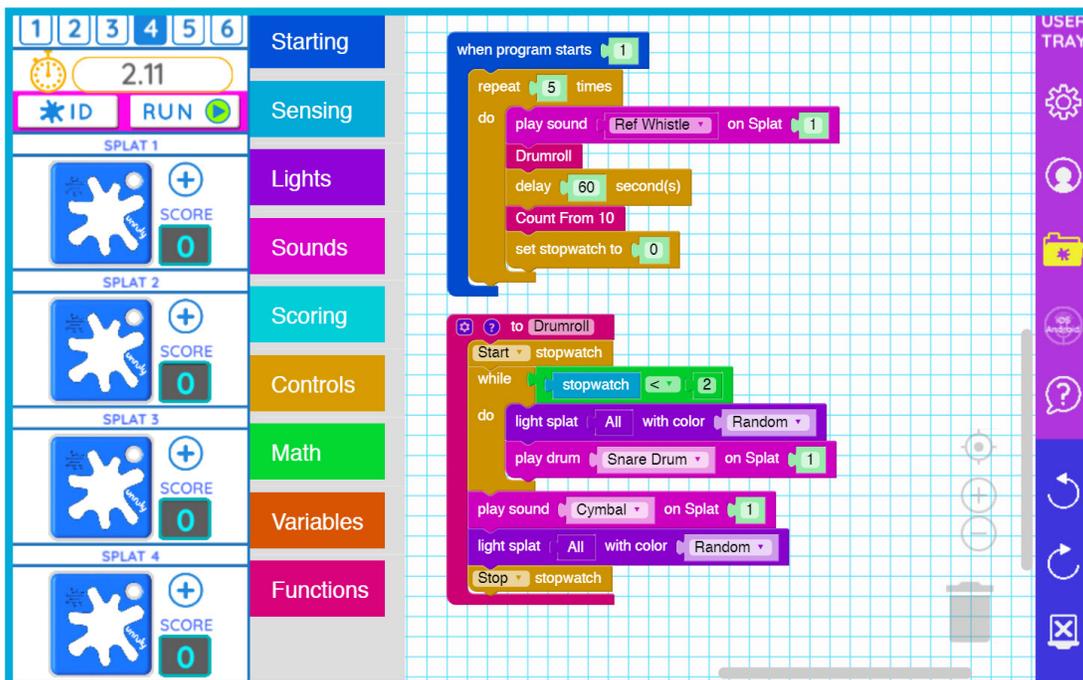
Before Function



The screenshot shows the Scratch coding environment. On the left, there are four 'SPLAT' objects, each with a 'SCORE' of 0. The main script area contains the following code:

```
when program starts 1
repeat 5 times
do
  play sound Ref Whistle on Splat 1
  Start stopwatch
  while stopwatch < 2
  do
    light splat All with color Random
    play drum Snare Drum on Splat 1
  play sound Cymbal on Splat 1
  light splat All with color Random
  Stop stopwatch
  delay 60 second(s)
  Count From 10
  set stopwatch to 0
```

After Function



The screenshot shows the Scratch coding environment with the drum-roll effect moved into a function. The main script is now:

```
when program starts 1
repeat 5 times
do
  play sound Ref Whistle on Splat 1
  Drumroll
  delay 60 second(s)
  Count From 10
  set stopwatch to 0
```

The function 'Drumroll' is defined as:

```
to Drumroll
Start stopwatch
while stopwatch < 2
do
  light splat All with color Random
  play drum Snare Drum on Splat 1
play sound Cymbal on Splat 1
light splat All with color Random
Stop stopwatch
```

HOW TO BUILD YOUR SCULPTURE:

Found Art Sculpture

The screenshot displays the Scratch programming environment. On the left, there is a sidebar with a stage area at the top showing a timer at 2.11 and a 'RUN' button. Below the stage are four 'SPLAT' objects, each with a 'SCORE' of 0. The sidebar contains various tool categories: Starting, Sensing, Lights, Sounds, Scoring, Controls, Math, Variables, and Functions. The main workspace shows a script starting with 'when program starts', followed by a 'repeat 5 times' block. Inside the repeat block, the following actions are performed: 'play sound Ref Whistle on Splat 1', 'Start stopwatch', a 'while' loop with 'stopwatch < 2' containing 'light splat All with color Random' and 'play drum Snare Drum on Splat 1', 'play sound Cymbal on Splat 1', 'light splat All with color Random', 'Stop stopwatch', 'delay 60 second(s)', 'Count From 10', and 'set stopwatch to 0'. A 'USER TRAY' is visible on the right side of the workspace.

How to build your sculpture:

Press RUN to start the drum-roll.

Once you hear the cymbal, quickly find an object that matches the color of Splats on your screen. Remember, you are building a sculpture, so pick objects that you want to include in your artwork.

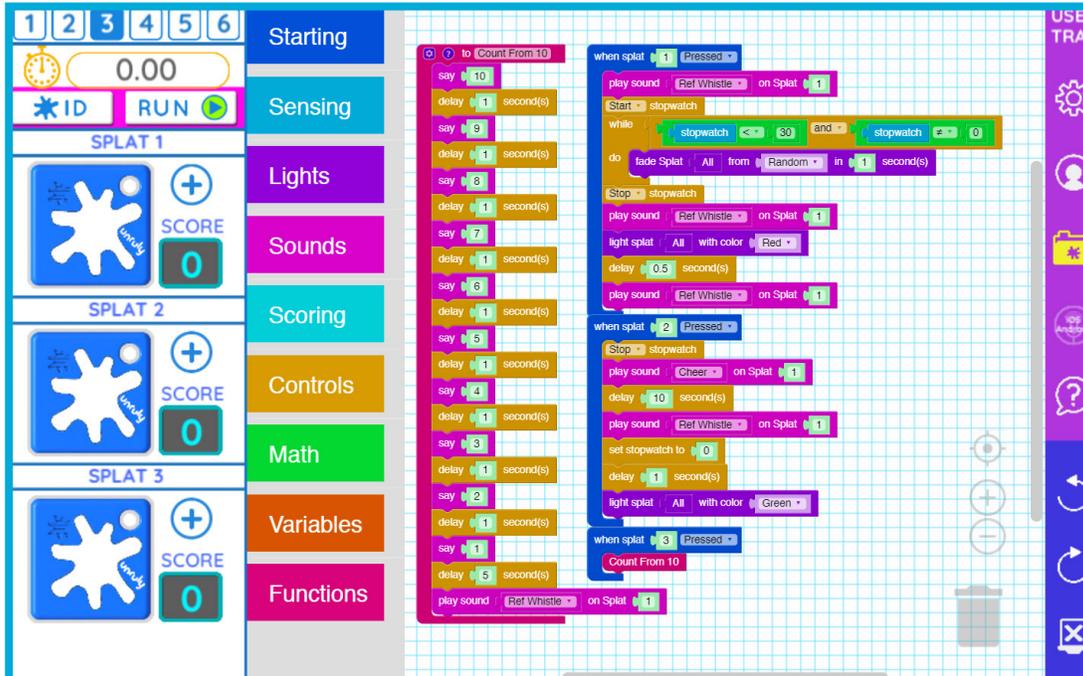
When you hear the countdown, hurry back with your object.

The number of objects will match the number in your **repeat** block. In this example you will be gathering 5 objects total.

Once you have all of your objects selected, compose your piece. Think of a title, and the meanings behind the objects you chose.

Part 2 - Movement Challenge

Remember the exercises from activity 1-3? We'll be using those exercises and adapting (changing) some previously made code to bring some Unruliness to our workout.



To begin, import your code from activity 1-3. Our new code will use pieces of this code with some changes to sound and timing. In the end, we want our code to play a random animal sound, which will tell us what exercise to do, while a stopwatch will tell us how long to do it! Take a sneak-peek at some of the exercises below!

What animal did you hear?

SHEEP

PIG

DOG

CHICKEN

DONKEY

HORSE

ELEPHANT

CAT

DUCK

COW

Where does your animal live?
Their home is the exercise you should do!

Paddock – Crab Walk

Coop – Jumping Jacks

Pasture – Push-Ups

Grassland – Crunches

Sty – Lunges

House – Run in Place

Farm – Burpees

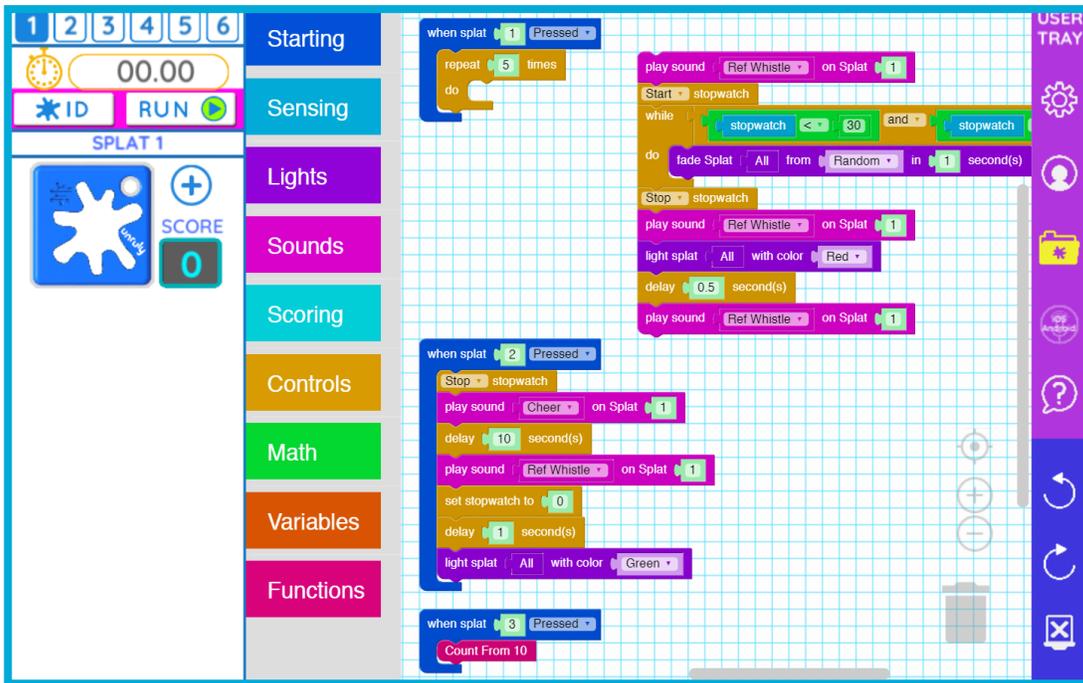
Yard – Mountain Climbers

Stable – Air Punches

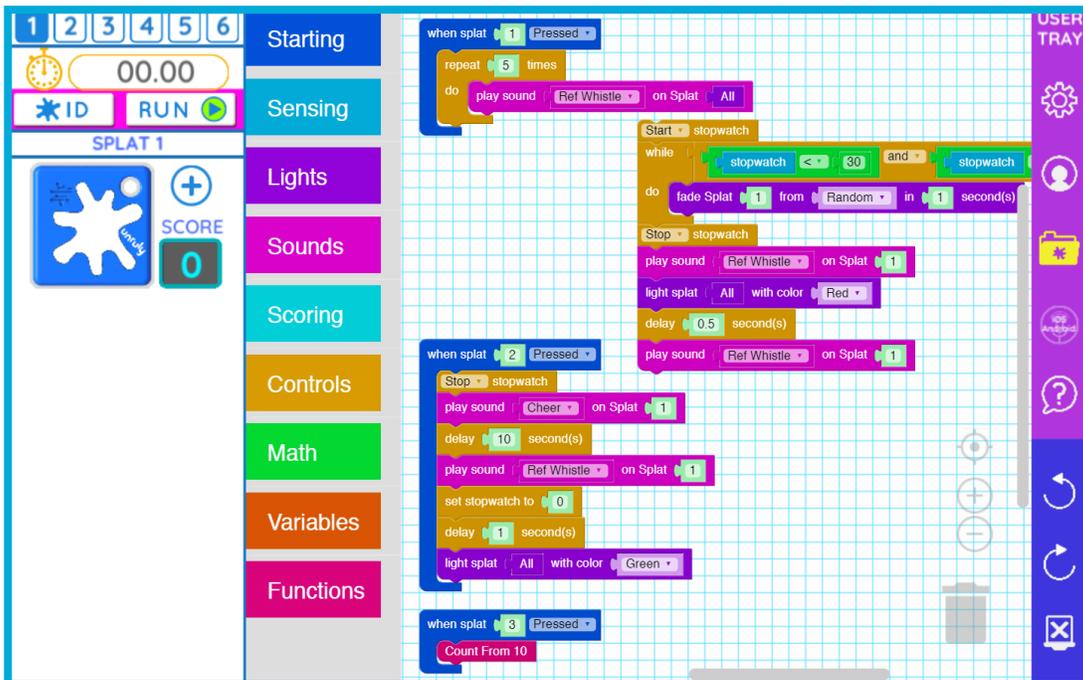
Pond – Toe Touches

The first change to our code will be unsnapping the **when splat pressed** block and adding a **repeat** block, set to five.

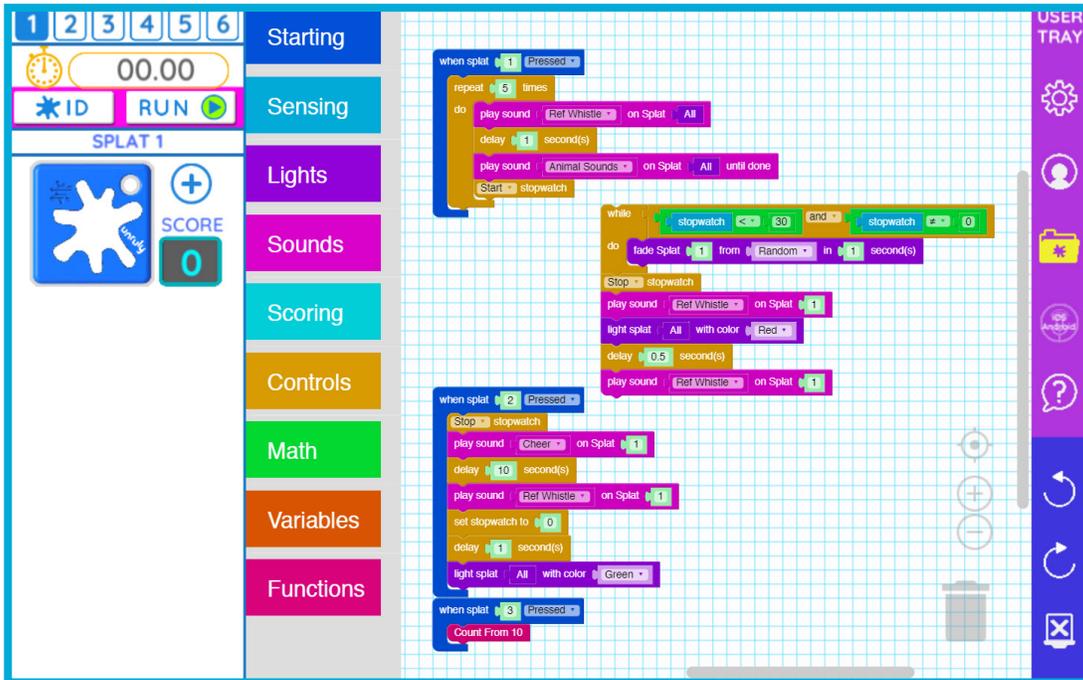
This means you will be doing five exercises in a row!



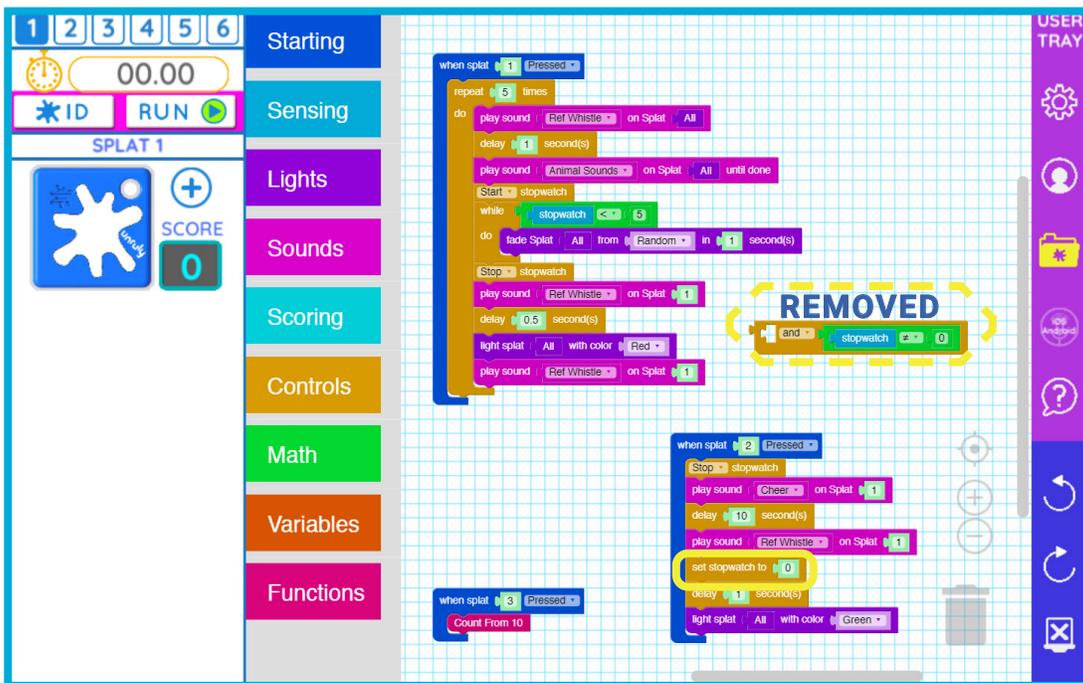
Next, we want a start sound that will alert us when a sound is about to play. Move the **play sound** inside the **repeat** block and set it to **Ref Whistle**.



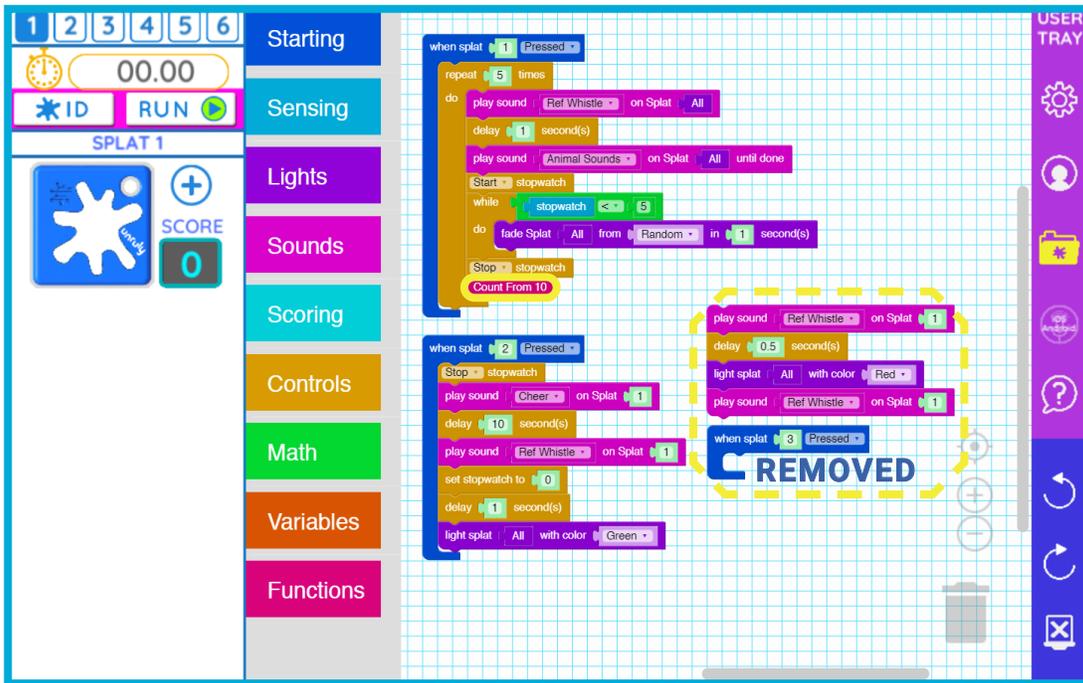
To help us prepare for the animal sound, add a **delay** block for one second. Next, attach the **play sound** and **start stopwatch** blocks to the delay.



Snap the remaining blocks (beginning with **while do**) inside the repeat block. Remove the **and / stopwatch** code. We want our Splats to fade in and out as random colors while the stopwatch is keeping time. We'll need to set our stopwatch back to zero at the end!

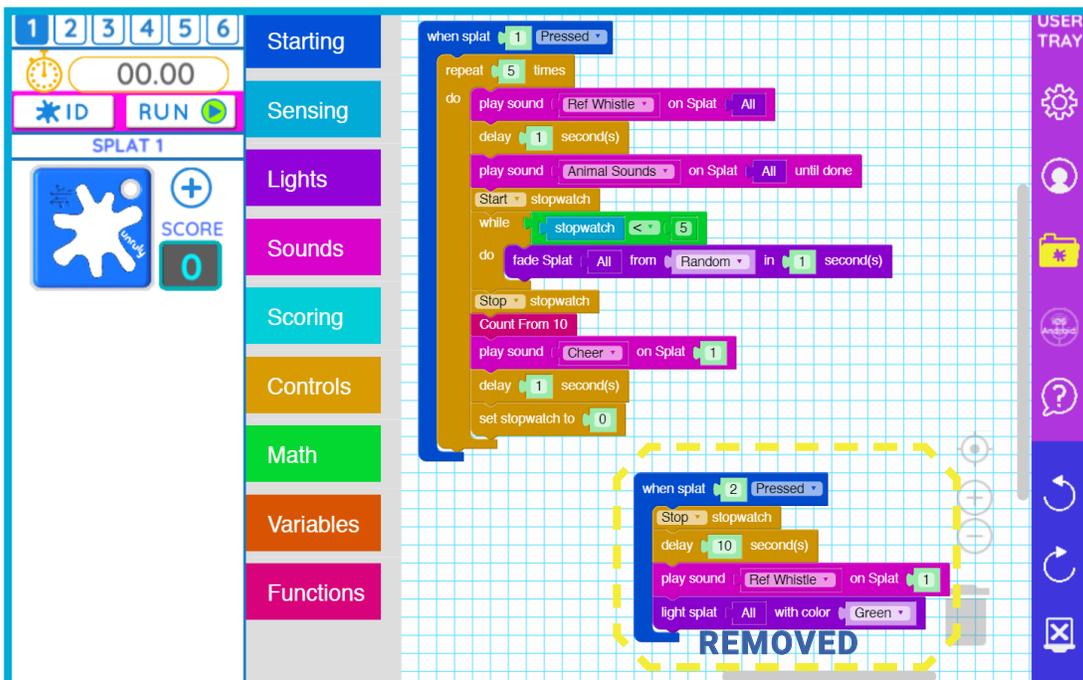


Unsnap the **play sound** code sequence from **when splat pressed**, and add in our **Count From 10** function block. Once the stopwatch ends, our countdown sequence begins. This is when you should be doing the exercise that matches the sound you heard!



Grab our **play sound - cheer** block and the **delay** block under the **when splat pressed** blocks. This is the all important cheer and break after your workout!

Lastly, snap the **set stopwatch - zero** block to the end of the code, delete any extra blocks you have, including **when splat 2 pressed**. Don't forget to save your code!



HOW TO PLAY:

Movement Challenge

You will be doing five exercises in this activity. When you press RUN, an animal sound will play. Each animal sound represents a different exercise.

You have five seconds to look up what exercise to do. Before starting be sure to check out [this video](#) demonstrating each of the exercises.

After the five seconds are up, a countdown will begin. Do that exercise until the countdown ends and you hear a whistle and a cheer.

Listen closely for the next animal sound!

What animal did you hear?

SHEEP

PIG

DOG

CHICKEN

DONKEY

HORSE

ELEPHANT

CAT

DUCK

COW

Where does your animal live?
Their home is the exercise you should do!

Paddock – Crab Walk

Coop – Jumping Jacks

Pasture – Push-ups

Grassland – Crunches

Sty – Lunges

House – Run in Place

Farm – Burpees

Yard – Mountain Climbers

Stable – Air Punches

Pond – Toe Touches

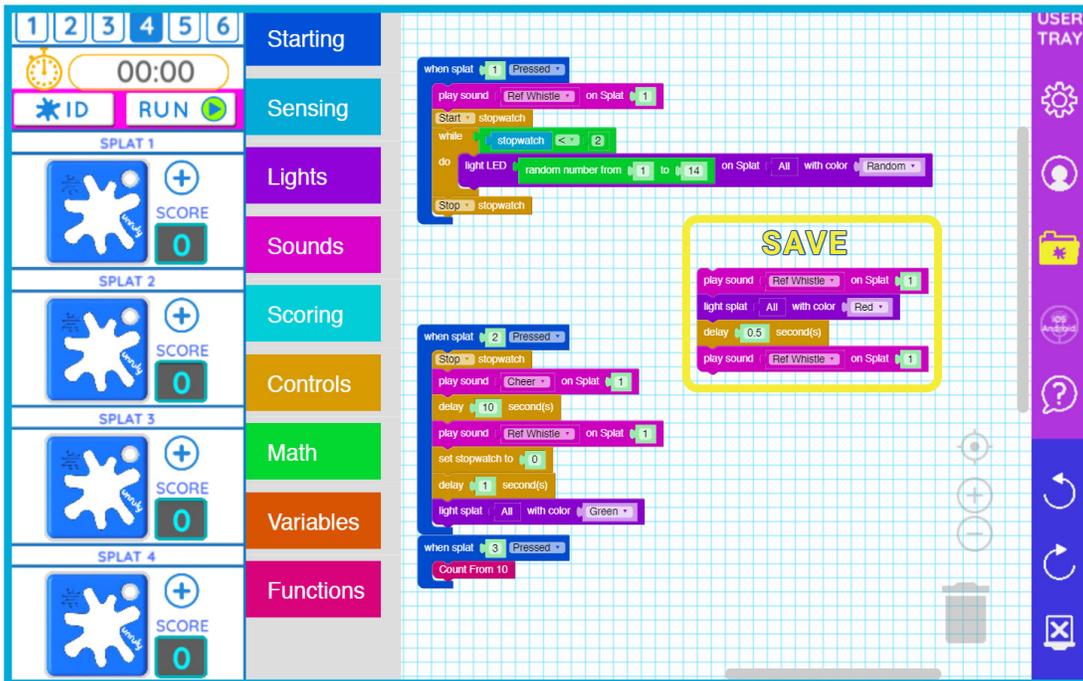
Part 3 - Robot Dance Party

Using the code from activity 1-3, Crash helped us create this robot dance challenge. When the Splats light up a certain color, you have to do a specific robot dance move. In the beginning, you'll want to start with just a few Splats, but experts like Crash can complete the challenge using six Splats!

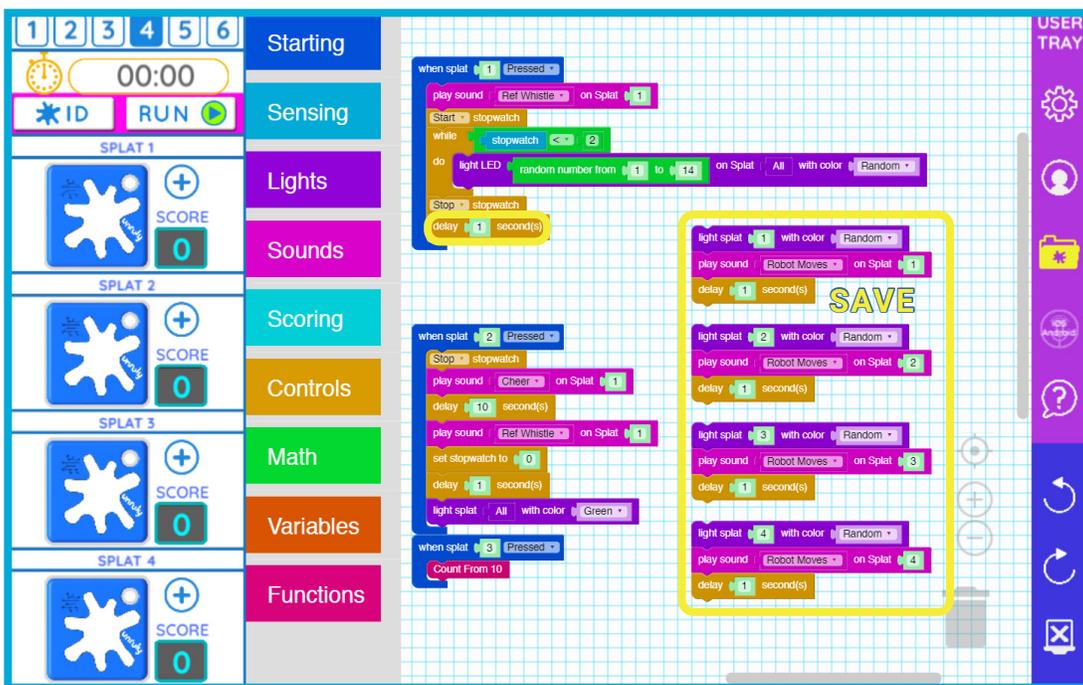
Unsnap a **stopwatch** block from the **and** block and reattach it to the **while** block in the first half of the code. Set the **less than (<)** block to two.

Next, switch out **fade splat** with **light LED**. Plug in a **random number** block from one to fourteen on Splat **all** with color **Random**.

Drag out the **play sound** block and its attached sequence of blocks. We're going to change this code, and it's easier if we unsnap it all first. Save these blocks on your coding screen!

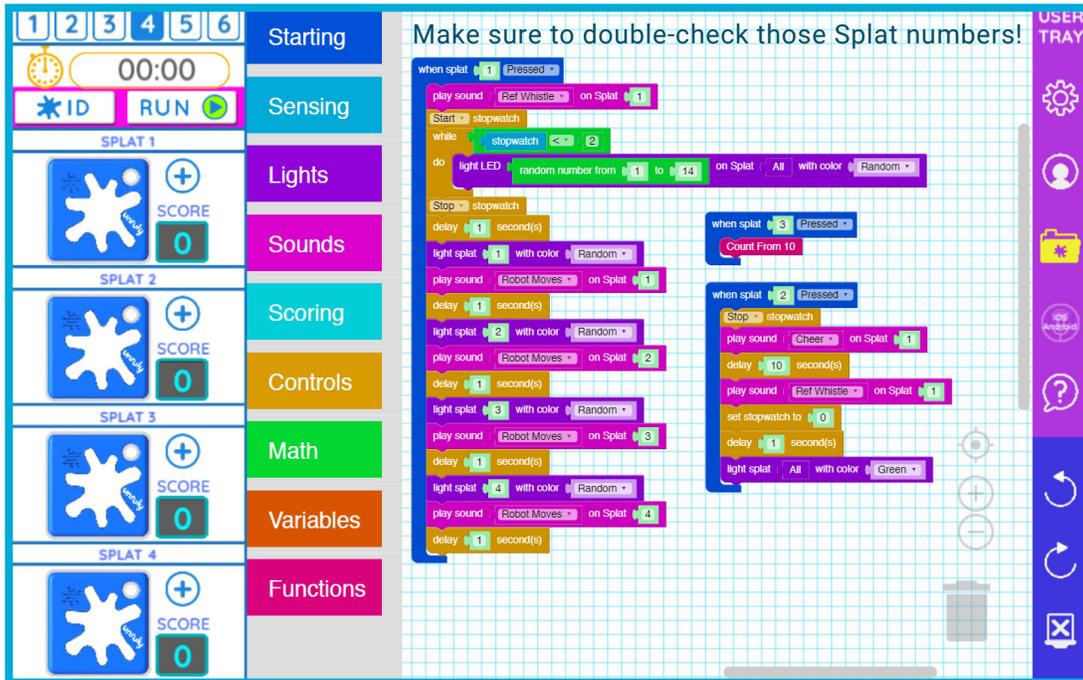


Reattach the **delay block** inside the **when splat 1 pressed** block. Make changes to the code we unsnapped previously so it matches the image below. You can find the Robot Moves sound inside the Sci-Fi sounds block.

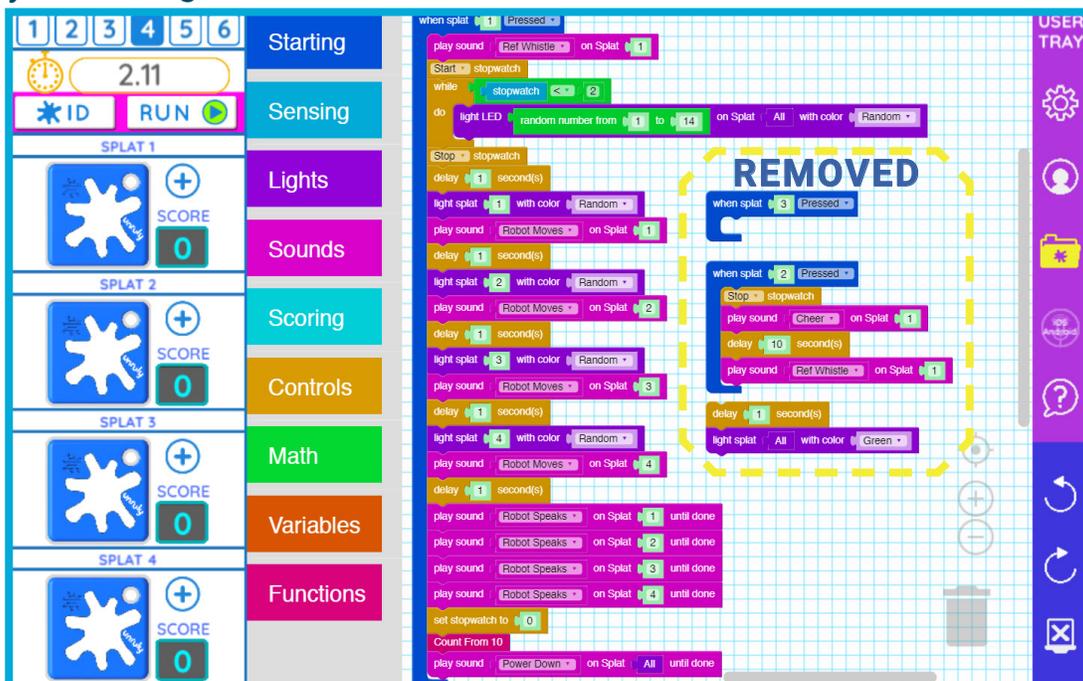


Snap all the code we just made into our **when splat 1 pressed** sequence, under the **delay** block. Your code should match the image below.

Get your duplication powers ready! Right click (or press and hold) on one of your **play sound robot moves** blocks and duplicate it three times. Click on **robot moves** and change it to **robot speaks**. Change the Splat numbers to one through four, then snap em' on!



After the robot speaks, set your **stopwatch** to zero, and snap in the **Count From 10** block, and don't forget to power down your dancing robot (meaning you, you are the dancing robot). Add a **play sound power down** block at the end so you don't get lost in the dance.



Last but not least, drag all your code out of when splat 1 pressed and into a when program starts block. Your code should match the image below!

The screenshot shows the Scratch programming environment. On the left is the 'Starting' palette with 'SPLAT 1' through 'SPLAT 4' buttons. The main workspace contains a 'when program starts' block with the following code:

```

when program starts
  play sound End Whistle on Splat 1
  Start stopwatch
  while stopwatch < 30
    do
      light LED random number from 1 to 14 on Splat All with color Random
    Stop stopwatch
    delay 1 second
    light splat 1 with color Random
    play sound Robot Moves on Splat 1
    delay 1 second
    light splat 2 with color Random
    play sound Robot Moves on Splat 2
    delay 1 second
    light splat 3 with color Random
    play sound Robot Moves on Splat 3
    delay 1 second
    light splat 4 with color Random
    play sound Robot Moves on Splat 4
    delay 1 second
    play sound Robot Speaks on Splat 1 until done
    play sound Robot Speaks on Splat 2 until done
    play sound Robot Speaks on Splat 3 until done
    play sound Robot Speaks on Splat 4 until done
    set stopwatch to 0
    Count From 10
    play sound Power Down on Splat All until done
  
```

On the right, a 'Count From 10' block is expanded, showing a sequence of 'say' and 'delay' blocks:

```

Count From 10
say 10
delay 1 second
say 9
delay 1 second
say 8
delay 1 second
say 7
delay 1 second
say 6
delay 1 second
say 5
delay 1 second
say 4
delay 1 second
say 3
delay 1 second
say 2
delay 1 second
say 1
delay 5 second
play sound Ref Whistle on Splat 1
  
```



HOW TO DANCE LIKE A ROBOT:

Robot Dance Party

Do you know what Crash's favorite activity is? Dancing! You will use this code to generate a robot dance routine.

Make sure your number of Splats is set to four and press RUN to start.

One by one, each of your Splats will light up a random color. After the robot sounds play, a countdown timer will start. During the countdown, look at the image below to see the moves you will be performing.

Make sure to check out [this video](#) demonstrating the dance moves!

FIND YOUR ROBOT COLORS!

RED

ORANGE

YELLOW

GREEN

BLUE

PURPLE

PINK

CYAN

GOLD

WHITE

FIND YOUR ROBOT MOVES!

POWER ON

RIGHT-CLICK

LEFT-CLICK

UNDO

REDO

REBOOT

MALFUNCTION

VIRUS SCAN

RED ALERT DANGER DANGER

POWER DOWN