



Example Activity

Designed for App Version 1.0

Spring 2019

Red [Splat], Green [Splat]

Activity Type	Exercise	<p>Use Splats to play "Red Light, Green Light". Splats are placed on the floor or table across the room. Students run towards their Splat when it is green, but must freeze when it turns red. Each group plays their own game, but it can also be played as a full-class.</p> <p>Students play with their own code in this activity.</p>
Time	30 minutes	
Space Required	Full Classroom, Running	
Materials	1 Splat & 1 iPad / Group	
Key Concepts	Repeat, Nesting	

Preparation	<p>Groups: Determine how many groups to divide your class into and distribute group materials. The largest recommended group size for this activity is four students.</p> <p>This activity has two parts—coding time and active play time. Each group will play with their own code, but feel free to do a finals round with the winners from each group!</p>
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Code Key

The screenshot shows the Splat 1 coding environment. On the left is a toolbar with categories: Starting, Sensing, Lights, Sounds, Scoring, Controls, Math, Variables, and Functions. A 'SPLAT 1' icon is visible. The main workspace contains a script starting with 'when program starts' followed by a 'repeat 30 times' loop. Inside the loop, the 'do' block contains: 'light splat 1 with color Red', a 'delay random number from 1 to 3 second(s)', 'light splat 1 with color Green', and another 'delay random number from 1 to 3 second(s)'. A 'USER TRAY' is on the right with icons for settings, user, and help.

Activity Outline	<p>1. Direct Instruction (10 minutes)</p> <ul style="list-style-type: none"> ○ Introduce the premise of Red Light, Green Light and explain how the Splats will be used to play. Tie the game to randomness -- the Random Number block will be used to switch between red and green. ○ Introduce all required blocks: When Program Starts, Repeat, Light Splat, Delay, Random Number. Show students the blocks and how to snap them together. <ul style="list-style-type: none"> ▪ Say: "Random is an important part of coding, and it can allow us to make some fun programs. The Random Number block works like a
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	<p>virtual die, you get to pick the number of sides and what number is on each side. We will use this block to randomize Splat color.”</p> <ul style="list-style-type: none"> ○ Review nesting, making sure students understand that some blocks must be placed inside others. Say: “The Repeat block repeats the code inside it a specific number of times. All of our code must be inside the When Program Starts block if we want it to happen when we press Run.” ○ Talk through the use of the Delay block. Say: “We want to randomly cycle between Red and Green lights on our Splats. In order for the computer to understand this, we tell it to light up Red wait for some amount of time and then light up green and wait again. Since this is inside our Repeat block, this will repeat a specific amount of time.” <p>2. Worktime (10 minutes)</p> <ul style="list-style-type: none"> ○ Support: To equalize iPad time, assign students a number/letter within their group. Designate time for each number/letter and indicate when it is time to switch. <p>3. Gameplay (10 minutes)</p> <ul style="list-style-type: none"> ○ Make sure there is enough space for all groups to play their games. ○ Have students record the winners from each group. <p>4. Showcase (5 minutes)</p> <ul style="list-style-type: none"> ○ Hold a final game with the winners from each group. ○ Regroup and review, announcing the winners from each round.
Support	<p>If students are struggling during worktime, consider these possible supports:</p> <ul style="list-style-type: none"> ○ Give groups the placement of When Program Starts and Repeat. Students can then fill in the remaining blocks ○ Show how to attach the Random Number block. <p>Struggling groups may also benefit from writing out each step on paper before beginning to code.</p>
Extensions	<p>Full Class: Add in the {Start} Stopwatch block, having it start when the program starts and stop when the Splat is pressed.</p> <p>Individual: Groups can add additional rules to their game and add colors/sounds</p>
Sharing	#UnrulyEdu #RedSplatGreenSplat #UnrulySplats