

SPLAT JACKS

GAME SETUP

2-4

PLAYERS



2

SPLATS



LET'S GET QUACKIN'!

GAME SUMMARY

UNRULINESS: Jumping in place

GAME RULES: Do jumping jacks with Bill

Build a program where Bill, your trainer, will keep you in good form for jumping jacks (Splat jacks). If done properly, Bill will let you know with a quack! (Bill is a duck.)

HOW IT WORKS

This code counts jumping jacks with conditional statements. Using the **AND** connector with **IF/THEN** blocks; the program senses when both splats are jumped on at the same time.

If Splat 1 and Splat 2 are pressed at the same time, both Splats will light up a random color, make a duck sound, and add a point to the score!

```
when program starts 1
  light splat All with color Gold

when splat Any Pressed
  if splat 1 pressed and splat 2 pressed
  do
    light splat All with color Random
    play sound Duck on Splat All
    change Splat 1 score by 1
```



SUGGESTED OUTLINE



INTRODUCE EXERCISE

Introduce the activity. Explain that students will be writing a program to count jumping jacks. Review the essential blocks, focusing on the **IF/DO** and sensing blocks.



WORK TIME

Have students brainstorm different ways to count jumping jacks using Splats. Support groups as they build their programs. Encourage groups to add additional blocks, or Splats! Have students build multiple mini-programs and test them out. Lead a full-class discussion to compare and contrast different options that groups developed.



GAME PLAY

Give groups time to test and play their games.



STUDENT SHOWCASE!

Have groups show off their Splatjack counter. If time allows, lead a competition!

GOING FURTHER

EXTENSION

Students can add a stopwatch or countdown timer for a Splat Jacks competition. By copying this code and changing the pair of Splats numbered in the **AND** block, Splat pairs 3 + 4 and 5 + 6 could be used for up to three players competing at the same time!

SUPPORT

Talk through what would happen if the code did not include the if/do block or the and connector block. These blocks are an easy way for us to add points only if someone does a correct Splatjack by stepping on both Splats at once.



CSTA STANDARDS

ALGORITHMS & PROGRAMMING

GRADES 3–5

1B-AP-08 ALGORITHMS	Compare and refine multiple algorithms for the same task and determine which is the most appropriate. (P6.3, 3.3)
1B-AP-10 CONTROL	Create programs that include sequences, events, loops, and conditionals. (P5.2)
1A-AP-13 DEVELOPMENT	Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences. (P1.1, 5.1)
1B-AP-15 DEVELOPMENT	Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended. (P6.1, 6.2)