

Instructional Day: Day 1 from Unit D, Part 3

Topic Description: Students learn how to use the Pick Random block in Scratch.

Objectives:

The students will be able to:

- Utilize the random number generator within their Scratch scripts.

Outline of the Lesson:

- Introduce the Pick Random block (5 minutes)
 - Show the students where to find the Pick Random block.
 - Explain that the block chooses a different random number in the given range every time the block is run in the script.
- Demonstration of Pick Random block (5 minutes)
 - Build the following script in front of the class to show how to use the Pick Random block:



```
when clicked
forever
  point in direction pick random 1 to 360
  move 50 steps
  wait 1 secs
  if on edge, bounce
```

- Demonstrate the use of the Pick Random block in a game (10 minutes)
 - Build the following script in front of the class to inspire students to use randomness in their Scratch games:



Sprite 1

```
when clicked
  go to x: 0 y: -100

when left arrow key pressed
  change x by -10

when right arrow key pressed
  change x by 10
```



Sprite 2

```
when clicked
forever
  go to x: pick random -240 to 240 y: 180
  repeat until y position of baseball = -180
  change y by -15
  wait 0.1 secs
```

- You can add additional ball sprites with identical scripts to make the game more challenging:



- Independent work in Scratch (20 minutes)
 - Have students create a game in Scratch that utilizes random number generation
- (Optional) Students write a journal/blog entry about what they learned (10 minutes)