



Girls Who Code At Home

Meteor Catcher Game: Part 5
Reference Guide

Meteor Catcher Game: Part 5 - Reference Guide



In this document you will find all of the answers to some of the questions in the activity. Follow along with the activity and when you see this icon, stop and check your ideas here.

Step 1: Reflect on your game's challenge

Where can we add randomness to the game to make it more challenging?

There are many places where we could add randomness. Here we will focus on the following properties of the meteor:

- starting location
- speed
- size

Make a note of your other ideas - you may want to include one when you start customizing your sketch!

Step 3: Update your pseudocode

There are different ways you can write this pseudocode, so if yours doesn't match exactly, that's ok!

- **Meteor starting location:** Set `meteorX` equal to a random value between 0 and 400. We could also say set it to a random value anywhere on the width of the x axis.
- **Meteor speed:** Set the value of the `speed` variable to a random value between 0.5 and 4
- **Meteor size:** Set the value of `meteorDiameter` to be a random value between 10 and 30

Step 5: Test Your Code

JAVASCRIPT

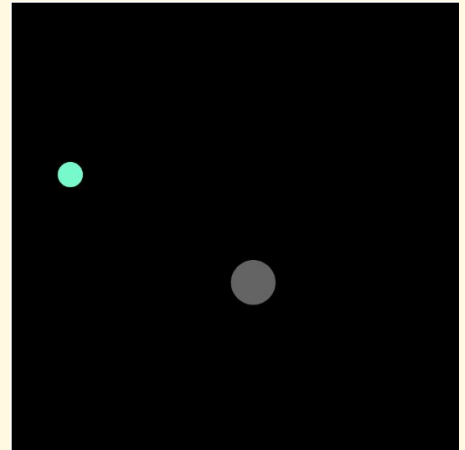
```
// Test to see if meteor and catcher have intersected
if (distance < 15) {
  // Redraw meteor to top of screen at a
  // random location on x-axis
  meteorY = 0;
  meteorX = random(width);

  // Set meteor speed to random number between
  // 1 and 4
  speed = random(1,4);

  // Set meteor diameter to random number
  // between 10 and 30
  meteorDiameter = random(10,30);
}

// Test to see if meteor has intersected with
// bottom wall
if(meteorY > height) {
  meteorY = 0;
  meteorX = random(width);
  speed = random(1,4);
  meteorDiameter = random(10,30);
}
```

RESULT



Click [here](#) to run the example sketch.

Step 6: Check for Understanding

Describe how this line of code would change the behavior of our catcher:

```
ellipse(mouseX, mouseY, random(80, 120), random(80, 120));
```

This line of code will change the size of oval shapes but continue to have a location that follows the mouse. If the ellipse is in `draw()`, the random value generated will change each loop.