



# Girls Who Code At Home

**Meteor Catcher Game: Part 3**  
Reference Guide

## Meteor Catcher Game: Part 3 - 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: Using variables in p5.js

#### JAVASCRIPT

```
let meteorX = 200; //store the X position of the meteor
let meteorY = 0; //store the Y position of the meteor
let meteorDiameter = 20; //store diameter of the meteor

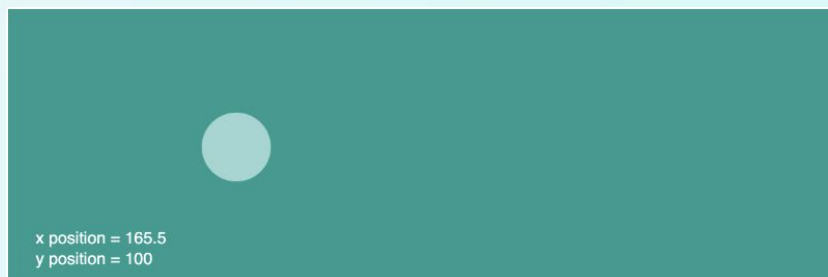
function setup() {
  createCanvas(400, 400);
}

function draw() {
  background(0, 0, 0);
  noStroke();

  //Draw the meteor
  fill(0, 254, 202);
  ellipse(meteorX, meteorY, meteorDiameter, meteorDiameter);
}
```

### Step 2: Make observations about motion

Examine this [sketch](#) and use your observations to write a line of pseudocode to tell the program how to move the ball.



There are many different ways you could write this. Here are a couple:

- Increase the value of x by a certain amount each time the program loops through.
- Add a small value to the **xPosition** variable in **draw()**.

### Step 3: Add motion to your meteor

#### JAVASCRIPT

```
let meteorX = 200;
let meteorY = 0;
let meteorDiameter = 20;
let speed = 0.5; //store speed of the meteor

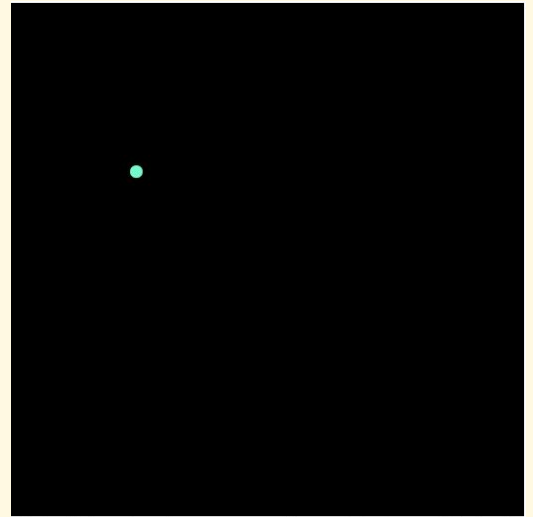
function setup() {
  createCanvas(400, 400);
}

function draw() {
  background(0, 0, 0);
  noStroke();

  //Draw the meteor
  fill(0, 254, 202);
  ellipse(meteorX, meteorY, meteorDiameter,
    meteorDiameter);

  // Make the meteor fall
  meteorY = meteorY + speed;
}
```

#### RESULT



**Note:** In this [example sketch](#) the meteor is programmed to reset. Your sketch will not do this until Part 5.

### Step 5: Check for Understanding

How would you change the speed equation to make the meteor move from the bottom of the screen to the top?

Use the subtraction arithmetic operator `-` instead of the addition arithmetic operator `+`. This would cause the y value to decrease after each loop and change the vertical position of the meteor:

```
meteorY = meteorY - speed
```