colorMode()

Changes the way color values are interpreted.

By default, the `Number` parameters for fill(), stroke(), background(), and color() are defined by values between 0 and 255 using the RGB color model. This is equivalent to calling `colorMode(RGB, 255)`. Pure red is `color(255, 0, 0)` in this model.

Calling `colorMode(RGB, 100)` sets colors to use RGB color values between 0 and 100. Pure red is `color(100, 0, 0)` in this model.

Calling `colorMode(HSB)` or `colorMode(HSL)` changes to HSB or HSL system instead of RGB. Pure red is `color(0, 100, 100)` in HSB and `color(0, 100, 50)` in HSL.

p5.Color objects remember the mode that they were created in. Changing modes doesn't affect their appearance.

Examples

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Fill with pure red.
  fill(255, 0, 0);

  circle(50, 50, 25);

  describe('A gray square with a red circle at its center.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Use RGB color with values in the range 0-100.
  colorMode(RGB, 100);

  // Fill with pure red.
  fill(100, 0, 0);

  circle(50, 50, 25);

  describe('A gray square with a red circle at its center.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Use HSB color.
  colorMode(HSB);

  // Fill with pure red.
  fill(0, 100, 100);

  circle(50, 50, 25);

  describe('A gray square with a red circle at its center.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(200);

  // Use HSL color.
  colorMode(HSL);

  // Fill with pure red.
  fill(0, 100, 50);

  circle(50, 50, 25);

  describe('A gray square with a red circle at its center.');
}
```

```
function setup() {
  createCanvas(100, 100);

  // Use RGB color with values in the range 0-100.
  colorMode(RGB, 100);

  for (let x = 0; x < 100; x += 1) {
    for (let y = 0; y < 100; y += 1) {
      stroke(x, y, 0);
      point(x, y);
    }
  }

  describe(
    'A diagonal green to red gradient from bottom-left to top-right with shading transitioning to black at top-left corner.'
  );
}
```

```
function setup() {
  createCanvas(100, 100);

  // Use HSB color with values in the range 0-100.
  colorMode(HSB, 100);

  for (let x = 0; x < 100; x += 1) {
    for (let y = 0; y < 100; y += 1) {
      stroke(x, y, 100);
      point(x, y);
    }
  }

  describe('A rainbow gradient from left-to-right. Brightness transitions to white at the top.');
}
```

```
function setup() {
  createCanvas(100, 100);

  // Create a p5.Color object.
  let myColor = color(180, 175, 230);
  background(myColor);

  // Use RGB color with values in the range 0-1.
  colorMode(RGB, 1);

  // Get the red, green, and blue color components.
  let redValue = red(myColor);
  let greenValue = green(myColor);
  let blueValue = blue(myColor);

  // Round the color components for display.
  redValue = round(redValue, 2);
  greenValue = round(greenValue, 2);
  blueValue = round(blueValue, 2);

  // Display the color components.
  text(`Red: ${redValue}`, 10, 10, 80, 80);
  text(`Green: ${greenValue}`, 10, 40, 80, 80);
  text(`Blue: ${blueValue}`, 10, 70, 80, 80);

  describe('A purple canvas with the red, green, and blue decimal values of the color written on it.');
}
```

```
function setup() {
  createCanvas(100, 100);

  background(255);

  // Use RGB color with alpha values in the range 0-1.
  colorMode(RGB, 255, 255, 255, 1);

  noFill();
  strokeWeight(4);
  stroke(255, 0, 10, 0.3);
  circle(40, 40, 50);
  circle(50, 60, 50);

  describe('Two overlapping translucent pink circle outlines.');
}
```

Syntax

```
colorMode(mode, [max])
```

```
colorMode(mode, max1, max2, max3, [maxA])
```

Parameters

mode	Constant: either RGB, HSB or HSL, corresponding to Red/Green/Blue and Hue/Saturation/Brightness (or Lightness).
max	Number: range for all values.
max1	Number: range for the red or hue depending on the current color mode.
max2	Number: range for the green or saturation depending on the current color mode.
max3	Number: range for the blue or brightness/lightness depending on the current color mode.
maxA	Number: range for the alpha.

This page is generated from the comments in src/color/setting.js . Please feel free to edit it and submit a pull request!

Related References

background
Sets the color used for the background of the canvas.

beginClip
Starts defining a shape that will mask any shapes drawn afterward.

clear
Clears the pixels on the canvas.

clip
Defines a shape that will mask any shapes drawn afterward.