Lesson 13: RGB Colors and Classes

Web Lab

Overview

In this lesson, students first learn how to specify custom colors using their RGB (red, green, blue) values. They then apply these colors to a new Four Seasons web page, which uses CSS classes. CSS classes allow web developers to treat groups of elements they want styled differently than other elements of the same type. Using classes, students add more styles to the Four Seasons web page, then use them to style their personal websites.

Purpose

Up until this point, the only styling students have been able to do is styling by element, which means that every element of a particular kind has the same style. Classes allow for web developers to group together a set of elements they want to style. This means students can single out a certain element they want to style or group together elements from one or more types of elements. Once elements are in a class, the class can be used as a selector in a style rule.

Note: Single elements can also be selected by id, but this type of selection is possible with a class applied only to that single element. Because id selection does not add any extra functionality, it is not taught in this course.

Agenda

Warm Up (5 minutes)
    RGB Colors Matching
Activity (40 minutes)
    RGB and Classes
Wrap Up (5 minutes)
    Journal: Reflecting on the Practices

View on Code Studio

Objectives

Students will be able to:

- Group elements using classes in order to create more specific styles on their website.
- Apply the rgb() color function to add custom colors to their website

Preparation

☐ Print a copy of **RGB Colors - Activity Guide** for every student.

Links

> **Heads Up!** Please make a copy of any documents you plan to share with students.

For the Teacher
- **RGB Colors** - Key

For the Students
- **RGB Colors** - Activity Guide [Make a Copy ▾]

Vocabulary

- **CSS Class** - An identifier that allows multiple elements in an HTML document to be styled in the same way

Introduced Code

- `rgb(red, green, blue)`

Teaching Guide

Warm Up (5 minutes)

RGB Colors Matching

🎤 *Remarks*

> So far, you've been using color names to choose colors for your web pages. That means that you can only use the colors that someone else has already thought of. Today, you're going to learn how to mix new colors for your pages.

Distribute: Hand out the **RGB Colors - Activity Guide**.

Transtion: Send students to Code Studio to use the RGB widget at the beginning of this progression to complete the activity guide. You may want to answer one question together, then allow students to work in pairs to complete the first activity.

🎤 *Remarks*

> On the computer screen, we mix colors by combining red, green, and blue. In the next few levels, you'll have a chance to use the color mixer to choose your own colors, then put them into a web page.

Activity (40 minutes)

RGB and Classes

Transition: Once students have completed the warm up, allow them to continue working through the remaining levels.

🖥 Code Studio levels

Lesson Overview 🖥️ | Teacher Overview | | Student Overview |

View on Code Studio to access answer key(s)   **View on Code Studio**

RGB Widget 🗔 | Student Overview |

RGB Exploration | 🗔 3 | 🗔 4 | 🗔 5 | 🌐 6 | *(click tabs to see student view)*

CSS Classes 📖 | Student Overview |

Styling with Classes | 🌐 8 | 🌐 9 | 🌐 10 | 🌐 11 | *(click tabs to see student view)*

Wrap Up (5 minutes)

Journal: Reflecting on the Practices

Journal: Have students update their "CSS Properties" page in their journal with the new information they've learned about classes.

Journal: Have students reflect on their development of the five practices of CS Discoveries (Problem Solving, Persistence, Creativity, Collaboration, Communication). Choose one practice you thought was especially important for the activity we completed today. What made it so important?

Standards Alignment

View full course alignment

CSTA K-12 Computer Science Standards (2017)

▶ **AP** - Algorithms & Programming