

Lesson Purpose

The purpose of this lesson is to teach scholars about the syntax of HTML, namely text tags.

Lesson Summary

Do now

Tags – 6 min

Explore

Element Sandwich – 6 min

Explore

Tag That – 12 min

CFU

Tags – 3 min

Create

Class Website – 16 min

Explore

How to Share Your Website – 2 min

Objectives

SWBAT utilize <h> and <p> tags to develop website

AP CS Principles Standards

EK 1.2.4A A collaboratively created computational artifact reflects effort by more than one person.

EK1.2.4C Effective collaborative teams practice interpersonal communication, consensus building, conflict resolution, and negotiation.

Vocabulary

Tag: Command that tells the browser how to display text or graphics.

Opening tag: Begins a new HTML element.

Closing tag: Ends an HTML element and contains a backslash.

Line number: Found in the lefthand column, useful to talk about elements within an editor.

Webpage: A hypertext document connected to the World Wide Web.

Website: A location connected to the Internet that maintains one or more pages on the World Wide Web.

New and Prioritized Code

<p>...</p> - paragraph tag, creates paragraph style text.

<h1>...</h1> - heading tag, create heading text. Ranges from 1 - 6 in descending size.

Do Now

Tags – 6 minutes

Say

Now that we have our CodePen accounts and started to get used to the way CodePen works, let's make some websites! There are a few things that you discovered yesterday when working on that poster that we should talk about. Read the Do Now questions independently, and then we will compare our responses as a class.

1

4 minutes – Answer questions independently

2

2 minutes – Whole class discussion

Directions

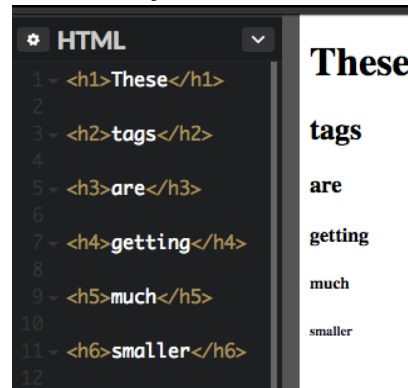
Read the definition of HTML and Tags aloud for students. Give scholars 4 minutes of silent work time and then cold call responses. Make a list of what students notice and wonder on the board as scholars are responding. Tell scholars that there are different types of tags. H tags are header tags and p tags are paragraph tags. H tags have numbers assigned to them to tell you how big the font will be. The smaller the number, the bigger the font. Paragraph tags don't have numbers assigned to them. Today, and the rest of the web design unit, we will be using these tags to create websites.

Student View

Question 1: HTML is a website development language that is used to add text and graphics to a website.

Tags tell the browser how to display text or graphics.

What do you notice?



The screenshot shows a CodePen editor with the following HTML code:

```
1 - <h1>These</h1>
2
3 - <h2>tags</h2>
4
5 - <h3>are</h3>
6
7 - <h4>getting</h4>
8
9 - <h5>much</h5>
10
11 - <h6>smaller</h6>
12
```

To the right of the code, the rendered output is shown:

These
tags
are
getting
much
smaller

Question 2: What do you wonder?

Exemplar Answers

Answers will vary; There are less than symbols, the same words are on both sides, there are numbers.

Answers will vary; I wonder how this happens, what they're used for, what they're called.

Explore

Element Sandwich – 6 minutes

Directions

Show scholars the structure of a tag in question one, and then give them one minute with their shoulder partner to try to type that first tag. Write the correct response on the board and show scholars where on the keyboard the slash and the angled brackets are. Next, show scholars the element sandwich and give them one minute with their shoulder partner to answer the question. This image is another way for students to think about text tags. Another real world connection is to compare text tags to a door. Just like when you open a door, you also need to close it, when you open a text tag, you also need to close that. CodePen does not automatically close tags for scholars, so it's easy to forget. If scholars learn proper syntax now, they will be able to debug their projects more efficiently in the coming lessons.

1

2 minutes - Answer questions in shoulder partners

2

4 minutes - Whole group discussion

Teacher Tips

For younger grades, it is helpful to have scholars show the difference between an opening tag and a closing tag with their hands. For example, a closing tag would look like two hands in the shape of greater than and less than symbols. An opening tag would look like one hand at a slant to represent a backslash.

Student View

Question 1: Tags tell the browser how to display text or graphics.

Everything in HTML needs to be within tags.

Element		
Opening Tag	Text	Closing Tag
<code><h1></code>	Hello World	<code></h1></code>

Type an h1 tag using the words "Computer Science is cool."

Question 2:

Element Sandwich



`<bread>Lettuce and meat</bread>`

`<tag>Text</tag>`

How is a closing tag different from an opening tag?

Exemplar Answers

```
<h1>Computer Science is cool</h1>
```

A closing tag has a backslash and an opening tag doesn't.

Explore

Tag That – 12 minutes

Directions

The purpose of this section is to get scholars familiar with the details of tags. There is a worksheet attached that allows scholars to begin by writing down tags. If your students are younger and not as familiar with typing, this might be your best option. Otherwise, they can type the text tags directly into the CodePen Editor. As the instructor, you can't see what students type in the editor on your screen like you can submitted responses on the platform. You can see what they type on their screen as you're circulating.

1

12 minutes – Whole group discussion

Student View

Question 1: Let's practice typing tags! Use the worksheet given to you by your teacher or type the text tags inside the CodePen editor.

Students have access to an embedded CodePen Editor.

Paste your code below.

Exemplar Answers

[Exemplar](#)

Teacher Tips

Students might need assistance with where to find the greater than and less than symbols on the keyboard. Model where they are for students and show them how to use the shift key. Similarly, model for scholars how to toggle between views on the embedded CodePen Editor, so students can see both the HTML and the Result at the same time.

CFU

Tags – 3 minutes

Directions

Have scholars complete the CFU questions before moving on to the next section. Identify scholars who are struggling and address their misunderstandings either individually or in a small group. Pull these scholars during the next challenges section to close any gaps.

1

3 minutes - Answer questions independently

Student View

Question 1: Which of the following is a correct `<h2>` tag?

Question 2: Write a `<p>` tag using the words "I like ice cream." *Be sure to include an opening and a closing tag.*

Exemplar Answers

```
<h2>Hello</h2>
```

```
<p>I like ice cream</p>
```

Class Website - 16 Minutes

Circulate as scholars are working in shoulder partners. Target students who struggled on the CFU's and in the Tag That section. If you notice scholars as a whole group are still having trouble typing or are forgetting slashes in their closing tags, pull the whole group back together and model the mistake and have scholars fix it in shoulder partners. Then release scholars to continue working in shoulder partners.

Student View

Exemplar Answers

Congratulations! Your teacher has chosen you to make a website for your computer science class. Using the CodePen editor, complete the following challenges.

Students have access to an embedded CodePen Editor

Challenge 1:

Make an h1 tag with your teacher's name as the title.
Example: Ms. Bennett's Class

Challenge 2:

Make an h3 tag with the days and time that you have class.
Example: Everyday from 9AM-10AM

Challenge 3:

Write a 1-2 sentence description inside of a p tag of what you've learned in class so far this year.

[Exemplar](#)

Student View

Exemplar Answers

Challenge 4:

Give yourself credit for writing the website in an h6 tag. *Example: Written by Jonathan Jones*

Bonus Challenge

Add comments that describe your code

Example:

```
1 <!-- My name -->
2 <h1>Ms. Bennett</h1>
```

Paste your code or your link below.

Explore

How to Share Your Website – 2 minutes

Directions

As a whole group, model the process of sharing pens. Based on student need, either have scholars work through step by step or allow scholars to use the directions to complete the publishing independently. Remind students about the keyboard shortcuts for copy and paste. Keyboard shortcuts and a copy of this section are available for reference for scholars in the Resources Lesson. Scholars can go back to that any time they need to remember how to publish their website.

1

2 minutes – Show scholars how to share their website

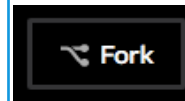
Student View

How to Share Your Website

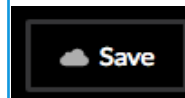
In the CodePen Editor, click on "Edit on CodePen"



Make sure that you're signed in, then fork the project



Change the name of your pen and then click Save



Click on the link to your project in the url bar

<https://codepen.io/republicschools/pen/KmpJGV?editors=1100>

Using *ctrl + c*, copy the link

Using *ctrl + v*, paste the link into the submit box