



1: HTML Basics

Learning Objectives

Students will learn HTML basics.

CSTA Standards (3)

1B-AP-11: Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process.

1B-AP-12: Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features.

1B-AP-15: Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended.

Materials Needed

Skill Struck platform

Student computing devices

Supplemental Materials

[Algorithms Poster](#)

[HTML Printable Cards](#)

[Web Development Track - Effort Rubric](#)

Professional Development

View resources in Community Plus [↗](#)

Activities

Time Estimate: 50 min

Warm-up/Wrap-up

Demo

Platform

Class Activity

Extra Activity

Name	Description
Extra Activity Optional Ice Breaker Idea	*Note: These additional activities do not currently have supplemental materials or resources available in the educator portal. Error Code Icebreaker Students introduce themselves and name something silly that could be their "glitch" if they were a robot (e.g., "Hi, I'm Mia. My robot glitch would be dancing every time someone says 'math!'").



Name	Description
Warm Up 5 min	Ask students to share with the class or in small groups what their favorite websites are and to share what it is they like about them. Write HTML up on the board and explain how HTML is a programming language. It is the programming language used to build websites. Pull up an example website such as your school homepage and discuss different characteristics like the headings, paragraphs, and colors. Explain that all of these characteristics show on the webpage because of HTML programming Explain that in this unit students will be learning some HTML basics.
Teacher Demonstration: HTML Basics 20 min	Ask students to share with the class or in small groups what are some characteristics they see when they visit a website. Write HTML up on the board and explain how HTML is a programming language. It is the programming language used to build websites. Explain that in this unit students will be learning some HTML basics. This lesson uses text based code to teach HTML in 3rd-5th grade. However, if you prefer to teach HTML using block-based code (drag and drop), scroll to the bottom of the lesson plan. Demonstrate the concepts in the HTML Basics lesson. Consider doing this by modeling how to write an HTML tag in the code playground. The steps for modeling this are shown below. The code playground can be found by navigating to your profile settings. Go to the Code Playground to teach the following: 1. Type <code><h1>Hello World</h1></code> and tell students this is how you type a header tag. Explain that a tag is a line of code. 2. Explain that <code><h1></code> is the opening tag. The opening tag is like the capital letter on your sentence. It tells the computer that this is the beginning of your tag. 3. Next, explain that <code></h1></code> is the closing tag. The closing tag is like the period in your sentence. It tells the computer that this is the end of your tag. 4. Explain that anything typed in between the opening and closing tags will show on the website. 5. Give students time to practice typing a few header tags. 6. Then, send them back into the lesson to complete the checkpoint, quiz, and challenges using syntax code.
Platform: HTML Basics Lesson 20 min	Students complete the platform lesson.
Wrap Up 5 min	Ask students to share what obstacles they ran into as they were coding and what solutions they found. Explain that finding and fixing mistakes in code is also called "debugging." Students will practice finding bugs and creating solutions throughout their coding experience. A good rule of thumb to implement is for students to either 1) look at their code for 2 minutes before asking for help and/or 2) asking the person on their left and right to look before asking the teacher if they cannot figure out what's wrong. This will save you time with helping other students in the classroom.

Activities for Further Learning



Name	Description
Extra Unplugged Activities	If you have additional time, below are some additional ideas for activities you can do with the class. • Extend the dance class activity. Have students teach their dance to the class. As a whole class, have students figure out the algorithm. • Paper Airplane Algorithm 1. Teach students how to make a simple paper airplane. 2. Challenge them to write step-by-step instructions (algorithm) for making it. 3. Have them exchange their algorithms with a partner to see if they can successfully recreate each other's airplanes • Complete the Algorithm 1. Provide students with the first step of instructions and the last step. Some possible instructions include: • Make Scrambled Eggs: Get out the egg carton and cheese; Enjoy your scrambled eggs • Paint a rainbow: Get out your paintbrush, water cup, and piece of paper; Hang your finished picture on the refrigerator 2. Have students either whole class or with partners, fill in the rest of the algorithm. 3. Further the activity by having students give the first and last step instructions to other students to complete.
Block-based Code	If wanting to teach HTML using block-based code, first ensure your settings are set up correctly. 1. Click the avatar on the top corner of your screen that says "View My Profile" when hovered over. 2. Under Code Settings, select "Blocks (drag & drop)" Teach what HTML tags are with the following explanation. Navigate to the Code Playground, which can also be found in the Profile settings on the right side. Model this for students first. To create a header tag using HTML Blocks: 1. Click on the word Blocks 2. Drag the block that says header level 1 into the code editor 3. Next, drag the text block and click it within the header block 4. Type Hello World! in the text block 5. Tell students that what they see showing on the right side is how it would look on a website! 6. Click Save, then Click Run
Extension and Remedial Ideas	Extension Opportunity: Teachers can challenge students to find an error in a pre-written "buggy" HTML document and rewrite it perfectly, explaining the syntax rules they applied. Students can also begin drafting a wireframe for a multi-page website they want to build in the future. Remedial Resources: For students needing extra support, teachers can use physical "tag" blocks (like Lego bricks labeled with <p> and </p>) to physically build the structure of an HTML element before typing it. A coloring worksheet where opening tags, content, and closing tags are color-coded can help students visualize the syntax.

