ACTIVITY TITLE: Code for Safety: Create Your First Web Page to Keep the Internet Safer

Activity Code: ncWITEC01

⧖ DURATION	60 minutes
☻ AGE RANGE	13–14 years
⚛ TOPICS	Technology Coding Inclusion Design Global Digital Citizenship

🗨 Description of the project

In this inclusive and creative digital activity, students will step into the role of ethical web designers to create an accessible web page that promotes digital safety for all. The project connects basic coding skills with real-world ethical issues like cyberbullying, online fraud, and privacy.

Students will explore essential technical concepts (HTML tags, inline styles, semantic structure) and social themes (gender equity, cultural diversity, and digital inclusion). They will examine how online risks affect different communities and how web design can communicate safety messages clearly and respectfully.

By the end of the session, students will:

- Build and present a working HTML web page focused on a key digital safety tip.

- Apply accessibility and inclusive design principles (contrast, font size, alt text).

- Reflect on how culture and gender shape digital experiences.

- Justify their design decisions using real-world case studies and inclusive visual storytelling.

🎯 Objectives: What will I learn?

- **Learn to understand the basic structure of a web page** using HTML, by creating a simple and semantically organized site, in order to communicate information clearly and responsibly online.

- **Learn to communicate an online safety message grounded in real-world risks**, by selecting a relevant topic (e.g., scams, password protection) and writing user-focused content, in order to promote ethical digital behavior in their communities.

- **Learn to apply inclusive visual design practices**, by using headings, lists, alt text, and basic styling,

in order to ensure that their website is accessible to diverse users with different needs.

- **Learn to justify their design and content choices**, by reflecting on user needs, cultural relevance, and inclusive design principles, in order to develop socially responsible and user-centered digital tools.

- **Learn to collaborate in rotating roles within a team**, by engaging as coders, designers, researchers, and presenters, in order to promote equal participation and leadership—especially for female and underrepresented students.

- **Learn to reflect on gender equity and cultural practices related to digital safety**, by exploring their own regional or family experiences, in order to recognize how social identity affects digital inclusion and risk.

Materials: What do I need?

1. **Provided by the teacher/institution (tools, software, physical materials).**
   - Sample HTML file
   - Projector/screen for demonstration
   - Printed Inclusive Design Checklist & Reflection Sheet
   - Female Cybersecurity Experts' Profiles (e.g., Parisa Tabriz, Tracy Chou)
   - Design Thinking Steps Poster (empathy > define > ideate > prototype > test)

2. **Provided by students (computer, internet access, notebook, pencils).**
   - A laptop or tablet with internet
   - Text editor (Replit, Notepad++, or VS Code)
   - Notebook and pencil

3. **Downloadable resources (guides, templates, reference examples).**
   - [HTML Starter Template](#)
   - [List of online safety tips](#)
   - [Inclusive Design Checklist](#)
   - [Female Role Models in Cybersecurity cards](#)
   - [HTML tag reference sheet](#)

Previous preparation

- **Review profiles of female cybersecurity leaders:**
  Before launching the activity, the teacher prepares students by introducing both the technical foundation and the social purpose behind the project. To begin, students explore the world of cybersecurity through the inspiring stories of women leaders in the field—figures like Parisa Tabriz (Google), Katie Moussouris (Luta Security), and Anne Neuberger (NSA). Whether through short bios, interviews, or video profiles, this step helps humanize cybersecurity and actively

- **Divide students into inclusive, diverse teams of 2–3 and assign rotation roles**:

  Once the class is energized, students are divided into small, inclusive teams of 2 to 3, ensuring a mix of genders, experience levels, and backgrounds. To build trust and cohesion, brief team-building activities can be used before assigning technical tasks.

  Each team is then introduced to a rotating role system to promote equity and skill development across the group (Rotating roles helps all students gain experience across the project and prevents bias-based role assignments). Roles include:

  o HTML editor (responsible for writing and refining the code)

  o Visual designer (who focuses on layout, color, and accessibility)

  o Reviewer (who ensures clarity, accuracy, and inclusive design).

  Students will rotate these roles during the activity so everyone learns each part of the process.

- **Teacher introduces HTML tags and the design checklist**:

  HTML Tags: Teach basics like <html>, <head>, <body>, <h1>, <p>, <a>, <img>, etc. In order to make it easier to understand, provide a design Checklist which includes practical criteria for inclusive and accessible web pages, such as:

  o Clear navigation

  o Consistent fonts and color palettes

  o Accessible contrast and alt text

  o Mobile-friendly layout

  Then, to ensure a smooth technical experience, students complete a short setup process. They open the HTML Starter Template in a text editor or browser-based platform like Replit. Each student checks that their device is charged, internet-connected, and capable of displaying .html files in a browser like Chrome or Firefox. The teacher also reviews how to properly save files with a .html extension to avoid compatibility issues.

- **Share national/international online safety statistics:**

  To ground the activity in real-world relevance, the teacher shares recent data and statistics related to digital safety. These may include national or global reports on cyberbullying rates, data breaches, phishing trends, and especially gender-based disparities in online harassment. This step not only strengthens the project's purpose but also helps students see how their design choices can contribute to safer, more inclusive digital spaces

Have a look at these resources

Why This Matters – Context and Relevance

The internet is one of the most powerful tools for learning, communication, and creativity, but it also exposes users to risks such as scams, cyberbullying, surveillance, exploitation, and misinformation. These risks are not equally distributed. Girls, younger users, LGBTQ+ youth, and ethnic minorities often face greater threats online, ranging from targeted harassment to algorithmic bias.

For example,

- A Pew Research Center study found that 72% of teens are exposed to misinformation online.
- According to UNICEF, one-third of youth globally have been cyberbullied, and many don't know how to report it.
- Inclusive, student-led design projects have been shown to increase empathy and digital engagement.
- The Global Cybersecurity Index shows strong safety systems at the national level—but emphasizes that individual awareness is still the first line of defense.

This activity invites students to take a stand against these digital threats through creativity and code. By designing inclusive and accessible web pages on digital safety topics, they'll become ethical creators, not just consumers, of technology.

Guiding Questions to Spark Reflection and Inquiry:

- What makes some people more vulnerable to online harm than others?
- Why do some online platforms seem safer than others? Who creates the rules—and who enforces them?
- How do design choices (e.g., comment sections, anonymity features) impact online behavior and harm?
- Have you or someone you know ever felt unsafe online? What helped (or didn't)?
- How do your parents or older relatives think about digital safety? What advice have they given you?
- In what ways do digital safety concerns differ across countries or cultures?
- How do values like privacy, free speech, and identity vary across generations or cultures?
- In what ways can we code with empathy to make the internet safer for everyone?
- How can we build websites and tools that reduce harm rather than increase it?

CREATE

Some things you need before beginning

Before you dive into building your web page, here are a few powerful facts to help you understand why this work matters, not just technically, but socially:

• **HTML is the language of the web**: It's used on more than 95% of websites around the world. Learning it means you can create your own space on the internet, and not just consume what others have built.

• **Design can include—or exclude—people**: 1 in 7 people worldwide live with a disability. Websites that don't use things like alt text, readable fonts, or color contrast can leave users behind. Inclusive design makes content reachable for everyone.

• **Online safety isn't equal for everyone**: Research shows that girls, LGBTQ+ youth, and marginalized communities face more harassment, data risks, and biased algorithms. That's why designing for empathy matters.

• **Color and layout affect trust**: Studies in UX (User Experience) show that sites with clean layout, calm colors, and logical flow are seen as more trustworthy—which is especially important for digital safety messages.

• **Coding is a civic skill**: The internet influences what we see, believe, and do. Knowing how to build ethical and inclusive pages helps shape a safer and more respectful digital culture.

Now, follow these steps

Step 1. Choose a Digital Safety Tip:

Explore a list of online safety tips from around the world. Each tip addresses different concerns, like cyberbullying, privacy, fake news, and online respect. Choose one that feels important to you or your community.

For example:

- "Don't share personal information with strangers online."
- "Think twice before sharing something—check if it's true."
- "Speak up if you or a friend is being bullied."

Step 2. Open the HTML Template:

A basic HTML template and a HTML tag reference sheet will be provided by the teacher. This might look like a simple page with a heading and a few placeholder paragraphs. You'll start editing this template to

make it your own.

Learn how the HTML structure works—what tags like <h1>, <p>, and <ul> mean—and begin replacing the content with your chosen safety tip. If this is your first time using HTML, don't worry! The teacher will walk you through the key parts step by step. This video might help understanding the concepts: [HTML in 5 minutes](#).

Step 3. Add a Personal Paragraph:

Now, it's time to make the webpage more meaningful. Write a short paragraph (3–5 sentences) that connects the tip chosen to your own life since this step adds a human voice to your page, one that makes people listen. Explain why this tip matters to *you* and think of a real-life story or context: Why is this issue common in your culture or age group? Have you or someone you know faced this kind of risk? You could include:

● A situation where you or someone you know could have used this advice.

● Why does this topic matter to teens in your school or culture.

● A statistic from real research (provided by the teacher) to show how serious the issue is.

Step 4. Create a List of Safe Practices:

Under your paragraph, add a bulleted list (<ul> and <li> in HTML) with 3–5 clear, simple actions someone could take to stay safe. These should be short and practical, like:

● Don't share your password—even with friends.

● Block and report users who make you uncomfortable.

● Check the source before sharing a post or video.

Step 5. Insert an Image with Alt Text:

Find an image that helps tell your story—maybe a visual metaphor (like a lock for privacy or a shield for safety). Insert it using the <img>tag, and be sure to add descriptive alt text, which explains the image for people who use screen readers or have slow internet. For example:

Ht

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<img src="safe_internet.png" alt="Teen using a phone with a shield icon for protection">

Step 6. Style Your Page with Inline CSS:

Now it's time to make your page look good and easy to read. Use inline CSS to adjust font sizes, text

alignment, and background colors. Think about contrast—like dark text on a light background—so that your content is readable for everyone. You might do something like:

html

CopyEdit

```html
<p style="font-size:18px; color:#333;">Stay safe online by...</p>
```

Step 7. Optional Eco-Design Tip:

Did you know that websites with heavy media or inefficient code use more energy—and that affects the planet? For this project, try to keep your design lightweight:

- Use simple code and avoid large images or unnecessary effects
- Choose web-safe fonts and minimal styles to reduce file size
- Think about how digital reuse works—can you redesign a common message about safety in a fresh way?

Add a note to your page (as a comment or short paragraph) on how your design choices support sustainability—either by saving energy, reusing ideas, or promoting thoughtful digital use. For example, the output could be:

```html
<!-- We used a small image and simple layout to keep our page lightweight and eco-friendly -->
<p style="font-size:16px;">By designing a simple, accessible page, we reduce digital waste and help make the web more sustainable for everyone.</p>
```

Step 8. Use the Inclusive Design Checklist:

Before finishing your project, review your work using the inclusive design checklist provided in class. Ask:

- Can someone with vision difficulties read this easily?
- Are the colors and fonts clear and consistent?
- Does this design respect all kinds of users, across gender, culture, or ability?

Step 9. Add a Reflection on Culture and Gender:

Create a short section on your page where you answer: "Who is this message for?" and "Why do they need it?" Talk about how people from different backgrounds may experience online safety differently. For example, you might mention how girls, younger users, or people from certain cultures face unique risks online.

In addition to writing about who your message is for and why they need it, think about how your culture, region, or family traditions approach safety, communication, or trust. You might:

- Include a traditional saying, proverb, or story that reflects the idea of caution, protection, or respect.

- Reflect on how digital safety values today compare to what your elders or community might emphasize offline.

Step 10. Peer Review and Improve:

Finally, swap projects with another team for peer review. Each team will give constructive feedback: Is the tip clear? Is the design easy to follow? Are the facts correct? After reviewing each other's work, make final edits together and submit your finished webpage.

COMMUNICATE

After completing the webpage on digital safety, teams will share their work with the class—and potentially with the world. This final step is your chance to explain not just what it has been built, but why it matters, who it helps, and how the voices of students have been used to build something responsible, inclusive, and meaningful:

1. Each group will give a short (3–5 minute) presentation to the class. They will walk everyone through their HTML webpage, highlighting the design, message, and choices.

2. Reflect on the topic and make it personal. Students should answer to the following questions:
   - What made you choose this specific safety tip?
   - Is it a problem you or someone you know has experienced?
   - How might this advice help other teens in your school or around the world?

3. Explain what community or group they had in mind and answer to:
   - Does your message support a specific group (e.g., younger kids, girls, LGBTQ+ teens, or students in another country)?
   - How did you design your content and language to make sure they felt seen, safe, and respected?

4. Talk about how their team worked together fairly by answering to:
   - Did everyone get a turn in every role—coding, designing, reviewing?
   - Did you support and listen to each other's ideas, especially across gender lines?
   - How did you make sure all voices were respected?

It is time to share!

Share your work online with #CodeForSafety:

- LinkedIn: https://www.linkedin.com/company/steambrace-project/posts/?feedView=all

- Instagram: https://www.instagram.com/steambrace_eu/

- X: https://www.instagram.com/steambrace_eu/

💡 KEEP ON LEARNING

🧠 How can I make a similar project by myself?

- What was the most challenging part of building your first webpage?

- How did using a tool like Replit or VS Code make the process easier or harder for you?

- Which HTML tag or design decision were you most proud of using — and why?

- How did researching a digital safety tip or personal story change how you see the internet?

- What surprised you most about the stories or statistics you found?

- If you could redesign your message for a different audience (e.g., younger kids, older adults), what would you change?

- What design choices did you make to help everyone understand your message clearly?

- How did using the inclusive design checklist affect your final webpage?

- Would someone with vision or reading challenges find your site easy to use? Why or why no

- If you created another webpage about a different issue (like mental health or climate change), what topic would you choose — and why?

- How could you apply what you learned about web design and accessibility to help people in your school or community?

- What would you add to your next project now that you understand HTML, storytelling, and inclusive design?

🔵 Which are other connected projects?

Build an "Anti-Bullying Awareness" Campaign

- Collect real-life stories from peers (anonymous or fictionalized).

- Design a website or digital poster to raise awareness about the emotional and social impacts of bullying.

- Include interactive tips, support links, and visual metaphors (e.g., broken chains, open doors).

Create a Tribute Page to Women in Tech

- Research women innovators from different regions or historical periods.

- Create a timeline, tribute page, or multimedia gallery.

- Use visual storytelling to show how gender equity impacts progress in technology.

Design a Multilingual Health Tip Microsite

- Collect health or well-being tips (mental health, hygiene, nutrition) relevant to your culture or community.

- Translate them into multiple languages spoken in your school or area.

- Use inclusive symbols and colors to make the page accessible to all.

Develop a Youth Privacy and Safety Toolkit

- Turn complex data privacy concepts (cookies, tracking, digital footprint) into a student-friendly infographic or microsite.

- Add a "Did you know?" section with facts and tips about how to protect personal data.

- Include a fictional chatbot or quiz that helps users test their privacy knowledge.

LINKS FOR FURTHER INFORMATION

- W3Schools HTML/CSS Tutorials
- The A11Y Project (Accessibility Resources)
- CyberWise.org (Digital Safety for Kids)
- Common Sense Education
- Girls Who Code
- Inclusive Design Toolkit
- Be Internet Awesome – Google
- Common Sense Education – Digital Citizenship Curriculum
- Wired for Youth: Girls and Tech

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