



Scheme of Learning	Topic: Web Technologies	
Learning outcomes	By the end of the unit you should have knowledge and understanding of basic web development technologies (HTML, CSS, JavaScript), web accessibility principles, and web security concepts such as XSS. Students should develop the ability to create simple, well-structured, and styled webpages with interactive features while ensuring accessibility and basic security which requires development of logical thinking, problem-solving, and digital literacy skills.	
Key Question	How do we build webpages that are well-structured, visually appealing, accessible to all users, interactive, and secure from common vulnerabilities?	
Knowledge	Key concepts: • HTML structure and elements • CSS styling • Web accessibility principles (alt text, keyboard navigation, contrast) • JavaScript basics (variables, functions, events) • Web security threats (XSS) and prevention methods Key skills developed: • Writing valid HTML and CSS code • Applying semantic tags and styles • Creating interactive webpage elements with JavaScript • Evaluating accessibility features • Understanding basic security vulnerabilities and safe coding practices	Key terminology • HTML, tag, elements, attribute • CSS, selector, property, value, box model, margin, padding, border • Accessibility, alt text, keyboard navigation, colour contrast • JavaScript, variable, function, event, popup alert • XSS, vulnerability, input validation, injection attack



Ongoing Assessment

In this unit you will discuss a variety of different concepts and skills before attempting some practice questions. These will be in an MS form format so you can get feedback and we can see how you are doing. You will also be doing practical coding tasks during lessons, taking part in peer reviews and group discussions and writing short reflections and explanations of the work you produce over the course of this unit.

Key misconceptions to address:

- Confusing HTML tags with CSS properties
- Misunderstanding semantic tags vs styling tags
- Overlooking accessibility importance
- Belief that JavaScript is only for advanced developers
- Underestimating web security threats like XSS

Homework:

- Completing RAG Sheets
- Completing Target Sheets
- Working on targets to improved RAG rating
- For the final two weeks when the competition takes place, your homework will be to continue the challenge. You will work in teams for this part of the unit and progress is monitored daily, with positions being displayed on a SharePoint page.

Revision aids:

- SharePoint pages
- Notes in exercise books

Key Assessment

There are two assessment periods for Year 8. These take place at the start of the Spring term, and halfway through the Summer term. Each assessment will check understanding of the units recently covered as well as their sustained understanding of previous units, building upon the Year 7 units. The self-evaluation sheets should be used as the basis of what they need to revise.

These assessments will have the same number of marks across the year group, though there may be some variety in the questions depending on the progress of the individual class. They are written tests on paper and consist of three sections: Knowledge (facts), Application, Explanation. The reports are based on how each student does in comparison with the rest of the year group in these assessments.



Clear sequencing of content	Chronology: 1. Basic webpage structure with HTML 2. Semantic improvement and organization 3. CSS basics and layout principles 4. Add CSS styling to webpage development 5. Accessibility introduction and application 6. JavaScript for interactivity 7. Web security with XSS awareness
Links to Careers	• Web Developer / Front-End Developer: building and styling websites • UX/UI Designer: focusing on accessibility and user experience • Accessibility Specialist: ensuring digital inclusivity • Software Developer: programming interactive features • Cybersecurity Analyst: protecting websites from attacks such as XSS • Technical Writer: explaining complex concepts clearly
Diversity and Inclusion	• A range of role models from different career areas. • Appropriate and relative scenarios for students. • Include examples of websites that serve diverse user groups (e.g., screen readers for visually impaired, keyboard navigation for motor disabilities). • Discuss the importance of accessibility in supporting users of all abilities and backgrounds. • Ensure examples and language are inclusive, representing diverse cultures, genders, and abilities. • Encourage collaboration respecting all voices in peer reviews and discussions.
Additional Support	SharePoint pages KS3 Cyberclub All Years Coding Club Mentoring support
Challenge	KS3 Cyberclub w3 schools National School's Cipher Challenge



	GCHQ puzzle books Going Beyond Sharepoint page
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