

ADVANCED HTML5 & CSS3

THE UNREPEATABLE PLACE

A Three-Page, Evidence-Based Website Project

THE CHALLENGE

Build a responsive three-page website about one real place you can personally observe. Your site must be supported by original photographs, field notes, measurements, design decisions, and a live code explanation. A polished site alone is not enough: your process and your ability to defend your code are part of the grade.

Essential Question

How can semantic HTML and modern CSS turn firsthand evidence into a clear, accessible, responsive visual story?

Learning Objectives

- Create a valid, semantic, three-page HTML5 website with consistent navigation and meaningful document structure.
- Build a responsive design system using custom properties, Grid, Flexbox, fluid sizing, and media queries.
- Apply accessibility, performance, and usability practices to original content and media.
- Explain, modify, and troubleshoot personally written code during a brief live defense.

Recommended Schedule

Five 50-minute class periods plus one short presentation/defense period. Students may photograph and observe their location outside class, following school rules and personal-safety expectations.

IMPORTANT

This is an AI-resistant assessment, not an “AI-proof” claim. Authenticity comes from original evidence, dated checkpoints, version history, in-class coding, and the live defense. Students must follow the teacher’s stated AI-use policy.

Student Project Brief

Choose one safe, appropriate place you can revisit: a classroom corner, workshop, library area, sports space, garden, public landmark, family workspace, or another teacher-approved location. Do not photograph faces, private information, license plates, computer screens, student work, or restricted areas.

Required Site Map

File	Page title	Purpose	Required evidence
index.html	The Place	A strong landing page that establishes mood, purpose, and visual identity.	Original hero image; 75–125 word introduction; three key facts.
details.html	Look Closer	A detailed visual and informational study of the place.	Gallery; observations; one measured or counted data set; one figure/caption.
process.html	Behind the Build	A transparent explanation of research, design, testing, and revisions.	Field-note excerpt; wireframe photo; CSS decisions; test results; reflection.

Folder and File Requirements

- project-folder/index.html, details.html, process.html
- project-folder/css/styles.css (one external stylesheet shared by all pages)
- project-folder/images/ (optimized original images only)
- project-folder/evidence/ (field notes, wireframe, and checkpoint images)
- Optional: project-folder/js/ only if a teacher-approved enhancement is added; JavaScript is not required.

Original Evidence Packet

- Six original photographs taken by you. At least one image must include the teacher's daily verification card or assigned classroom object in the scene. Do not include people.
- One handwritten field-note page containing at least eight specific observations: color, texture, sound, light, movement, purpose, scale, and one unexpected detail.
- One hand-drawn wireframe for each page. Label the intended HTML elements and layout method.
- One small data set you personally collect: measurements, counts, time observations, repeated colors, object categories, or another teacher-approved measure.
- Three checkpoint screenshots that show the browser and code editor together at different stages.
- A process log with date/time, task completed, problem encountered, and next step.

AUTHENTICITY RULE

Every visual and factual claim must connect to something you personally observed or created. Generic descriptions, stock photos, copied facts, template text, or unexplained code will not earn evidence points.

Technical Requirements

HTML5: Structure and Meaning

- Use a unique, accurate <title> and meta description on every page.
- Use semantic landmarks appropriately: <header>, <nav>, <main>, <section>, <article>, <aside>, and <footer>. Do not add semantic elements only to satisfy a checklist.
- Use one <h1> per page and a logical heading order. Navigation must identify the current page with aria-current="page".
- Use at least one <figure> with <figcaption>, one meaningful list, and one accessible data table or definition list.

- Every informative image needs accurate alt text. Decorative images use empty alt text. Set image width and height attributes when known.
- Include a visible “Skip to main content” link and a useful footer on all three pages.
- All internal links must work from the submitted folder; no absolute local computer paths.

CSS3: Advanced Design System

- Define at least eight custom properties in :root for color, spacing, type, radius, shadow, or layout width.
- Use CSS Grid for one major two-dimensional layout and Flexbox for navigation or a one-dimensional component.
- Use clamp() for at least one fluid typographic or spacing value.
- Use min(), max(), minmax(), or auto-fit/auto-fill meaningfully in a responsive layout.
- Create at least two reusable component classes, such as .card, .fact, .gallery-item, or .callout.
- Use pseudo-classes for keyboard and pointer states, including :focus-visible and :hover. Do not remove outlines without a visible replacement.
- Use at least two breakpoints chosen because the layout needs them, not because a device name was supplied.
- Include a prefers-reduced-motion rule if any animation or transition is used.
- Use a consistent naming approach. No inline styles and no !important declarations.

Responsive and Accessibility Tests

Test	Pass condition	Evidence on process.html
Keyboard	Every link/control is reachable; focus is visible; order is logical.	State what you tested and one result.
Narrow viewport	No horizontal scrolling at 320 CSS pixels.	Include viewport width and revision.
Wide viewport	Content remains readable and does not stretch excessively.	Name the max-width or layout choice.
Contrast	Text and controls remain readable against their backgrounds.	Record one color pair checked.
HTML/CSS validation	Resolve errors; explain any remaining warning.	Record validator result and correction.
Broken links/media	All three pages, images, skip links, and navigation work.	Include final checklist result.

Five-Day Build Workflow

Day 1 — Observe, Collect, Plan

Teacher introduces the challenge, approves locations, issues the daily verification card, and checks safety/privacy. Students collect or plan original evidence, handwrite field notes, define audience/purpose, draw three wireframes, and create the folder structure.

Checkpoint 1: approved topic + field notes + three wireframes.

Day 2 — Semantic HTML Architecture

Teacher models landmark choice and heading logic with an unrelated example. Students build all three HTML shells, shared navigation, skip links, content hierarchy, figure/caption, data structure, and footer.

Checkpoint 2: all pages link correctly and show meaningful unstyled content.

Day 3 — CSS Design System

Teacher reviews custom properties, Grid/Flex responsibilities, and fluid sizing. Students establish tokens, typography, components, page layout, responsive imagery, and visual hierarchy.

Checkpoint 3: desktop layout + first code/editor screenshot.

Day 4 — Responsive Behavior and Accessibility

Teacher conducts a keyboard-test demonstration. Students add breakpoints, focus states, reduced-motion support, alt text, current-page navigation, and narrow-screen corrections.

Checkpoint 4: 320px test + keyboard test + second screenshot.

Day 5 — Validate, Revise, Document

Teacher conferences with students and selects one code section each student must explain. Students validate, fix errors, test links/media, finish process.html, compare against wireframes, and record meaningful revisions.

Checkpoint 5: final validation record + third screenshot + submission folder.

Defense Day — Demonstrate Ownership

Student opens the site and code without notes, explains one semantic decision and one layout decision, then completes a small teacher-selected change.

2–4 minute live defense scored with the rubric.

Required Process Log (minimum five entries)

Date/time	Work completed	Problem + response	Next step
_____	_____	_____	_____

Copy this structure to process.html and add real entries throughout the project. Entries written all at once at the end do not demonstrate process.

Personal Design Constraints

The teacher assigns each student one item from each column after the wireframe checkpoint. The assigned combination must be used intentionally and explained on process.html. This creates a unique design problem for every student.

Layout constraint	Visual constraint	Content constraint
Asymmetrical Grid	One accent color sampled from an original photo	Describe change across two observations

Editorial two-column feature	Monochrome plus one accent	Use an original count in a visual display
Overlapping card composition	High-contrast dark theme	Feature one overlooked object
Modular card system	Light theme with strong borders	Compare two zones within the place
Full-width feature + narrow reading column	No gradients	Explain one measurement and why it matters
Alternating image/text rhythm	Texture created only with CSS	Organize observations by time or sequence

Live Code Defense

The teacher chooses prompts at random. A student may point to code while answering, but may not read a prepared script.

1. Show how your heading structure communicates the page hierarchy.
2. Explain why one section uses Grid and another uses Flexbox.
3. Change one custom property and predict every element it will affect before refreshing.
4. At a teacher-selected viewport width, identify the rule controlling the layout.
5. Explain one alt-text decision and one accessibility test you performed.
6. Fix a teacher-created small problem, such as a broken relative path, missing class, or incorrect selector.
7. Show one difference between your wireframe and final site and explain the evidence behind the revision.

DEFENSE SAFETY NET

A student who struggles may schedule one reassessment after reviewing the relevant skill. Reassessment verifies learning; it does not replace missing original evidence.

Submission Checklist

- Three HTML files, one shared CSS file, original optimized images, and evidence folder
- Three-page navigation works from every page; current page is identified
- All required semantic, responsive, and accessibility features are present
- process.html contains evidence, logs, tests, revisions, and citations for any allowed external sources
- Folder name: Lastname_Firstname_UnrepeatablePlace (no spaces)
- Site opens correctly from index.html on a different computer

100-Point Assessment Rubric

Category	Full-credit evidence	Pts	Non-negotiable cap
Original evidence & content	Six original images; specific field notes; personal data; accurate, purposeful writing; evidence visible in site/process.	20	No original evidence packet: maximum project score 60.
Semantic HTML5	Appropriate landmarks, hierarchy, figure/caption, list, data structure, metadata, skip link, working relative paths.	15	Fewer than three working pages:

			maximum project score 69.
Advanced CSS3	Coherent tokens; effective Grid and Flexbox; fluid sizing; reusable components; intentional assigned constraints.	20	Copied/unexplained stylesheet receives no ownership points.
Responsive design	Usable from 320px through wide desktop; purposeful breakpoints; readable line length; responsive media.	10	Horizontal overflow or unusable navigation limits this category to 5.
Accessibility & quality	Keyboard access, visible focus, alt decisions, contrast, reduced motion, validation, optimized images, working links.	15	Missing keyboard access or pervasive contrast failures limits category to 7.
Process & revision	Three wireframes, five dated log entries, three checkpoint screenshots, tests, and specific before/after revisions.	10	Process created only at end limits category to 4.
Live code defense	Accurately explains decisions, locates controlling rules, predicts effects, and completes a small change/fix.	10	No defense: 0 in this category pending reassessment.

Scoring Guidance

Full credit requires technical correctness plus intentional decision-making. “It works” is not the same as “I can explain why it works.” Deduct within the relevant category for missing, ineffective, or unexplained requirements. Apply caps only when the stated condition occurs.

Academic Integrity Decision Rule

Do not decide authorship from an AI detector. Compare the final work with checkpoints, version history, process evidence, classroom observations, and the student’s live explanation. If ownership remains uncertain, use a supervised reconstruction or modification task aligned to the disputed skill and follow school policy.

Teacher Guide

Before the Project

- Choose a simple daily verification item or code that students can include in one original photo without exposing personal information.
- Prepare a location approval list and state where/when photography is allowed. Provide a non-photography alternative using teacher-supplied physical objects that students arrange, measure, and sketch in class.
- Decide the allowed-AI level in writing: prohibited, brainstorming only, or limited assistance with disclosure. The same evidence and defense requirements apply.
- Assign personal constraints only after students submit wireframes so the constraints require genuine revision and problem-solving.
- Schedule brief checkpoint initials or digital timestamps. A one-minute check per student is enough when the required artifact is clear.

Daily Teacher Moves

- Conference by asking “What are you trying to make happen?” and “Which rule controls it?” before offering a fix.
- Record one brief observation per student: current file, visible progress, and one concept explained.
- Use mini-lessons with unrelated examples so students must transfer the technique to their own design.
- Require students to predict a code change before running it. Prediction makes thinking visible.
- Select the live-defense code section from the student’s actual project, not from a generic question bank.

Suggested Defense Scoring (10 points)

Evidence	Points	Indicator
Explanation	0–4	Names the relevant HTML/CSS and accurately explains its purpose.
Prediction	0–2	Predicts the effect of a selected change before testing.
Modification	0–3	Completes or substantially completes a small, reasonable edit/fix.
Reflection	0–1	Connects one revision to evidence or testing.

Teacher Reference: What Strong Work Looks Like

- HTML choices describe the content, not merely its appearance; headings summarize real sections.
- CSS custom properties create a recognizable system, and components repeat without copy-pasted rule sets.
- Grid and Flexbox are used for problems they solve well; media queries respond to content pressure.
- Original evidence drives the visual design—for example, the accent color is sampled from a photographed object and documented.
- `process.html` names specific tests and revisions instead of claiming that everything “worked fine.”
- During the defense, the student can navigate the project, locate rules, use accurate vocabulary, and recover from a small mistake.

READY-TO-USE EXIT PROMPT

Identify one decision in your website that could not have been made without visiting or observing your chosen place. Cite the evidence, name the HTML/CSS involved, and explain how the decision improved the user’s experience.