Creating Accessible Websites

AccessATE

Use Headings

Headings are a handy means of keeping your website organized and easy to navigate. Bear in mind the following when creating headings for your website:

- The page title, and only the page title, should be marked up as H1.
- Major page sections should be marked up as H2.
- Use H3 if needed for sub-sections.
- Use headings like an outline, and aim to have consistent structure.
- Never skip heading levels; e.g., don't use H3 unless there's an H2 heading above it.

Use Descriptive Link Text

Links that don't actually describe their targets (e.g., "Click here", "Learn more", etc.) can be difficult for users or automated programs like search engine indexers to interpret. Good, helpful link text will provide a brief but meaningful description of the target that:

- Provides some information when read out of context,
- Explains what the link offers,
- Doesn't talk about mechanics, and
- Is not a verb phrase.

If the visual layout does not provide space for adequate context in the displayed text, website authors can still provide additional context for screen reader users using the `aria-label` attribute.

For example, `<button aria-label="Close">X</button>` will display a button with an X inside, but a screen reader will say "Close". Additional best practices for using `aria-label` can be found in the Resources section below.

Note that `<a>` tags should be used for navigation whereas `<button>` tags should be used for actions like submitting a form or closing a window. Assistive technologies may present different interfaces for these two tags and it can be very confusing for users when the wrong one is employed.

Describe Important Images

Null Alt for Decorative Images

If an image is a placeholder, a visible divider, just repeats nearby text, or is purely decorative and doesn't add information, use null alt which is coded as `alt=""`. (No characters inside the quotes!)

Appropriate Alt Text

Write image descriptions that are appropriate to the context: brief for simple contexts and detailed for important educational images. See *Resources* below for guidelines on how to write image descriptions.

Don't Use "Image of" in Your Image Descriptions

Screen readers will inform users that there is an image there, so no need to say so. However, if the kind of image is important, include that, such as a black and white photograph, an MRI scan, or an oil painting.

Forms

- All form elements should be marked up with label and ID so that screen readers can correctly report the purpose of each form field.
- Group radio buttons and checkboxes with `fieldset` and `legend`.
- Check that the form can be completed from the keyboard.
- Don't use color alone to indicate incorrect fields – add some text or an icon to visually distinguish fields that need attention.

Test Your Website from the Keyboard

Can you use the entire site without touching a mouse?

- Ensure there is a visible keyboard focus indicator on all elements.
- Ensure every selectable component is in the keyboard focus order.

See *Resources* below for additional keyboard navigation tips.

Colors

- Choose colors with good contrast. Use a free color contrast checker tool to check your color palette. (See *Resources* below for options.)
- Set the background color when you set the foreground color. Otherwise, users who use style sheets may end up with a surprisingly unreadable combination.
- Make sure the keyboard focus indicator has good contrast, too.

Fonts

Test your pages to ensure fonts enlarge properly when the page is zoomed. Enlarge up to 200% and check that all parts of the page enlarge, and that text doesn't overlap or flow off the page. If you have images of text instead of true text, they may not enlarge properly, so avoid using images of text.

Resources

Web Content Accessibility Guidelines

- WAI's Web Content Accessibility Guidelines (WCAG) Overview: **https://www.w3.org/WAI/standards-guidelines/wcag/**
- Don't Use "Click Here": **https://www.w3.org/QA/Tips/noClickHere**
- Using Meaningful Link Text: **https://www.washington.edu/accessibility/links/**
- WAI-ARIA Authoring Practices: **https://www.w3.org/TR/wai-aria-practices/**
    - Best Practices for Buttons: **https://www.w3.org/TR/wai-aria-practices/#button**
    - Best Practices for Links: **https://www.w3.org/TR/wai-aria-practices/#link**
    - Best Practices for Naming Aria-Labels: **https://www.w3.org/TR/wai-aria-practices/#naming_with_aria-label**
- Keyboard Accessibility guide: **https://webaim.org/techniques/keyboard**

Image Description Resources

- WBGH image description tools: **https://wgbh.org/foundation/ncam/tools-and-resources/image-description-resources**
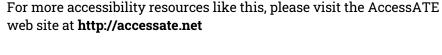
Color Contrast Tools

- Tanaguru Contrast Finder: **https://contrast-finder.tanaguru.com**
- WCAG Contrast Checker (Firefox add-on): **https://addons.mozilla.org/firefox/addon/wcag-contrast-checker/**
- Color Contrast Analyzer, which is particularly useful for checking the contrast levels of text over image backgrounds: **https://chrome.google.com/webstore/detail/color-contrast-analyzer/dagdlcijhfbmgkjokkjicnnfimlebcll** (https://tinyurl.com/aacolorcontrast)
- Accessible Brand Colors, which can show you how your colors work together in different combinations: **https://abc.useallfive.com**