Easy Checks for Web Accessibility: Get the Gist (No Experience Necessary)

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Note: This session is beta testing some updates to the online resource. This material is somewhat different from the online resource. The online resource also has much more information than this handout. **See: www.w3.org/WAI/test-evaluate/preliminary/**

Resource

- Not definitive.
- No green lights.

Helps you assess the accessibility of a web page. With these simple steps, you can get an idea whether or not accessibility is addressed in even the most basic way.

These checks cover just a few accessibility issues and are designed to be quick and easy, rather than definitive. A web page could seem to pass these checks, yet still have accessibility barriers. More robust evaluation is needed to evaluate all issues comprehensively.

Checks

1. Page titles
2. Headings
3. Image text alternatives ("alt text") (pictures, illustrations, charts, etc.)
4. Contrast ratio ("color"/luminosity contrast)
5. Text resizing
6. Text spacing
7. Keyboard access and visual focus
8. Audio and video (media, multimedia)
9. Moving, flashing, or blinking content
10. Orientation

Next Steps

Web Accessibility Evaluation Resources from W3C WAI

www.w3.org/WAI/eval/

Accessibility evaluation is also called "assessment", "audit", and "testing".

When developing or redesigning a website or web application, evaluate accessibility early and throughout the development process to identify accessibility problems early, when it is easier to address them.

There are evaluation tools that help with evaluation. However, no tool alone can determine if a site meets accessibility standards. Knowledgeable human evaluation is required to determine if a site is accessible.

Initial Checks

Even if you don't know anything about accessibility and you don't have a robust accessibility tool, you can check some aspects of accessibility.

- **Easy Checks – A First Review of Web Accessibility** — Provides step-by-step guidance and brief explanations for checking some aspects of accessibility.

Tools

Web accessibility evaluation tools are software programs or online services that help determine if web content meets accessibility standards.

Web Accessibility Evaluation Tools List — Includes information on more than 100 tools. You can use the filters to narrow down the list to the types of tools you are interested in.

Selecting Web Accessibility Evaluation Tools — Provides guidance on choosing tools. It describes the features and functionality of different types of evaluation tools, and discusses things to consider for your situation.

Conformance Evaluation

Conformance evaluation determines how well web pages or applications meet accessibility standards. W3C's Website Accessibility Conformance Evaluation Methodology (WCAG-EM) is an approach for determining conformance to Web Content Accessibility Guidelines (WCAG).

WCAG-EM Overview: Website Accessibility Conformance Evaluation Methodology — A short page with basic information to get you started. We suggest you read it before going to the full WCAG-EM document .

Reports

Communicate the results of evaluation clearly, including the scope of the evaluation.

WCAG-EM Report Tool: Website Accessibility Evaluation Report Generator — Helps you generate evaluation reports according to WCAG-EM. It does not do the checking for you. It helps you follow the steps of WCAG-EM and it generates a report from the input you provide.

Template for Web Accessibility Evaluation Reports — Suggests information to include in a report.

People

Getting the right people and skills involved makes your accessibility evaluations more effective.

Involving Users in Evaluating Web Accessibility — Provides guidance on including people with disabilities ("users") in evaluation throughout project development.

Using Combined Expertise to Evaluate Web Accessibility — Discusses skill sets and considerations for collaborative review.

Standards

Specifications for writing accessibility test rules (ACT Rules Format) and expressing test results (EARL) are introduced in the <u>For Evaluation section</u> of the W3C Accessibility Standards Overview.

Getting Started with Easy Checks

Optional Tools

You can do most of these checks with any browser, that is, you do not need to download special tools. However, some checks are easier if you can download tools.

WCAG links

These checks are based on the Web Content Accessibility Guidelines (WCAG) 2.0. Please see the WCAG Overview for an introduction to WCAG.

www.w3.org/WAI/intro/wcag

BAD, the Before-After Demo

www.w3.org/WAI/demos/bad/

The Before and After Demonstration (BAD) from W3C WAI shows an inaccessible website and a retrofitted version of this same website with the accessibility barriers fixed. You can use the BAD pages to learn how to do these checks. For example, first, do the check on an accessible version of a page to see what it should look like. Then, do the check on the corresponding inaccessible page to see what it looks like when there are accessibility barriers.
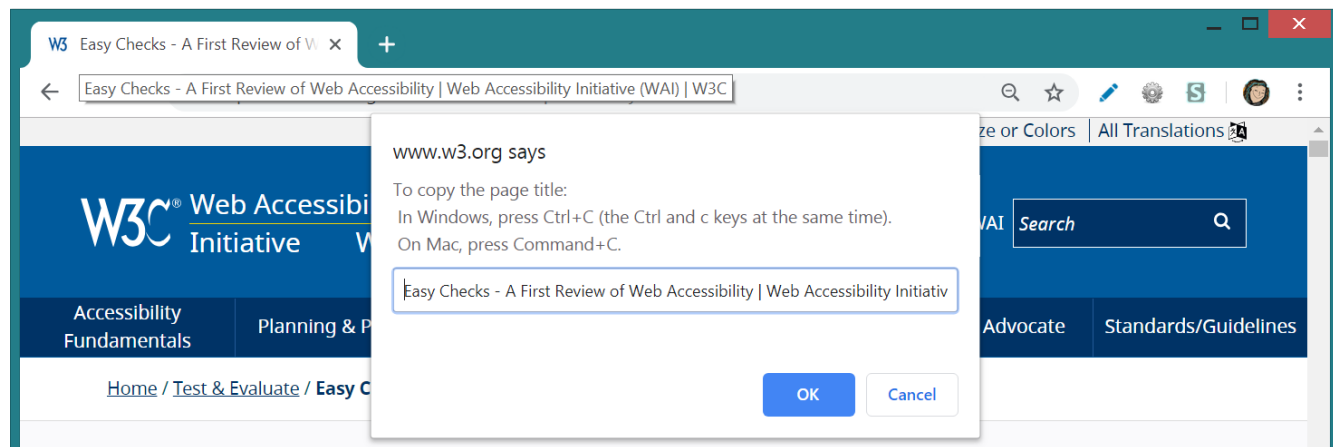
Set Up for Today's Lab

1. Confirm Web Developer Tools
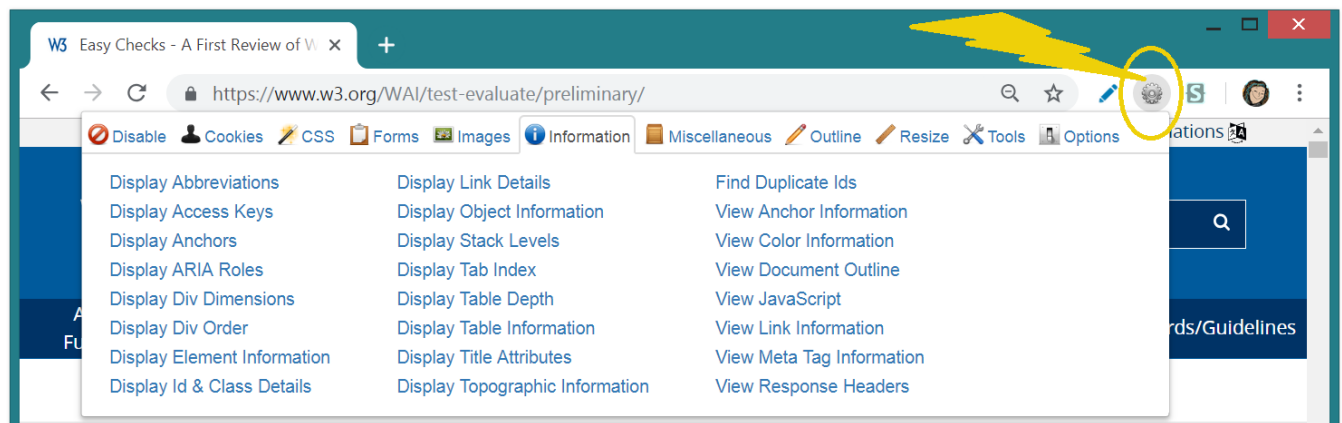
2. Add Bookmarklets
   - Open www.w3.org/WAI/presentations/AccessU2019E
   - Drag each to the toolbar

Page Titles

What to do:

- Look at the page's title:
  - Hover over the title in the browser tab
  - Listen to it with a screen reader
  - Use the bookmarklet if you want to copy it
- Look at titles of other pages on the website.

What to check for

- Check that there is a title that adequately and briefly describes the content of the page.
- Check that the title is different from other pages on the website, and adequately distinguishes the page from other web pages.

✓ **Check it!**

Headings

What to check for

- The page has a heading. In almost all pages there should be at least one heading.
- All text that looks like a heading is marked up as a heading.
- All text that is marked up as a heading is really a conceptual section heading.
- The heading hierarchy is meaningful. Ideally the page starts with an "h1" — which is usually similar to the page title — and does not skip levels; however, these are not absolute requirements.

Headings checks options

1. **Headings outline:** an outline of the headings that are marked up on page

2. **Headings markup in page**: a view of the page with the heading markup shown

Web Dev - headings outline:

1. Open the web page you are checking.

2. In the toolbar, select "Information", then "View Document Outline".
   A new page opens with the outline.
   If there are no headings:
      In Chrome, it might hang.
      In Firefox, it will say "0 headings".

3. Non-visual checks:
   Does the outline start with [H1] and follow a meaningful hierarchy?
    (That's not required, but strongly suggested.)

4. Visual checks: Compare the Document Outline to the visual rendering of the page. (You can open the pages side-by-side.)

   o Are the things that look like headings on the page
      listed in the Document Outline?

   o Are there things in the Document Outline that aren't really headings?

Web Dev - heading markup in the page:

1. Open the web page you are checking.

2. In the toolbar, select "Outline", then "Show Element Tags Names".

3. In the toolbar, select "Outline", then "Outline Headings".
   The headings will be outlined and <h1>, <h2>, etc. icons will be before the headings.

4. Anything that is a functional heading should have a heading icon before it.

5. Anything that is a **not** functional heading should **not** have a heading icon before it.

✓ Check it!

To practice checking headings in BAD:

Headings outline:

- Follow the instructions under "Headings outline" above and use the accessible News page: **www.w3.org/WAI/demos/bad/after/news**. Notice there is a nice hierarchical outline.

- Next, use the inaccessible News page: **www.w3.org/WAI/demos/bad/before/news**. Notice there is just one heading.

Heading markup in the page:

- Start by visually looking at the inaccessible BAD news page: **www.w3.org/WAI/demos/bad/before/news**. What looks like headings? *(Citylights News, Heat wave linked to temperatures, Man Gets Nine Months in Violin Case, ...)*

- Next, see how it should look. Follow the instructions for "Heading markup in the page" above on the accessible News page: **www.w3.org/WAI/demos/bad/after/home**. Notice the headings have icons next to them.

- Next, see what it looks like when headings are not marked up. Use the inaccessible News page:**www.w3.org/WAI/demos/bad/before/home**. Notice there is text that visually looks like headings, but does not have headings icons next to it.

Check your pages . . .

Image Alternatives ("alt text")

- Conveys same meaning, or functional equivalent *(not description)*
- Not exact science
- Depends on context
- Include any text in image (e.g., logo)

`<img src="pointer_to_image.png" alt="here's where the alternative text goes">`

- Not "button, "link", "image of"
- "Diagram of workflow described above"
- For complex images: short alt and long description
- If decorative only, then null alt (alt="")

What to check for

- Every image has `alt` with appropriate alternative text.

✓ Check it!

1. Check the BAD inaccessible home page

   www.w3.org/WAI/demos/bad/before/home

- Missing alt:
  - There are lots of images without alt text. (Many of these are just decorative and should have null alt text, per the Tips.)
  - The weather image of the cloud and sun is missing alt.
- Inappropriate alt text:
  - Near the top, left, see the long alt text starting with "Red dot with...". That description is way too detailed and includes unimportant information. The appropriate alt text in the accessible page is: "Citylights: your access to the city."
  - Near the bottom in the middle, see the image of text: "(1)269C-H-O-K-E". The alt is 123456789, which is not equivalent.
- Appropriate alt text:
  - Near the top, see the W3C image; the alt text is: "W3C logo".

2. Check your pages . . .

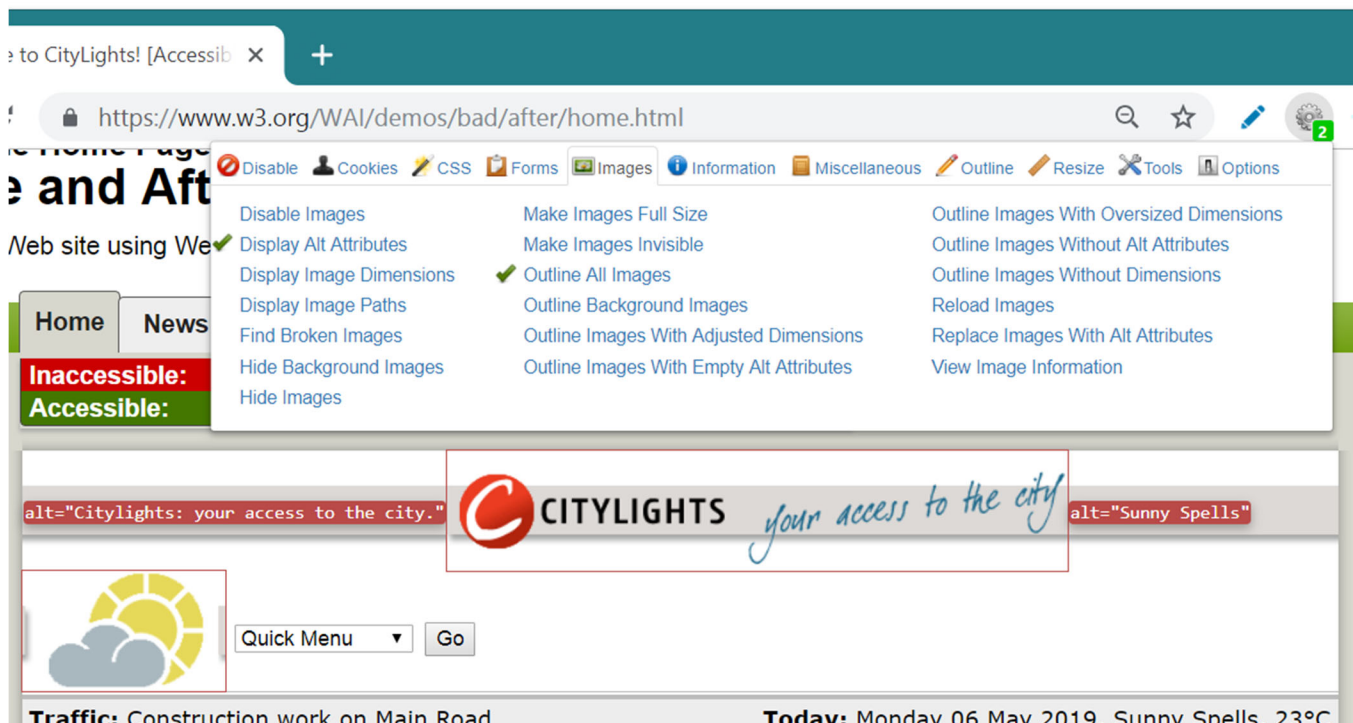⚙️ **Web Dev – image alts**

1. Select Images > Outline Images Without Alt Attributes.
   Red boxes appear around any images missing alt.
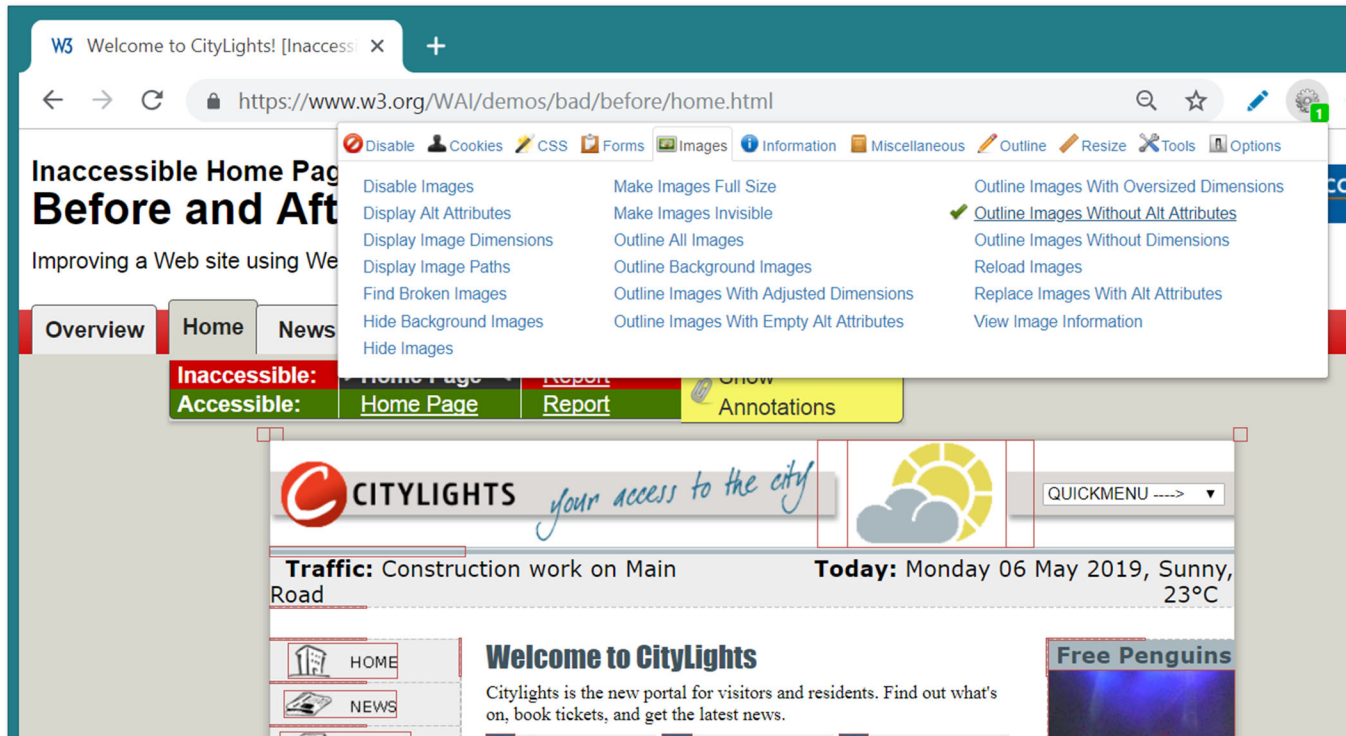
   Note any missing alt.

2. Select Images > Display Alt Attributes and Outline All Images
   The alt text will be displayed before the images on a red background.

3. For each image, see if the alt text adequately conveys the information in the image after it.

Contrast Ratio ("Color"/Luminosity Contrast)

What to check for

- Web pages should also have a minimum contrast by default:
  a contrast ratio of at least 4.5:1 for normal-size text.

Contrast ratio checks

There are basically three ways to check contrast, each with strengths and weaknesses.

1. **Table with contrast ratio** - The tool displays a table with all the possible contrast ratios in the web page. With some tools, you can click in the table and it will show where that color combination is in the web page.

   - *Pro:* Comprehensive.
   - *Con:* Can be inaccurate, specifically, it can show some color combinations that are not really in the displayed page.

2. **Eye-dropper to select colors** - The tool lets you select a text color and a background color, then it shows you the contrast ratio.

   - *Pro:* Accurate.
   - *Con:* Can only test one item at a time. Need to be able to see and use a mouse.

3. **Turn off color.** The tool shows the page in grayscale.

   - *Pro:* Gives you direct experience.
   - *Con:* Imprecise, does not provide contrast ratio value.

Colour Contrast Analyser = eye-dropper to select colors

- Open the Colour Contrast Analyser

- Using the first eye-dropper icon from the foreground color section, pick the foreground color (usually the text) you want to analyze.

- Using the second eye-dropper icon from the background color section, pick the corresponding background color.

- *In the bottom of the Color Contrast Analyser window, the resulting luminosity Contrast ratio will show (for example: 7.5:1), along with "Pass" or "Fail" and a visual example of the colors.*

 Web Dev

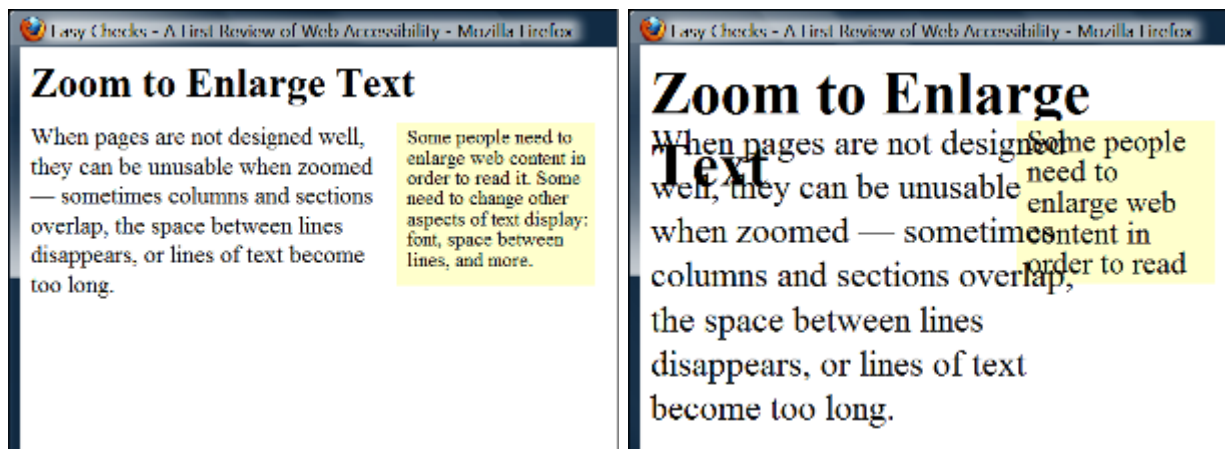For small targets, you can get the color palette from Web Dev:

- Select Information> View Color Information
  It will open a new windows with the colors in big squares.

✔ **Check it!**

Text Resizing

What to check for

- All text gets larger. (A common problem is that text is not provided as actual text format but instead the text is in an image. Text in images does not get larger when users increase text size.)
- Text doesn't disappear or get cut off.
- Text, images, and other content do not overlap.
- All buttons, form fields, and other controls are visible and usable.
- Horizontal scrolling is not required to read sentences or "blocks of text". It is best practice that when text size is increased, all the text in a sentence is visible. It is acceptable to have to scroll horizontally to get to different sections of a page.

Check text-only zoom in Firefox:

1. From the menu bar, do one of the following
   - Select View > Zoom > Zoom Text Only
     Or with the keyboard: Alt + V, Z, T

2. Incrementally increase text-only zoom:
   - In Windows, press Ctrl+[+] *(the control key and the + key at the same time)* 6 times to get 300% zoom.

Text Spacing

No loss of content or functionality occurs by setting:
- Line height (line spacing) to at least 1.5 times the font size
- Spacing following paragraphs to at least 2 times the font size
- Letter spacing (tracking) to at least 0.12 times the font size
- Word spacing to at least 0.16 times the font size

What to do

1. Spacing 1.4.12 bookmarklet

What to check for

- Text doesn't disappear or get cut off.
- Text, images, and other content do not overlap.
- All buttons, form fields, and other controls are visible and usable.

✓ **Check It!** Text Resize with Zoom **&** Text Spacing

Keyboard access and visual focus

To learn more, see:
- Accessibility Principles
- Introduction to Accessibility
- Other WAI resources

Free Newsletter (optional)
To receive our free newsletter fill in the following details:
Mr. ○ Mrs. ○ Name:
eMail Address: Retype eMail:

What to check for

- **Tab to all:** Check that you can tab to all the elements, including links, form fields, buttons, and media player controls. (A common problem is that you cannot tab to media player controls.)

- **Tab away:** Check that you can tab away from all elements that you can tab into. (A common problem is the keyboard focus gets caught in media controls and you cannot get out; it's called the "keyboard trap".)

- **Tab order:** Check that the tab order follows the logical reading order (e.g., for left-to-right languages: top to bottom, left to right) in sequence.

- **Visual focus:** Check that the focus is clearly visible as you tab through the elements, that is, you can tell which element has focus, e.g., links have a gray outline around them or are highlighted.

- **All functionality by keyboard:** Check that you can do everything with the keyboard; that is, you don't need the mouse to activate actions, options, visible changes, and other functionality. (A common problem is that some functionality is available only with mouse hover, and is not available with keyboard focus.)

- **Drop-down lists:** Check that after you tab into a drop-down list, you can use the arrow keys to move through all the options without triggering an action. (A common problem for drop-downs used for navigation is that as soon as you arrow down, it automatically selects the first item in the list and goes to a new page — you cannot get to other items in the list.)

- **Image links:** Check that when images are links, they have clear visual focus and can be activated using the keyboard (usually by pressing the Enter key).

Check keyboard navigation in most browsers

In a browser that supports keyboard navigation with the Tab key (for example, Firefox, IE, Chrome, and Safari; not Opera):

- Click in the address bar, then put your mouse aside and **do not use it**.
- Press the 'Tab' key to move through the elements on the page. You can press 'Shift-Tab' to go backwards.
- To move within elements such as drop-down lists and menu bars, press the arrow keys.
- To select a specific item within a drop-down list:
  - Tab to the list box,
  - use the arrow keys to move the focus to items,
  - when an item has focus, press the Enter key or Space bar to select that item.

✓ **Check it!**

To see visual focus with BAD

Open the accessible Survey page: www.w3.org/WAI/demos/bad/after/survey
Tab through the page. Notice:

- Most things get a red background when they get focus.
- The other Survey pages get a dotted border and arrows.
- The radio buttons get a dotted border.

Check your pages . . .

Audio and Video (Media, Multimedia)

Information in podcasts or other audio is not available to people who are deaf or some people who are hard of hearing, unless it is provided in an alternative format such as captions and text transcripts. Visual information in videos is not available to people who are blind or some people what have low vision, unless it is provided in an alternative format such as audio or text. (Text can be read by a screen reader or Braille display, or enlarged and reformatted for people with low vision.)

(Remember these easy checks are not comprehensive or definitive.)

What to check for:

Keyboard access

Follow the steps above for keyboard access to ensure that the media player controls are labelled and keyboard accessible.

Auto-start control

It is best if audio (including background noise and video with sound) does not start automatically when a web page opens. If it does start automatically, it should either:

- Stop after 3 seconds.
- Include controls to pause or stop the audio.
- Include controls to turn down the volume.

Captions

Most video on the web that provides captions has "closed captions" that can be turned on and off. ("Open captions" are always shown.) For example, in YouTube, you turn on captions with the CC button (no known keyboard access). If there is not a CC button, there are no captions available for that video.

Automatic captions are not sufficient for accessibility because they are not accurate enough. For example, in YouTube, if only "automatic captions" are listed, there are no sufficient captions and the video is not accessible. Captions in the specific language need to be listed.

If there are captions, you can check that:

- The captions seem in sync with the spoken content.
- The people who are speaking are identified when they speak.
- Important sound other than dialogue — e.g., footsteps approaching, doors closing, glass breaking — is included.

Transcript

It is best practice to provide both captions and transcripts, although not always required; providing transcripts has many benefits — both to people with disabilities and to website owners.

Transcripts should be easy to find near the audio/video itself and any links to the audio/video.

Check that transcripts include all audio information, including dialogue with the speakers identified, and all important sound — e.g., footsteps approaching, doors closing, glass breaking.

A transcript for a video could provide all the audio and all the visual information, so that a person can get all the content of the video by reading the text.

Audio description

Audio description (sometimes known as described video, video description, or visual interpretation) is description of important visual information in a video, in order to make it accessible to people who cannot see. For example, some videos start out with a title in text, have speaker names in text, and have illustrations. That visual information needs to be provided to people who cannot see the video.

Moving, Flashing, or Blinking Content

What to check for:

- Check if there is any **moving, blinking, or scrolling information** that starts automatically and lasts more than five seconds. If there is, check that there is a way for the user to pause, stop, or hide the movement.

- Check if there is any **auto-updated information** (such as stock price). If there is, check that there is a way for the user to pause, stop, or hide the updated information, or for the user to control the frequency of the update.

- Check that **no content flashes or blinks** more than three times in one second. If it does, further evaluation is needed as explained in Understanding Success Criterion 2.3.1: Three Flashes or Below Threshold

  <https://www.w3.org/WAI/WCAG21/Understanding/three-flashes-or-below-threshold>.

- Check that any **motion animation triggered by interaction** can be disabled, (unless the animation is essential to the functionality or the information being conveyed).

Orientation

Rotate between portrait and landscape.

Next steps

Share your findings

Contacting Organizations about Inaccessible Websites has guidance on reporting accessibility problems. It is focused for people who do not work for the organization that owns the website, yet also has some useful information if you do work for the organization — particularly the Introduction, Consider Your Approach, and Sources for More Information sections.

www.w3.org/WAI/users/inaccessible

Encourage thorough accessibility evaluation

The checks on this page are not definitive; a web page could seem to pass these checks, yet still have accessibility barriers.

This page covers just a few accessibility issues. There are other accessibility issues not covered in these easy checks, for example: links, data table markup, reliance on color, content that causes seizures, and much more.

More robust evaluation is needed to evaluate all issues comprehensively. Guidance is available from:

- WCAG-EM Website Accessibility Conformance Evaluation Methodology

  www.w3.org/WAI/eval/conformance

- Selecting Web Accessibility Evaluation Tools

  www.w3.org/WAI/eval/selectingtools

- Involving Users in Evaluating Web Accessibility

  www.w3.org/WAI/eval/users

Getting Started with Web Accessibility

- **Introduction to Accessibility** + 4-minute video

  www.w3.org/WAI/intro/accessibility

- **Accessibility Principles**

  www.w3.org/WAI/fundamentals/accessibility–principles/

- **Tips for Getting Started with Web Accessibility**
  - **Designing**: Tips for user interface and visual design
  - **Writing**: Tips for writing and presenting content
  - **Developing**: Tips for markup and coding.

  www.w3.org/WAI/tips/

- **Many more WAI resources!**

  www.w3.org/WAI