
Recipe for Accessibility: Limiting ingredients for faster design

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Faster design process with accessibility

The earlier in your process you solve for accessibility, the less expensive it is.

Recipes produce consistent results.

Saving dozens of hours per project with early consistent accessibility.

One day builds with no design stage.

Recipe Outline

Who is affected by poor design choices.

Definitions.

Good ingredients for different skill levels.

Good tools for saving time.

Good recipe processes for saving money.

Combining everything together.

Gen Herres
Anphira.com
EasyA11yGuide.com
Baltimore Meetup

I started accessibility in the end of 2019 at Anphira.

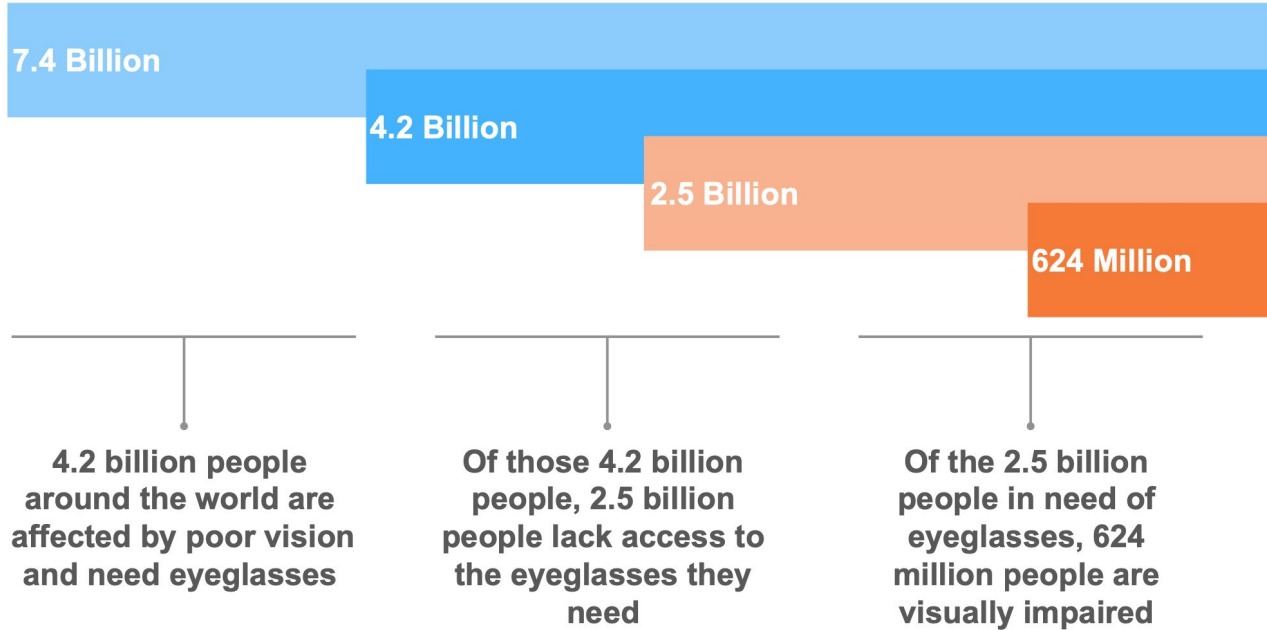
I started EasyA11yGuide to provide better tools and resources for early design process accessibility.

And I organize the Baltimore WordPress meetup!

**Slides & links available at
easya11yguide.com/learn**

What effects do poor design choices have on people?

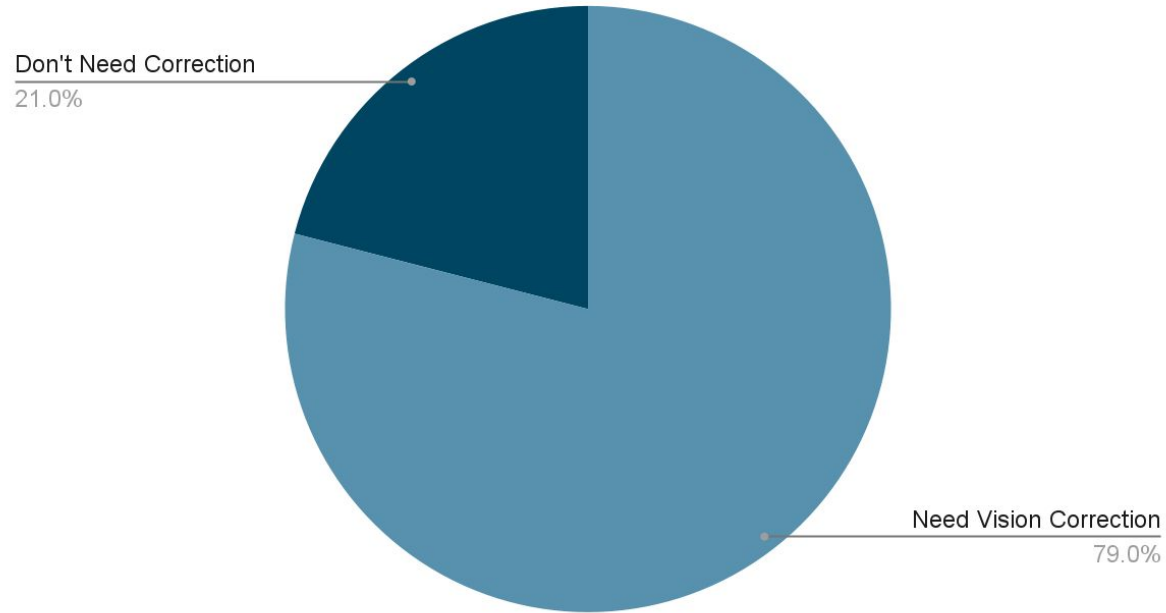
People aren't perfect



Using 2015 numbers

People aren't perfect

204 Million US adults need vision correction



People aren't perfect

About 20% of people have dyslexia.

About 12-14% of people have Irlen syndrome.

Waht ew tinhk
dyxlesia kloos lkie.

Actually, it's much
Actually, much more
subcomplicated.
Abstract word can
complete disappear,
disorientation
mind view words
3-dimensionally.
Words 3-dim

People aren't perfect

About 8% of men are colorblind, higher in caucasians.

MOST COMMON RED-GREEN COLOR DEFICIENCIES



NORMAL



DEUTERANOPIA

People aren't perfect

About 4% of people have synesthesia.

SYNESTHESIA

0123456789

People don't live in perfect situations



People don't live in perfect situations



People don't live in perfect situations



People don't live in perfect situations



Design for imperfect people

People aren't perfect and don't live in perfect situations.

Make design choices for all of the imperfect people.

Definitions

Terminology definitions

WCAG - Web Content Accessibility Guidelines, maintained by W3C (World Wide Web Consortium).

WCAG 2.1 level AA.

A11y - abbreviation for “accessibility”.

Legal aspects of accessibility

More countries are writing legislation to put specific requirements on web accessibility.

Lawsuits in US almost always say WCAG 2.1 level AA.

Overlay widget - a technology that sits between the website and the user. It's middleware and plays "monkey in the middle".

I'm not a lawyer.

**Good ingredients for
different skill levels**

Beginner ingredients

Easiest way to add chocolate, is to just stick a giant chocolate chip on top.



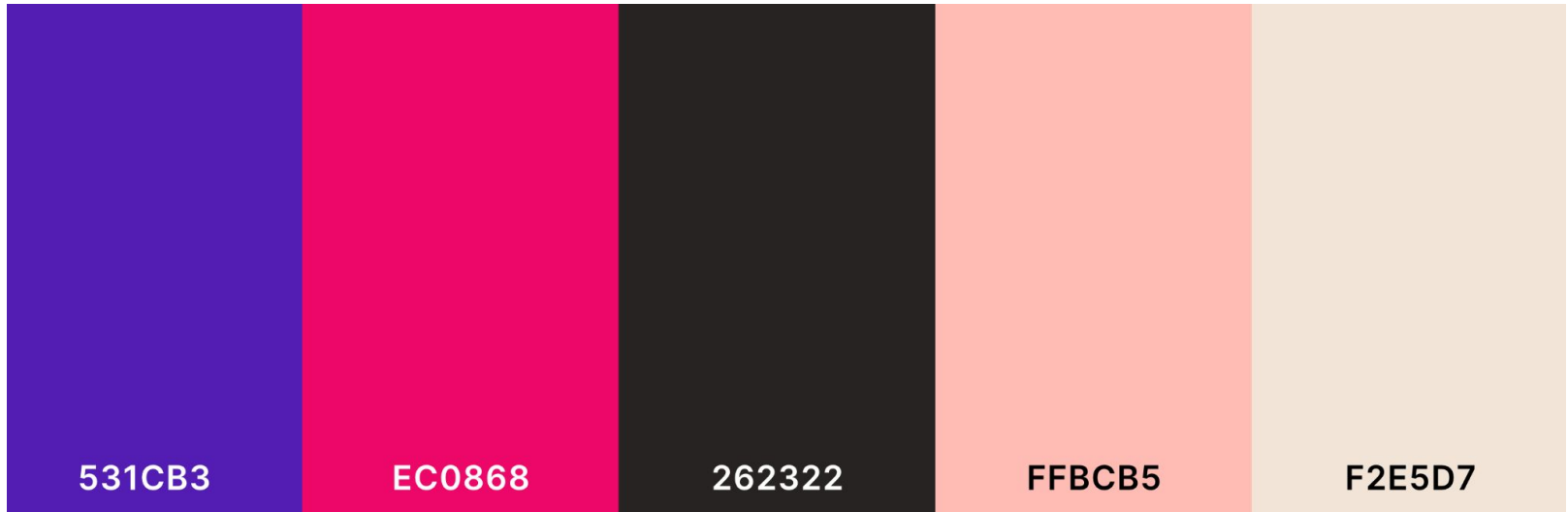
Advanced ingredients

This is a multi-step chocolate cake
uses bakers chocolate.



Colors as ingredients

Some colors are very easy to use anywhere, some aren't.



Color palette issues

People don't enjoy reading text on neon backgrounds.

Correcting colors

The neon pink color is RGB #EC0868

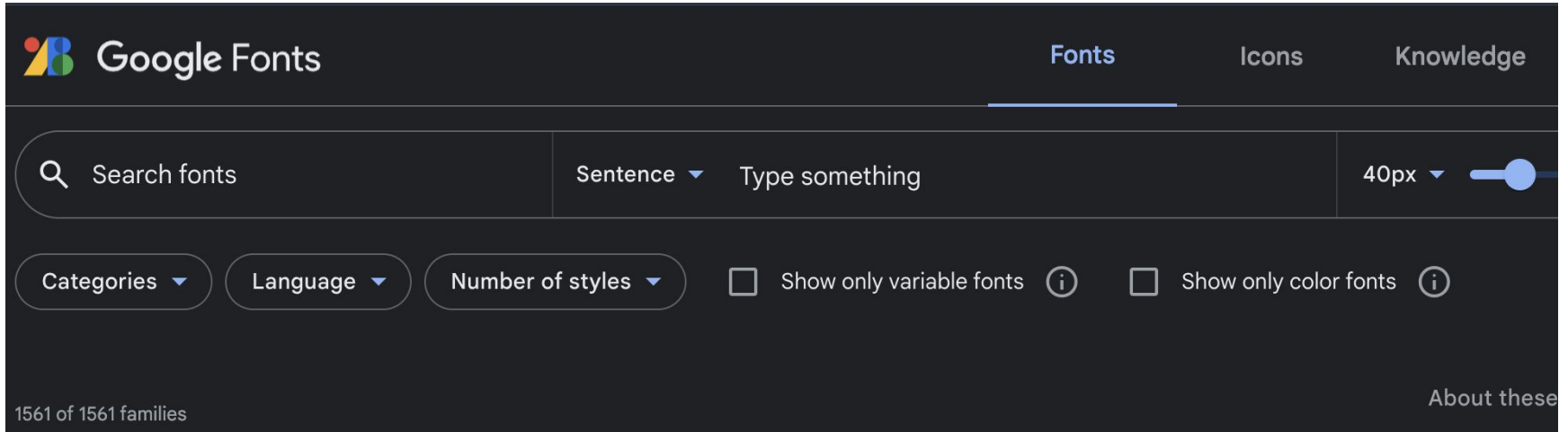
Switch to HSL, Hue 335, Saturation 93%, Lightness 48%

Drop your Saturation to 50% or lower, and you instantly get gentler colors on the eyes. You can decrease the lightness a little as well if contrasting with white. Or increase if contrasting with black.

People do enjoy reading text on low saturation backgrounds.

Fonts as ingredients

Big font sites, like Google, are advanced ingredients.



The image shows a dark-themed screenshot of the Google Fonts website. At the top left is the Google Fonts logo. To its right are navigation tabs for 'Fonts', 'Icons', and 'Knowledge', with 'Fonts' being the active tab. Below the navigation is a search bar with a magnifying glass icon and the text 'Search fonts'. To the right of the search bar is a preview area showing the word 'Sentence' in a dropdown menu and 'Type something' in a text input field. Further right is a size selector showing '40px' and a slider. Below these are three filter buttons: 'Categories', 'Language', and 'Number of styles', each with a dropdown arrow. To the right of these are two checkboxes: 'Show only variable fonts' and 'Show only color fonts', each with an information icon. At the bottom left, it says '1561 of 1561 families'. At the bottom right, there is a link that says 'About these'.

Fonts as beginner ingredients

Give people a short list and include letter-spacing on the samples. I generally set letter-spacing to 0.015em.

Always give a default. If they don't pick from the choices, they get the default.

Give them text they are completely unfamiliar with and would require them to actually put effort into reading.

Font samples

Beginner friendly font samples

The quick brown fox jumps over the lazy dog. Jinxed wizards pluck ivy from the big quilt. Jaded zombies acted quaintly but kept driving their dizzy oxen forward. We promptly judged antique ivory buckles for the next prize.

Numbers: 0123456789

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Check for letter spacing on illi combos: willing, billing, drilling.

The following text includes commonly confused letter and number combinations, make sure it is unambiguous: TII17 mnmnmmn GC00 ij IJ aec uvvw EF T7Z2 O0D gqa B835S.

Beginner Ingredients

Row of individual images



Advanced Ingredients

Carousels of images



Good Ingredients

Good ingredients work for everyone, even beginners.

Make good choices so everyone can benefit.

Good tools for saving time

Tools with lots of manual work

Some tools are very versatile, but require a lot of manual work.



Tools for saving time

With powerful, reliable tools, it can be a very pleasant experience.



Tools with lots of manual work

When I first started, I was spending hours on tools to check all of the colors and try to see them in action.

Contrast Ratio

white

4.47

#777

Precise contrast
4.478

Passes AA for large text (above 18pt or bold above 14pt) and AA for user interface components and graphical objects

: ratio indica
ircle to get n
en semi-tra
ckgrounds, the

Tools for saving time

Background Color 1:

Background Color 2:

Background Color 3:

Heading Color:

Text Color:

Link Color:

Link Hover Color:

Border Color:

Accent Color 1:

Accent Color 2:

Accent Color 3:

Button Background Color:

Button Text Color:

Button Background Hover Color:

Button Text Hover Color:

Button Border Color:

Tools for saving time

Color Name	Background 1	Background 2	Background 3
OK - Heading Color	14.56 - Great AAA	14.40 - Great AAA	14.38 - Great AAA
OK - Text Color	14.56 - Great AAA	14.40 - Great AAA	14.38 - Great AAA
OK - Link Color	6.79 - Good AA	6.71 - Good AA	6.70 - Good AA
OK - Link Hover Color	6.52 - Good AA	6.45 - Good AA	6.44 - Good AA
OK - Border Color	3.14 - Icon/Large Text	3.10 - Icon/Large Text	3.10 - Icon/Large Text
OK - Accent Color 1	6.52 - Good AA	6.45 - Good AA	6.44 - Good AA
OK - Accent Color 2	6.79 - Good AA	6.71 - Good AA	6.70 - Good AA
OK - Accent Color 3	3.61 - Icon/Large Text	3.57 - Icon/Large Text	3.56 - Icon/Large Text
OK - Button	6.45 - Good AA	6.45 - Good AA	6.45 - Good AA
OK - Button Hover	6.71 - Good AA	6.71 - Good AA	6.71 - Good AA

Tools for saving time

Heading 1

The quick brown fox jumps over a lazy dog. My girl wove six dozen plaid jackets before she quit. Brown jars prevented the mixture from freezing too quickly. How vexingly quick daft zebras jump!

Heading 2

The quick brown fox jumps over a lazy dog. My girl wove six dozen plaid jackets before she quit. Brown jars prevented the mixture from freezing too quickly. How vexingly quick daft zebras jump!

Heading 3

Watch "Jeopardy!", Alex Trebek's fun TV quiz game. We promptly judged antique ivory buckles for the next prize. The five boxing wizards jump quickly. Farmer jack realized that big yellow quilts were expensive.

Heading 4

Accent Font

This is an example of your selected Accent text font.

This is a paragraph in your accent text font. The quick brown fox jumps over the lazy dog. Jinxed wizards pluck ivy from the big quilt. Jaded zombies acted quaintly but kept driving their dizzy oxen forward. We promptly judged antique ivory buckles for the next prize.

Check the following commonly confused letters to make sure they are unambiguous: TIl17 mnmnmn GC00 ij IJ aec uvvw EF T7Z2 O0D gqa B835S.

Check for letter spacing on illi combos: willing, billing, drilling.

Links

[Link in heading example](#)

[Link in paragraph example](#). The quick brown fox jumps over the lazy dog. Jinxed wizards pluck ivy from the big quilt. Jaded

Good tools save time

Look for tools which allow you to get a complete view.

Look for useful output.

**Good recipe processes
for saving money**

Processes save time & money

People are used to working within limits:

- Copywriters are told what tone of voice to use, what length to write, what audience they have, etc.
- Designers are told to follow brand use guidelines, rules from printing companies, given exact content to use, etc.



WCAG criteria & how to handle them

WCAG 2.1 level AA has 50 criteria.

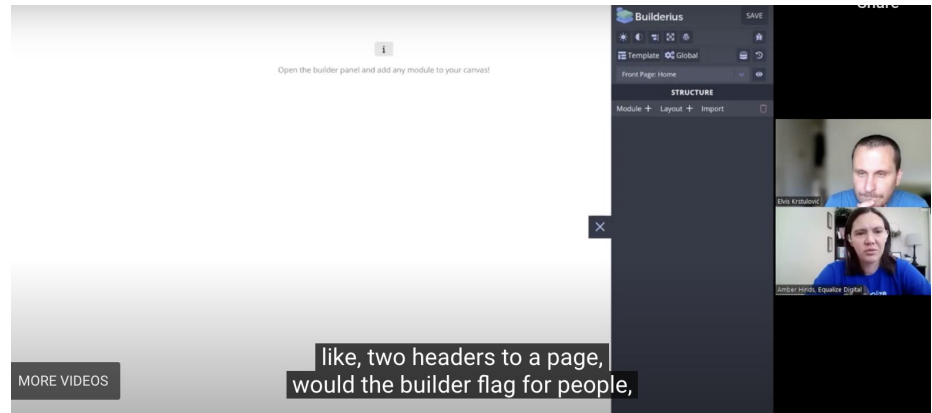
Save money by being mindful of WCAG criteria and creating processes so you automatically follow WCAG.



Criteria to eliminate as not relevant in design

About half the WCAG 2.1 level AA criteria doesn't apply to a static mockup of a website.

For example, 1.2.2 requires captions on videos. But for a static mockup the designer is not responsible for creating & captioning the video.



like, two headers to a page,
would the builder flag for people,

MORE VIDEOS

Criteria to just say no

Autoplaying content is almost never necessary and always distracting.

Just say no to anything that automatically moves, scrolls, or updates.



Criteria to eliminate with simple recipes

Some criteria can be eliminated by giving designers specific rules to follow.

For example, 1.4.12 requires that line height be able to be adjusted to 1.5 times the font size.

Tell the designer that paragraphs shall have line height of 1.5.



Don't do unnecessary work

Some criteria doesn't need design.

For example, 2.4.7 requires visible and clear keyboard focus.

Get stress relief

Get stress relief



Criteria to solve ahead of time

Designers can make unintentionally poor choices.

For example, 1.4.3 requires specific contrast for text depending on the size of the text and font weight. This can be difficult to understand, and still allows for a number of poor choices.

This sample text attempts to visually demonstrate how readable this color combination is, for normal, *italic*, **bold**, or ***bold italic*** text of various sizes and font styles.

Criteria to simplify with specific to dos

For example, 1.4.4 requires text to be able to be resized up to 200%.

It's critical for content readability and web performance that your website's ratio be in the green zone.

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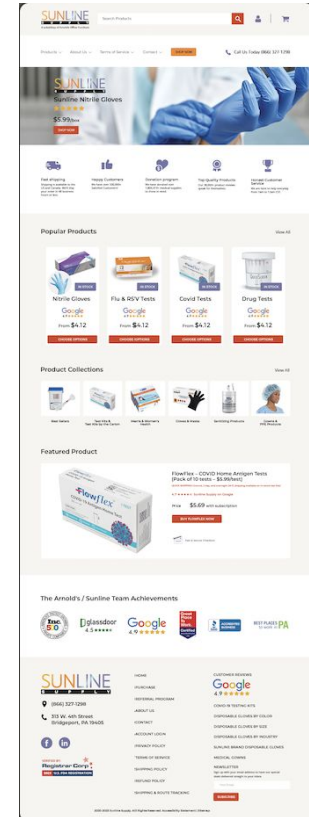
Combining together

Understand people's skills

I work with a design service on a regular basis.

- Provide colors
- Provide fonts
- Provide list of what to do & avoid
- Provide text content & photos
- Provide basic wireframe

The last instructions I gave took me 30 minutes to complete and it was for an eCommerce home page, and I got back a page very close to what I was looking for.



90% done rule for design phase

Make it clear to everyone that the goal of the design phase is not to have a fully finished and polished look.

It's to get to 90% done.

Sets expectations that things don't need to be perfect.

Sets expectations that the finished product will look a little different.

Accounts for the inevitable content changes.

Blog
Info on Physical Activity Topics to Help You & Your Program Succeed

Browse our blog categories

- Afterschool
- Fitness
- Physical Education
- Tips

Why Skillstics® Is The Best Choice for Your Physical Activity Program.
Posted on December 28, 2022 by Alisha Burken
Discover why education combined with a single teacher for a new route of instruction that will benefit all of your students within school programs. Skillstics® is a Physical Activity program that includes all the tools you need to teach. Teachers, coaches and administrators have realized over time, single route instruction does not work for all students.

Physical Activity vs. Movement: Consider Both For Your After School Program
Posted on November 21, 2022 by Alisha Burken
Which can ignite certain feelings in us. These feelings are usually connected to movement and that is our physical body. For instance, the word family may mean something totally different to two people, who the word can mean something different to be defined as changing the position of one's body.

The Best Physical Activity Programs to Organize a Group of Mixed Age Students with Limited Staff
Posted on November 15, 2022 by Alisha Burken
Most people would recognize the famous movie line, "It's like a box of chocolates... you never know what you're gonna get!" The same idea could easily represent the one-age-for-all physical activity director. Some weeks might have more physical activity or more games, perfectly adapted to age, and...

Seven steps for starting an Afterschool Program, even on a limited budget
Posted on October 27, 2022 by Alisha Burken
Lesson plans in simply during the writing and formatting. Initially, I even looked for the best activity's structure and even had over 1000, when an online partner took a gallery of type and wanted to make a huge selection book. It has been made only for students.

Font selection: the details designers need

Designers need more than “use font XYZ”.

They need to know heading font vs body font. If there is an accent font.

Headings h1-h4. h5 & h6 are almost never used.

Body font size & weight.

Line height, paragraph spacing.

Letter spacing (generally just for body font, but on some fonts I add it for headings).

Colors: We need a lot more than 5 colors

Multiple background colors needed. (most sites use 2-3)

Heading font color.

Body font color.

Link & link hover colors.

Border color.

Accent colors.

Button & button hover colors.

CSS Variables

For ease of development, below are the CSS

```
--background-color-1: #f7f7f7;  
--background-color-2: #e0e0e0;  
--background-color-3: #eeeeee;  
  
--heading-color: #222222;  
--text-color: #111111;  
--link-color: #1111ff;  
--link-hover-color: #116611;  
  
--border-color: #777777;  
--accent-color-1: #ce0909;  
--accent-color-2: #028d5e;  
--accent-color-3: #bc690b;  
  
--button-background-color: #111111;  
--button-text-color: #eeeeee;  
--button-background-hover-color: #eeeeee;  
--button-text-hover-color: #111111;  
--button-border-color: #111111;
```

Colors: We need a lot more than 5 colors

If both dark & light backgrounds, double that.

Plus any decorative accent colors which are for aesthetic purposes only (no contrast guidelines).

CSS Variables

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```
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--border-color: #777777;  
--accent-color-1: #ce0909;  
--accent-color-2: #028d5e;  
--accent-color-3: #bc690b;  
  
--button-background-color: #111111;  
--button-text-color: #eeeeee;  
--button-background-hover-color: #eeeeee;  
--button-text-hover-color: #111111;  
--button-border-color: #111111;
```

Be clear & specific with instructions

We are just giving them some rules for their work.

Remove any ambiguity & any decision making.

Examples:

- No text over an image
- No carousels or sliders allowed
- All buttons will be XXX background, XXX border, and XXX text color
- Exactly one h1 heading on every page
- Line spacing for body text is 1.5

- Accessible Design Guidelines

What is the purpose of these...

Limitations of these guidelin...

Purpose of a webpage

Quick reference to accessibl...

Screen reader

Keyboard navigation

Touch screens

CSS (Cascading Style Sheets)

Future friendly design

Set your defaults in a style g...

What is a style guide?

Elements of a style guide

Relevant WCAG criteria

Checklists to review work

People aren't perfect.

Have clear checklist to review the design.

- Were the correct fonts used?
 - Correct line & letter spacing?
 - Are any of the items on the not allowed list present?
 - Do forms have clear labels?
-

Faster design process with accessibility

The earlier in your process you solve for accessibility, the less expensive it is.

Recipes produce consistent results.

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WCAG.

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Good tools for saving time.

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Questions?

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