

Coding for Accessibility



Brian Treese

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```

96     <h1>One more for good measure.</h1>
97     <p>Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta in massa nec ele
98     .</p>
99     <p><a class="btn btn-lg btn-primary" href="#" role="button">Browse gallery</a>
100   </div>
101 </div>
102 </div>
103 <a class="left carousel-control" href="#myCarousel" role="button" data-slide="prev">
104   <span class="glyphicon glyphicon-chevron-left" aria-hidden="true"></span>
105   <span class="sr-only">Previous</span>
106 </a>
107 <a class="right carousel-control" href="#myCarousel" role="button" data-slide="next">
108   <span class="glyphicon glyphicon-chevron-right" aria-hidden="true"></span>
109   <span class="sr-only">Next</span>
110 </a>
111 </div><!-- /.carousel -->
112 <!--Featured Content Section-->
113 <div class="container">
114   <div class="row">
115     <div class="col-md-4"></div>
116     <div class="col-md-4"><h2>FEATURED CONTENT</h2> <div class="featurette">

```



```
96     <h1>One more for good measure.</h1>
97     <p>Cras justo odio, dapibus ac facilisis in, egestas eget quam. Donec id elit non mi porta in massa nec ele
98     .</p>
99     <p><a class="btn btn-lg btn-primary" href="#" role="button">Browse gallery</a>
100   </div>
101 </div>
102 </div>
103 <a class="left carousel-control" href="#myCarousel" role="button" data-slide="prev">
104   <span class="glyphicon glyphicon-chevron-left" aria-hidden="true"></span>
105   <span class="sr-only">Previous</span>
106 </a>
107 <a class="right carousel-control" href="#myCarousel" role="button" data-slide="next">
108   <span class="glyphicon glyphicon-chevron-right" aria-hidden="true"></span>
109   <span class="sr-only">Next</span>
110 </a>
111 </div><!-- /.carousel -->
```

```
<!--Featured Content Section-->
```

```
112 <div class="container">
113   <div class="row">
114     <div class="col-md-4"></div>
115     <div class="col-md-4"><h2>FEATURED CONTENT</h2> <div class="feature">
```

Coding for Accessibility

- Proper document structure
- Use the correct HTML tags
- Don't use text in images
- Add alt descriptions to images in content
- Accessible from the keyboard
- Focus on performance

Proper Document Structure

<h1> - <h6>

It's All About the Document Outline

1. Web Accessibility Getting Started
 1. Main Navigation
 2. Accessibility is About Everyone
 1. Accessibility Areas
 1. What is Accessibility?
 2. Accessible Design
 3. Accessible Code
 4. ARIA
 5. WCAG & Section 508
 6. Testing & Tools

Use Proper Order

```
<main role="content">
```

```
<h1>I'm the Main Title</h1>
```

```
<p>I'm the main description</p>
```

```
<h2>I'm a Secondary Title</h2>
```

```
<p>I'm a secondary description</p>
```

```
</main>
```


Use Proper Order

```
<main role="content">  
  <h2>I'm an H2 Header</h2>  
  <p>I'm the main description</p>  
  <h5>I'm an H5 header</h5>  
  <p>I'm a secondary description</p>  
</main>
```

Use Proper Order

```
<main role="content">  
  <h2>I'm an H2 Header</h2>  
  <p>I'm the main description</p>  
  <h5>I'm an H5 header</h5>  
  <p>I'm a secondary description</p>  
</main>
```

Use Lists

``
Unordered

``
Ordered

`<dl>`
Description

```
<ul>
  <li>Milk</li>
  <li>Bread</li>
  <li>Lettuce</li>
</ul>
```

Unordered Lists

Use when no order of sequence or importance is needed

```
<ol>
```

```
  <li>First we need to do this</li>
```

```
  <li>Next we need to do this</li>
```

```
  <li>Lastly we need to do this</li>
```

```
</ol>
```

Ordered Lists

Use when order of sequence or importance ***IS*** needed

```
<d1>  
  <dt>Milk</dt>  
  <dd>Fat free organic milk</dd>  
  <dt>Bread</dt>  
  <dd>Whole wheat sourdough</dd>  
</d1>
```

Description Lists

Use when a description for each item is needed

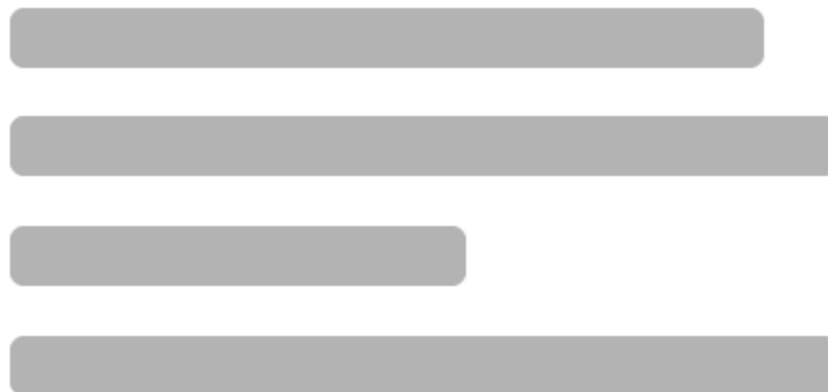
Facilitate Keyboard Navigation



Secondary Content



Primary Content

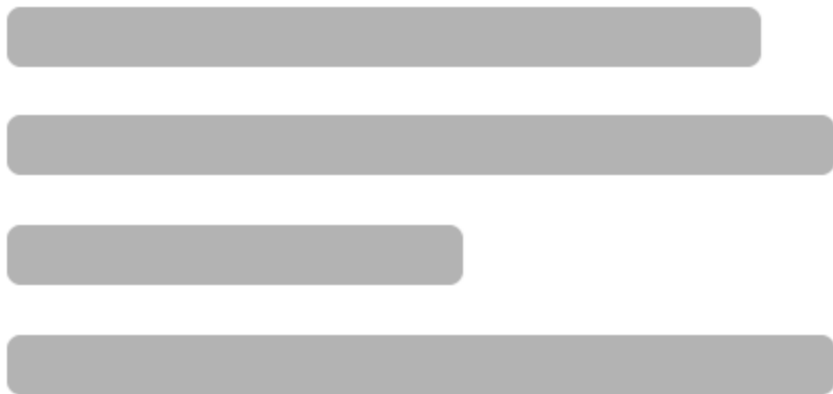




Secondary Content

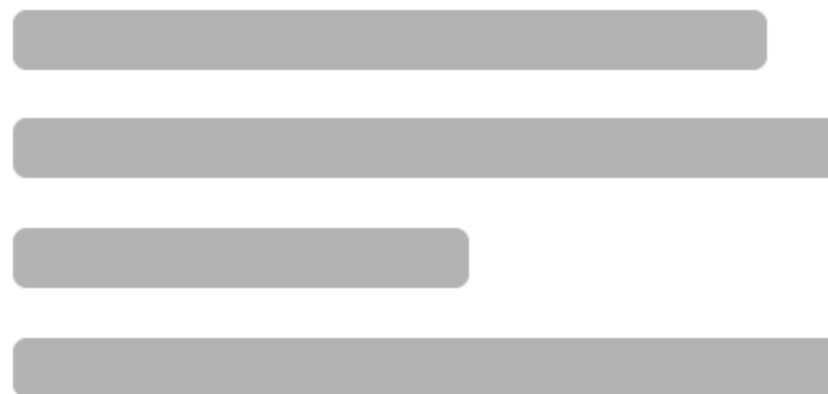


Primary Content





Primary Content

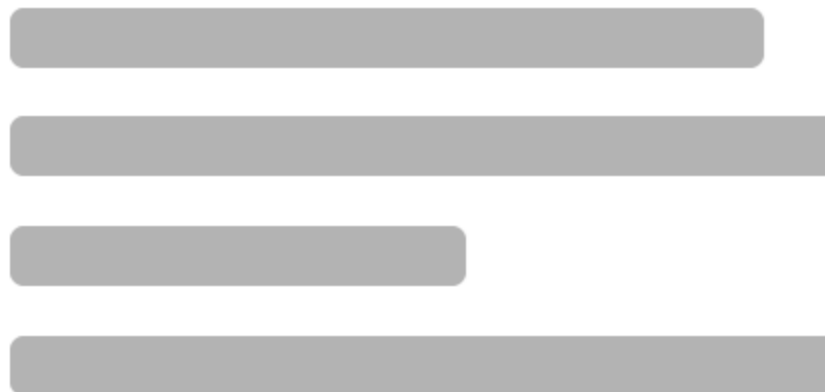




Secondary Content



Primary Content

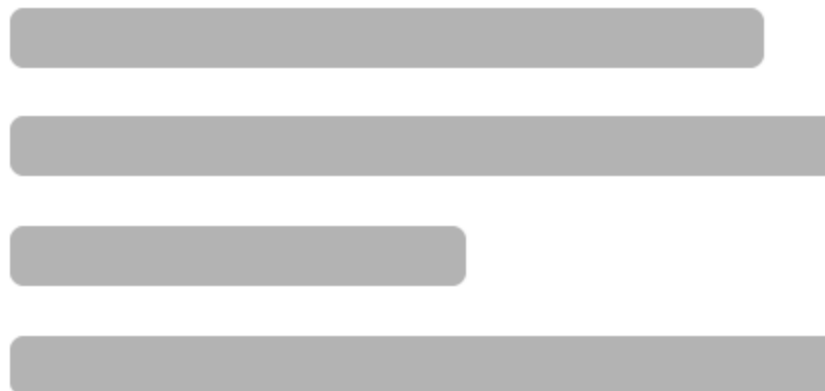




Secondary Content

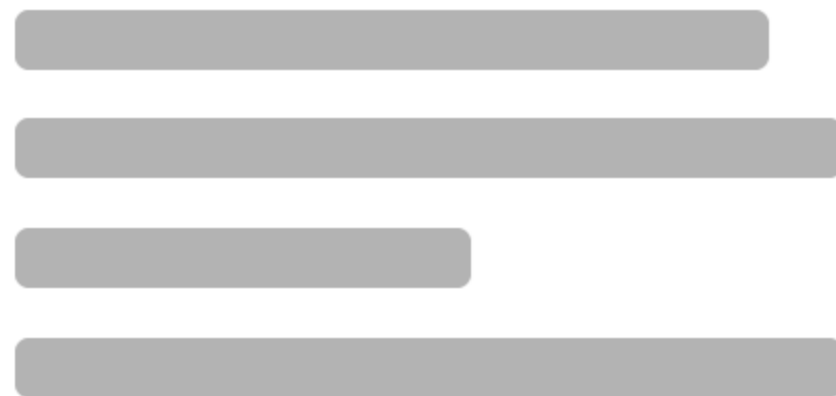


Primary Content





Primary Content

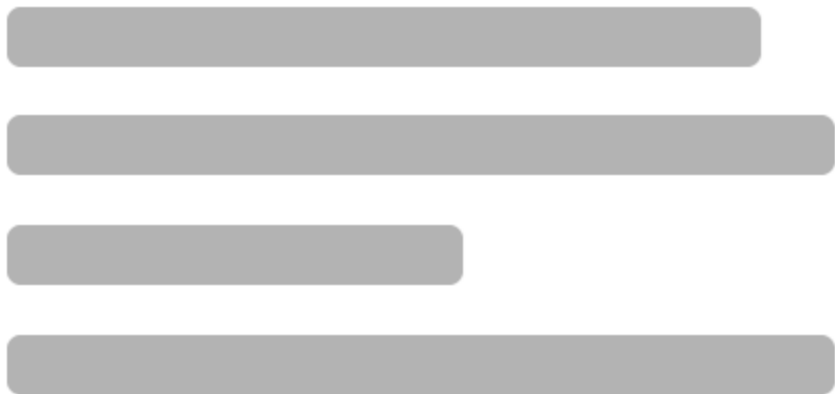




Secondary Content



Primary Content

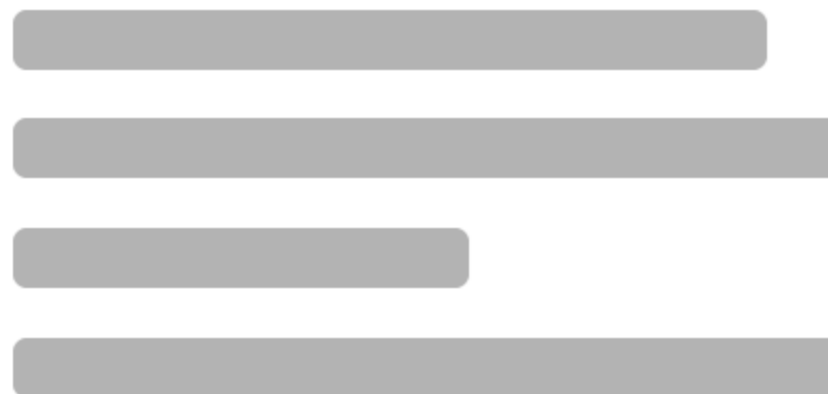


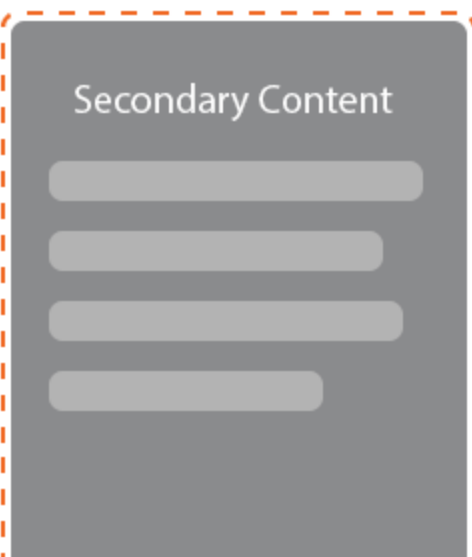


Secondary Content

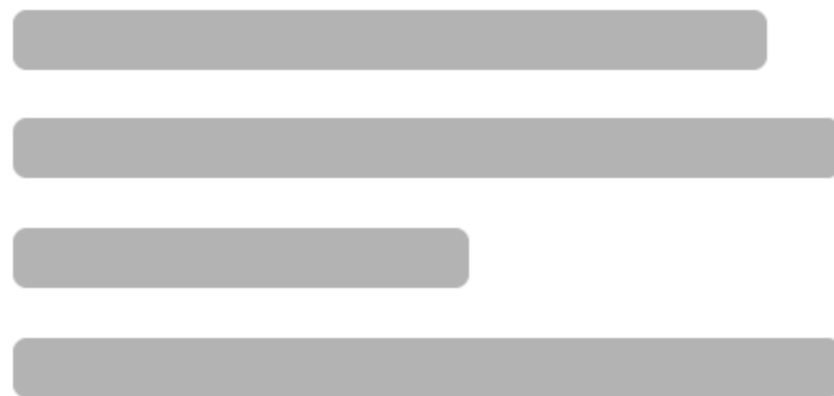


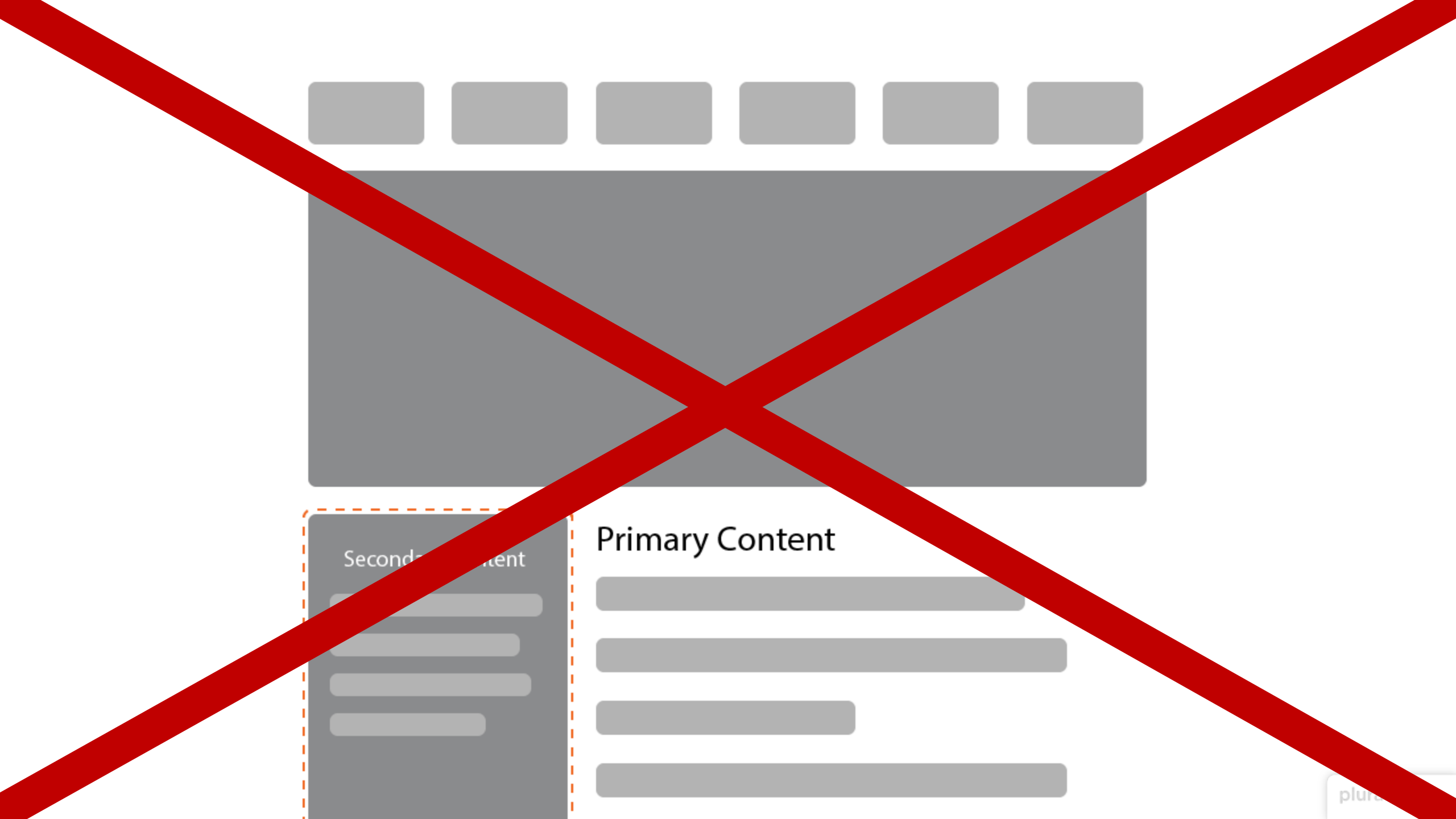
Primary Content





Primary Content





Secondary Content

Primary Content

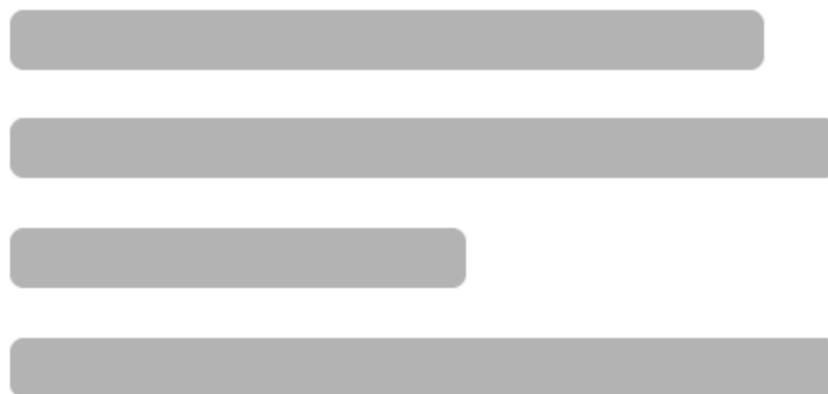
plus



Secondary Content



Primary Content

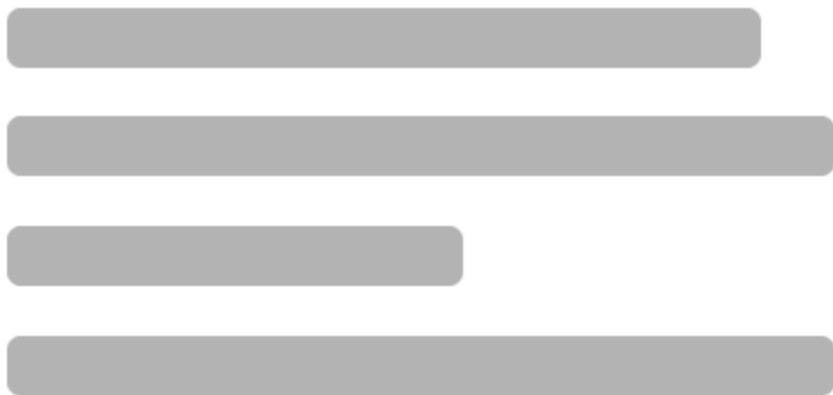




Secondary Content

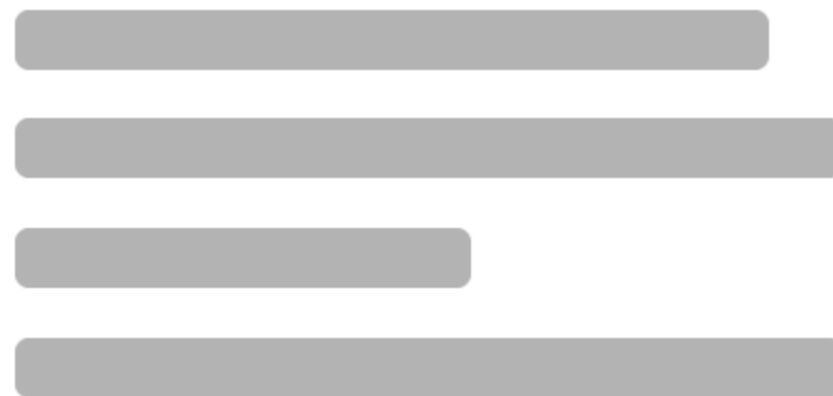


Primary Content





Primary Content

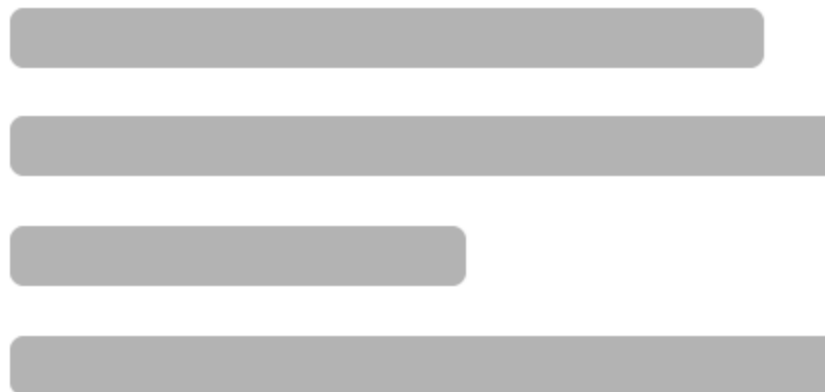




Secondary Content



Primary Content

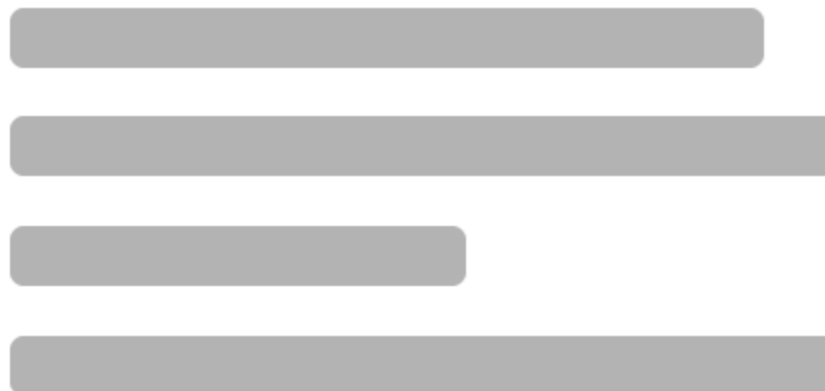




Secondary Content



Primary Content

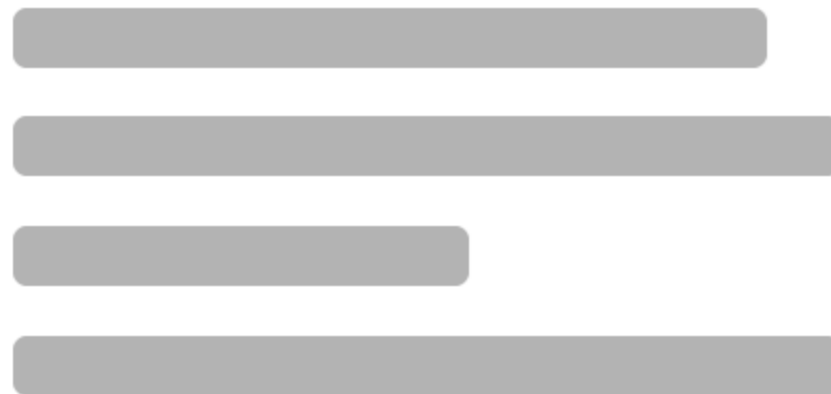




Secondary Content

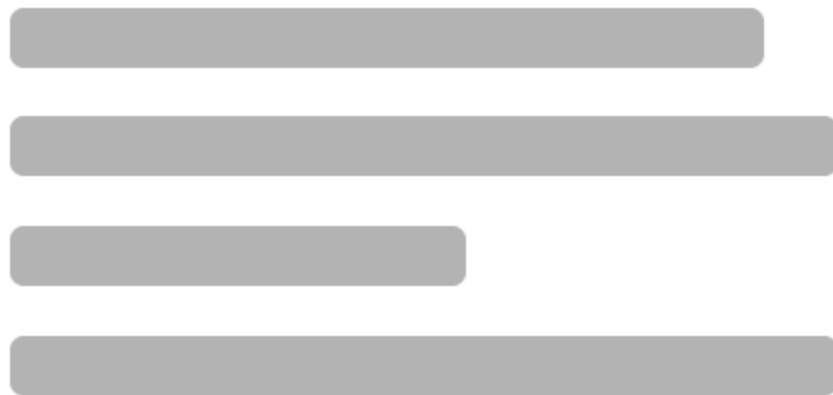


Primary Content





Primary Content

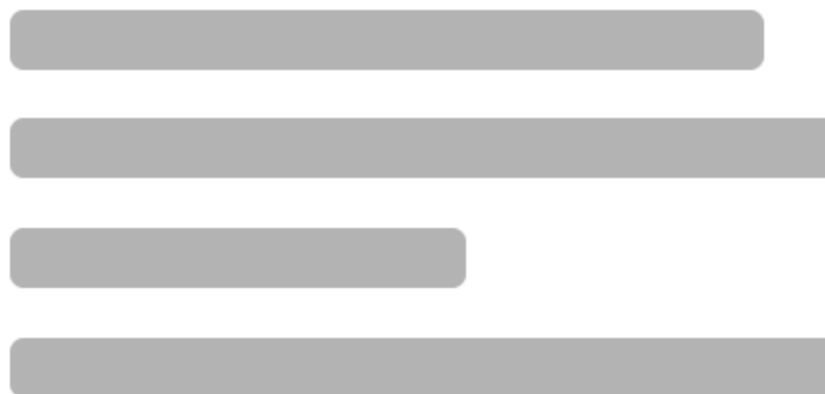




Secondary Content



Primary Content

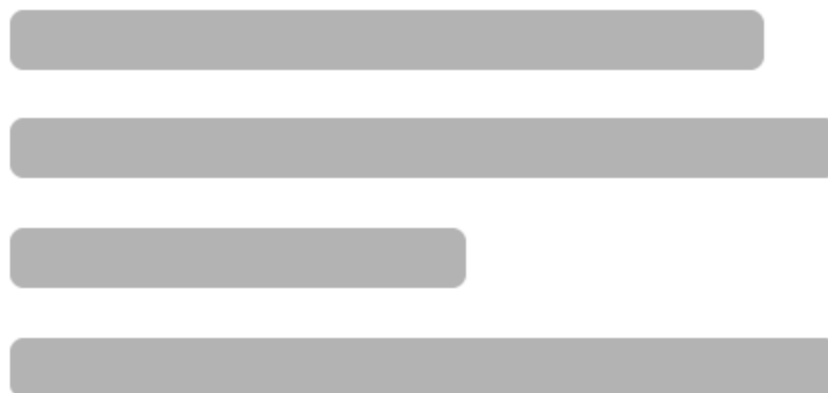




Secondary Content

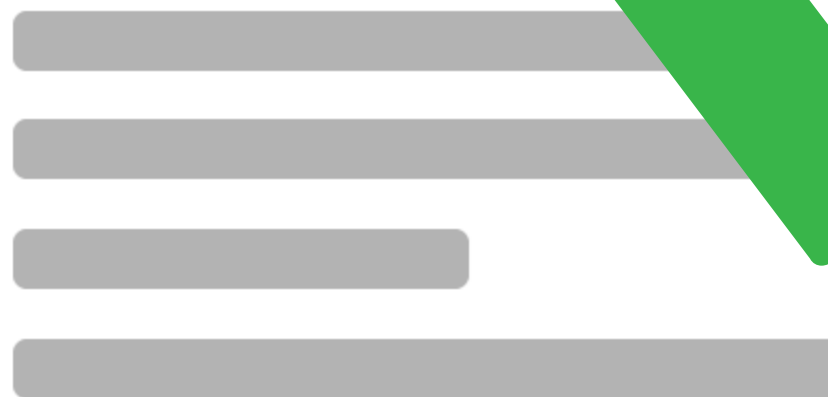


Primary Content





Primary Content



It's Pretty Straight Forward!

Images & Accessibility

Images by Default Are Inaccessible

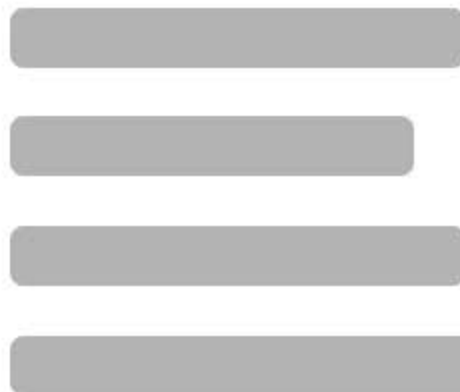
They Need Descriptions



Secondary Content



Primary Content

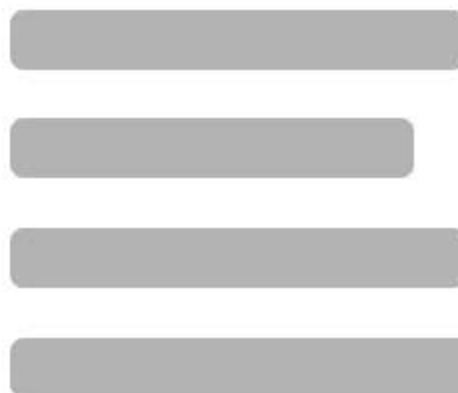




Secondary Content



Primary Content



```

```

Alternate Text

A succinct description of the content of the image

Don't overwhelm with a superfluous wordy description



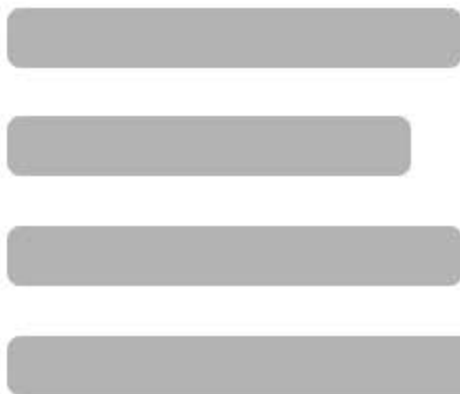
Line Graph



Secondary Content



Primary Content





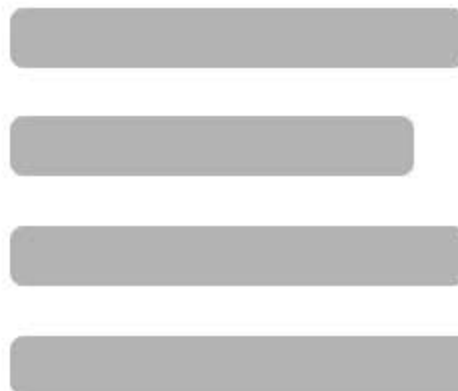
Line Graph



Secondary Content



Primary Content



```

```

Long Description

Can be a URL to a different page or can link to an ID on the current page

Browser support is almost non-existent



Line Graph

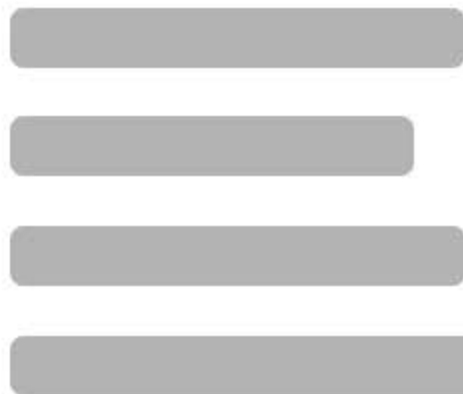


[Get Graph Details](#)

Secondary Content



Primary Content





Line Graph



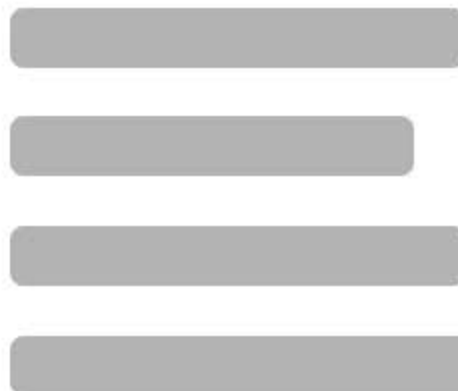
[Get Graph Details](#)



Secondary Content



Primary Content



```
  
<a href="GraphDesc.html" id="desc">  
    Get Graph Details  
</a>
```

Use a Link Instead!

What if We Don't Need a
Description?

```

```

No Description Needed?

Add an empty alt attribute

This tells screen readers to ignore it

Content & Accessibility

It Doesn't Matter...

What device
they're using

If they have
disabilities

If they're using
assistive
technologies

If they're losing
abilities due to
aging

If they have
vestibular or
reading disorders

They Came for the Content

They Should Be Able to Get It!

[Skip to Main Content](#)



Main Content



[Skip to Main Content](#)



Main Content



[Skip to Main Content](#)



Audio File



[Get Transcript](#)

[Skip to Main Content](#)



Audio File



[Get Transcript](#)



[Skip to Main Content](#)



We need to add captions to videos

0:11

[Get Transcript](#)

[Skip to Main Content](#)



[Get Transcript](#)

[Skip to Main Content](#)



[Get Transcript](#)

Adding Text in Images...



No Bueno

Who am I?

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More](#)

Our Products

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More](#)

Who am I?

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More](#)



Our Products

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More](#)



```
<a href="about.html">
```

Read More

```
</a>
```

Generic Text

Screen readers read "Read More, Read More, Read More"

No further information about the section is available

Who am I?

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More About Me](#)

Our Products

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Read More About Our Products](#)

Who am I?



[Read More About Me](#)



Our Products



[Read More About Our Products](#)



```
<a class="about-link" href="about.html">  
  Read More About Me  
</a>
```

Use CSS Generated Content

```
.about-link:after {  
    content: "Read More";  
}
```

Use CSS Generated Content

HTML Attributes & Accessibility

```
<html lang="en">
```

Language Attributes

let the browser or assistive technology know what language the site is using


```
<blockquote lang="fr">
```

Si six scies scient six cyprès, six cents scies scient
six cent cyprès.

```
</blockquote>
```

Language Attributes

if displaying something in a different language within the page, add the “lang” attribute

```

```

Alternate Text

A succinct description of the content of the image

Don't overwhelm with a superfluous wordy description

```
<abbr title="Hyper Text Markup Language">
```

HTML

```
</abbr>
```

Abbreviations Need a Title

Used to show the full description of the abbreviated word

Must contain the description for the word and nothing else

For Forms...

```
<label for="firstName">
```

First Name

```
</label>
```

```
<input type="text" id="firstName" />
```

For Attribute

Connect labels with their associated form fields

```
<label for="firstName">
```

First Name

```
</label>
```

```
<input type="text" id="firstName" required />
```

Required Attribute

Provide more information for required fields

Tab Index...

```
<span class="button" tabindex="5">  
    Submit  
</span>
```

Tabindex Attribute

Forces non-standard controls into the tab order for keyboard navigation

Web Forms & Accessibility

Logical Groupings With Fieldsets & Legends

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

← fieldset

Submit

CVV2 Code

Required

Billing Address

legend



Address

Required

City

Required

State

Required

Postal Code

Required

Submit

```
</fieldset>
```

```
<fieldset>
```

```
  <legend>Billing Address</legend>
```

```
  <label for="billingAddress">Address</label>
```

```
  <input type="text" id="billingAddress" />
```

```
  <label for="billingCity">City</label>
```

```
  <input type="text" id="billingCity" />
```

Fieldsets & Legends

Use them to logically group form fields

Labels

Contact Us

Your Name

Required

Your Email

Required

Your Message

Required



I would like to receive product updates and news

Submit

Contact Us

Your Name

Required

Your Email

Required

Your Message

Required



I would like to receive product updates and news

Submit

```
<fieldset>
```

```
  <legend>Contact Us</legend>
```

```
  <label for="name">Your Name</label>
```

```
  <input type="text" id="name" />
```

```
  <label for="email">Your Email</label>
```

```
  <input type="text" id="email" />
```

```
  <label for="name">Your Message</label>
```

Labels

Every field should have an associated label using the "for" attribute

Contact Us

Required

Your Name

Required

Your Email

Required

Your Message



I would like to receive product updates and news

Submit

Contact Us

Required

Your Name

Required

Your Email

Required

Your Message



I would like to receive product updates and news

Submit

plus

```
<fieldset>
```

```
  <legend>Contact Us</legend>
```

```
  <input type="text" id="name" placeholder="Your Name" />
```

```
  <input type="text" id="email" placeholder="Your Email" />
```

```
  <textarea id="message" placeholder="Your Message" />
```

```
  <label>
```

```
    <input type="checkbox" id="updatesAndNews" checked />
```

Placeholder Text

SHOULD NOT be used as a replacement for labels

SHOULD be used to provide hints and tips

```
</fieldset>
</legend>Contact Us</legend>
  <input type="text" id="name" placeholder="Your Name" />
  <input type="text" id="email" placeholder="Your Email" />
  <textarea id="message" placeholder="Your Message" />
  <label>
    <input type="checkbox" id="updatesAndNews" checked />
```

Placeholder Text

SHOULD NOT be used as a replacement for labels

SHOULD be used to provide hints and tips

Hidden Labels Are Ok
Sometimes

Hidden Labels Are Ok Sometimes


```
<form id="sitesearch">  
  <label for="s" class="hidden">  
    Search This Site  
  </label>  
  <input type="text" id="s" placeholder="Search this site">  
  <input type="button" value="Go">  
</form>
```

Hidden Labels

It's ok to visually hide labels where it makes sense to do so

```
/* Visually Hide Content */  
.hidden {  
    position: absolute;  
    left: -9999px;  
}
```

CSS Used to Visually Hide the Label

Required

Contact Us

Your Name

Required

Your Email

Required

Your Message

Required



I would like to receive product updates and news

Submit

Contact Us

Your Name

Required

Your Email

Required

Your Message

Required



I would like to recieve product updates and news

Submit

```
<fieldset>
  <legend>Contact Us</legend>
  <label for="name">Your Name</label>
  <span class="required">Required</span>
  <input type="text" id="name" required />
  <label for="email">Your Email</label>
  <span class="required">Required</span>
```

Required

This attribute should be added to all required fields

Enter Your Email Address

Required

Choose A Password

Must be at least 8 characters

Required

Whats Your Occupation?

Optional

Create Account

Enter Your Email Address

Required

Choose A Password

Must be at least 8 characters

Required



Whats Your Occupation?

Optional

Create Account


```
<form id="createAccount">
  <label for="e">Enter Your Email Address</label>
  <input type="email" id="e" />
  <label for="p">Choose a Password</label>
  <em>Must be at least 8 characters</em>
  <input type="password" id="p" />
  <label for="o">What's Your Occupation?</label>
```

Add Helper Text Where Needed

This helps make it easier for everyone to fill out the form

Tab Order

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

CVV2 Code

Required

Billing Address

Address

Required

City

Required

State

Required

Postal Code

Required

Submit

Accessible Keyboard Control





Who Doesn't Use a Mouse?

Blind people

People with fine
motor control
issues

People with little or
no use of their
hands

People that don't
have hands

People that find it
easier



Focus & Active Indicators

- Help people see where they are

Show Ad 

 AdChoices

[Make MSN my homepage](#)

NEWS

WEATHER

ENTERTAINMENT

SPORTS

MONEY

LIFESTYLE



Te
pr



Show Ad 

 AdChoices



[Make MSN my homepage](#)

NEWS

WEATHER

ENTERTAINMENT

SPORTS

MONEY

LIFESTYLE



Te
pr



```
.hidden {  
    display: none;  
}
```

```
.hide {  
  display: none;  
}
```



```
input:focus {  
    outline: solid 1px #98C741;  
    box-shadow: 0px 0px 5px 0px rgba(152,199,65,1);  
}
```



```
input:focus {  
    outline: solid 1px #98C741;  
    box-shadow: 0px 0px 5px 0px rgba(152,199,65,1);  
}
```

Tab Order



LTR



RTL



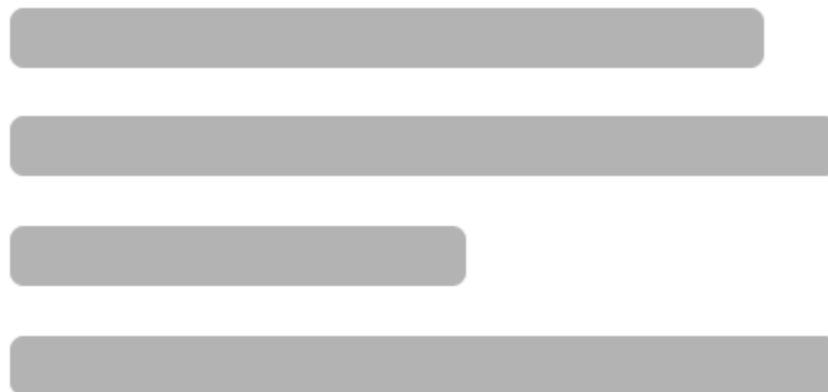
Top to Bottom



Secondary Content



Primary Content

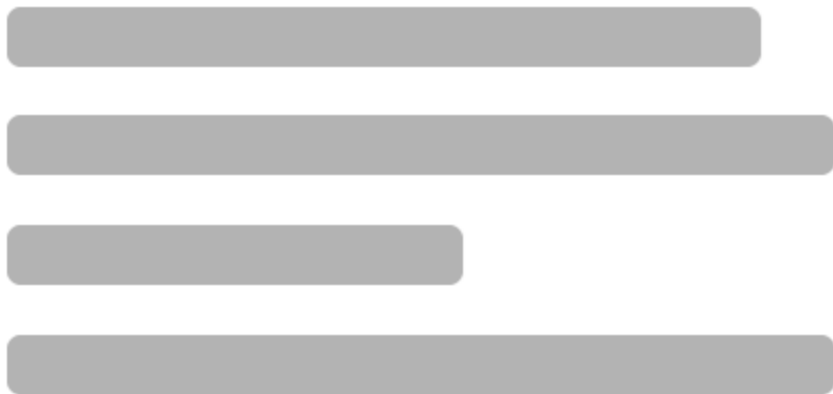




Secondary Content

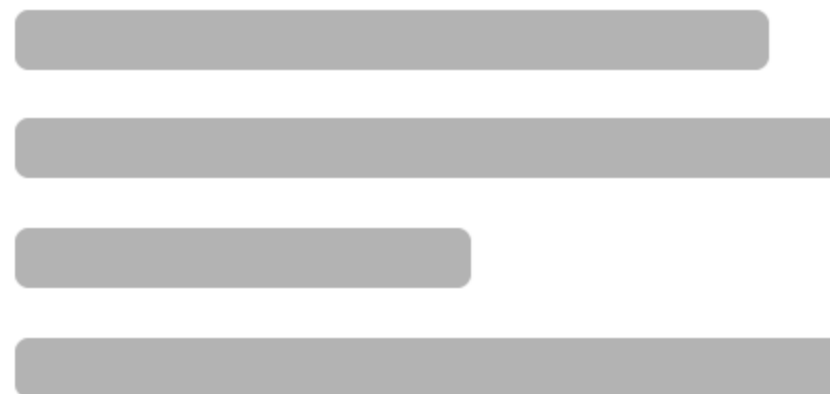


Primary Content





Primary Content

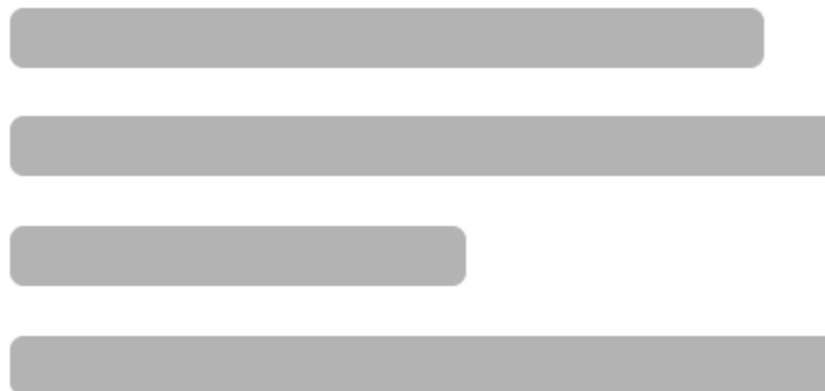




Secondary Content



Primary Content

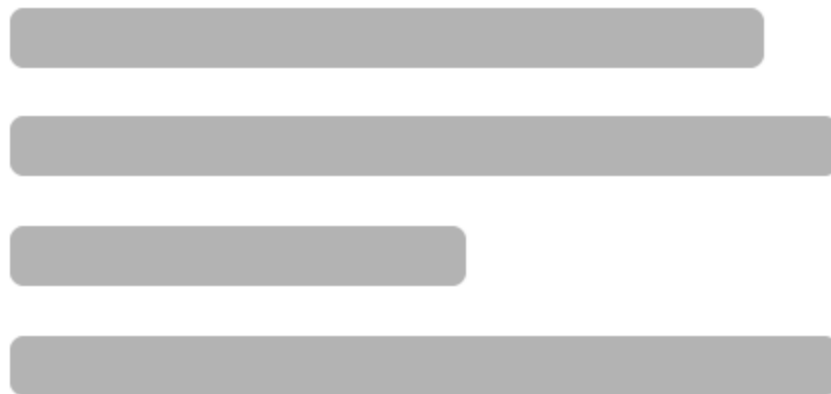




Secondary Content



Primary Content

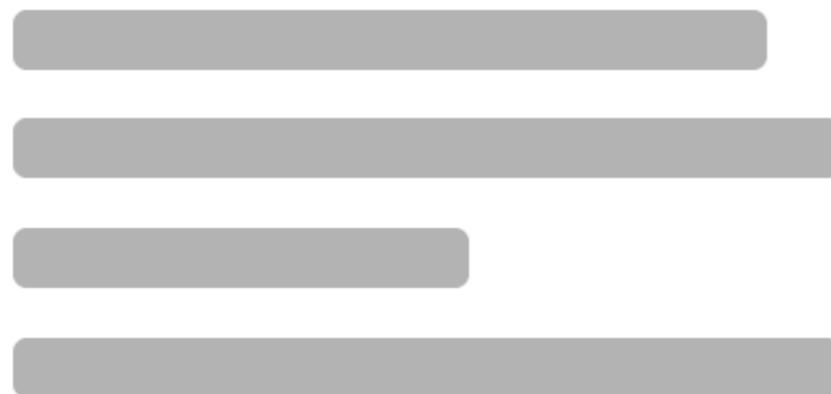




Secondary Content



Primary Content

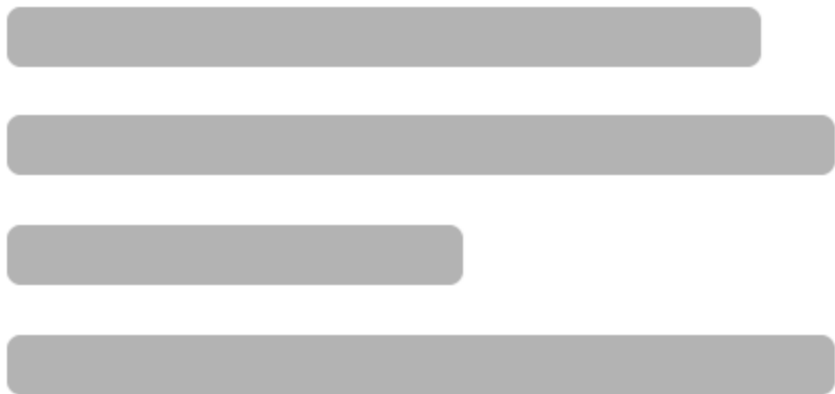




Secondary Content



Primary Content

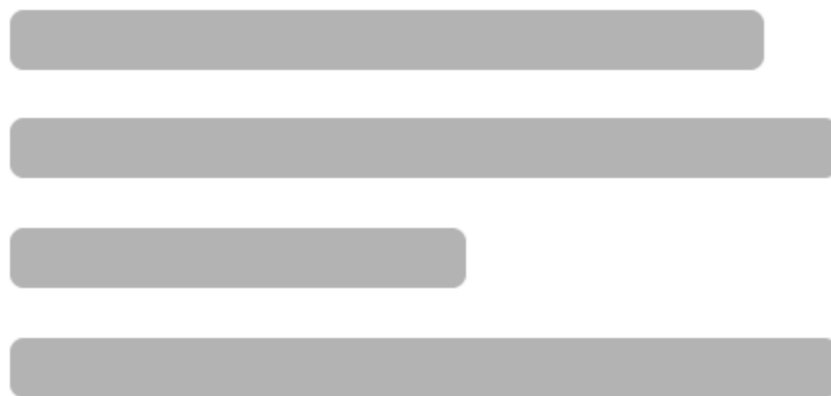




Secondary Content

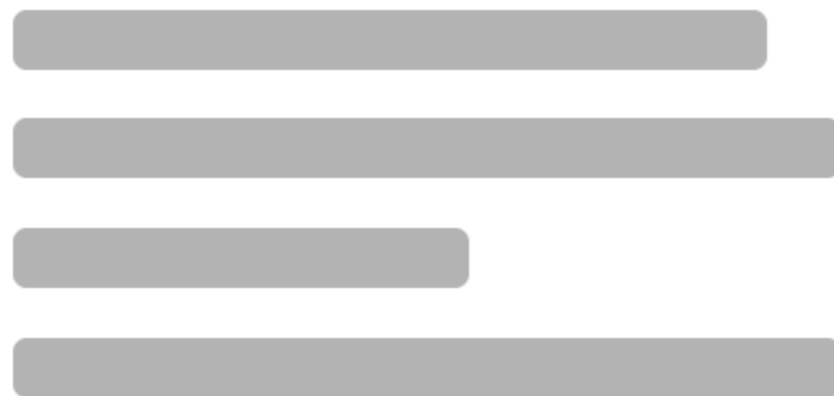


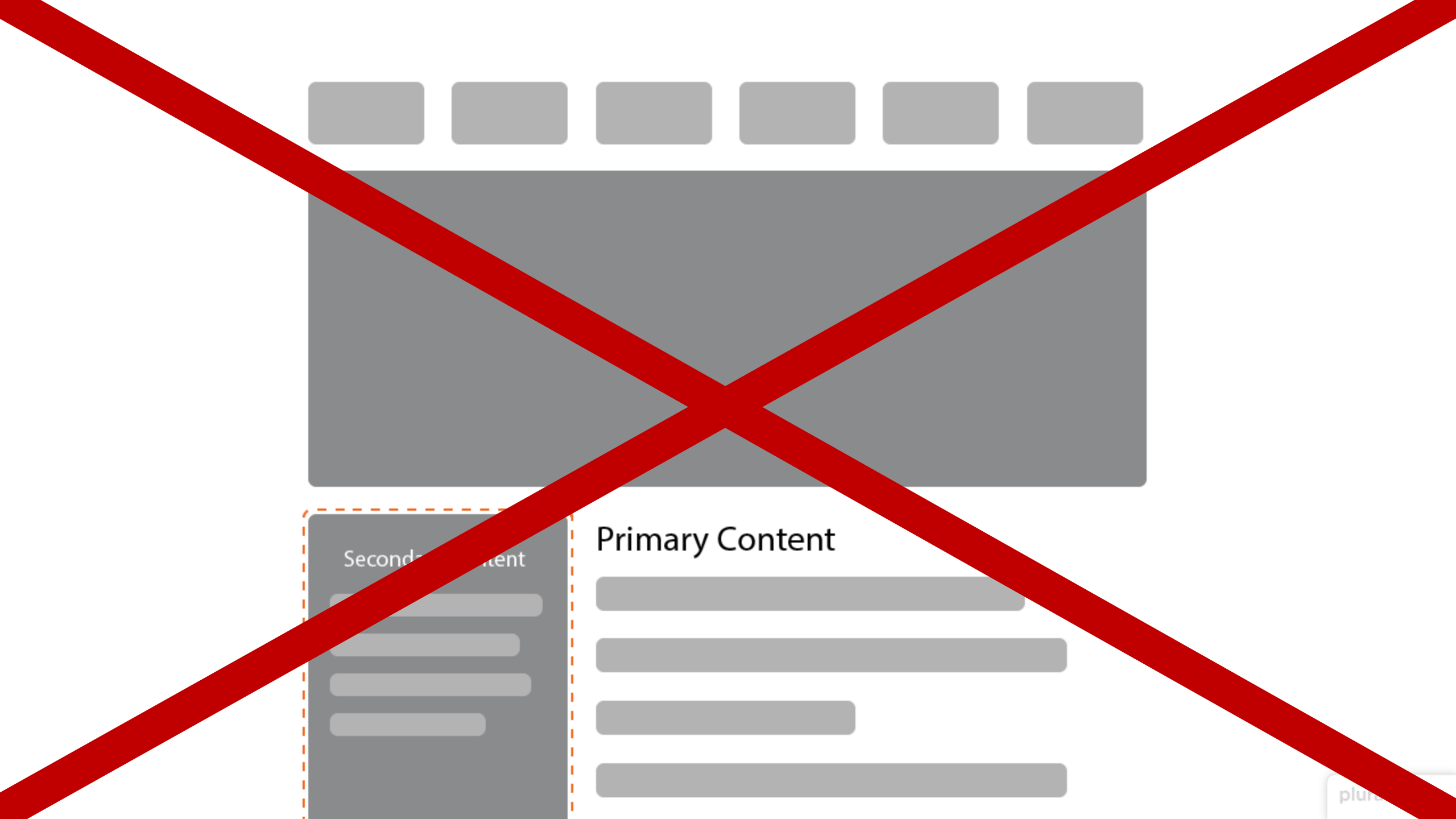
Primary Content





Primary Content





Secondary Content

Primary Content

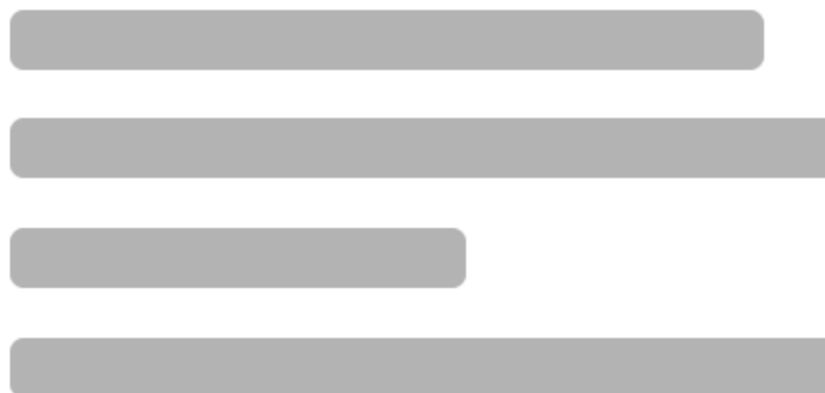
plus



Secondary Content



Primary Content

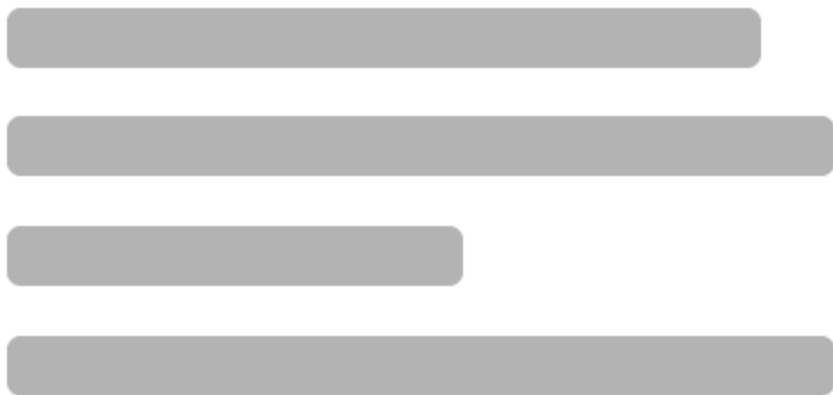




Secondary Content

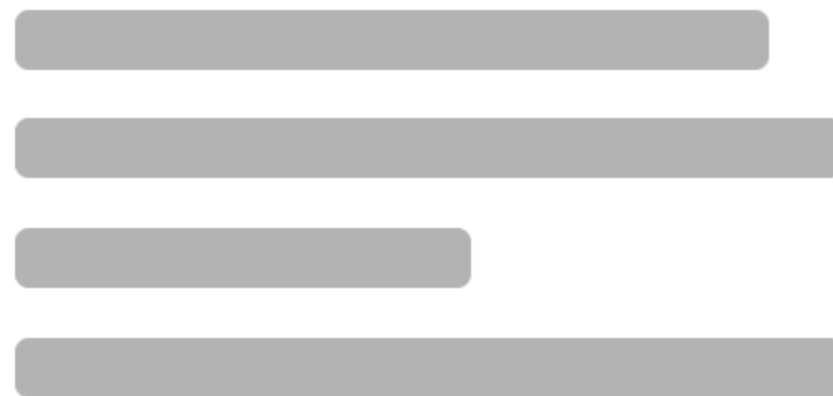


Primary Content





Primary Content

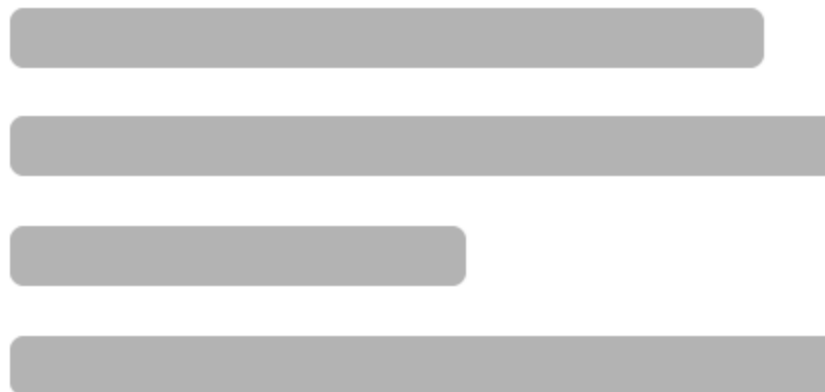




Secondary Content



Primary Content

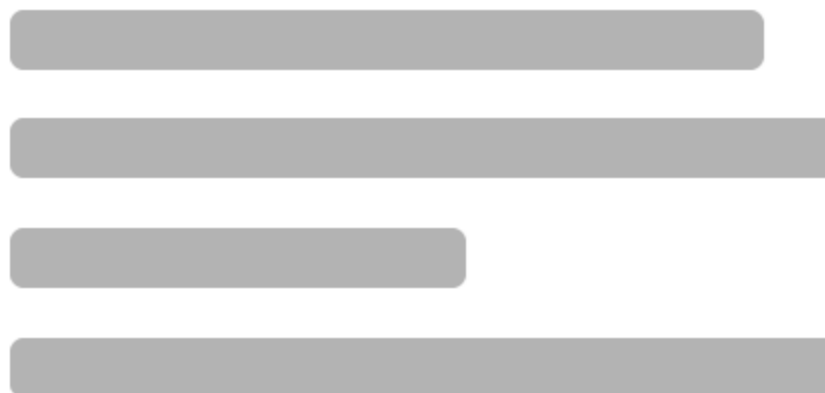




Secondary Content

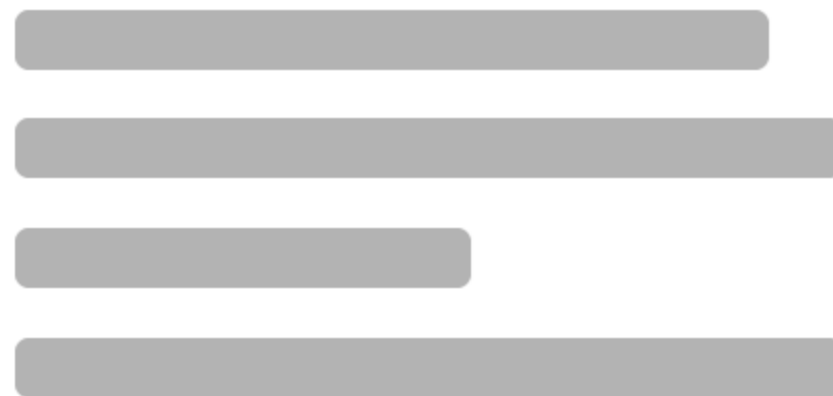


Primary Content





Primary Content

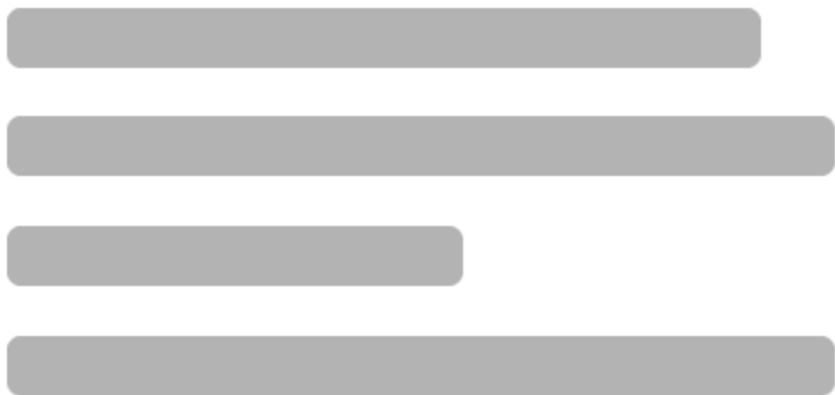




Secondary Content



Primary Content

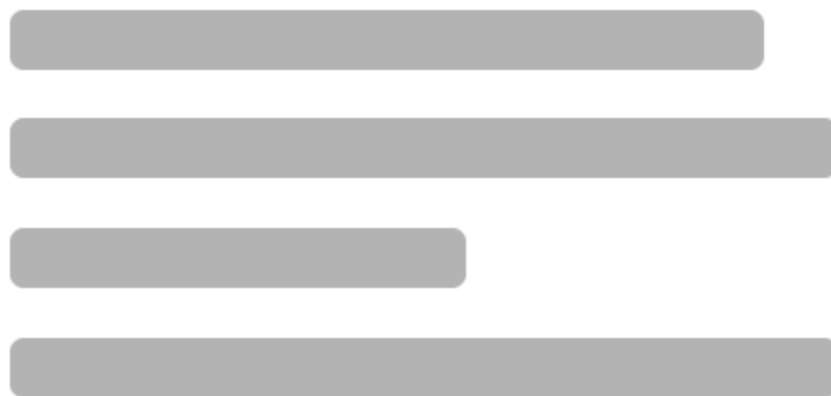




Secondary Content



Primary Content

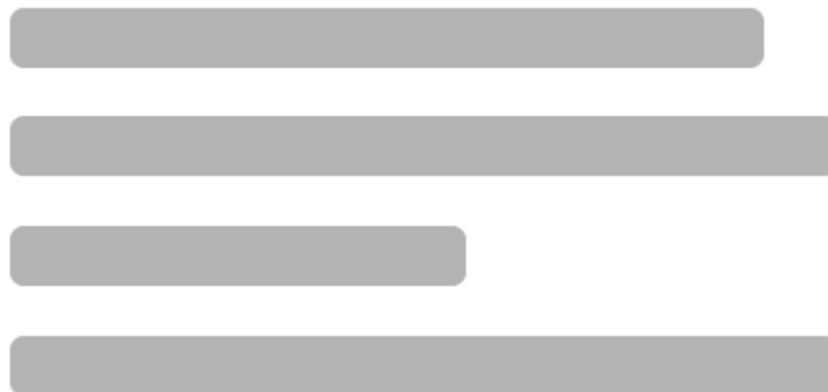




Secondary Content



Primary Content

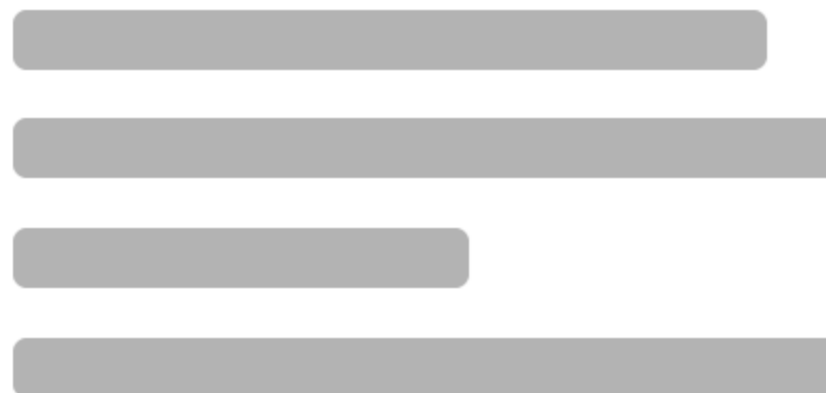




Secondary Content



Primary Content



```
<body>  
  <main>  
    <section class="primary-content">  
      ...  
    </section>  
    <aside class="secondary-content">  
      ...
```

Main Content Comes First!

Even though the sidebar looks like it comes 1st the main content should come before the sidebar in the code

Address

Required

City

Required

State

Required

Postal Code

Required

Submit



Span



Address

Required

City

Required

State

Required

Postal Code

Required

Submit



Span



Address

Required

City

Required

State

Required

Postal Code

Required

Submit



Address

Required

City

Required

State

Required

Postal Code

Required

Submit



Address

Required

City

Required

State

Required

Postal Code

Required

Submit



Non-Navigable Items

```
<span tabindex="0"  
  class="button"  
  onclick="document.getElementById('form-id').submit();">  
  Submit  
</span>
```

Non-Navigable Items

Adding a "tabindex" value of zero will insert the element into the default navigation order

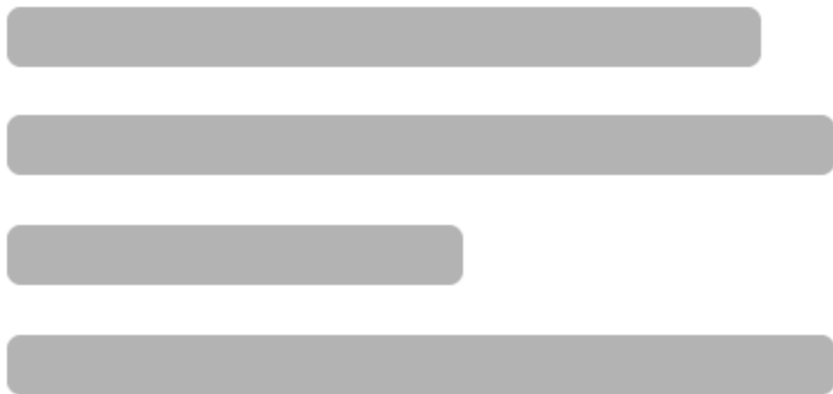
Skip Navigation Link



Secondary Content

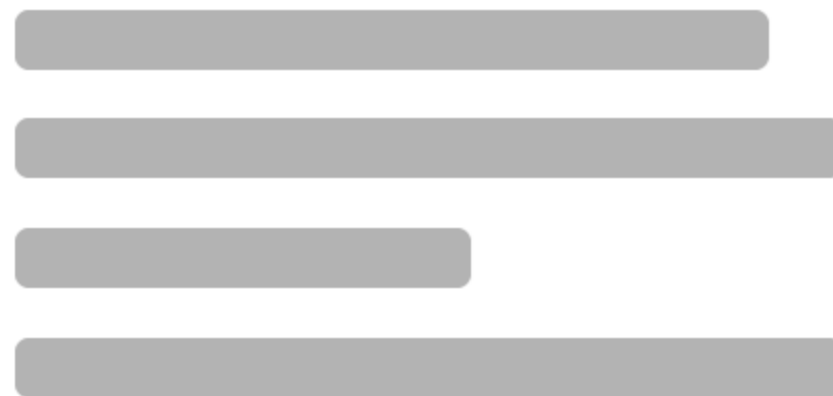


Primary Content





Primary Content

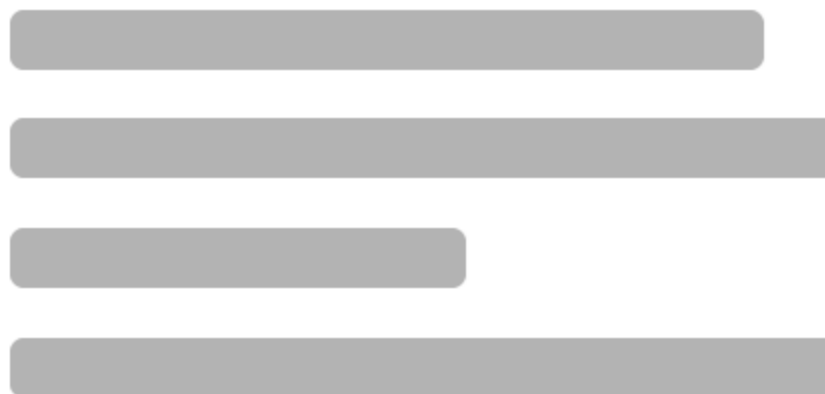




Secondary Content



Primary Content

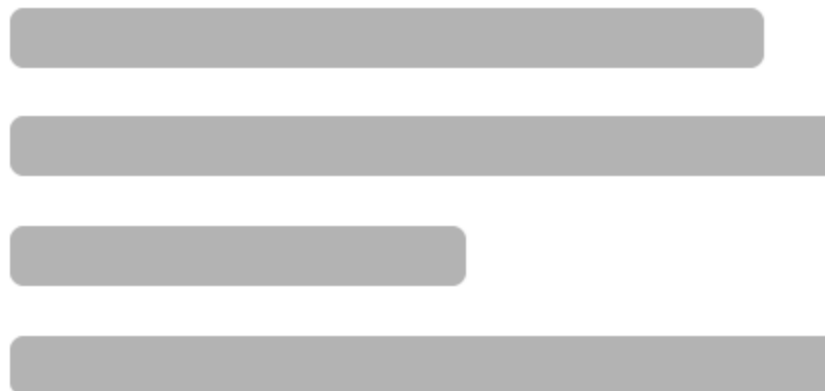




Secondary Content

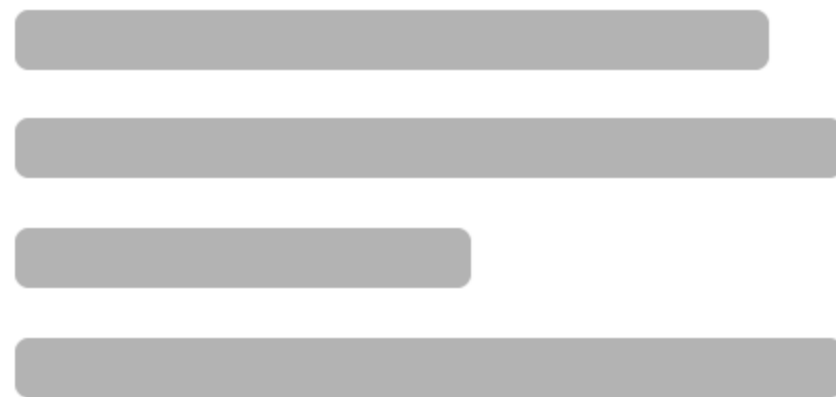


Primary Content





Primary Content

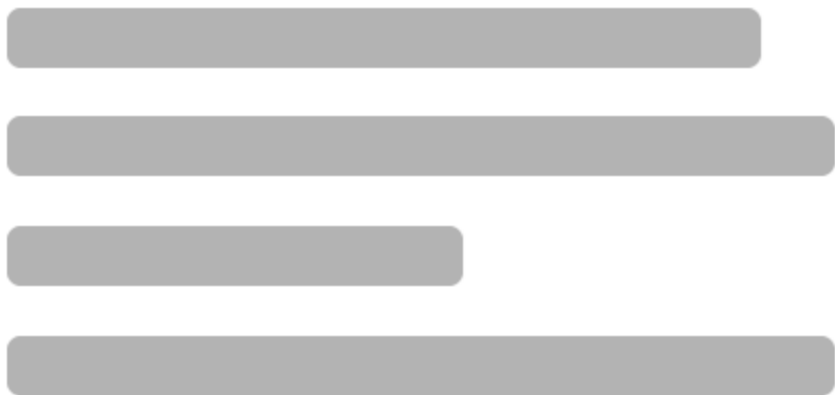




Secondary Content



Primary Content

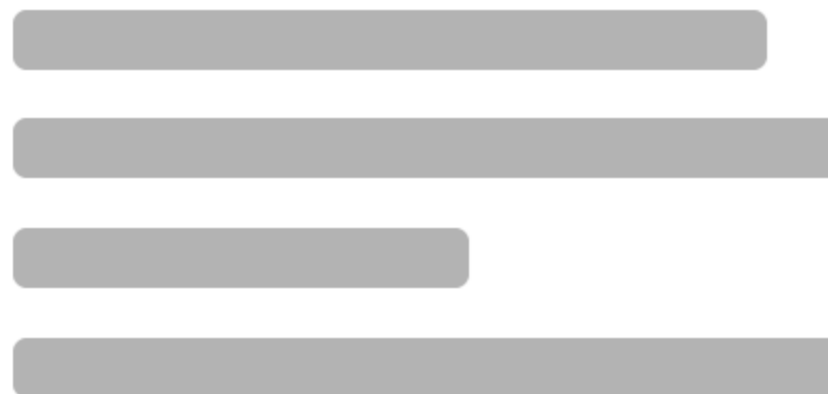




Secondary Content



Primary Content

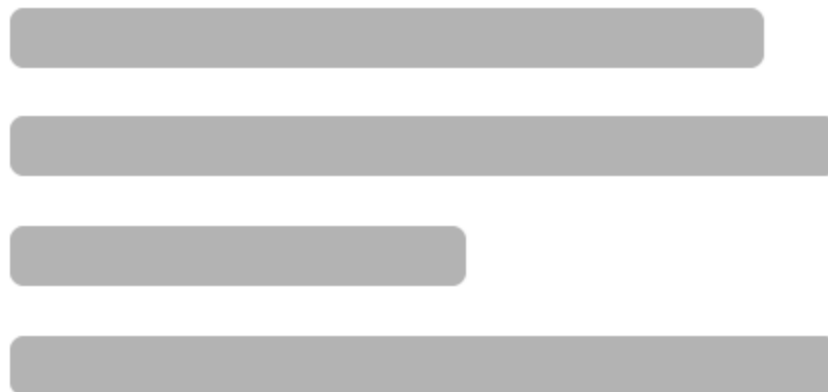


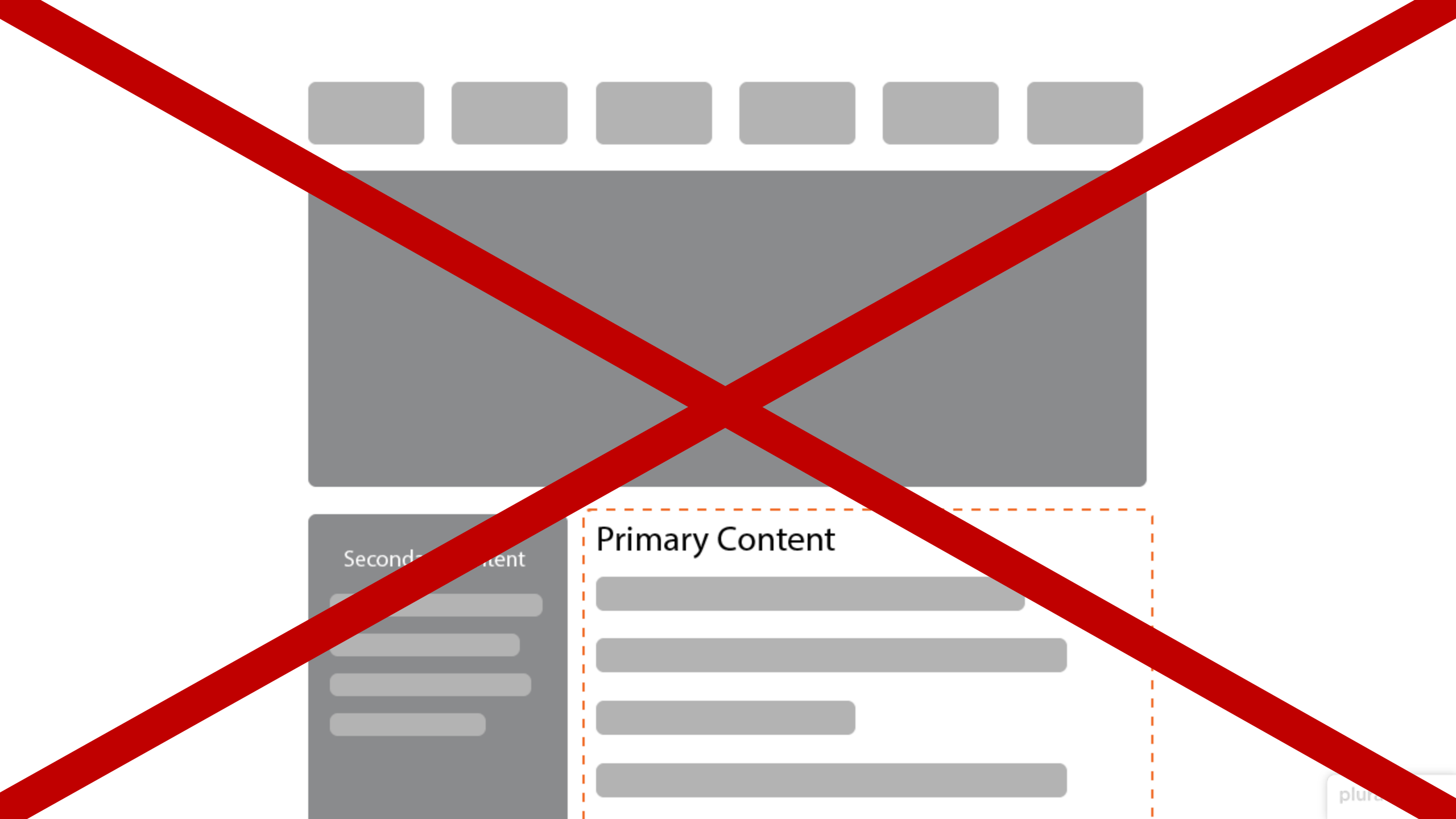


Secondary Content



Primary Content





Secondary Content

Primary Content

plus

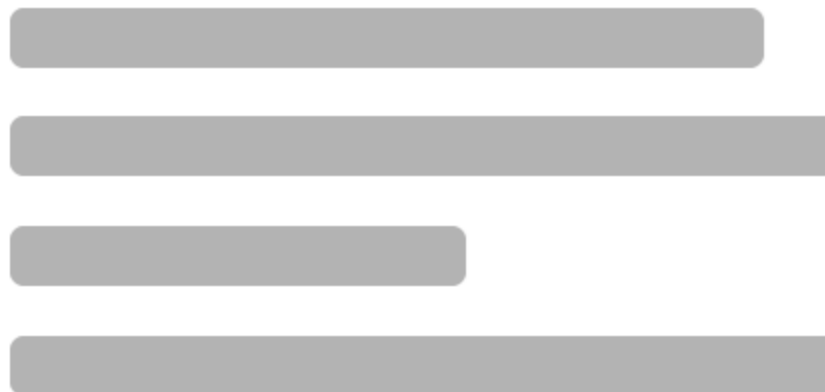
[Skip to Main Content](#)



Secondary Content



Primary Content



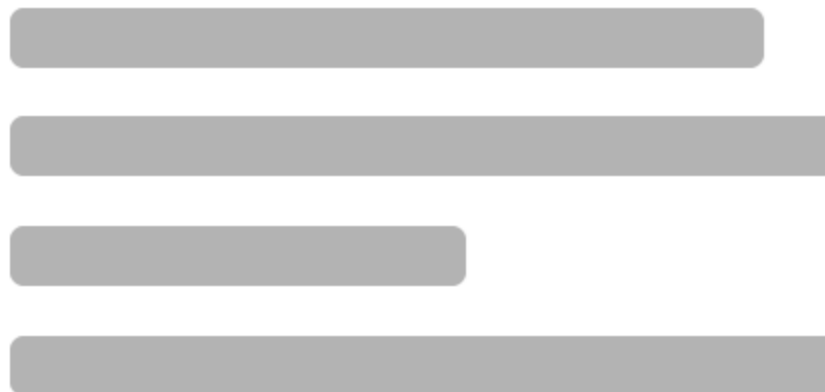
[Skip to Main Content](#)



Secondary Content



Primary Content



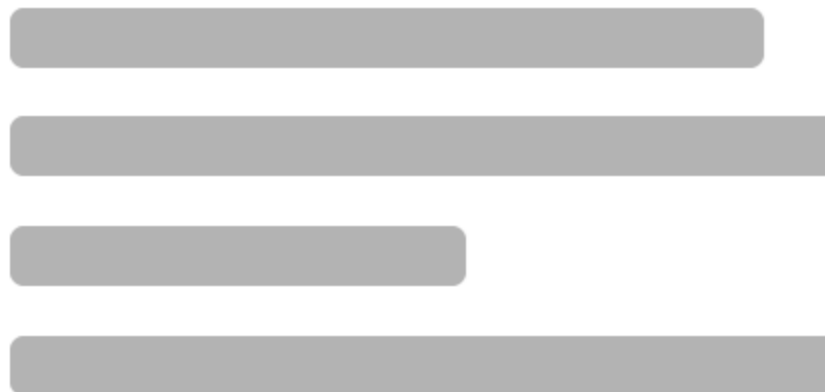
[Skip to Main Content](#)



Secondary Content



Primary Content



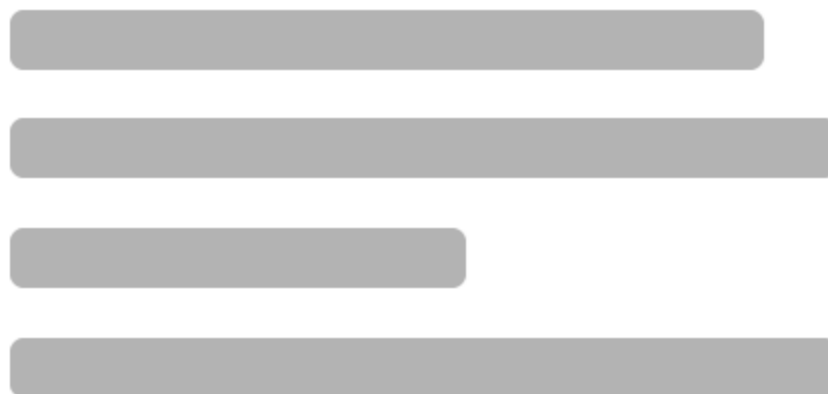
[Skip to Main Content](#)



Secondary Content



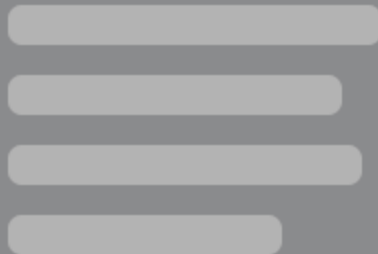
Primary Content



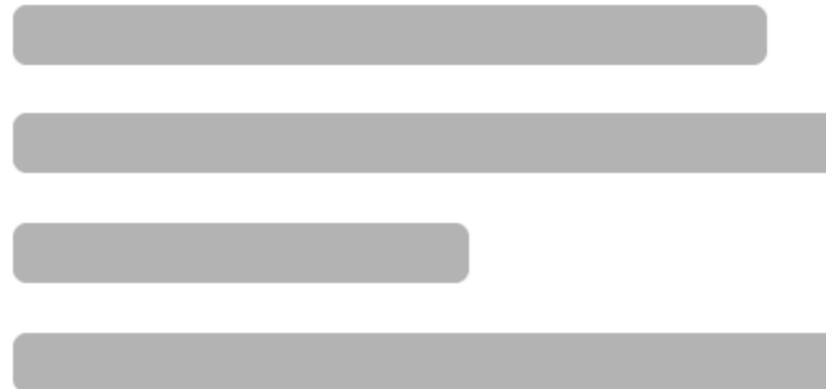
[Skip to Main Content](#)



Secondary Content



Primary Content



```
<head>  
  <title>Skip Link Example</title>  
</head>  
<body>  
  <a href="#primaryContent">  
    Skip to Main Content  
  </a>
```

Skip Navigation Link

Make it one of the 1st elements in the document

```
</header>
```

```
<main>
```

```
<section id="#primaryContent">
```

Donec pede justo, fringilla vel, aliquet nec,
vulputate eget, arcu. In enim justo, rhoncus ut,
imperdiet a, venenatis vitae, justo.

```
</section>
```

Skip Navigation Link

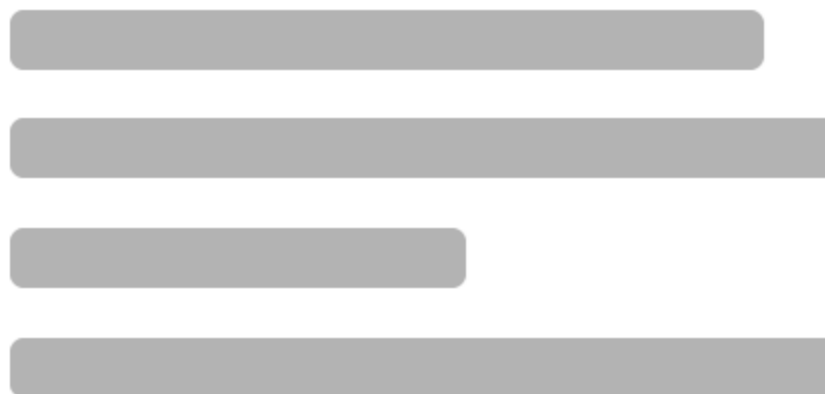
Use the "id" of the main content container in the "href" of the link



Secondary Content



Primary Content



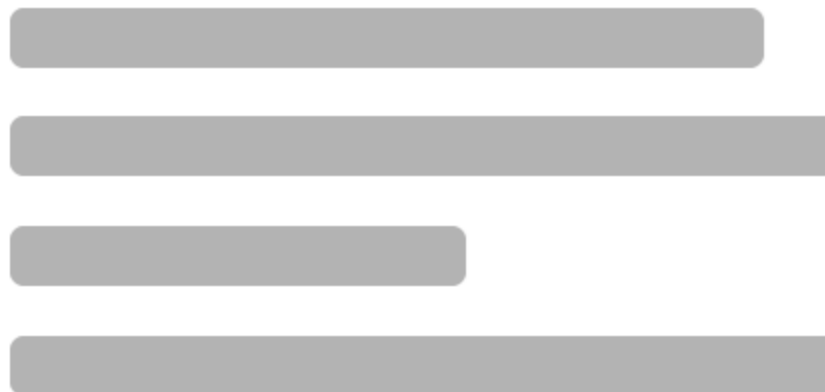
[Skip to Main Content](#)



Secondary Content



Primary Content



CSS & Accessibility

Default Browser Styles

Our Styles

CSS Cascade Overview

- Default browser styles
- Our external CSS
- Style sheets embedded in the page
- Inline styles
- End user settings adjustments



Increased Font Size

Increased

Contrast

Changed Font

The End User Is in Control

What Happens If We Increase Font Size?

Font Size

What Happens If We Increase Font Size?

Font Size

What Happens If We Increase Force Size?

Force size

What Happens If We Change the Font?

Font

What Happens If We Change the Font?

FONT

What Happens If We Change the font?

Font

Make It Flexible!

So That When Font Size Increases...

Font Size

Everything Is Ok!

Font Size

Everything Is Ok!

Font Size



And When Fonts Are Changed...

Font

Everything Is Ok!

FONT

Everything Is Ok!

FONT



CSS Gives Us Flexibility

But, Our Content Still Needs to
Follow a Logical Order

Don't Rely Solely on CSS

This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget, arcu.

```
<div class="heading-01">
```

This is a Level 1 Heading

```
</div>
```

```
<div class="heading-02">
```

This is a Level 2 Heading

```
</div>
```

```
<p>
```

Donec pede justo,
fringilla vel, aliquet
nec, vulputate eget, arcu.

```
</p>
```

This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget, arcu.

```
<div class="heading-01">
```

This is a Level 1 Heading

```
</div>
```

```
<div class="heading-02">
```

This is a Level 2 Heading

```
</div>
```

```
<p>
```

Donec pede justo,
fringilla vel, aliquet
nec, vulputate eget, arcu.

```
</p>
```

This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget arcu.

```
<div class="heading-01">
```

This is a Level 1 Heading

```
</div>
```

```
<div class="heading-02">
```

This is a Level 2 Heading

```
</div>
```

```
<p>
```

Donec pede justo,
fringilla vel aliquet
nec, vulputate eget, arcu.

```
</p>
```


This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget, arcu.

```
<h1>
```

This is a Level 1 Heading

```
</h1>
```

```
<h2>
```

This is a Level 2 Heading

```
</h2>
```

```
<p>
```

Donec pede justo,
fringilla vel, aliquet
nec, vulputate eget, arcu.

```
</p>
```

This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget, arcu.

```
<h1>
```

```
    This is a Level 1 Heading
```

```
</h1>
```

```
<h2>
```

```
    This is a Level 2 Heading
```

```
</h2>
```

```
<p>
```

```
    Donec pede justo,  
    fringilla vel, aliquet  
    nec, vulputate eget, arcu.
```

```
</p>
```



This is a Level 1 Heading

This is a Level 2 Heading

Donec pede justo, fringilla vel,
aliquet nec, vulputate eget, arcu.

```
<h1>
```

```
    This is a Level 1 Heading
```

```
</h1>
```

```
<h2>
```

```
    This is a Level 2 Heading
```

```
</h2>
```

```
<p>
```

```
    Donec pede justo,  
    fringilla vel, aliquet  
    nec, vulputate eget, arcu.
```

```
</p>
```

Visually Hidden CSS

[Skip to Main Content](#)

Main Navigation



Main Content



[Skip to Main Content](#)



Main Navigation



Main Content



```
<body>  
  <header>  
    <a href="#content">Skip to Main Content</a>  
  <nav>  
    <h2 class="hidden">Main Navigation</h2>  
    <ul>  
      <li>
```

Can Be Visually Hidden With CSS

```
.hidden {  
  visibility: hidden;  
}
```



```
.hidden {  
  display: none;  
  visibility: hidden;  
}
```

```
.hidden {  
  height: 0;  
  display: none;  
  visibility: hidden;  
}
```

```
.hidden {  
  width: 0;  
  height: 0;  
  display: none;  
  visibility: hidden;  
}
```

These Won't Work

They prevent assistive technologies from reading their contents

```
.hidden {  
    text-indent: -9999px;  
}
```

[Skip to Main Content](#)



Main Content



[Skip to Main Content](#)



Main Content



[Skip to Main Content](#)



Main Content



```
.hidden {  
    position: absolute;  
    left: -9999px;  
    top: auto;  
    width: 1px;  
    height: 1px;  
    overflow: hidden;  
}
```

Absolute Positioning

Positions the content off of the page


```
.hidden {  
    position: absolute;  
    left: -9999px;  
    top: auto;  
    width: 1px;  
    height: 1px;  
    overflow: hidden;  
}
```



Absolute Positioning

Positions the content off of the page

```
.hidden {  
    position: absolute;  
    clip: 1px 1px 1px 1px; /* For ie6 & ie7 */  
    clip: 1px, 1px, 1px, 1px;  
}
```

CSS Clip Property

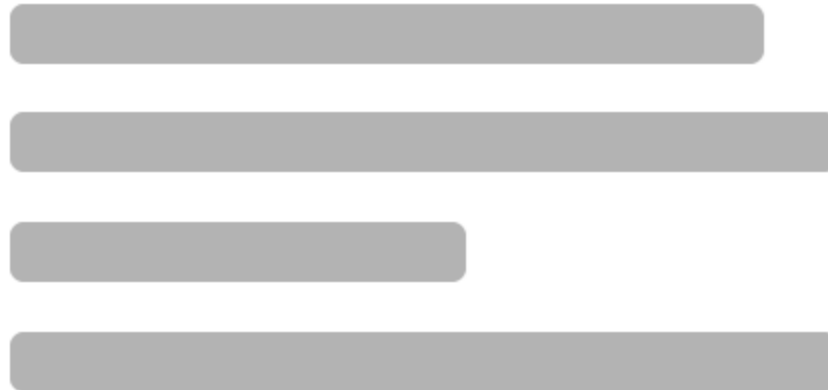


:focus

Secondary Content



Primary Content



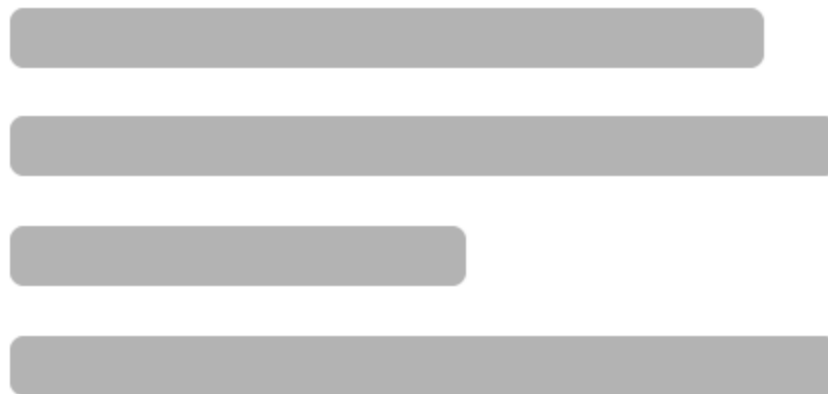


:focus

Secondary Content



Primary Content



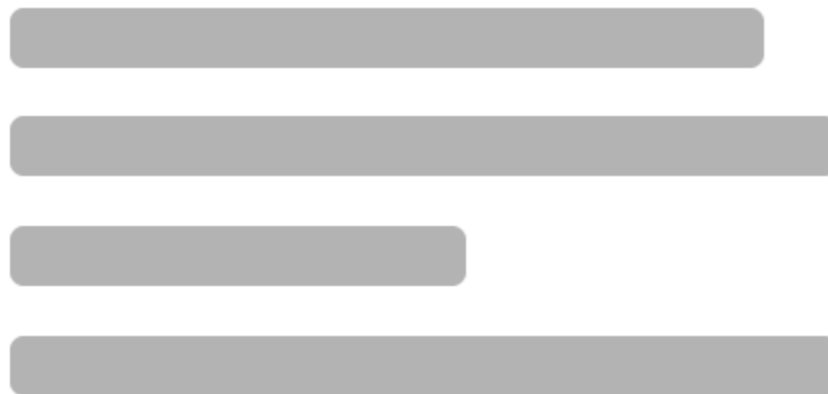


:focus

Secondary Content



Primary Content



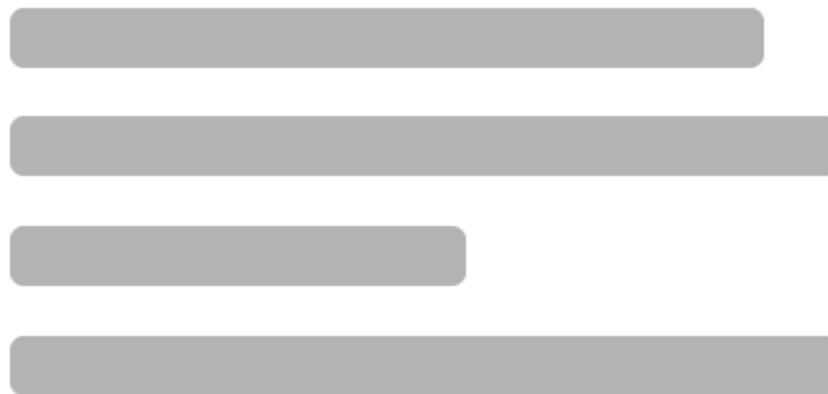


:focus

Secondary Content



Primary Content



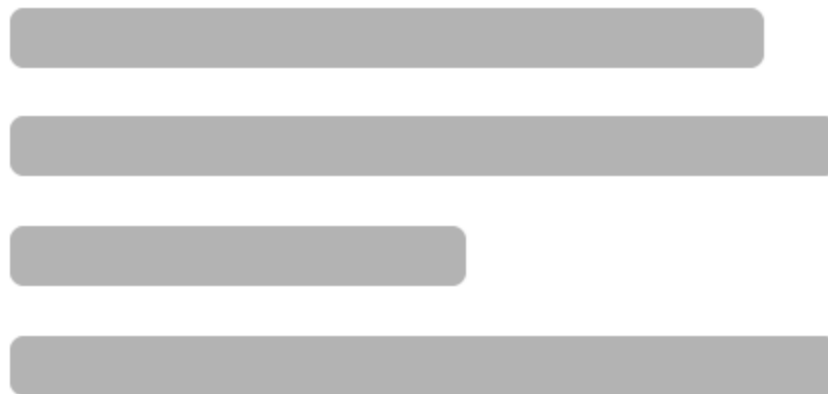


:focus

Secondary Content



Primary Content



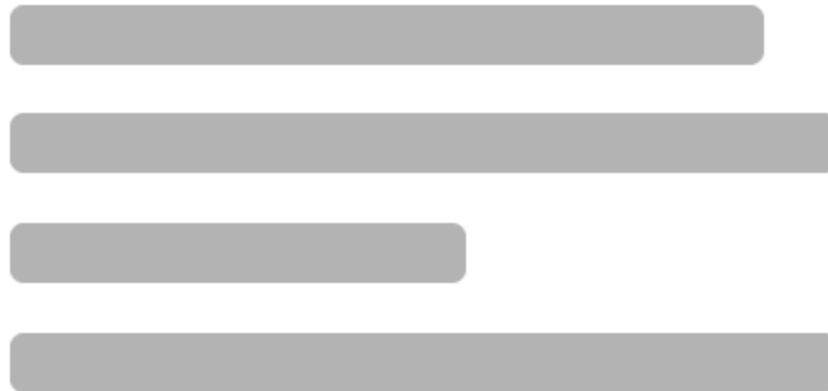


:focus

Secondary Content



Primary Content



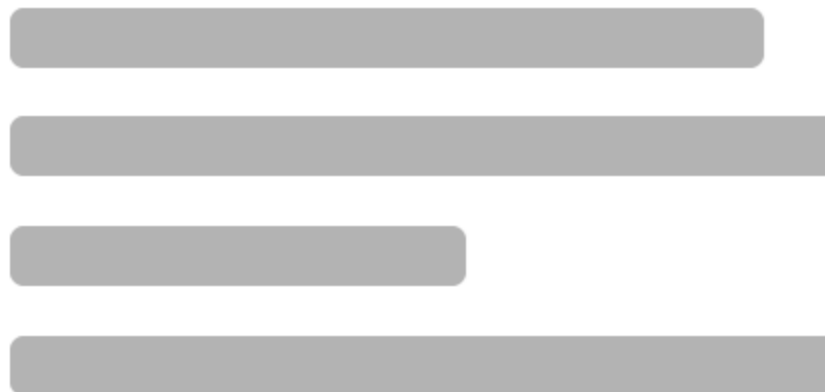


:focus

Secondary Content



Primary Content



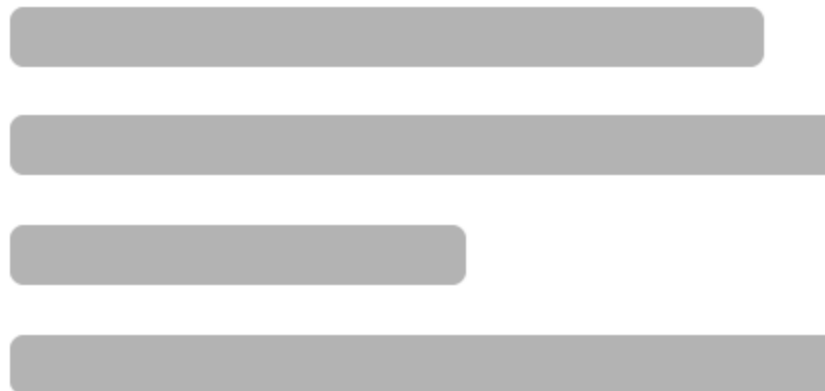


:active

Secondary Content



Primary Content



```
:focus {  
    outline: dotted 2px #f06924;  
}  
:active {  
    outline: dotted 2px #39b54a;  
    transform: scale(0.8);  
}
```

Focus & Active Indicators

Performance & Accessibility



A dramatic photograph of a space shuttle launching. The shuttle is positioned in the upper center, ascending vertically. A massive, bright white and yellow plume of fire and smoke erupts from its base, expanding outwards and upwards. The smoke is thick and billowing, with some parts appearing dark grey and others glowing yellow from the intense heat. The background is a solid black, making the bright launch plume stand out. The overall composition is dynamic and powerful, emphasizing the immense energy and performance of the launch.

Focus on Performance

Web Performance

- Keep file sizes small
- Limit http requests
- Optimize images

<http://jpegmini.com/>

JPEGmini®

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Sign In

Your Photos on a Diet

Reduce image size by up to 80%, without compromising quality

TRY IT NOW ↓



Photo By: [Zach Dischner](#), Photo Resolution: 5184x3456 | [Download](#)



<https://tinypng.com/>

HOME

PHOTOSHOP

DEVELOPER API



Drop your .png or .jpg files here!

Up to 20 images, max 5 MB each.

tiny png

Shrink PNG files

Advanced lossy compression for PNG images that preserves full alpha transparency.

What does TinyPNG do?

TinyPNG uses smart lossy compression techniques to **reduce the file size** of your PNG files. By selectively decreasing the number of colors in the image, fewer bytes are required to store the data. The effect is

Why should I use TinyPNG?

PNG is useful because it's the only widely supported format that can store partially **transparent images**. The format uses compression, but the files can still be large. Use TinyPNG to shrink images for your apps

Developer API improved!

We have added multiple **image resizing**, all new **PHP & Rails** development libraries and custom upload to **S3 buckets**. Let us know what you think of the changes!

Image Sprites

Sprite.png



[Skip to Main Content](#)



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[Login](#)



Search




Main Content



Reduces HTTP Requests

One File to Cache

SVG



jpeg

versus



svg

SVG Benefits

- Relatively small file sizes
- Can be embedded directly into HTML
- Can be styled with CSS
- Greater flexibility
- Scalable without loss in quality

Inlining “Critical Path” CSS

[Skip to Main Content](#)

 [Join](#)

 [Login](#)



Search



Main Content



Critical Path
CSS

Above the
Fold

```
<head>
  <!-- Critical Path CSS -->
  <style type="text/css">
    html, body {
      background: #fff;
      font-family: Arial, sans-serif;
    }
    a {
```

Inlined "Critical Path" CSS

Added in the <head> tag

<https://github.com/addyosmani/critical>

README.md

critical

npm package 0.6.0

build passing

build passing

dependencies up to date

Critical extracts & inlines critical-path (above-the-fold) CSS from HTML




Critical

Install

All of These Things
Help Everyone

Progressive Enhancement & Accessibility



Not assuming with which technology a site is consumed is a key component in accessible web development, as assistive technology is so diverse.

— W3C





Without Progressive Enhancement...

1. Build for high-end devices
2. Add in fallbacks to fill gaps



With Progressive Enhancement...

1. Start with the lowest common denominator
2. Well-structured HTML
3. Add in well-supported CSS
4. Add in more advanced CSS
5. Add in JavaScript to further enhance the experience

Summary



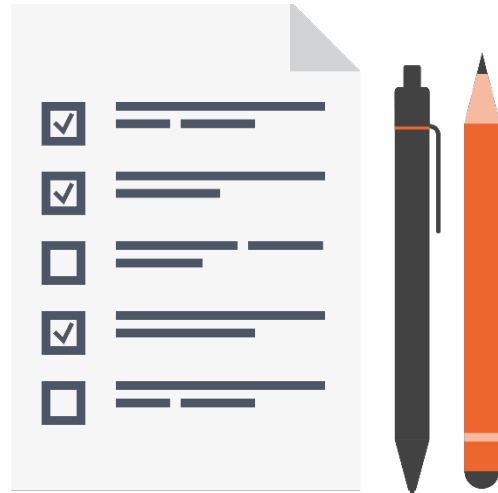
Proper document structure makes sense without CSS

Images are inaccessible by default and need descriptions

The content is the most important piece and it should be accessible to everyone

Various HTML attributes enhance accessibility

Summary



Forms should be simple, logical, navigable, and well labeled

Navigable via the keyboard

Certain CSS properties affect accessibility

Performance enhancements help accessibility

Progressive enhancement helps accessibility