

Multicol and fragmentation

Rachel Andrew, Developer Content Lead, Chrome.

CSS multiple-column layout

TABLE OF CONTENTS

1	Introduction
1.1	Value Definitions
2	The Multi-Column Model
3	The Number and Width of Columns
3.1	The Inline Size of Columns: the 'column-width' property
3.2	The Number of Columns: the 'column-count' property
3.3	The 'column-width' and 'column-count' Shorthand: The 'columns' Property
3.4	The Pseudo-algorithm
3.5	Stacking Context
4	Column Gaps and Rules
4.1	Gutters Between Columns: the 'column-gap' property
4.2	The Color of Column Rules: the 'column-rule-color' property
4.3	The Style Of Column Rules: the 'column-rule-style' property
4.4	The Width Of Column Rules: the 'column-rule-width' property
4.5	Column Rule Shorthand: the 'column-rule' property

CSS Multi-column Layout Module Level 1

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▼ More details about this document

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Flexbox and grid

- Create a new formatting context for their direct children.
- These children then participate in flex or grid layout.
- Strings that are direct children of the flex or grid container get wrapped in an anonymous element, so they behave like other elements in layout.

Multicol

- The direct children don't do anything special.
- The children continue to participate in block and inline layout.
- They are fragmented into columns.

Fragmentation

TABLE OF CONTENTS

1	Introduction
1.1	Module Interactions
1.2	Values
2	Fragmentation Model and Terminology
2.1	Parallel Fragmentation Flows
2.2	Nested Fragmentation Flows
3	Controlling Breaks
3.1	Breaks Between Boxes: the ‘break-before’ and ‘break-after’ properties
	Generic Break Values
	Page Break Values
	Column Break Values
	Region Break Values
3.1.1	Child→Parent Break Propagation
3.2	Breaks Within Boxes: the ‘break-inside’ property
3.3	Breaks Between Lines: ‘orphans’, ‘widows’
3.4	Page Break Aliases: the ‘page-break-before’, ‘page-break-after’, and ‘page-break-inside’ properties
4	Rules for Breaking
4.1	Possible Break Points

CSS Fragmentation Module Level 3

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Editors:

[Rossen Atanassov](#) (Microsoft)

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It is now time we turn our attention from the airship to its important rival, the flying machine.

At first sight it may perhaps appear that so far the flying machine has accomplished less than the airship, and gives less promise of success, since up to the present time no flying machine has taken a man any distance into the air, or indeed done much more than just lift itself off the ground. Nevertheless those who have made a study of the matter are full of hope for the future. Many experts declare that already the limits of what can be done with the airship, which depends upon the lifting power of its gas to raise it and to sustain it in the air, are being reached. It has indeed been proved that on a calm day, or with only a light breeze, this form of sky vessel can be steered safely about the heavens, and doubtless as engines are constructed yet lighter and more powerful in proportion to their weight, more successful voyages still will be accomplished. But it is extremely doubtful whether an airship can ever be constructed which shall be able to stand against a gale of wind.

So long as a balloon sails only with the breeze it offers no resistance to the force of the wind, and can be made

of the lightest and thinnest material. But directly it has to face the wind, and fight its way against it as an airship must do, then it has to be made of sufficient strength and rigidity to withstand the wind's power, or it will be blown to pieces. To make so large a thing as an airship withstand a rough wind, it must be built of very strong and rigid materials. To do this means to add to the weight of the machine. To lift the increased weight, a larger machine which can hold more gas is needed. The larger the machine the more surface it offers to the wind, and the stronger therefore must be its construction. It will now be seen that we are arguing in a circle, and we can understand that a point must be reached in the making of airships when, with our present materials, the advantage gained by increase of strength will be more than counterbalanced by increased weight. On this point Sir Hiram Maxim says: "It is not possible to make a balloon, strong enough to be driven through the air at any considerable speed, at the same time light enough to rise in the air; therefore balloons must always be at the mercy of a wind no greater than that which prevails at least 300 days in the year;" adding, "Those who seek to navigate the air by machines lighter than air have, I think, come practically to the end of their tether."

Most of these are fragmentation tests



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Search test files, like 'cors/allow-headers.htm', then press <Enter>



For information on the search syntax, [view the search documentation](#)

Showing 641 tests (1134 subtests) in css/css-multicol from the latest master test runs for chrome[experimental], edge[experimental], firefox[experimental], safari[experimental]

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Path


Chrome 139
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 **9dd67fb**
Jun 3, 2025


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Firefox 141
Linux 22.04
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Jun 3, 2025


Safari 220 preview
macOS 15.5
 **9dd67fb**
Jun 3, 2025

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[always-balancing-before-column-span.html](#)

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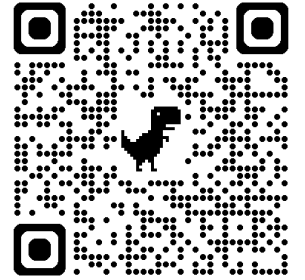
1 / 1

1 / 1

846 / 846

1 / 1

Fragmentation

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Breaking Boxes With CSS Fragmentation

15 min read

[CSS Grid](#), [CSS](#), [Browsers](#)

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QUICK SUMMARY ✦ Rachel Andrew has been digging around in the CSS Fragmentation spec, and finding browser support is somewhat fragmented. In this article, she explains what fragmentation is, why you might want to use it, and what the state of browser support is. She'll also show you the current state of browser support and some of the things you can do to get it working as well as it can in your multicol and print projects.








ABOUT THE AUTHOR

Rachel Andrew is a web developer, writer

Controlling breaks

- break-before
- break-after
- break-inside
- orphans
- widows
- box-decoration-break

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Tips: you can click/tap on a cell for more information

But almost before the invention of the hot-air balloon had been completed, and before Pilâtre de Rozier had made his ascent, a rival craft had appeared upon the scene, to which we must more specially refer in the next chapter.

**This box should
not break**

**between two
columns.**

During the time of which we are speaking there was living in London a famous chemist named Henry Cavendish. He was the son of a nobleman, and a very rich man; but he shut himself up entirely from the world, and devoted his whole time and energies to the study of science. So afraid was he of being

interrupted in his work that he lived the life of a hermit, commanding his servants to keep out of his sight on pain of dismissal, and ordering his dinner daily by means of a note placed on the hall table. In the year 1760—twenty-two years before the Montgolfier brothers began their experiments—this eccentric man had discovered what was then known as “inflammable air,” but what we now call hydrogen gas.

```
.target {  
  break-inside: avoid;  
}
```

But almost before the invention of the hot-air balloon had been completed, and before Pilâtre de Rozier had made his ascent, a rival craft had appeared upon the scene, to which we must more specially refer in the next chapter.

**This box should
not break
between two
columns.**

During the time of which we are speaking there was living in London a famous chemist named Henry Cavendish. He was the son of a nobleman, and a very rich man; but he shut himself up entirely from the world, and devoted his whole time and

energies to the study of science. So afraid was he of being interrupted in his work that he lived the life of a hermit, commanding his servants to keep out of his sight on pain of dismissal, and ordering his dinner daily by means of a note placed on the hall table. In the year 1760—twenty-two years before the Montgolfier brothers began their experiments—this eccentric man had discovered what was then known as “inflammable air,” but what we now call hydrogen gas.

```
.target {  
  box-decoration-break: clone;  
}
```

But almost before the invention of the hot-air balloon had been completed, and before Pilâtre de Rozier had made his ascent, a rival craft had appeared upon the scene, to which we must more specially refer in the next chapter.

This box should be broken across two columns. It has a

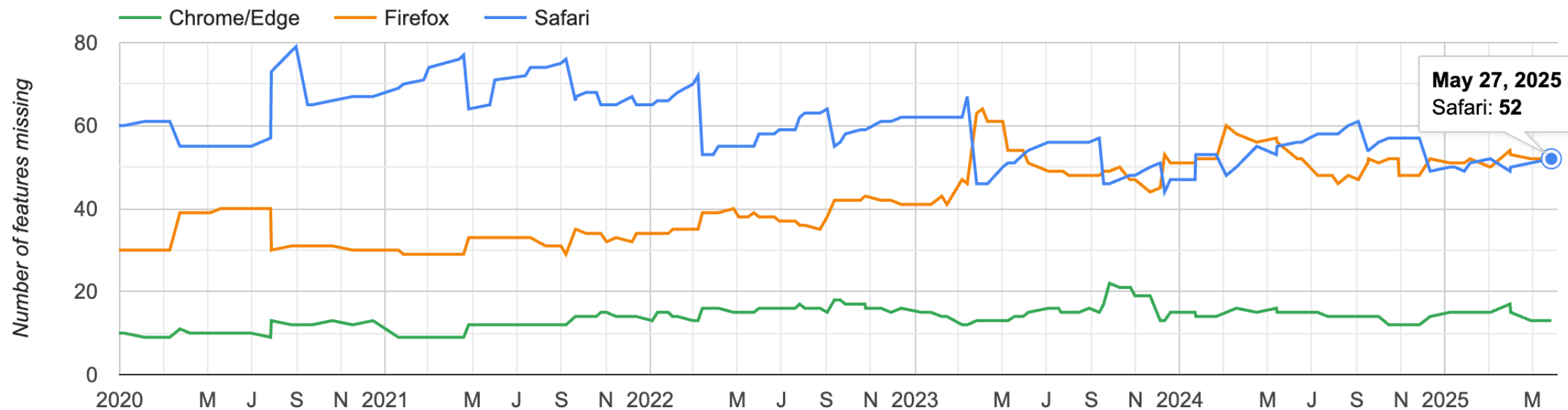
border which is what we are interested in here.

During the time of which we are speaking there was living in London a famous chemist named Henry Cavendish. He was the son of a nobleman, and a very rich man; but he shut himself up entirely from the world, and devoted his whole time and energies to the study of science.

So afraid was he of being interrupted in his work that he lived the life of a hermit, commanding his servants to keep out of his sight on pain of dismissal, and ordering his dinner daily by means of a note placed on the hall table. In the year 1760—twenty-two years before the Montgolfier brothers began their experiments—this eccentric man had discovered what was then known as “inflammable air,” but what we now call hydrogen gas.

Features missing in only one browser

This chart displays the number of features that are missing in exactly one major browser, for each browser. The counted features are present in all browsers except that browser. Each of the features would be considered Baseline once the feature is supported in the corresponding browser. Click on a line in the chart to see the exact number at any given time and the list of specific features missing in that browser.



<https://webstatus.dev/stats>

Sphinx of black quartz, judge my vow

Pack my box with five dozen liquor jugs

Sphinx of black quartz, judge my vow

Pack my box with five dozen liquor jugs

RenderingNG



chrome for developers

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RenderingNG

Overview

RenderingNG architecture

Key data structures

BlinkNG

Simulate color vision
deficiencies in Blink Renderer

VideoNG

LayoutNG

LayoutNG block
fragmentation

Home > Docs > Chromium

Was this helpful?  

RenderingNG deep-dive: LayoutNG block fragmentation



Morten Stenshorne

Block fragmentation is splits a CSS block-level box (such as a section or paragraph) into multiple fragments when it doesn't fit as a whole inside one fragment container, called a *fragmentainer*. A fragmentainer is not an element, but represents a column in multi-column layout, or a page in paged media.

For fragmentation to happen, the content needs to be inside a *fragmentation context*. A fragmentation context is most

On this page

LayoutNG block
fragmentation

Block fragmentation in
LayoutNG is now
complete

Legacy engine
interaction

Legacy engine fallback
detection and handling

Pre-paint tree walk

The problems with the
legacy fragmentation
engine

Avoiding breaks before and after



- break-before: avoid
- break-after: avoid

CSS for print

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[Rachel Andrew](#) / JUN 19, 2019 / [19 comments](#)

How To Create A PDF From Your Web Application

10 min read

[CSS Grid](#), [CSS](#), [Browsers](#)

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QUICK SUMMARY ♡ There is a wide variety of choices when it comes to creating a PDF from a web application. In this article, Rachel Andrew takes a look at the tools that are available and shares her recommendations to help you find the tool that works best for you. She'll explore ways in which we can generate a PDF directly from a web application on the fly. It isn't a comprehensive list of tools, but instead Rachel is aiming to demonstrate the different approaches. If you have a favorite tool or any



ABOUT THE AUTHOR

Rachel Andrew is a web developer, writer

Paged Media

- Paged Media Level 3: <https://www.w3.org/TR/css-page-3/>
- Generated Content for Paged Media: <https://drafts.csswg.org/css-gcpm/>

**Add content to page
headers and footers**

@page size descriptor

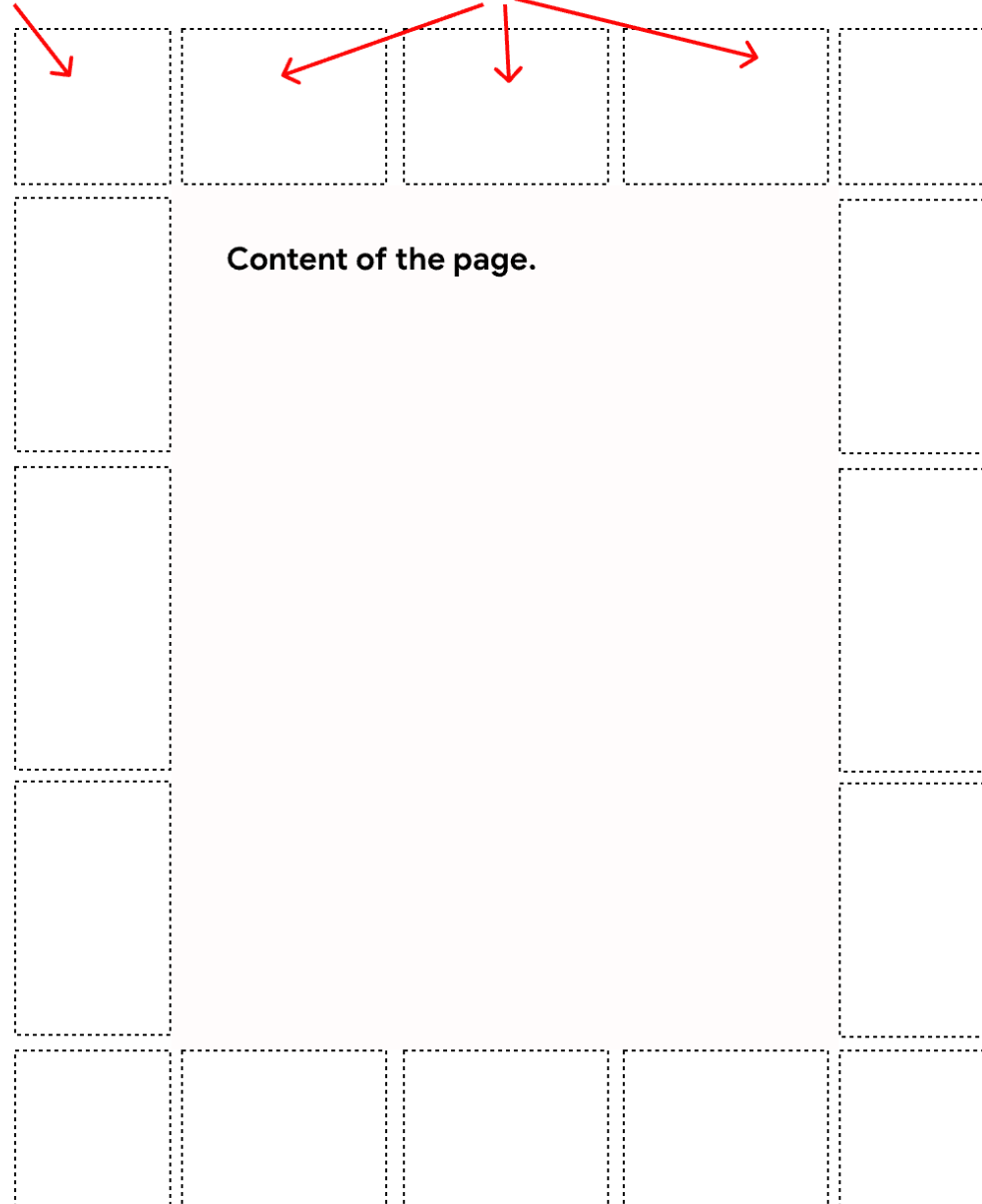


Define the size of the page you are printing to, and the size of the margins around the content.

```
@page {  
  size: 8.5in 7in;  
}
```

Fixed size margin box

Flexible margin boxes



@page margin at-rules

- @top-left-corner
- @top-left
- @top-center
- @top-right
- @top-right-corner
- @left-top
- @left-middle
- @left-bottom
- @right-top
- @right-middle
- @right-bottom
- @bottom-left-corner
- @bottom-left
- @bottom-center
- @bottom-right
- @bottom-right-corner



```
@page :right {  
  @bottom-left {  
    content: "My book";  
    font-size: 9pt;  
    color: #333;  
  }  
}
```



```
@page :right {  
  @bottom-right {  
    content: counter(page);  
  }  
}
```

```
@page :left {  
  @bottom-left {  
    content: counter(page);  
  }  
}
```

Print things that browsers don't do

These things are all in the spec.

Set strings

Add content from the HTML document to the page margin.

For example, store the content of an `<h1>` element then output it. The content is updated if a new `<h1>` is encountered.

```
h1 {  
    string-set: doctitle content();  
}  
  
@page :right {  
    @top-right {  
        content: string(doctitle);  
        margin: 30pt 0 10pt 0;  
        font-size: 8pt;  
    }  
}
```

Cross-references

Cross-references in print are indicated with the page number where the content is found.

Cross-references on the web are a link.

With target-counter you can show a link for web presentations and the page number when the same document is printed.

```
<style>
```

```
a.xref:after {
```

```
  content: " (page " target-
```

```
    counter(attr(href, url), page) ")";
```

```
}
```

```
</style>
```

```
<a class="xref" href="#ref1">my reference</a>
```

Footnotes

When printed, footnotes are shown in the margin at the foot of the page on which they appear.

They use a new value of float.

```
<style>
```

```
.fn {
```

```
  float: footnote;
```

```
}
```

```
</style>
```

```
<p>This is some text <span class="fn">this is a  
footnote</span>.</p>
```

Chrome bugs for these features

- Set strings (20 +1s): <https://crbug.com/376420244>
- Cross-references (33 +1s): <https://crbug.com/40529223>
- Footnotes (13 +1s): <http://crbug.com/376428674>

We've become trained in
what the web **can't** do

text-wrap: balance



```
h1 {  
  text-wrap: balance;  
}
```

unbalanced

**Lorem ipsum dolor sit amet consectetur
adipisicing elit.**

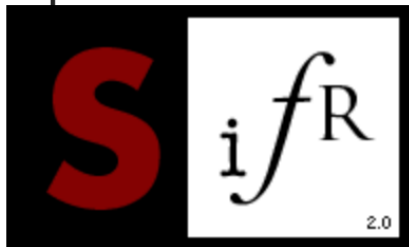
balanced

**Lorem ipsum dolor sit amet
consectetur adipisicing elit.**



sIFR 2.0: Rich Accessible Typography for the Masses

April 27, 2005



Over the last several months, a small group of web developers and designers have been hard at work perfecting a method to insert rich typography into web pages without sacrificing accessibility, search engine friendliness, or markup semantics. The method, dubbed sIFR (or Scalable Inner Font),

Variable fonts

Variable Fonts^{v0.2}

A simple resource for finding and trying variable fonts

[Tags](#) [Designers](#) [Publishers](#) [Character sets](#) [Licenses](#)

[App support](#) [About](#)

Welcome to the new version 0.2 of this website. If you missed the [presentation about the new features](#) in the Typographics TypeLab, there's a very brief summary in the [changelog](#).

377 entries

HEX Franklin Variable

Weight: 400 ————— 800
Width: 65 ————— 100

A 21st-century tribute to the classic [Franklin Gothic](#) type family and its lighter-weight siblings, News Gothic and Lightline Gothic. The design draws specifically from ATF's [original fonts](#) for letterpress printing, and not the later adaptations from other companies. Offered with discounted pricing while it's still a work in progress.

Full disclosure: This typeface was designed by the editor of this website.

Tags: body text, sans, gothic, multiplexed,

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789



Rachel Andrew

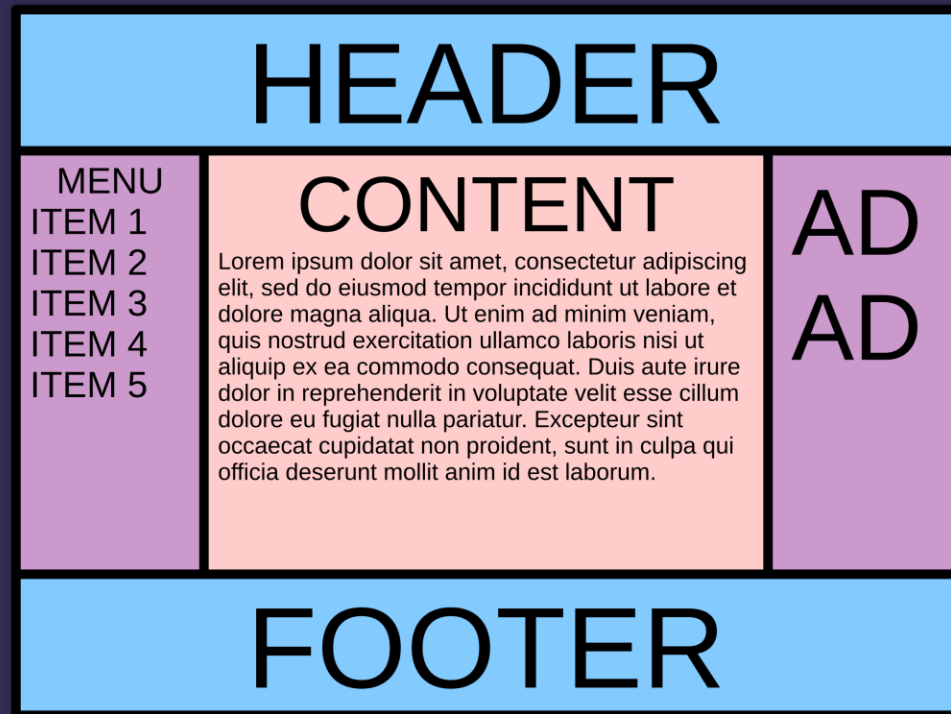
@rachelandrew.bsky.social

Those of you who design websites, or FE devs who implement things from designers. Do you still get requests for layout that's common in print but essentially impossible (or very hard to do) on the web?

May 25, 2025 at 6:48 PM  Everybody can reply [🔗](#)

Are you pre or post responsive design?

- The concept of responsive design is now **15 years old**.
- Bootstrap was launched in 2011.



By David Lark - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=42413988>

“The Holy Grail” on Wikipedia.



Badgers, Mr. WeebI

[https://en.wikipedia.org/wiki/Badgers_\(animation\)](https://en.wikipedia.org/wiki/Badgers_(animation))

CSS for developer experience

A lot of new CSS gives us better ways to do the things we can already do

The web just doesn't work like that

Creating rows in multicol

Multiple-column Layout Level 2

Overflow columns in multicol

```
.columns {  
  column-count: 3;  
  height: 100px;  
  row-gap: 2em;  
}
```

now time we turn our attention from the ship to its important rival, the flying machine.	At first sight it may perhaps appear that so far the flying machine has accomplished less than the airship, and gives less promise of success, since up to the present time no flying machine has taken a man any distance into the air, or	indeed done much more than just lift itself off the ground. Nevertheless those who have made a study of the matter are full of hope for the future. Many experts declare that already the limits of what can be done with the airship,	which depends upon the lifting power of its gas to raise it and to sustain it in the air, are being reached. It has indeed been proved that on a calm day, or with only a light breeze, the form of sky vessel can be steered safely above
--	---	--	--

Multicol Level 2

TABLE OF CONTENTS

- 1 Introduction
 - 1.1 Value Definitions
- 2 Module Interactions
- 3 The multi-column model
- 4 The number and width of columns
 - 4.1 The Inline Size of Columns: the 'column-width' property
 - 4.2 The Number of Columns: the 'column-count' property
 - 4.3 The 'column-width' and 'column-count' Shorthand: The 'columns' Property
 - 4.4 The Pseudo-algorithm
 - 4.5 Stacking Context
 - 4.6 Styling Columns: the '::column' pseudo-element
- 5 Column Gaps and Rules
 - 5.1 Gutters Between Columns: the 'column-gap' property
 - 5.2 The Color of Column Rules: the 'column-rule-color' property
 - 5.3 The Style Of Column Rules: the 'column-rule-style' property

CSS Multi-column Layout Module Level 2

W3C First Public Working Draft, 19 December 2024



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[GitHub Editor](#)

Test Suite:

The column-height property

```
.columns {  
  column-count: 3;  
  column-height: 100px;  
  row-rule: 2px solid grey;  
  row-gap: 2em;  
}
```

It is now time we turn our attention from the airship to its important rival, the flying machine.

which depends upon the lifting power of its gas to raise it and to sustain it in the air, are being reached. It has indeed been proved that on a calm day, or with only a light breeze, this form of sky vessel can be steered safely about

and can be made of the lightest and thinnest material. But directly it has to face the wind, and fight its way against it as an airship must do, then it has to be made of sufficient strength and rigidity to withstand the wind's power, or

can understand that a point must be reached in the making of airships when, with our present materials, the advantage gained by increase of strength will be more than counterbalanced by increased weight. On this point Sir Hiram

At first sight it may perhaps appear that so far the flying machine has accomplished less than the airship, and gives less promise of success, since up to the present time no flying machine has taken a man any distance into the air, or

the heavens, and doubtless as engines are constructed yet lighter and more powerful in proportion to their weight, more successful voyages still will be accomplished. But it is extremely doubtful whether an airship can ever

it will be blown to pieces. To make so large a thing as an airship withstand a rough wind, it must be built of very strong and rigid materials. To do this means to add to the weight of the machine. To lift the increased

Maxim says: "It is not possible to make a balloon, strong enough to be driven through the air at any considerable speed, at the same time light enough to rise in the air; therefore balloons must always be at the mercy of a

indeed done much more than just lift itself off the ground. Nevertheless those who have made a study of the matter are full of hope for the future. Many experts declare that already the limits of what can be done with the airship,

be constructed which shall be able to stand against a gale of wind.

So long as a balloon sails only with the breeze it offers no resistance to the force of the wind,

weight, a larger machine which can hold more gas is needed. The larger the machine the more surface it offers to the wind, and the stronger therefore must be its construction. It will now be seen that we are arguing in a circle, and we

wind no greater than that which prevails at least 300 days in the year;" adding, "Those who seek to navigate the air by machines lighter than air have, I think, come practically to the end of their tether."

The column-wrap property

```
.columns {  
  column-count: 3;  
  column-height: 100px;  
  column-wrap: nowrap;  
  row-rule: 2px solid grey;  
  row-gap: 2em;  
}
```

now time we turn our attention from the ship to its important rival, the flying machine.	At first sight it may perhaps appear that so far the flying machine has accomplished less than the airship, and gives less promise of success, since up to the present time no flying machine has taken a man any distance into the air, or	indeed done much more than just lift itself off the ground. Nevertheless those who have made a study of the matter are full of hope for the future. Many experts declare that already the limits of what can be done with the airship,	which depends upon the lifting power of its gas to raise it and to sustain it in the air, are being reached. It has indeed been proved that on a calm day, or with only a light breeze, the form of sky vessel can be steered safely above
--	---	--	--

column-height



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which depends upon the use of gas to raise it and the distance being reached. It has been shown on a calm day, or by the use of some form of sky vessel

height



It is now time we turn our attention from the airship to its important rival, the flying machine.

which depends upon the lifting power of its gas to raise it and to sustain it in the air, are being reached. It has indeed been proved that on a calm day, or with only a light breeze, this form of sky vessel can be steered safely about

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So long as a balloon sails only with the breeze it offers no resistance to the force of the wind,

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wind no greater than that which prevails at least 300 days in the year;" adding, "Those who seek to navigate the air by machines lighter than air have, I think, come practically to the end of their tether."

Gap decorations

TABLE OF CONTENTS

1	Introduction
1.1	Value Definitions
2	Gap decorations
2.1	Layout and painting
2.2	Breaking gap decorations into segments: The <code>'column-rule-break'</code> , <code>'row-rule-break'</code> , and <code>'rule-break'</code> properties
2.2.1	Pairing gap intersection points into segments
2.3	Adjusting gap decoration endpoints: The <code>'column-rule-outset'</code> , <code>'row-rule-outset'</code> , and <code>'rule-outset'</code> properties
2.4	Gap decoration paint order: The <code>'rule-paint-order'</code> property
3	Color, style, and width
3.1	Gap decoration color: The <code>'column-rule-color'</code> and <code>'row-rule-color'</code> properties
3.2	Gap decoration style: The <code>'column-rule-style'</code> and <code>'row-rule-style'</code> properties
3.3	Gap decoration width: The <code>'column-rule-width'</code> and <code>'row-rule-width'</code> properties
3.4	Lists of values and the <code>'repeat()'</code> notation

CSS Gap Decorations Module Level 1

W3C First Public Working Draft, 17 April 2025



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[Kevin Babbitt](#) (Microsoft)

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Gap decorations: row-rule

```
.columns {  
  column-count: 3;  
  column-height: 100px;  
  column-wrap: wrap;  
  row-rule: 2px solid grey;  
  row-gap: 2em;  
}
```

It is now time we turn our attention from the airship to its important rival, the flying machine.

At first sight it may perhaps appear that so far the flying machine has accomplished less than the airship, and gives less promise of success, since up to the present time no flying machine has taken a man any distance into the air, or

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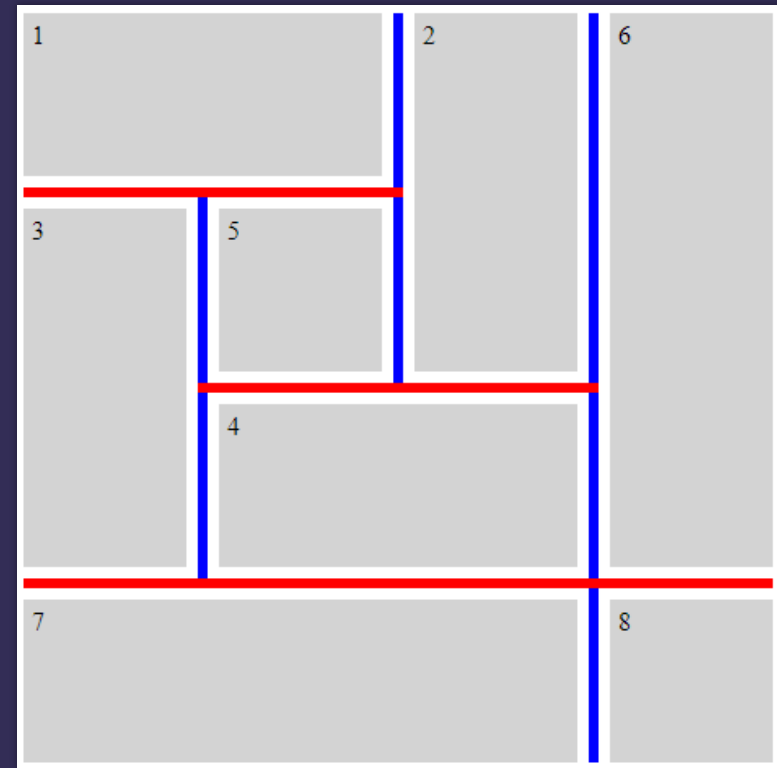
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Maxim says: "It is not possible to make a balloon, strong enough to be driven through the air at any considerable speed, at the same time light enough to rise in the air; therefore balloons must always be at the mercy of a

wind no greater than that which prevails at least 300 days in the year;" adding, "Those who seek to navigate the air by machines lighter than air have, I think, come practically to the end of their tether."

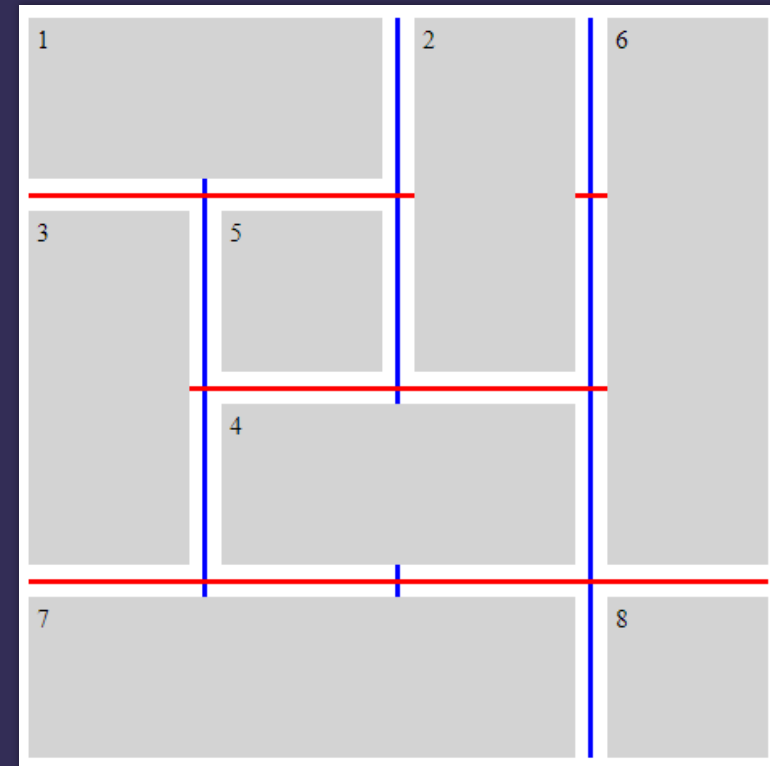
Gap decorations with grid

```
.grid-with-spans {  
  display: grid;  
  grid-template: repeat(4, 100px) /  
    repeat(4, 100px);  
  gap: 20px;  
  row-rule: 6px solid red;  
  column-rule: 6px solid blue;  
}
```

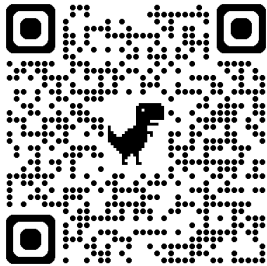


Gap decorations with grid

```
.break-none-grid {  
  display: grid;  
  grid-template: repeat(4, 100px) /  
    repeat(4, 100px);  
  gap: 20px;  
  row-rule: 6px solid red;  
  column-rule: 6px solid blue;  
  rule-break: none;  
  rule-outset: 0px;  
}
```



Gap decorations demos



Daily CSS News

May 30, 2025

- Home
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- Tech
- Design
- Opinion

Gap Decorations Start Dev Trials

By Tech Editor | May 30, 2025

The Microsoft Edge Layout team today announced the official launch of developer trials for the highly anticipated Gap Decorations Module. This early access program empowers front-end engineers to experiment with powerful new properties—**column-rule**, **row-rule**, and **gap-rule-paint-order**—to style gaps in grid, flex, and multicol containers without relying on additional

markup or pseudo-elements. In these trials, participants can test **row-rule** support in multicol layouts, leverage **column-wrap** to achieve sophisticated magazine-style flows, and fine-tune separator styles across responsive breakpoints. Feedback from this dev trial will shape the specification and guide future enhancements, ensuring GapDecorations integrates seamlessly

into existing design systems and workflows. Interested developers start using the new feature by using any Chromium-based browser with the experimental flag enabled: `--blink-enable-features=GapDecoration`. Web developers are encouraged to provide feedback and report bugs to make sure your voice is heard in shaping this game-changing CSS module.

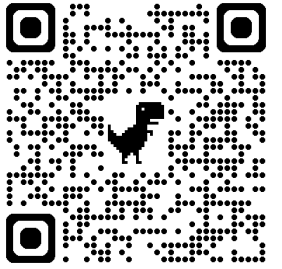
Trending

- Gap Decorations Tutorial
- Case Study: News Site Redesign
- Flex vs Grid Gap Techniques

Daily Sudoku

5	3			7				
6			1	9	5			
	9	8					6	
8				6				3

Gap decorations demos



CSS Gap Decorations playground

This interactive demo showcases the features of the [CSS Gaps Decorations Module Level 1](#). Use the controls to tweak gap, rule, and paint-order properties in real time and see how they affect multicolumn, flex, and grid layouts.

This is a non-exhaustive demo. See the spec for full details on the properties and their values.

As of right now, this is only implemented for Chromium-based browsers, and a flag is needed to enable the feature: `--enable-features=CSSGapDecoration`

Grid Layout

Gap (px): 30



Spanning Item

Grid Item 1

**Is the web moving closer
to paged media?**

Floating an image to the top or bottom

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Nunc vel sapien et purus eleifend tincidunt. Aliquam erat volutpat. Integer eu ligula ut dolor dictum cursus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Vestibulum ante

A large, dark gray rectangular area with rounded corners, serving as a placeholder for an image. The text "Placeholder Image" is centered within this area in a white, sans-serif font.

Placeholder Image

Duis a erat a nisl consectetur sollicitudin. Mauris et mi non libero dictum eleifend non in justo. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere

Page or column floats

TABLE OF CONTENTS

1	Overview
1.1	Value Definitions
2	Terminology
3	Floating to the inline-start/inline-end and block-start/block-end
3.1	The 'float-reference' property
3.2	The 'float' property
4	The 'clear' property
5	Deferring page floats
5.1	The 'float-defer' property
6	Wrapping around page floats
7	The 'float-offset' property
8	Page float placement
8.1	Float reference growth
8.2	Rules for page float stacking
9	Floats and absolutely positioned exclusions

CSS Page Floats

Editor's Draft, 4 November 2024



▼ More details about this document

This version:

<https://drafts.csswg.org/css-page-floats/>

Latest published version:

<https://www.w3.org/TR/css-page-floats-3/>

Previous Versions:

<https://www.w3.org/TR/2015/WD-css-page-floats-3-20150915/>

Feedback:

[CSSWG Issues Repository](#)

[Inline In Spec](#)

Editors:

[Johannes Wilm](#) (Vivliostyle)

[Florian Rivoal](#) (Invited Expert)

[Rachel Andrew](#) (Google)

Former Editor:

[Håkon Wium Lie](#) (Opera Software)

Suggest an Edit for this Spec:

[GitHub Editor](#)

Column floats in Prince

Snap the image to the top or bottom of a column, based on which edge is nearest.

```
img {  
    -prince-float: snap;  
}
```

column-span: <integer>

```
.spanner {  
  column-span: all;  
}
```

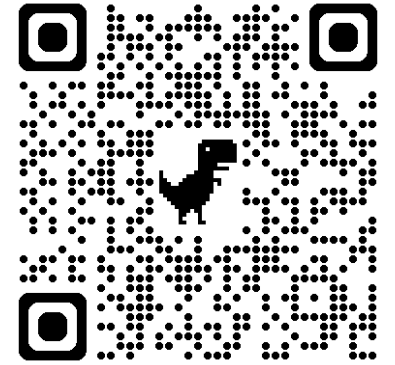
```
.spanner {  
  column-span: 2;  
}
```



3-COLUMN



6-COLUMN



Exclusions

Float an item lined up with a grid

i I'm redesigning this site in public! Follow the process step by step at v7.robweychert.com.



HOME

BLOG

SHOP

Editorial Layouts, Floats, and CSS Grid

CSS Grid is in many ways a dream come true, but there's at least one basic thing it can't do.

8 NOV 2018

I've been getting my feet wet with [CSS Grid](#) this year. The new possibilities it introduces for page layout on the web are exciting, but before venturing too far into those waters, I wanted to see how it handles the kind of layouts I'm already designing. Most of the work I do on the web—at [ProPublica](#) and here on my site—is editorial design, so I was keen to learn how Grid accommodates the conventions of the form

TL;DR

Since floats aren't compatible with CSS Grid, aligning floated elements to an established grid can be a real headache. This is a nontrivial impediment to traditional editorial layouts' ability to take advantage of Grid's benefits.

Veggies es bonus vobis, proinde vos postulo essum magis kohlrabi welsh onion daikon amaranth tatsoi tomatillo melon azuki bean garlic.

Gumbo beet greens corn soko endive gumbo gourd. Parsley shallot courgette tatsoi pea sprouts fava bean collard greens dandelion okra wakame tomato. Dandelion cucumber earthnut pea peanut soko zucchini.

Turnip greens yarrow ricebean rutabaga endive cauliflower sea lettuce kohlrabi amaranth water spinach avocado daikon napa cabbage asparagus winter



purslane kale. Celery potato scallion desert raisin horseradish spinach carrot soko. Lotus root water spinach fennel kombu maize bamboo shoot green bean swiss chard seakale pumpkin onion chickpea gram corn pea. Brussels sprout coriander water chestnut gourd swiss chard wakame kohlrabi beetroot carrot watercress. Corn amaranth salsify bunya nuts nori azuki bean chickweed potato bell pepper artichoke.

Nori grape silver beet broccoli kombu beet greens fava bean potato quandong celery. Bunya nuts black-eyed pea prairie turnip leek lentil turnip greens parsnip. Sea lettuce

lettuce water chestnut eggplant winter purslane fennel azuki bean earthnut pea sierra leone bologi leek soko chicory celtuce parsley jícama salsify.

CSS Exclusions issue



[css-exclusions] Status of the exclusions spec #3308

Edit

New issue



Open



rachelandrew opened on Nov 9, 2018



I get reasonably frequent questions from web developers, to which the answer would be exclusions. Rob Weychert wrote up an issue he had with grid, and I put together some demos showing how Exclusions would solve that particular case, the demos work in Edge with the prefixed `-ms-wrap-flow`.

- Rob Weychert: [Editorial Layouts, Floats, and CSS Grid](#)
- my response and demos showing how Exclusions solves this: [Editorial Layouts, Exclusions and CSS Grid](#)

Interop:

- Edge has the prefixed implementation that was in IE10
- the code was removed from Webkit] citing more work needed on the spec: <https://trac.webkit.org/changeset/166618/webkit>
- no implementation in Blink and the page on Chrome Status seems to have been removed: <https://webcache.googleusercontent.com/search?q=cache:45kp79I7wb8J:https://www.chromestatus.com/feature/6296903092273152+&cd=1&hl=en&ct=clnk&gl=us>
- no implementation in Firefox. Bug: https://bugzilla.mozilla.org/show_bug.cgi?id=674804

Assignees



No one - [Assign yourself](#)

Labels



css-exclusions-1

Type



No type

Projects



No projects

Milestone



No milestone

Relationships



Regions?

Like multicol, but with disconnected fragmaintainers.

CSS Regions - WD

Method of flowing content into multiple elements.

Usage
Global 2.78% + 4.8% = 7.57%
unprefixed: 0%

Current aligned	Usage relative	Date relative	Apply filters	Show all	?										
IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini *	Android Browser *	Blackberry Browser	Opera Mobile *	Chrome for Android	Firefox for Android	IE Mobile	UC Browser for Android	Samsi Interr
			4-14												
			15-18	3.1-6		3.2-6.1									
6-9			19-34	6.1-11		7-11.2									
10	12-17	2-62	35-69	11.1	10-55	11.4		2.1-4.4.4	7	12-12.1			10		4-6
11	18	63	70	12	56	12	all	67	10	46	70	63	11	11.8	7.2
		64-65	71-73	TP											

Notes Known issues (0) Resources (7) Feedback

Chrome status: No longer pursuing

- 1 Support is limited to using an iframe as a content source with the `-ms-flow-into: flow_name;` and `-ms-flow-from: flow_name;` syntax.
- 2 Partial support refers to not supporting the `region-fragment` property.

Can I use...

Browser support tables for modern web technologies
Created & maintained by @Fyrd, design by @Lensco.
Support data contributions by the GitHub community.
Usage share statistics by StatCounter GlobalStats for October 2018

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BECOME A PATRON

Site links

- Home
- Feature Index
- Browser usage table
- Feature suggestion list

Legend

- = Supported
- = Not supported
- = Partial support
- = Support unknown

My article

Veggies es bonus vobis, proinde vos postulo
essum magis kohlrabi welsh onion daikon
amaranth tatsoi tomatillo melon azuki bean
garlic.

Gumbo beet greens corn soko endive gumbo
gourd. Parsley shallot courgette tatsoi pea
sprouts fava bean collard greens dandelion
okra wakame tomato. Dandelion cucumber
earthnut pea peanut soko zucchini. Turnip
greens yarrow ricebean rutabaga endive
cauliflower sea lettuce kohlrabi amaranth
water spinach avocado daikon napa cabbage
asparagus winter purslane kale. Celery
potato scallion desert raisin horseradish
spinach carrot soko. Lotus root water
spinach fennel kombu maize bamboo shoot
green bean swiss chard seakale pumpkin
onion chickpea gram corn pea.

Brussels sprout coriander water chestnut
gourd swiss chard wakame kohlrabi beetroot
carrot watercress. Corn amaranth salsify
bunya nuts nori azuki bean chickweed potato
bell pepper artichoke.

My article

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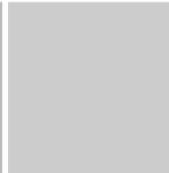
Gumbo beet greens corn soko endive gumbo



gourd. Parsley shallot courgette tatsoi pea
sprouts fava bean collard greens dandelion okra
wakame tomato. Dandelion cucumber earthnut pea
peanut soko zucchini. Turnip greens yarrow
ricebean rutabaga endive cauliflower sea lettuce
kohlrabi amaranth water spinach avocado daikon
napa cabbage asparagus winter purslane kale.

Celery potato scallion desert raisin horseradish
spinach carrot soko. Lotus root water spinach
fennel kombu maize bamboo shoot green bean
swiss chard seakale pumpkin onion chickpea
gram corn pea.

Brussels sprout coriander water chestnut gourd
swiss chard wakame kohlrabi beetroot carrot



watercress. Corn amaranth salsify bunya nuts
nori azuki bean chickweed potato bell pepper
artichoke.

Connective features

Not exciting on their own, but act as multipliers and enablers of exciting things

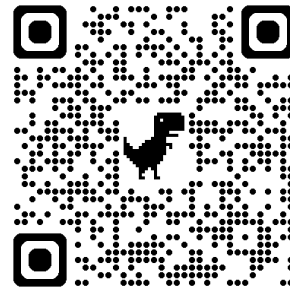
Raise issues to show us the things you can't do

Don't worry about how it's done, explain what the use case is.

reading-flow

Getting one of those impossible things done

reading-flow and reading-order




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 English ▾

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Was this helpful?  

Use CSS `reading-flow` for logical sequential focus navigation



Di Zhang



Rachel Andrew



Published: May 1, 2025

The CSS `reading-flow` and `reading-order` properties are available from Chrome 137. This post explains the reasons behind the design of these properties and some brief details to get you started with them.

Layout methods such as grid and flex have transformed frontend development, however their flexibility can cause a problem for some users. It's very easy to create a situation where the visual order mismatches the source order in the

On this page

[reading-flow](#)

[reading-order](#)

[Example in flexbox](#)

[Example with grid layout](#)

[A block container using reading-order](#)

[Interaction with tabindex](#)

[Let us know](#)

Thank you