Floats & Clears

Learning Objectives

- **Draw** the DOM tree for web pages containing elements like header and footer
- **Experiment** with Display Properties
- **Apply** header and footer, single column and multi column layouts to build web pages
- **Experiment** with, and **predict,** floats and clearing

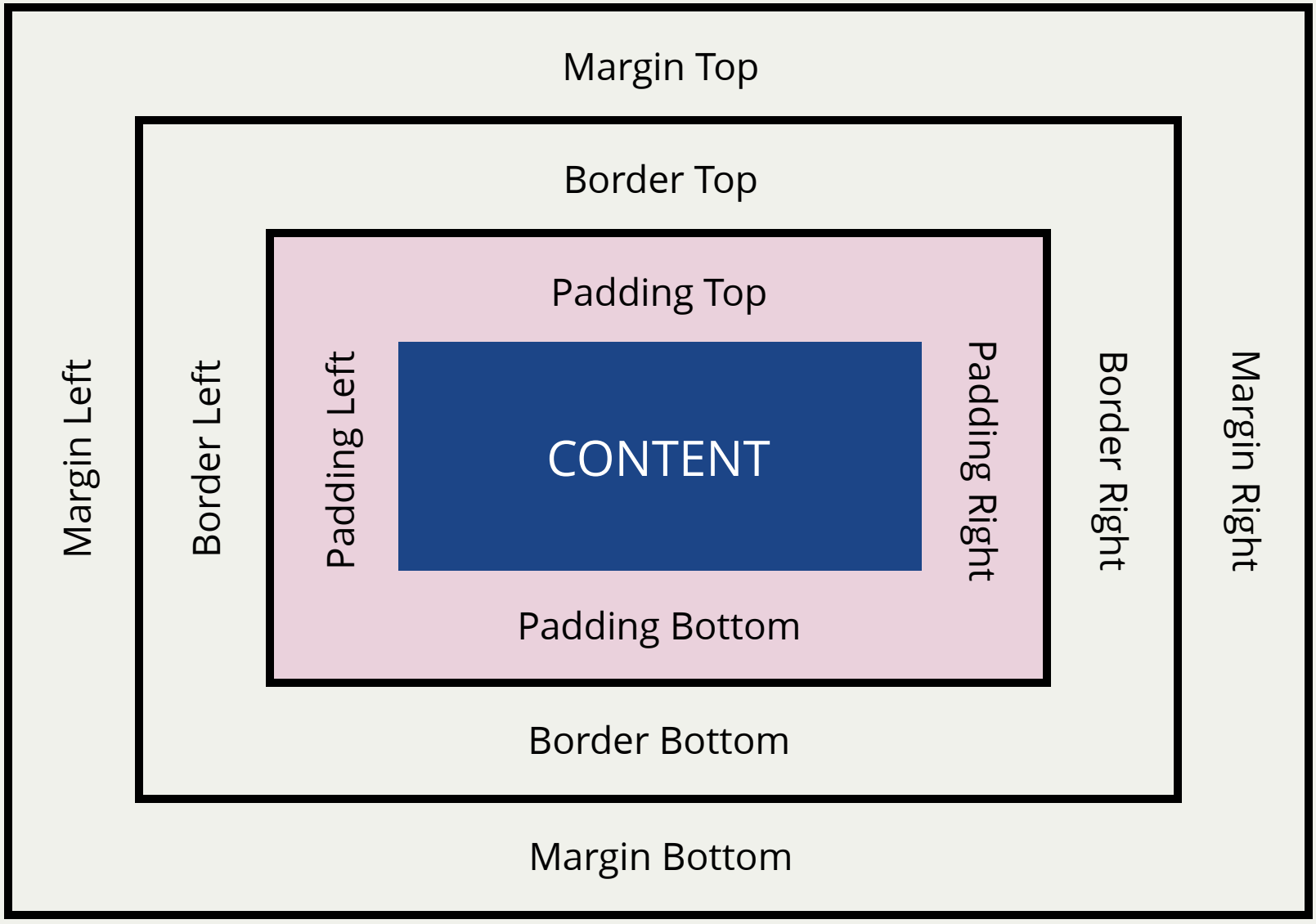
Agenda

- Review
- HTML5 Structural Elements
- Display Properties
- Floats and Clears
- Lab Time: Layout Challenge

Review

Box Model Review

- What is the Document Flow?
- What do we mean by box model?
- What makes up the box model?
- What do we use padding and margin for?
- When we specify a width, what do we typically specify?
- How do we solve that problem?



**The pink is the element's background colour*

Structural Elements

Header

```
<header></header>
```

Used to contain a group or introductory and navigational aids

Heading elements, logos, search form etc.

Nav

```
<nav></nav>
```

Used for a section on the page with navigation links

You can have more than one of these on the page

Footer

```
<footer></footer>
```

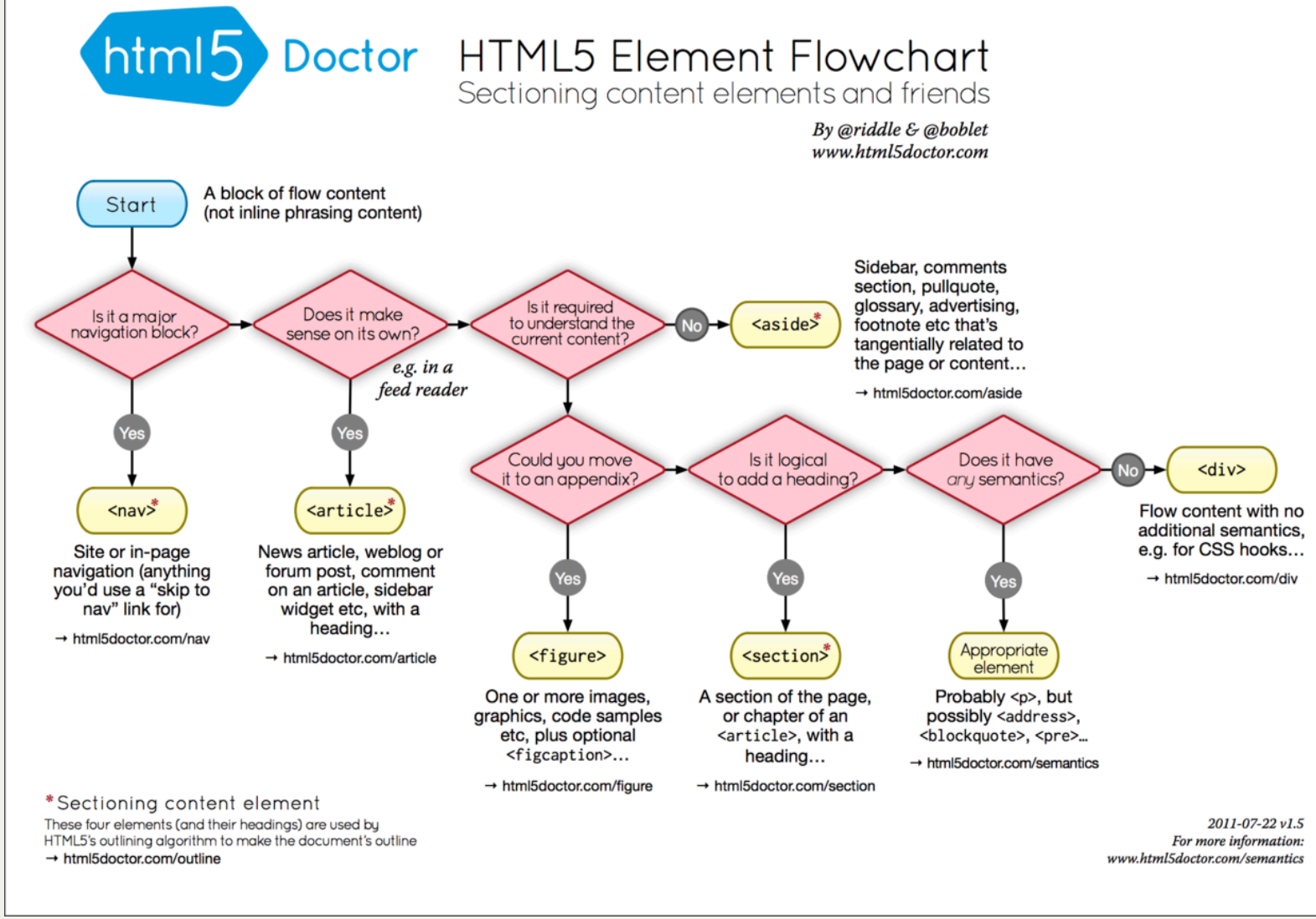
A footer typically contains information about the company or author, copyright data or links to other documents

Section

```
<section></section>
```

Defines a unique section in the document

e.g. A chapter, content blocks etc.


html5 Doctor
HTML5 Element Flowchart
Sectioning content elements and friends
By @riddle & @boblet
www.html5doctor.com
Start
A block of flow content
(not inline phrasing content)
Is it a major navigation block?
Yes
<nav>*
Site or in-page navigation (anything you'd use a "skip to nav" link for)
→ html5doctor.com/nav
Does it make sense on its own?
e.g. in a feed reader
Yes
<article>*
News article, weblog or forum post, comment on an article, sidebar widget etc, with a heading…
→ html5doctor.com/article
Is it required to understand the current content?
No
<aside>*
Sidebar, comments section, pullquote, glossary, advertising, footnote etc that's tangentially related to the page or content…
→ html5doctor.com/aside
Could you move it to an appendix?
Yes
<figure>
One or more images, graphics, code samples etc, plus optional <figcaption>…
→ html5doctor.com/figure
Is it logical to add a heading?
Yes
<section>*
A section of the page, or chapter of an <article>, with a heading…
→ html5doctor.com/section
Does it have any semantics?
Yes
Appropriate element
Probably <p>, but possibly <address>, <blockquote>, <pre>…
→ html5doctor.com/semantics
No

Flow content with no additional semantics, e.g. for CSS hooks…
→ html5doctor.com/div
* Sectioning content element
These four elements (and their headings) are used by HTML5's outlining algorithm to make the document's outline
→ html5doctor.com/outline
2011-07-22 v1.5
For more information:
www.html5doctor.com/semantics

Display

Display

Display determines the type of rendering box a particular element uses

- Can other elements sit next to it?
- Can you set widths and heights?
- Does padding and margin work?

Elements have these set by default (the **user agent stylesheet** does this)

Display: Block

- Start on a new line
- By default, they will stretch out to the right and left as far as they can (unless you set widths or heights)
- Nothing can sit on the same line as it
- Widths, heights, margin and padding all work

Display: Inline

- Does not disrupt the flow of other elements
- It will sit next to any element it can
- Padding works (but does not push elements away vertically)
- Margin works horizontally
- Widths and heights don't work at all

Display: Inline Block

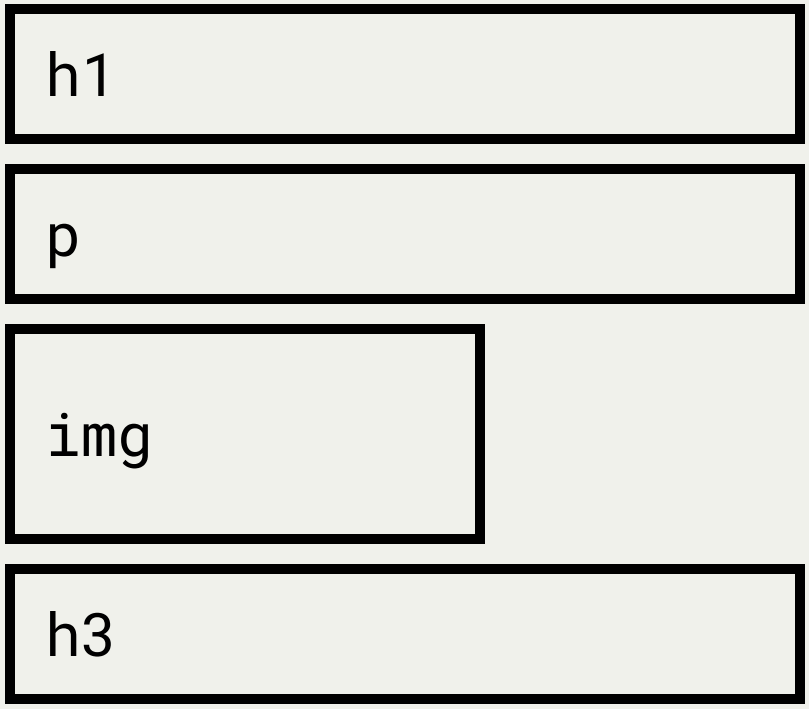
- A mix of inline and block
- Other elements can sit in the same line
- You can set widths and heights
- Margins and padding works perfectly

Display: None

- Completely removed from the document flow
- Invisible
- It's like the element was never there

Floats & Clears

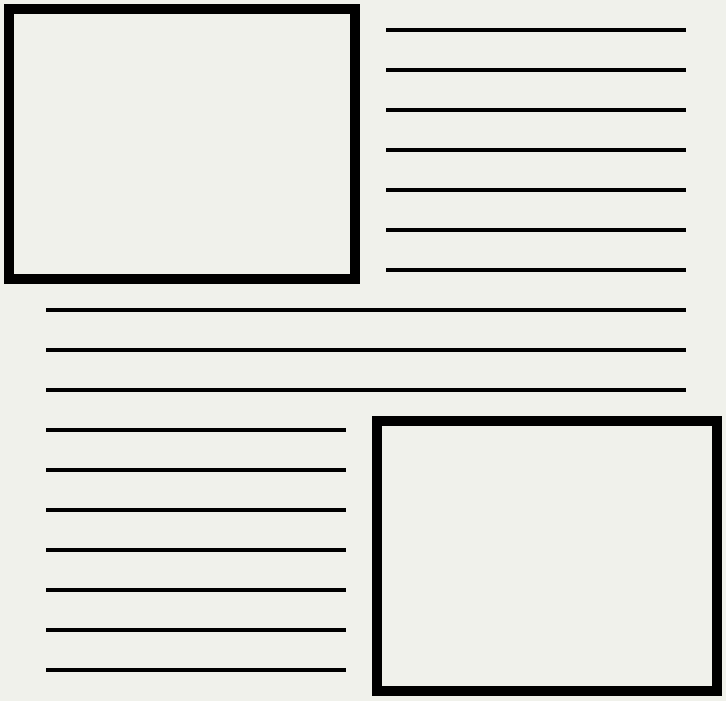
Document Flow



- How elements sit on a page
- The natural flow of a webpage

But what if we want to change that?

What are floats?



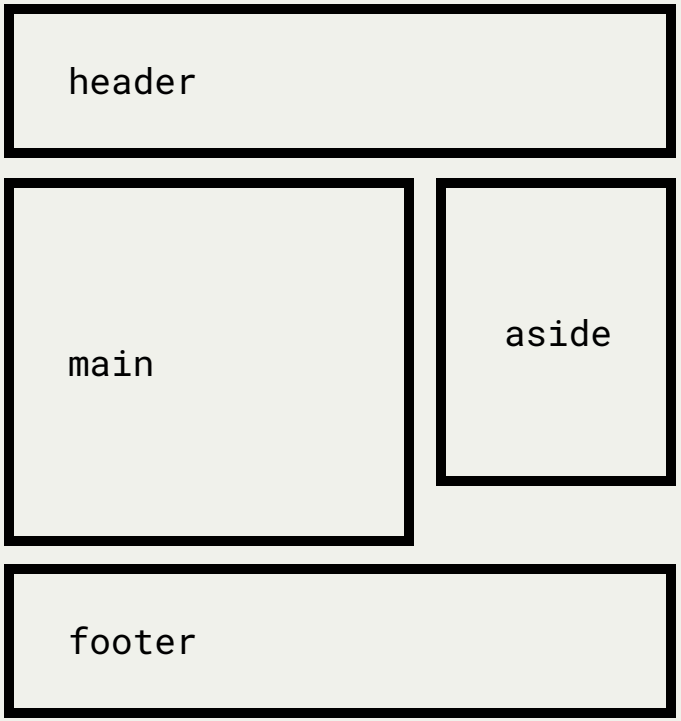
Elements with the float property:

- Remain in the document flow
- They can be pushed to the left or right
- Other content can flow around them

Float

```
element {
  float: left | right | none;
}
```

What can we do with float?



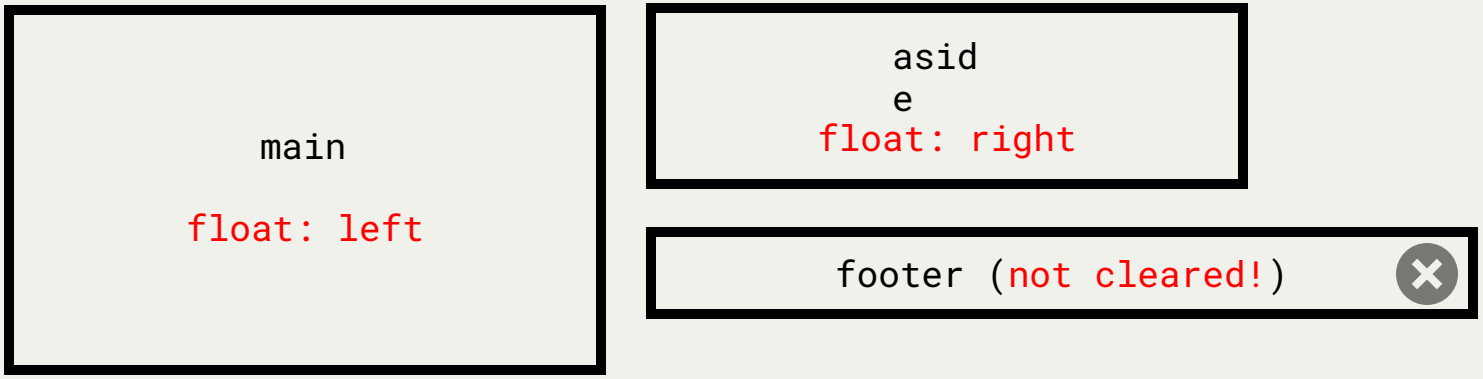
Beyond just wrapping text:

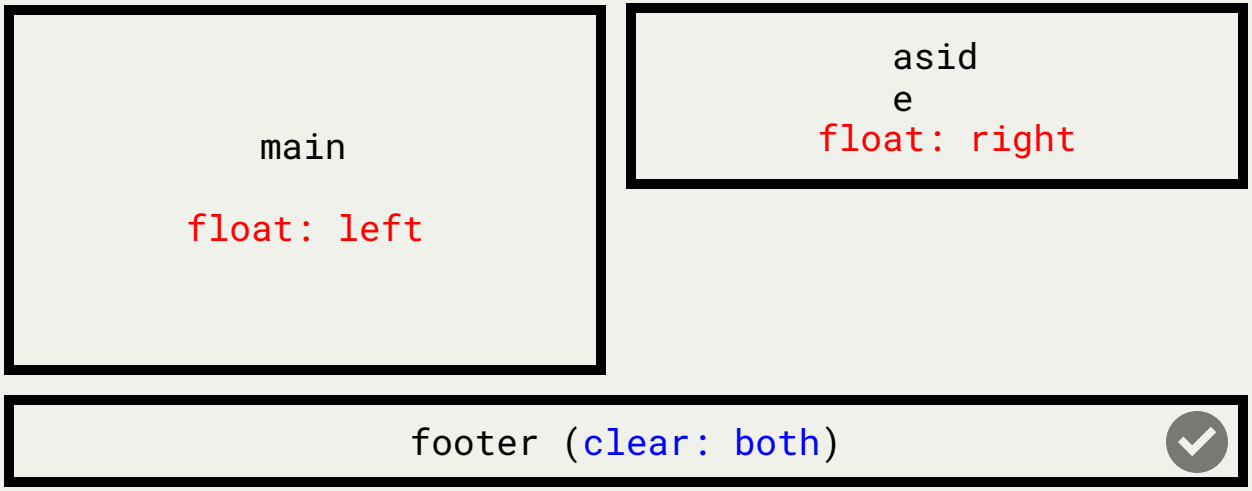
- Building full page layouts
- Smaller parts of the page
  - Navigations
  - etc.

Clear

A problem with floats

Once you have floated something, everything after it in the document flow will float up and try and fill whatever gap there is




main
float: left
asid
e
float: right
footer (clear: both)

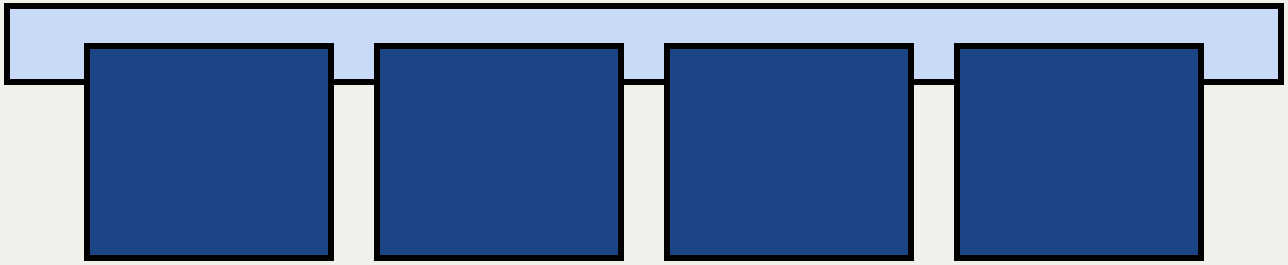
Clearing

Clearing is drawing a line and saying things can't float past this point

```
element {
  clear: left | right | both | none;
}
```

The Collapsing Parent

If everything inside an element is floated, that element will have a height of zero



Unless you clear it! (Solutions here)

So how do we clear a float?

Techniques for Clearing

1. **The Empty Div Method**
2. **The Overflow Method**
3. **The Clearfix Method**

The Empty Div Method

Adding an empty element to your HTML that has **clear both** attached to it. Add it wherever you need to stop the floats

```
...

<div class="clear"></div>

...
```

```
...

.clear {
    clear: both;
}

...
```

The Overflow Method

Add **overflow auto** or **overflow hidden** to the parent element that contains all of the floats. This will force the element to care about floated elements

The Clearfix Method

Use the clever **:after** CSS pseudo-selector to clear the floats. This pseudo-selector adds content to the page, and you can style that content to have **clear both**

```
.clearfix:after {
    content: "";
    visibility: hidden;
    display: block;
    height: 0;
    clear: both;
}
```

Exercise!

Layout Challenges

Homework

- Finish Relaxr
- Muck around with those Layout Challenges
- Review floats, clears and display
  - CSS Tricks
  - Smashing Magazine
  - Floats and Escalators (this is really well done!)

Q & A

Feedback Time

Lesson 4: **CSS Floats and Clears**

https://ga.co/fewd32syd

Thanks!