HTML5 SEMANTIC ELEMENTS

- The need for semantic elements

- Structural/layout elements

- Figures and captions

THE NEED FOR SEMANTIC ELEMENTS

- Give content on the page meaning and structure

- Semantics portray the value of content on a page, and are not just its style

- Semantic markup can be interpreted by tools for the visually impaired

- Search Engines can use semantic markup to better categorise and classify content

- Semantic markup can make site maintenance easier as new developers can quickly grasp the site structure

- Updating / restyling may by streamlined by using semantic elements

THE HTML5 SEMANTIC ELEMENTS

<header>

<nav>

<section>

<article>

<aside>

<figcaption>

<figure>

<footer>

<NAV>

```html
<nav>
 <h1>Navigation</h1>
 <ul>
  <li><a href="articles.html">Index of all articles</a></li>
  <li><a href="today.html">Things sheeple need to wake up for today</a></li>
  <li><a href="successes.html">Sheeple we have managed to wake</a></li>
 </ul>
</nav>
```
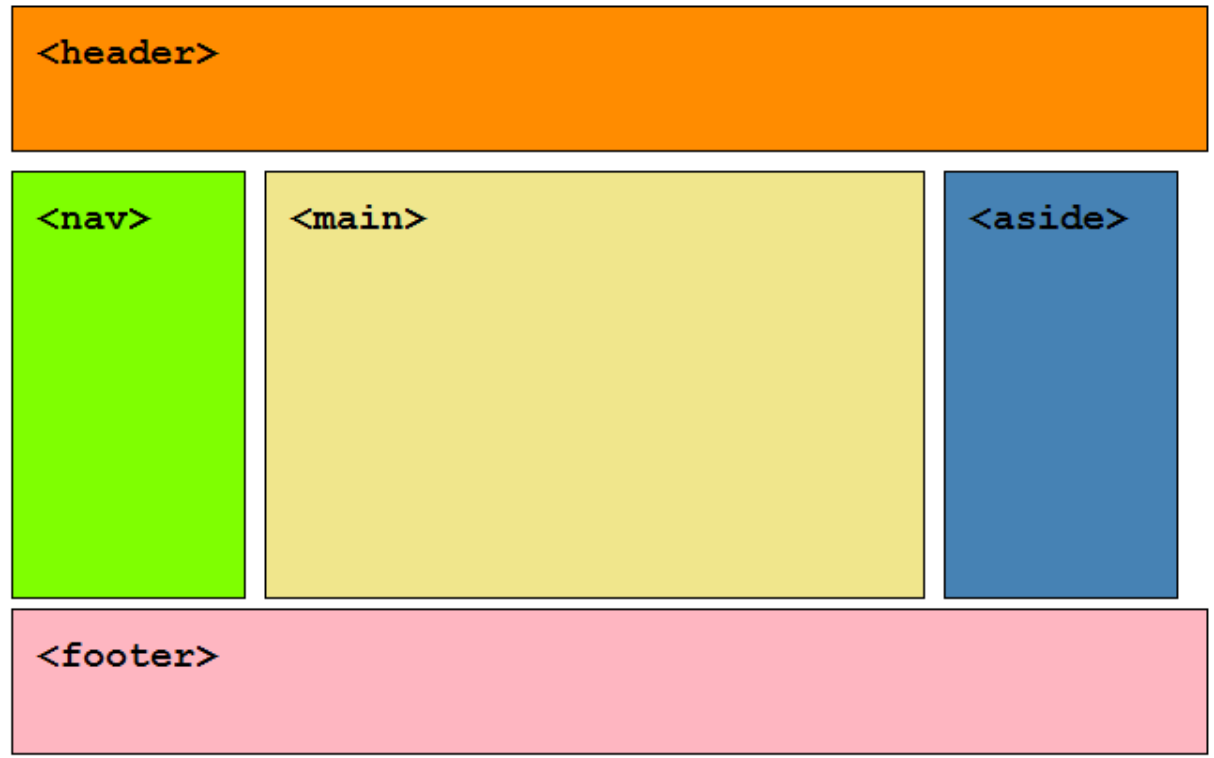
"The nav element represents a section of a page that links to other pages or to parts within the page: a section with navigation links."

<ARTICLE>

```html
<article itemscope itemtype="http://schema.org/BlogPosting">
 <header>
  <h1 itemprop="headline">The Very First Rule of Life</h1>
  <p><time itemprop="datePublished" datetime="2009-10-09">3 days ago</time></p>
  <link itemprop="url" href="?comments=0">
 </header>
 <p>If there's a microphone anywhere near you, assume it's hot and
   sending whatever you're saying to the world. Seriously.</p>
 <p>...</p>
 <footer>
  <a itemprop="discussionUrl" href="?comments=1">Show comments...</a>
 </footer>
</article>
```

"The article element represents a complete, or self-contained, composition in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication. This could be a forum post, a magazine or newspaper article, a blog entry, a user-submitted comment, an interactive widget or gadget, or any other independent item of content.

\<SECTION>

"The section element represents a generic section of a document or application. A section, in this context, is a thematic grouping of content. The theme of each section should be identified, typically by including a heading (h1-h6 element) as a child of the section element."

```
<article>
 <header>
  <h2>Apples</h2>
  <p>Tasty, delicious fruit!</p>
 </header>
 <p>The apple is the pomaceous fruit of the apple tree.</p>
 <section>
  <h3>Red Delicious</h3>
  <p>These bright red apples are the most common found in many
    supermarkets.</p>
 </section>
 <section>
  <h3>Granny Smith</h3>
  <p>These juicy, green apples make a great filling for apple
    pies.</p>
 </section>
</article>
```

<ASIDE>

"The aside element represents a section of a page that consists of content that is tangentially related to the content around the aside element, and which could be considered separate from that content. Such sections are often represented as sidebars in printed typography."

```html
<aside>
 <h1>Switzerland</h1>
 <p>Switzerland, a land-locked country in the middle of
    geographic Europe, has not joined the geopolitical
    European Union, though it is a signatory to a number
    of European treaties.</p>
</aside>
```

<HEADER> & <FOOTER>

"The header element represents introductory content for its nearest ancestor sectioning content or sectioning root element. A header typically contains a group of introductory or navigational aids."

"The footer element represents a footer for its nearest ancestor sectioning content or sectioning root element. A footer typically contains information about its section such as who wrote it, links to related documents, copyright data, and the like.."

```
<header>
 <p>Welcome to...</p>
 <h1>Voidwars!</h1>
</header>


<footer>
 <a href="../">Back to index…</a>
</footer>
```

W3C SPECIFICATIONS

- Readable and concise

- Simple guidance on structuring content

HTML 5.1 Nightly

A vocabulary and associated APIs for HTML and XHTML

Editor's Draft 27 November 2013

Latest Published Version:
    http://www.w3.org/TR/html51/

4.3 Sections
    4.3.1 The `body` element
    4.3.2 The `article` element
    4.3.3 The `section` element
    4.3.4 The `nav` element
    4.3.5 The `aside` element
    4.3.6 The `h1, h2, h3, h4, h5,` and `h6` elements
    4.3.7 The `header` element
    4.3.8 The `footer` element
    4.3.9 The `address` element
    4.3.10 Headings and sections
        4.3.10.1 Creating an outline
        4.3.10.2 Sample outlines
    4.3.11 Usage summary
        4.3.11.1 Article or section?

4.3.11.1 Article or section?

This section is non-normative.

A `section` forms part of something else. An `article` is its own thing. But how does one know which is which? Mostly the real answer is "it depends on author intent".

For example, one could imagine a book with a "Granny Smith" chapter that just said "These juicy, green apples make a great filling for apple pies."; that would be a `section` because there'd be lots of other chapters on (maybe) other kinds of apples.

On the other hand, one could imagine a tweet or reddit comment or tumblr post or newspaper classified ad that just said "Granny Smith. These juicy, green apples make a great filling for apple pies."; it would then be `article`s because that was the whole thing.

A comment on an article is not part of the `article` on which it is commenting, therefore it is its own `article`.

SEMANTIC AND DIV'ITIS

- Div'itis : the process of using too many nested/unnecessary divs to mark up a page.

- Excessive use of DIVs makes page difficult to interpret, both by a human and machine reader

```html
<html>
<head>
 <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"
</head>
<body>

<div id="container">

<div id="topbar">
<div id="header">
 <img src="/logo.jpg" width="400" height="150" />
</div> <!-- end header -->

<div id="menu">
 <ul id="navigation">
  <li> <a class="navlink" href="/home.html"> home </a> </li>
 </ul>
</div> <!-- end menu -->
</div> <!-- end topbar -->

<div id="content">

<div id="news">

<div class="headline"> News item 1 </div>
<div class="newsstory"> story here </div>

<div class="headline"> News item 2 </div>
<div class="newsstory"> story here </div>

</div> <!-- end news div -->

</div> <!-- end content div -->

<div id="footer">
 <div class="smalltext"> copyright &amp;copy; 2005 some guy </div>
</div>

</div> <!-- end container div-->

</body>
</html>
```
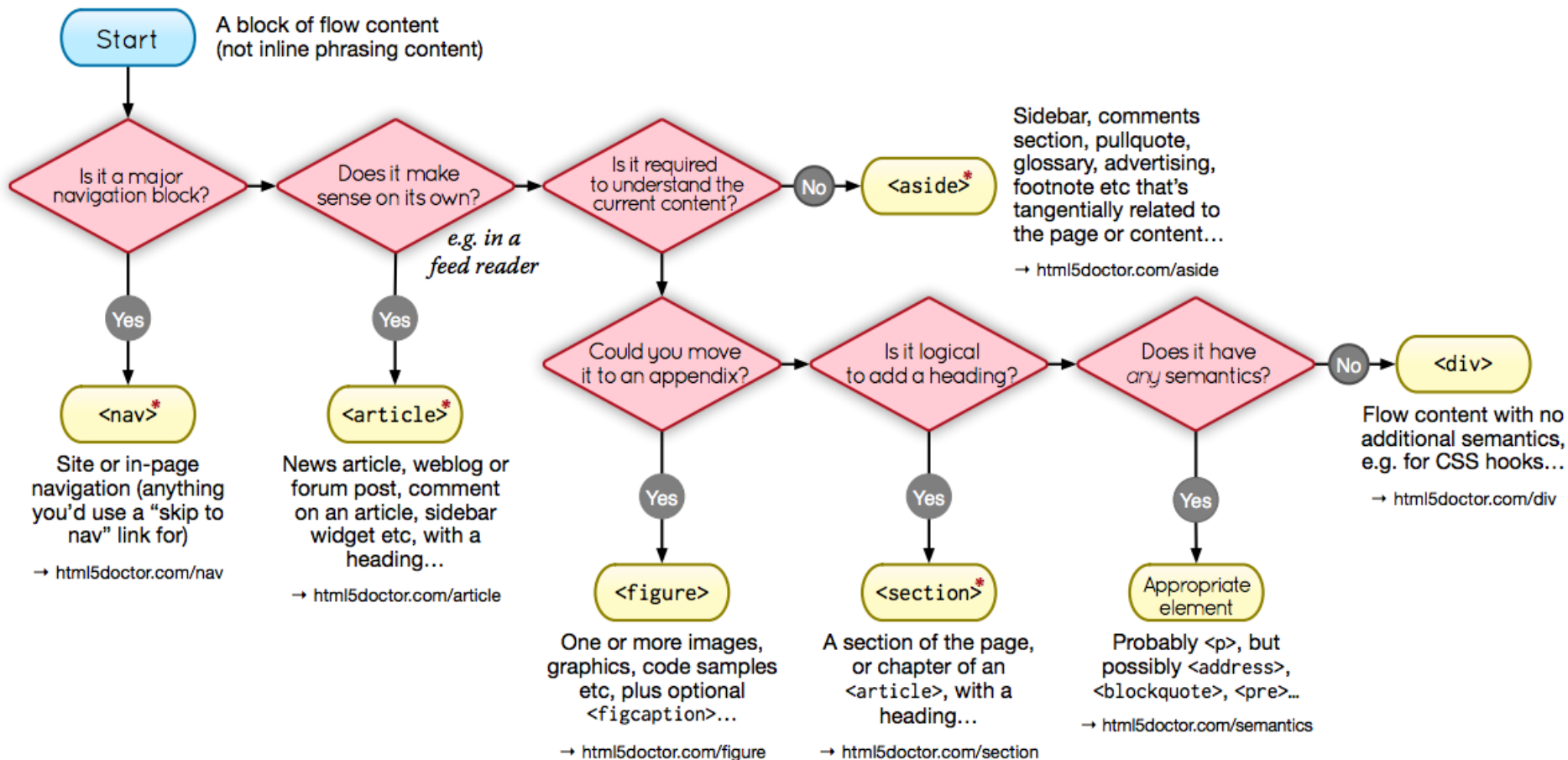
html5 Doctor

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?

Does it make sense on its own? — e.g. in a feed reader

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

Yes ↓ **<nav>*** — Site or in-page navigation (anything you'd use a "skip to nav" link for)
→ html5doctor.com/nav

Yes ↓ **<article>*** — News article, weblog or forum post, comment on an article, sidebar widget etc, with a heading…
→ html5doctor.com/article

Could you move it to an appendix?

Is it logical to add a heading?

Does it have any semantics? — No → **<div>** — Flow content with no additional semantics, e.g. for CSS hooks…
→ html5doctor.com/div

Yes ↓ **<figure>** — One or more images, graphics, code samples etc, plus optional <figcaption>…
→ html5doctor.com/figure

Yes ↓ **<section>*** — A section of the page, or chapter of an <article>, with a heading…
→ html5doctor.com/section

Yes ↓ **Appropriate element** — Probably <p>, but possibly <address>, <blockquote>, <pre>…
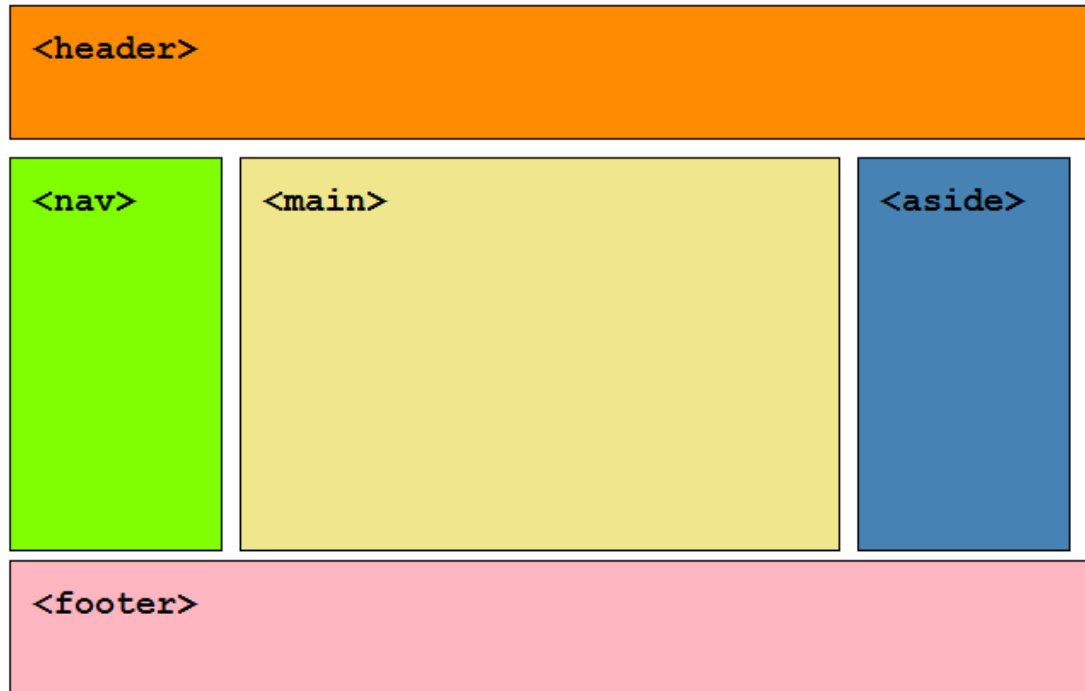→ html5doctor.com/semantics

*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

DIFFERENT STRUCTURES AND ORDERING

<header></header>

<nav></nav>

<main><main>

<aside></aside>

<footer></footer>

```
<footer>




<main>




<nav>
```

<footer></footer>
<main><main>
<nav></nav>
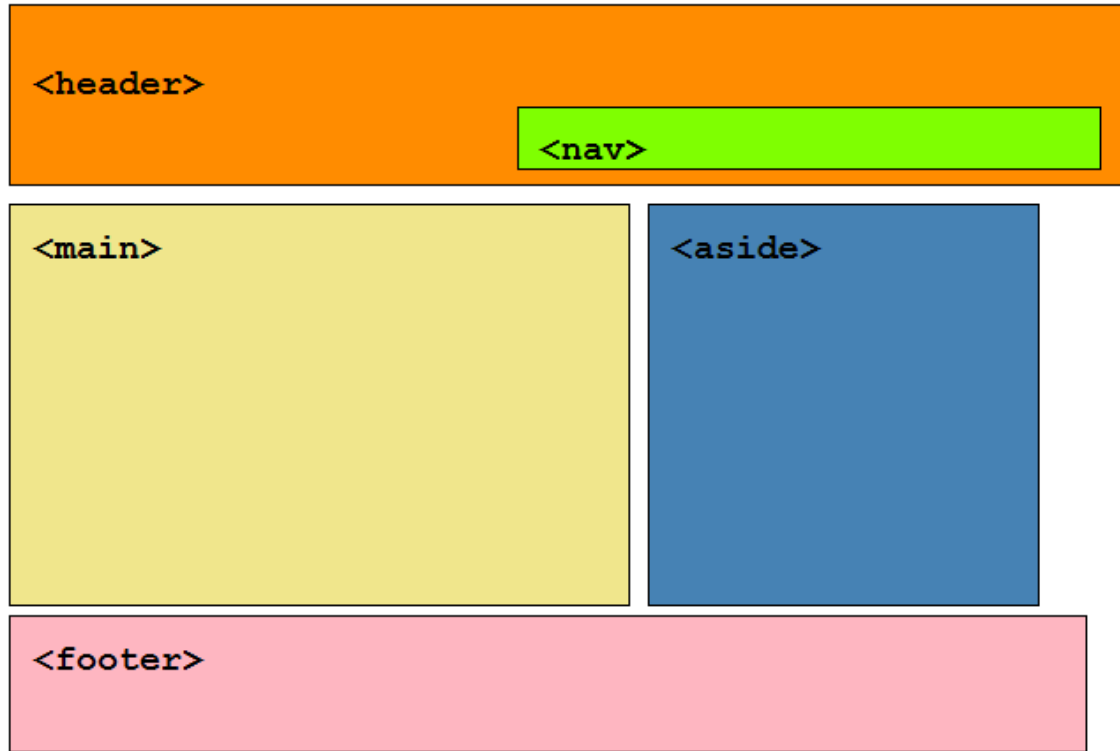
<header>
<nav></nav>
</header>
<main><main>
<aside></aside>
<footer></footer>

CSS EXAMPLE

- All of the semantic structural elements mentioned above can have CSS styles applied to them to control their appearance and position

```
51  header {
52    padding:2em;
53  }

54

55  nav {
56    background-color:#616e7d;
57  }

58

59  section {
60    padding:.5em 2em;
61    text-align:justify;
62  }
```

FIGURE AND FIGCAPTION

- The <figure> element is intended to be used in conjunction with the <figcaption> element to mark up diagrams, illustrations, photos, and code examples (among other things).

  "The figure element represents a unit of content, optionally with a caption, that is self-contained, that is typically referenced as a single unit from the main flow of the document, and that can be moved away from the main flow of the document without affecting the document's meaning"

  "The figcaption element represents a caption or legend for a figure."

FIGURE AND FIGCAPTION

This turtle was spotted swimming around the Great Barrier Reef (Queensland, Australia) quite gracefully despite having had a large chunk taken out of its right side, presumably in a shark attack.
[Photographer: Ian Lloyd]

```css
img.border {
  border: 15px solid white;
}

figure {
  border-bottom: 1px solid navy;
  margin-bottom: 2%;
}

figcaption {
  color:navy;
  font-size: 75%;
  font-weight: bold;
  margin-top: 0;
  width: 70%;
  line-height: 1.4em;
}

figcaption span {
  font-weight: normal;
  color: gray;
}
```

```html
<figure>
<img src="gallery/turtle-bite.jpg" width="400" height="258"
alt="A turtle swims comfortably among the coral, despite its
old injury - a large shark bite on one side" class="border">
<figcaption>This turtle was spotted swimming around the Great Barrier Reef
(Queensland, Australia) quite gracefully despite having had a
large chunk taken out of its right side, presumably in a shark attack.<br> <span>[Photographer: Ian Lloyd]</span></figcaption>
</figure>
```