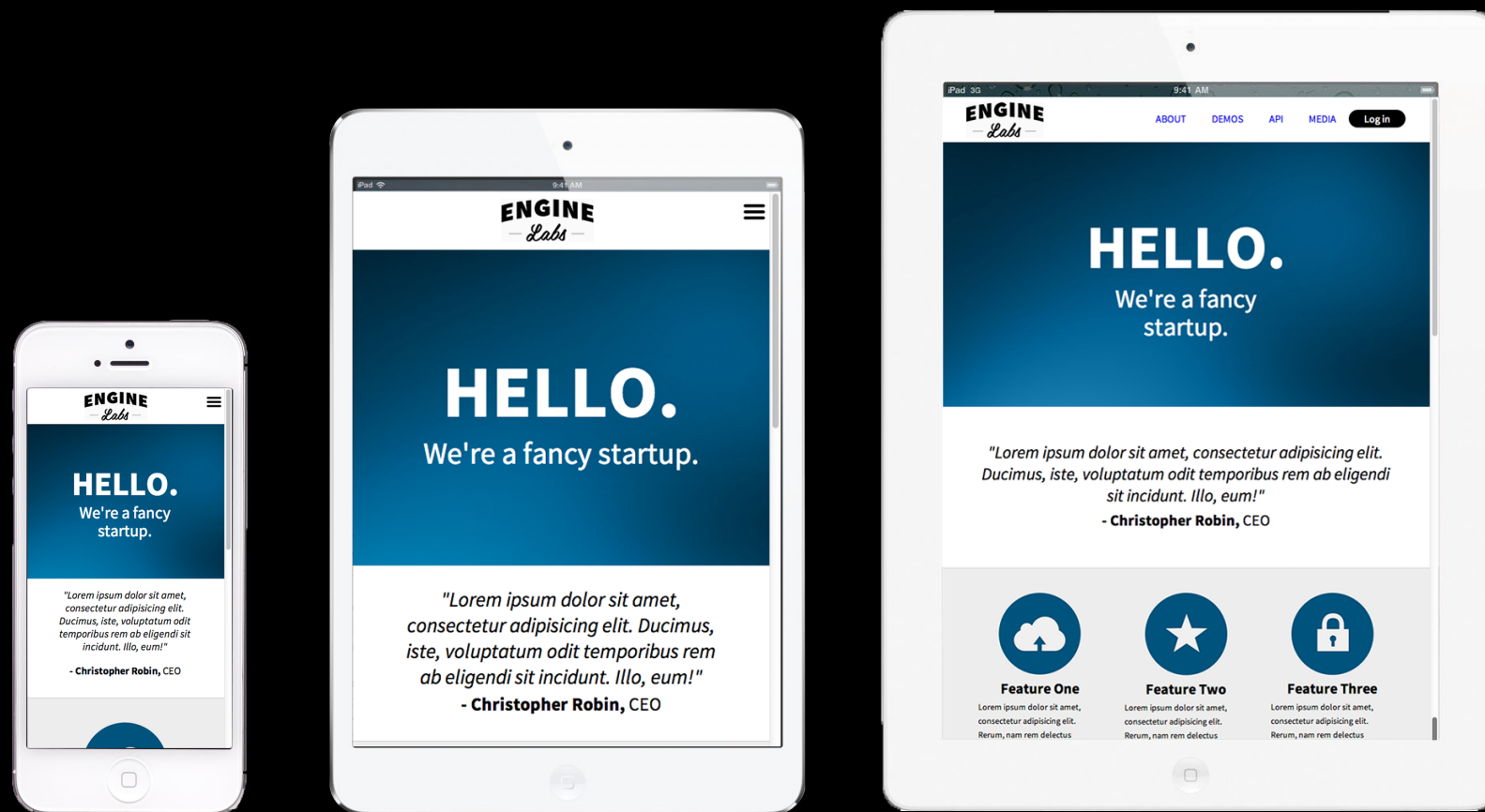# FLEXBOX

WHAT IS FLEXBOX?

A CSS Property that gives the container the ability to alter its height and width and fill the best available space.

WHAT IS FLEXBOX?

By expanding items to fill free space, or shrinking to prevent overflow…

WHAT IS FLEXBOX?

It can accommodate various display devices and screen sizes.

WHAT IS FLEXBOX?

It is **direction agnostic,** therefore you are not dealing with:

block elements

in-line styling

floats

clears

tables

HOW DOES IT WORK?

Everything starts with the
flex-container (your parent element).
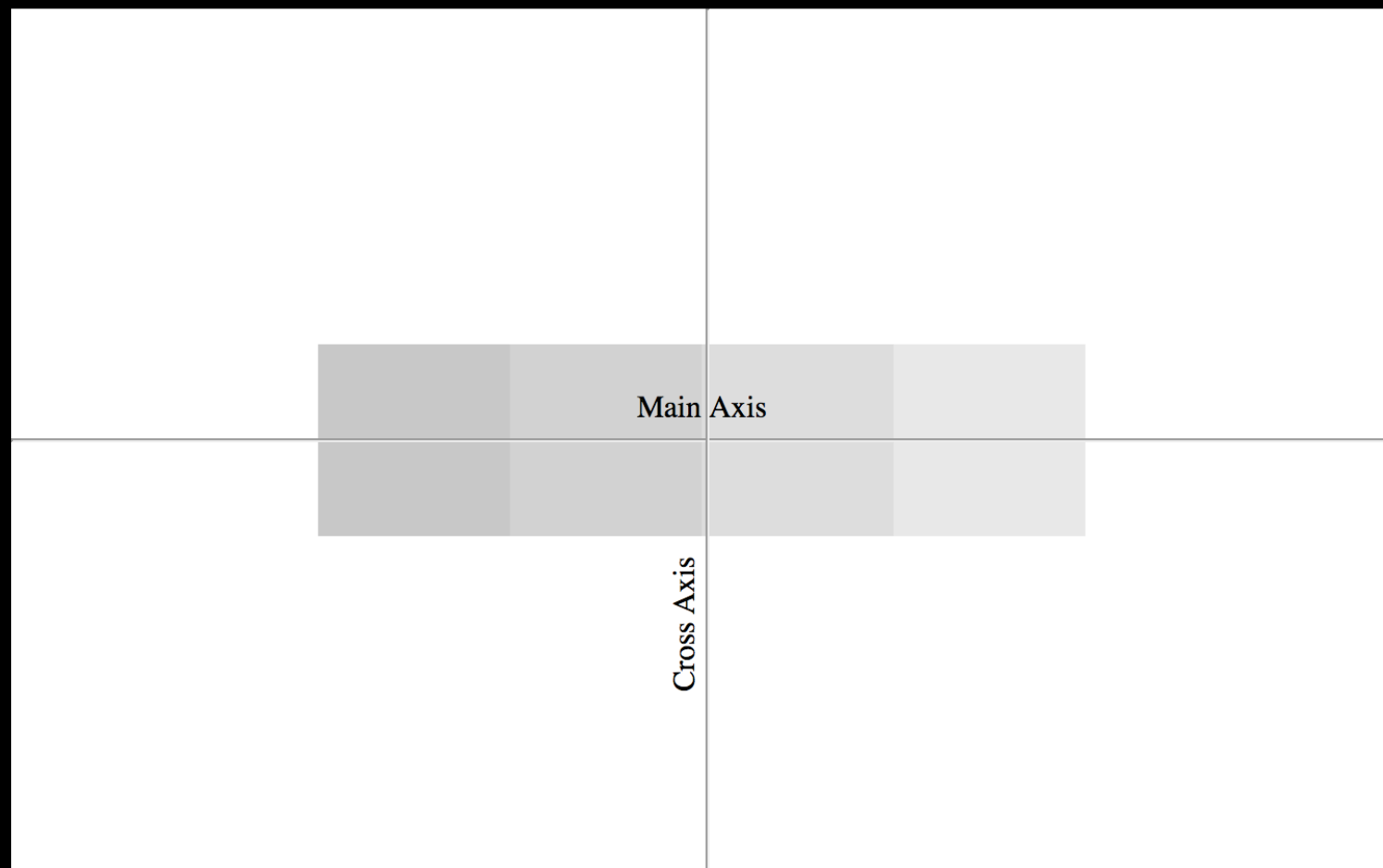
Declared by setting:

<div align="center">

display: flex;
('block')

or

display: flex-inline;
('in-line')

</div>

FLEX CONTAINER

In a flex container, items line up on a 'main axis'. Once a parent is set as flex container it's children follow the 'flexbox rules'.

FLEX CONTAINER

main-start

main-end

cross-start

Main Axis

Cross Axis

cross-end
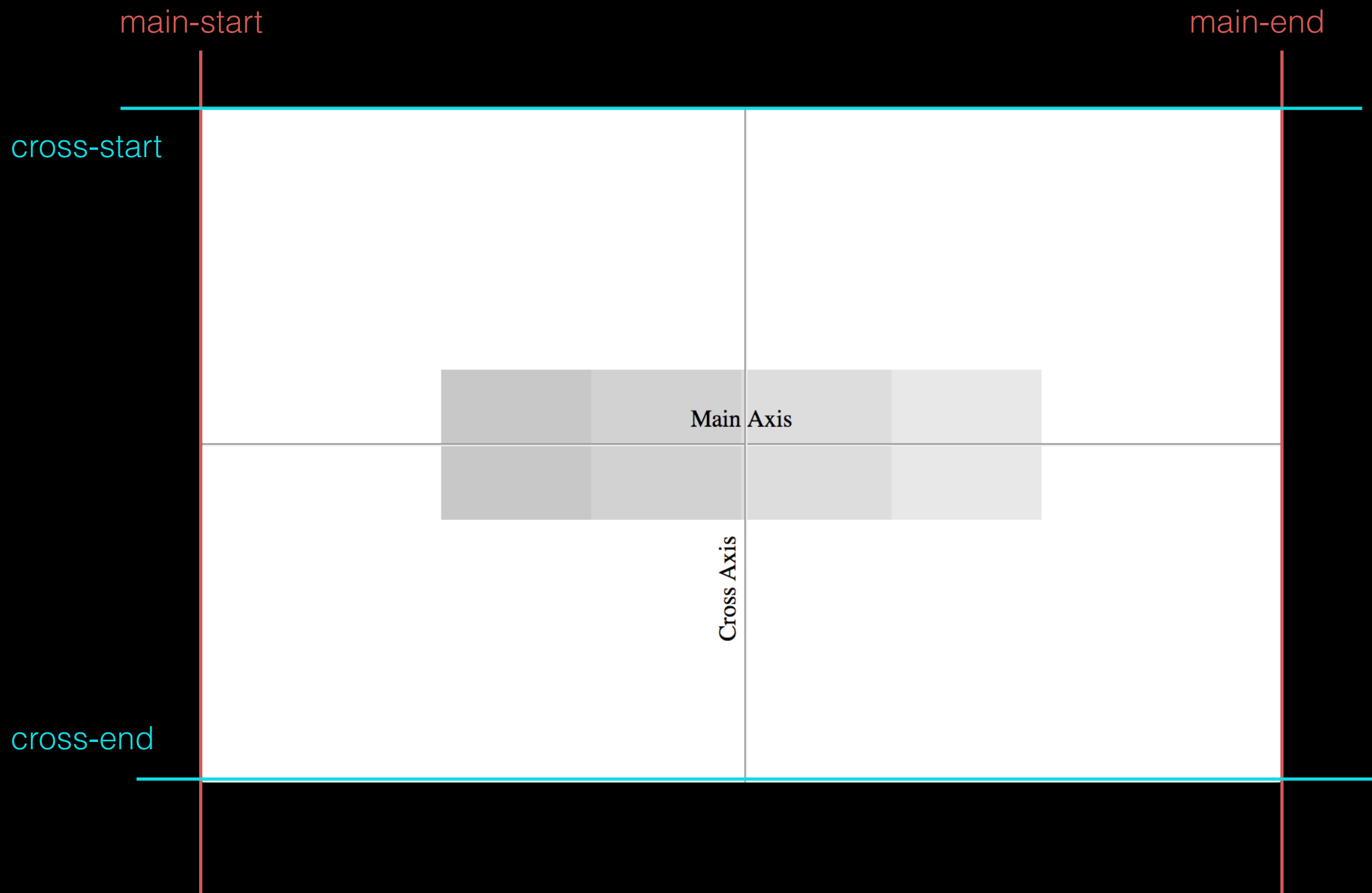
By default, the flex container is set as rows,

Main Axis

Cross Axis

display: flex;

But it also can be arranged as columns

Main Axis

Cross Axis
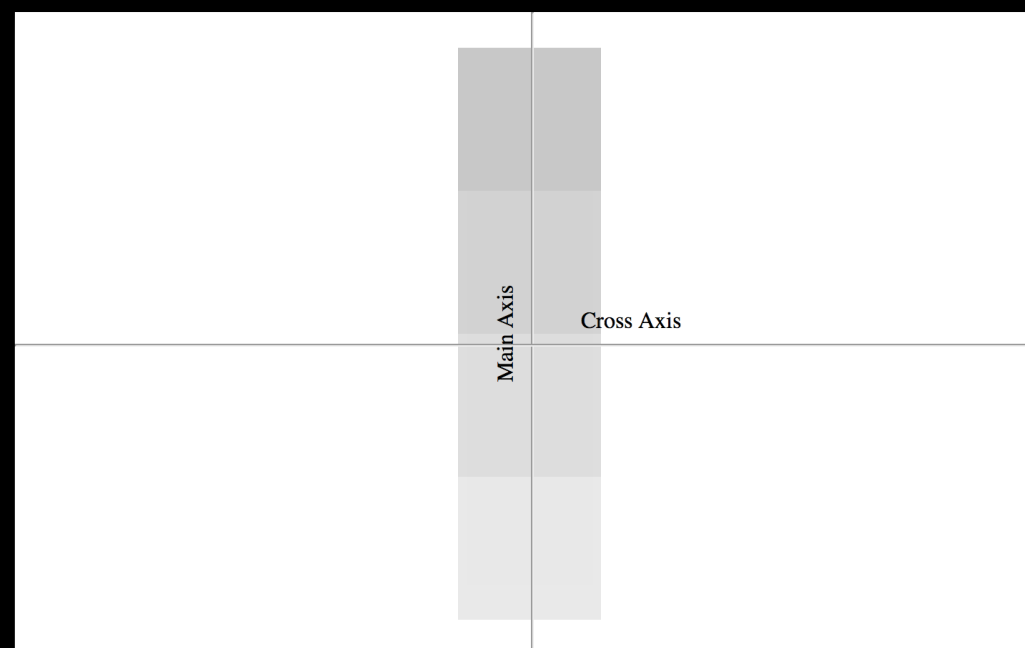
display: flex;
flex-direction: column;

PROPERTIES OF FLEXBOX

for complete listing refer to:

http://css-tricks.com/snippets/css/a-guide-to-flexbox/

display: flex;

flex-direction: row(default) vs. column

flex-wrap: wrap vs no wrap(default)

justify-content (relative to main-axis): flex-start(default)

align-items (relative to cross-axis): stretch(default)

PROPERTIES OF FLEXBOX

Properties of it's children (flex-items):

order: <integer>

flex-grow

flex-shrink

align-self

EXAMPLES OF FLEXBOX

Vertical Centering:

```css
                                                          CSS
.vertical-container {
  display: -webkit-flex;
  display: flex;
  height: 300px;
}
.vertically-centered {
  margin: auto;
}
```

```html
<div class="vertical-container">



                  <div class="vertically-centered">
                  Finally, it's easy to vertically center something in CSS!
                                                          </div>




                                                          </div>
```

EXAMPLES OF FLEXBOX

Vertical Centering (applied to marquee):

```html
<div class="main">
    <div class="headline-container">
        <p class="main-headline">Hello.</p>
        <p class="main-p">We're a fancy startup.</p>
    </div>
</div>
```

```css
.main, footer {
    background-image: url(../images/main_marquee.jpg);
    background-size: cover;
    background-position: center center;
    background-repeat: no-repeat;
    -webkit-background-size: cover;
    -moz-background-size: cover;
    -o-background-size: cover;
    display: flex;
    height: 416px;
}

.headline-container {
    display: flex;
    flex-direction: column;
    align-items: center;
    margin: auto;
    background: PaleVioletRed;
    width: 60%;
}
```

centers .headline-container

EXAMPLES OF FLEXBOX
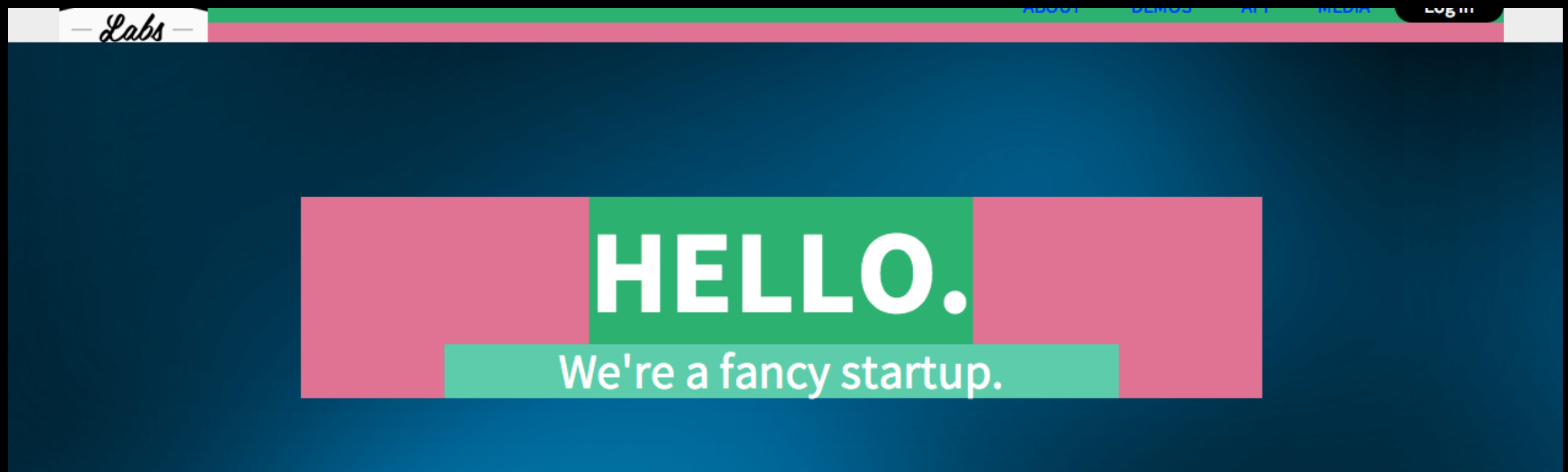
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    <div class="headline-container">
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    background-image: url(../images/main_marquee.jpg);
    background-size: cover;
    background-position: center center;
    background-repeat: no-repeat;
    -webkit-background-size: cover;
    -moz-background-size: cover;
    -o-background-size: cover;
    display: flex;
    height: 416px;
}

.headline-container {                    ←———————— centers
    display: flex;
    flex-direction: column;              ←———————— .headline-container
    align-items: center;                 ←————————
    margin: auto;                                   children
    background: PaleVioletRed;
    width: 60%;
}
```

HELLO.

We're a fancy startup.

EXAMPLES OF FLEXBOX

sample layout:

```css
.container {
  display: -webkit-flex;
  display: flex;
}
nav {
  width: 200px;
}
.flex-column {
  -webkit-flex: 1;
          flex: 1;
}
```
CSS

```html
<nav>ass="container">
```

- Home
- Taco Menu
- Draft List
- Hours
- Directions
- Contact

```html
</nav>
```

```html
<section> ="flex-column">
```
Flexbox is so easy!
```html
</section>
```

```html
<section>
```
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.

```html
</se</div>
```

EXAMPLES OF FLEXBOX

sample layout (applied to nav):

```html
<div class="nav-container">

    <img src="images/logo.png" alt="logo">
    <ul class="nav-ul">
        <li class="nav-ul-li"><a href="#">ABOUT</a></li>
        <li class="nav-ul-li"><a href="#">DEMOS</a></li>
        <li class="nav-ul-li"><a href="#">API</a></li>
        <li class="nav-ul-li"><a href="#">MEDIA</a></li>
        <li class="nav-ul-li-button"><a href="#" class="nav-ul-li-login">Log in</a></li>
    </ul>
</div>
```

```css
.nav-container {
    display: flex;
    margin: auto;
    width: 90%;
    background: PaleVioletRed;
}


.nav-ul {
    list-style: none;
    display: flex;
    justify-content: flex-end;
    flex: 1; /*********** allows nav to take up rest of container***********/
    background: MediumSeaGreen;
}
```

flex-container(parent) set to 'display:flex' and 'margin: auto'
flex-items(children) set to 'display:flex', 'flex-direction: column', 'margin: auto'

```html
<div class="feature-container">
    <div class="feature">
        <img src="images/feature1.png" alt="cloud">
        <h2>Feature One</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus
        aliquam eum nostrum dolorum minima nesciunt porro ducimus.</p>

    </div>

    <div class="feature">
        <img src="images/feature2.png" alt="star">
        <h2>Feature Two</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus
        aliquam eum nostrum dolorum minima nesciunt porro ducimus.</p>

    </div>

    <div class="feature">
        <img src="images/feature3.png" alt="privacy">
        <h2>Feature Three</h2>
        <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus
        aliquam eum nostrum dolorum minima nesciunt porro ducimus.</p>

    </div>
```

```css
.feature-container {
    display: flex;
    width: 90%;
    margin: 0 auto;
    padding: 5% 0%;
    background: PaleVioletRed;
}

.feature {
    display: flex;
    flex-direction: column;
    background: green;
    margin: 0 auto;

}

.feature img {
    width: 60%;
    margin: 0 auto;
}
```

```css
.feature h2{
    background: MediumSeaGreen;
    margin: 0 auto;
    padding: 3% 0 2%;
}


.feature p {
    text-align: left;
    font-size: 90%;
    line-height: 160%;
    margin: 0 auto;
    width: 80%;
    background: MediumAquaMarine;
}
```


Feature One

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus aliquam eum nostrum dolorum minima nesciunt porro ducimus.

Feature Two

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus aliquam eum nostrum dolorum minima nesciunt porro ducimus.

Feature Three

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Rerum, nam rem delectus aliquam eum nostrum dolorum minima nesciunt porro ducimus.

flex-container(parent) given 'flex-direction: column' for mobile…
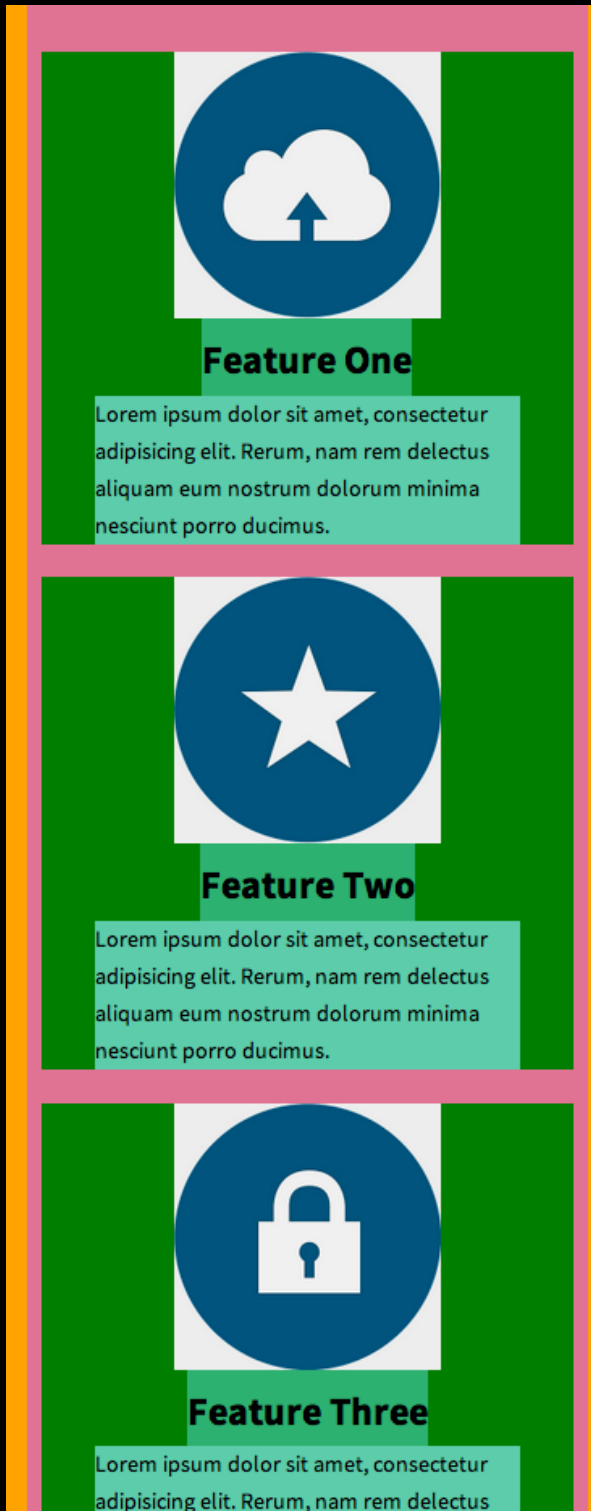

```css
.feature-container {
    margin: 6% auto;
    flex-direction: column; /*****- allows features to 'stack' ************/
    background: PaleVioletRed;
}

.feature {
    margin: 3% auto;
    width: 95%;
}

.feature img {
    width: 50%;
}

.feature p {
    width: 80%;
}
```

if not it will stay as a **row.**

```css
.feature-container {
    margin: 6% auto;
    background: PaleVioletRed;
}
```

SUPPORT FOR FLEXBOX

This is great!! I can use it in all my layouts now!!

SUPPORT FOR FLEXBOX

NOT SO FAST!! There's still browser support issues…

D'oh!

SUPPORT FOR FLEXBOX

according to http://caniuse.com/flexbox :

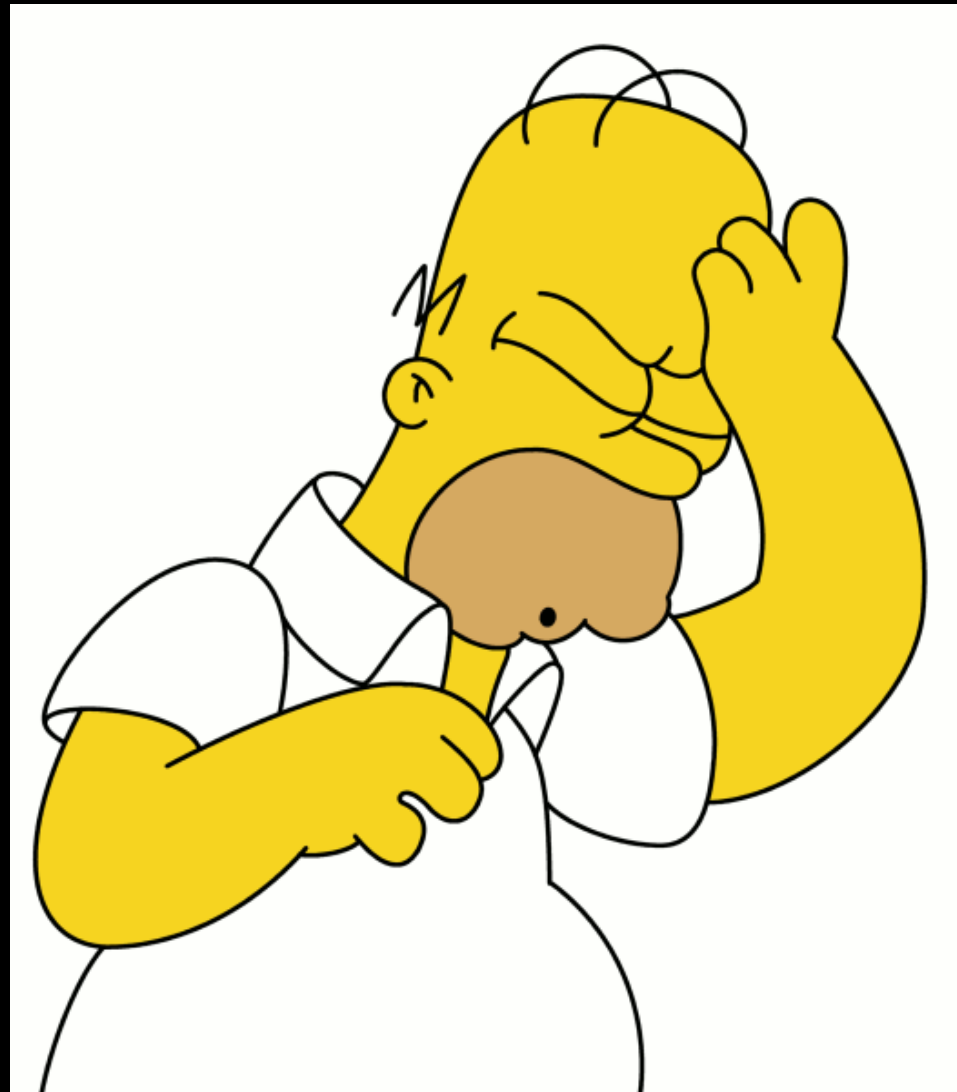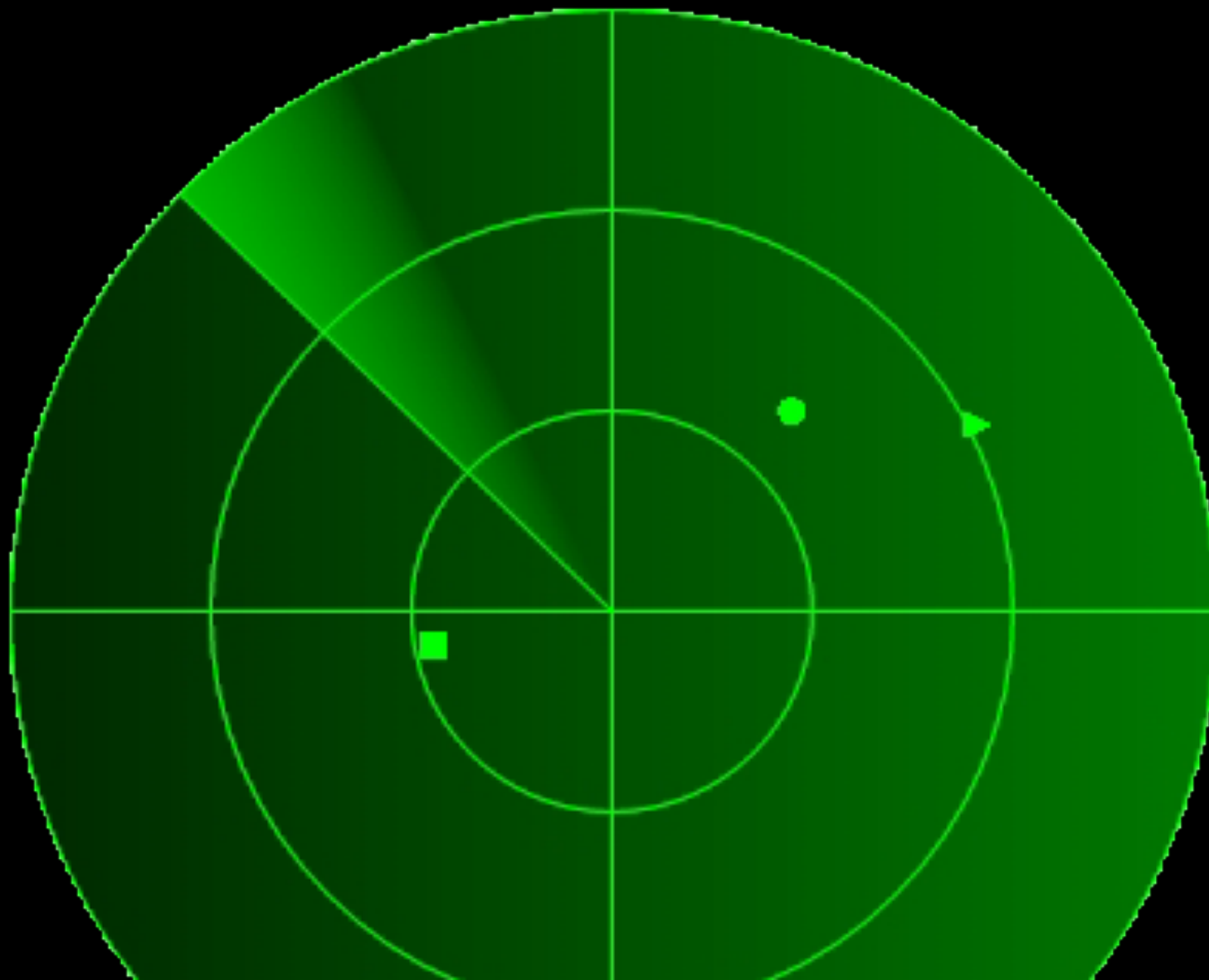|	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	Opera Mobile	Chrome for Android	Firefox for Android	IE Mobile
29 versions back			4.0 -webkit-										
28 versions back		2.0 -moz-	5.0 -webkit-										
27 versions back		3.0 -moz-	6.0 -webkit-										
26 versions back		3.5 -moz-	7.0 -webkit-										
25 versions back		3.6 -moz-	8.0 -webkit-										
24 versions back		4.0 -moz-	9.0 -webkit-										
23 versions back		5.0 -moz-	10.0 -webkit-										
22 versions back		6.0 -moz-	11.0 -webkit-										
21 versions back		7.0 -moz-	12.0 -webkit-										
20 versions back		8.0 -moz-	13.0 -webkit-										
19 versions back		9.0 -moz-	14.0 -webkit-										
18 versions back		10.0 -moz-	15.0 -webkit-										
17 versions back		11.0 -moz-	16.0 -webkit-										
16 versions back		12.0 -moz-	17.0 -webkit-		9.0								
15 versions back		13.0 -moz-	18.0 -webkit-		9.5-9.6								
14 versions back		14.0 -moz-	19.0 -webkit-		10.0-10.1								
13 versions back		15.0 -moz-	20.0 -webkit-		10.5								
12 versions back		16.0 -moz-	21.0 -webkit-		10.6								
11 versions back		17.0 -moz-	22.0 -webkit-		11.0								
10 versions back		18.0 -moz-	23.0 -webkit-		11.1								
9 versions back		19.0 -moz-	24.0 -webkit-		11.5								
8 versions back		20.0 -moz-	25.0 -webkit-		11.6								
7 versions back		21.0 -moz-	26.0 -webkit-	3.1 -webkit-	12.0			2.1 -webkit-					
6 versions back	5.5	22.0	27.0 -webkit-	3.2 -webkit-	12.1			2.2 -webkit-		10.0			
5 versions back	6.0	23.0	28.0 -webkit-	4.0 -webkit-	15.0 -webkit-	3.2 -webkit-		2.3 -webkit-		11.0			
4 versions back	7.0	24.0	29.0	5.0 -webkit-	16.0 -webkit-	4.0-4.1 -webkit-		3.0 -webkit-		11.1			
3 versions back	8.0	25.0	30.0	5.1 -webkit-	17.0	4.2-4.3 -webkit-		4.0 -webkit-		11.5			
2 versions back	9.0	26.0	31.0	6.0 -webkit-	18.0	5.0-5.1 -webkit-		4.1 -webkit-		12.0			
Previous version	10.0 -ms-	27.0	32.0	6.1 -webkit-	19.0	6.0-6.1 -webkit-		4.2-4.3 -webkit-	7.0 -webkit-	12.1			
Current	11.0	28.0	33.0	7.0 -webkit-	20.0	7.0 -webkit-	5.0-7.0	4.4	10.0 -webkit-	16.0	33.0	26.0 -moz-	10.0 -ms-
Near future		29.0	34.0		21.0								
Farther future		30.0	35.0		22.0								
3 versions ahead		31.0	36.0										

TAKE AWAY MESSAGE

Be aware of flexbox (keep it on your radar!!) as browser support continues to grow quickly…

FLEXBOX LINKS

For further reading…

http://css-tricks.com/snippets/css/a-guide-to-flexbox/

http://weblog.bocoup.com/dive-into-flexbox/

http://learnlayout.com/flexbox.html

http://www.sketchingwithcss.com/samplechapter/

http://webdesign.tutsplus.com/tutorials/tricks-with-flexbox-for-better-css-patterns--cms-19449