SNACKS & DESIGN

TODAY!

RYAN

(GOOGLE SHEET IS PINNED IN SLACK)

GENERAL ASSEMBLY

RESPONSIVE BASICS

Eric Boyer

LEARNING OBJECTIVES

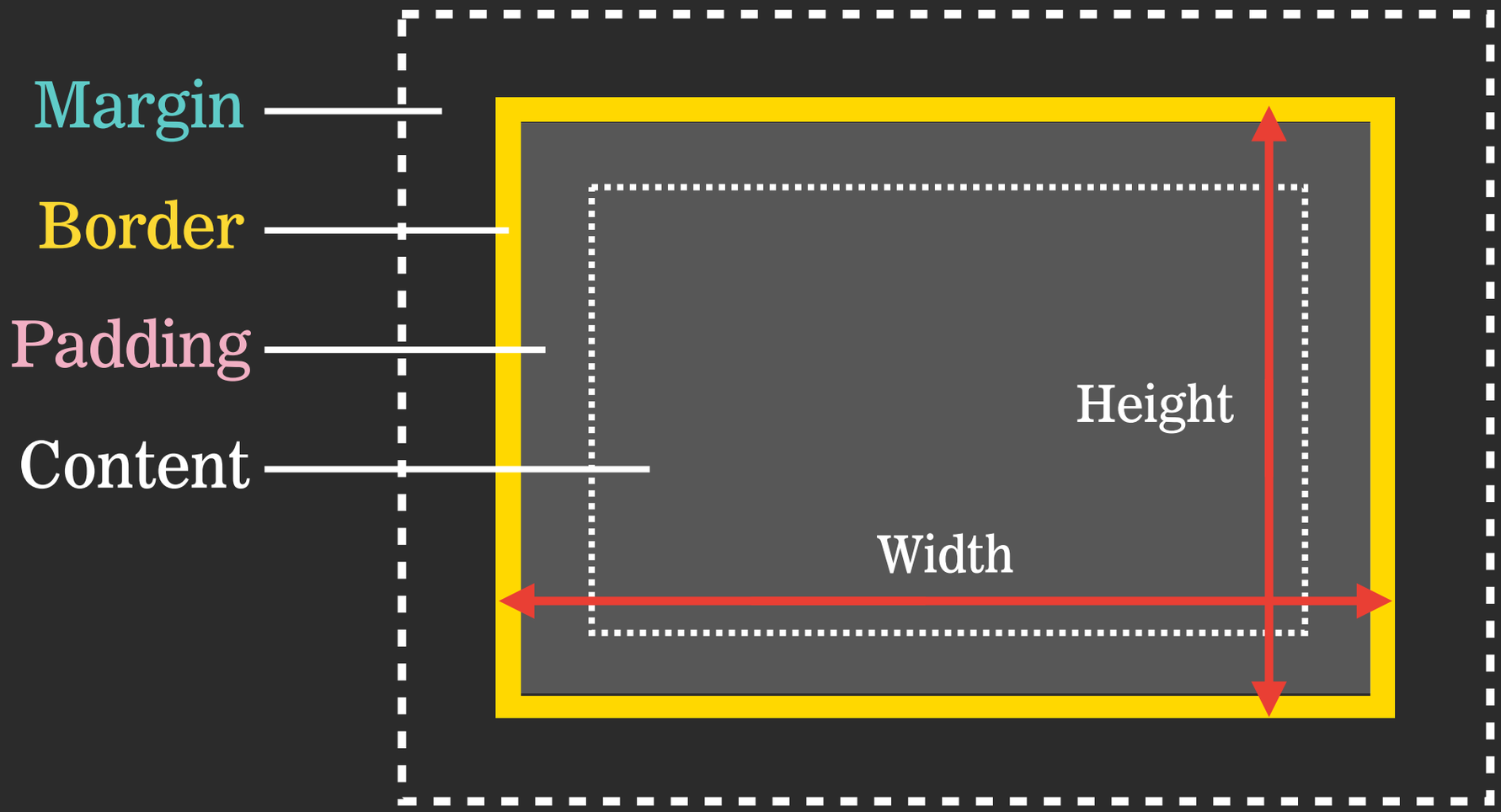
- Describe responsive design.
- Know the difference between fluid, fixed and responsive layouts
- Apply media queries to achieve a responsive layout.

AGENDA

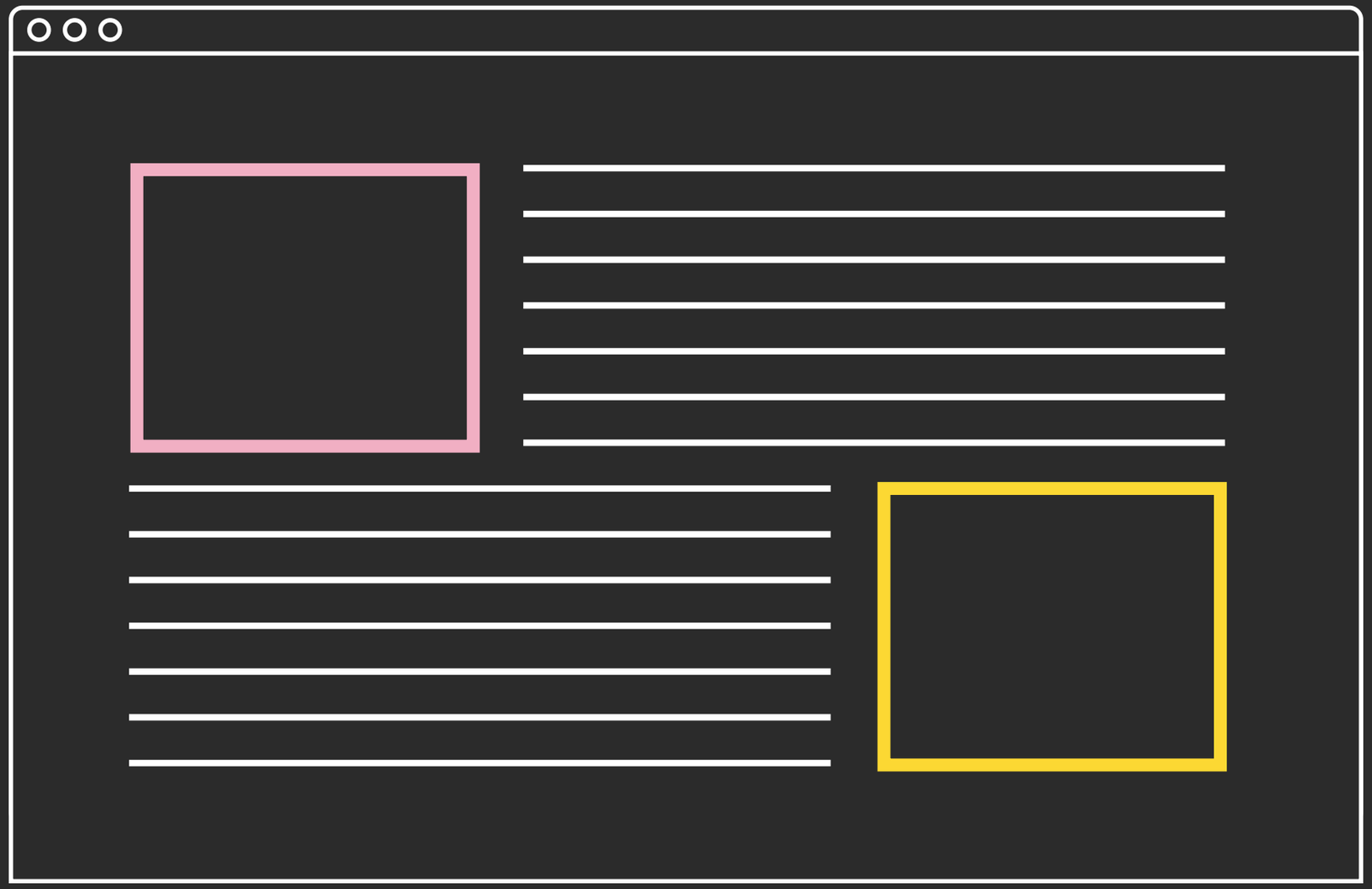
- Review
- Responsive — Layout Design
- Responsive — Media Queries
- Responsive — REM/EM
- Cont. Lab + Final Projects

REVIEW

BOX-SIZING: BORDER-BOX



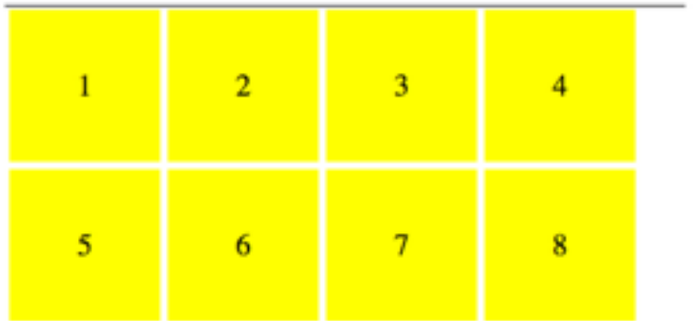
CSS — FLOATS



PARENTS OF FLOATED ELEMENTS

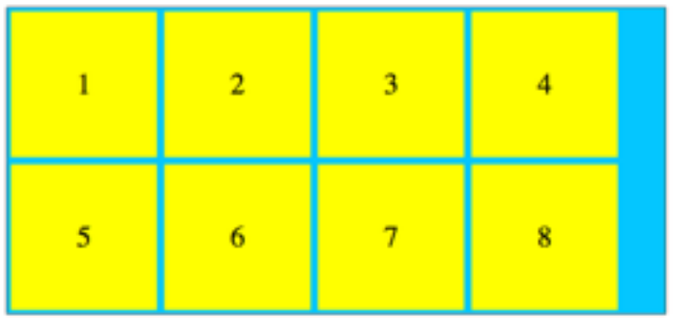
- If a containing element **only contains floated elements**, some browsers will treat it as if it is zero pixels tall.

PROBLEM:



Collapsed parent!

SOLUTION:



PT. 1 — ADD CSS CLASS:

```
.clearfix:after {
  content: "";
  display: table;
  clear: both;
}
```

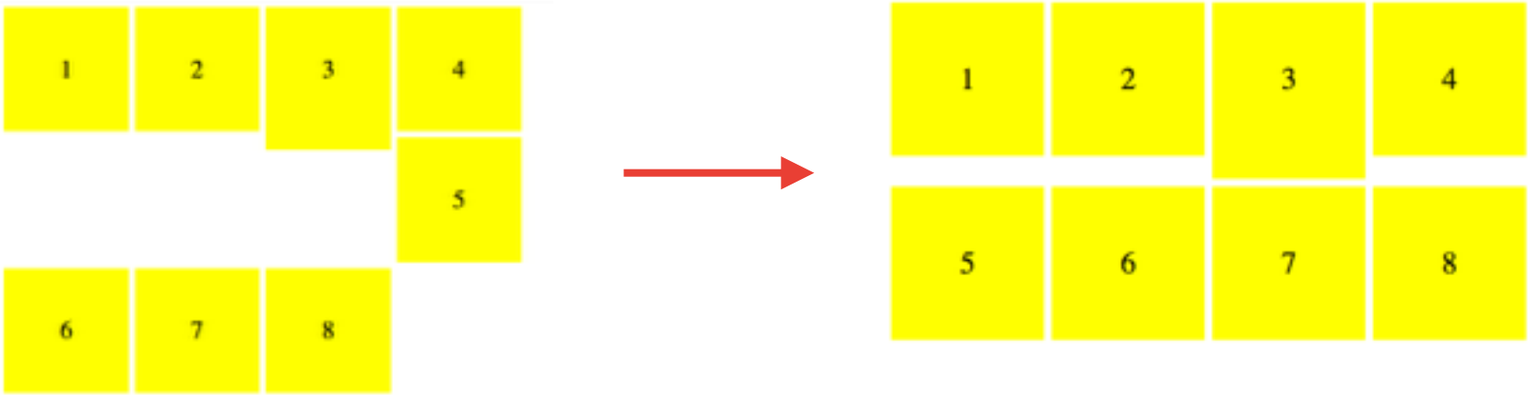
PT. 2 — ADD CLASS TO HTML:

```
<div class="clearfix">
    <p>1</p> <!-- float: left -->
    <p>2</p> <!-- float: left -->
    <p>3</p> <!-- float: left -->
</div>
```

CONFUSING NAMES — KEEPING THINGS STRAIGHT

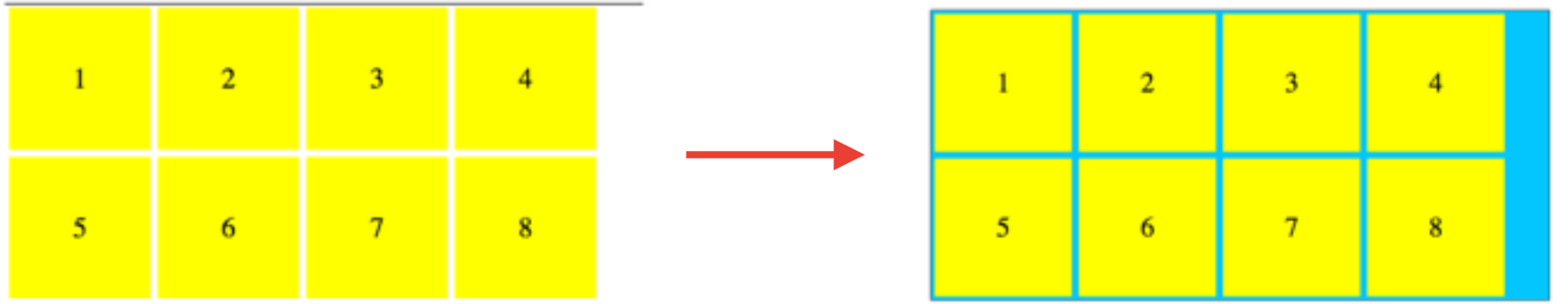
CLEAR: BOTH;

Make sure an element starts on a new line

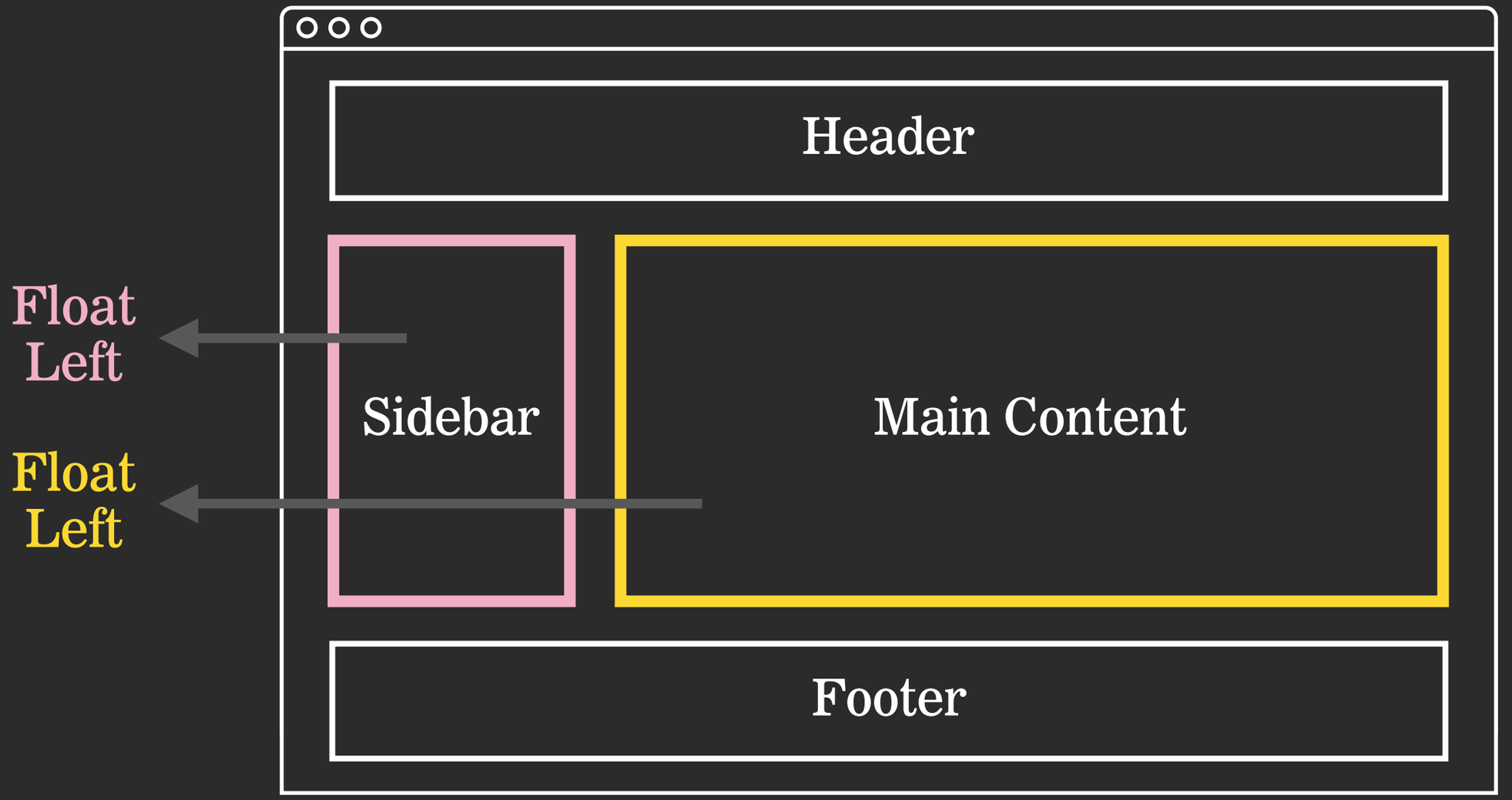


CLEARFIX:

Fixes collapsed parent



CSS — MULTI-COLUMN LAYOUT



LAB

ACTIVITY

KEY OBJECTIVE

- Review HTML/CSS Layouts

TYPE OF EXERCISE

- Code along w/ Eric to build a layout of boxes

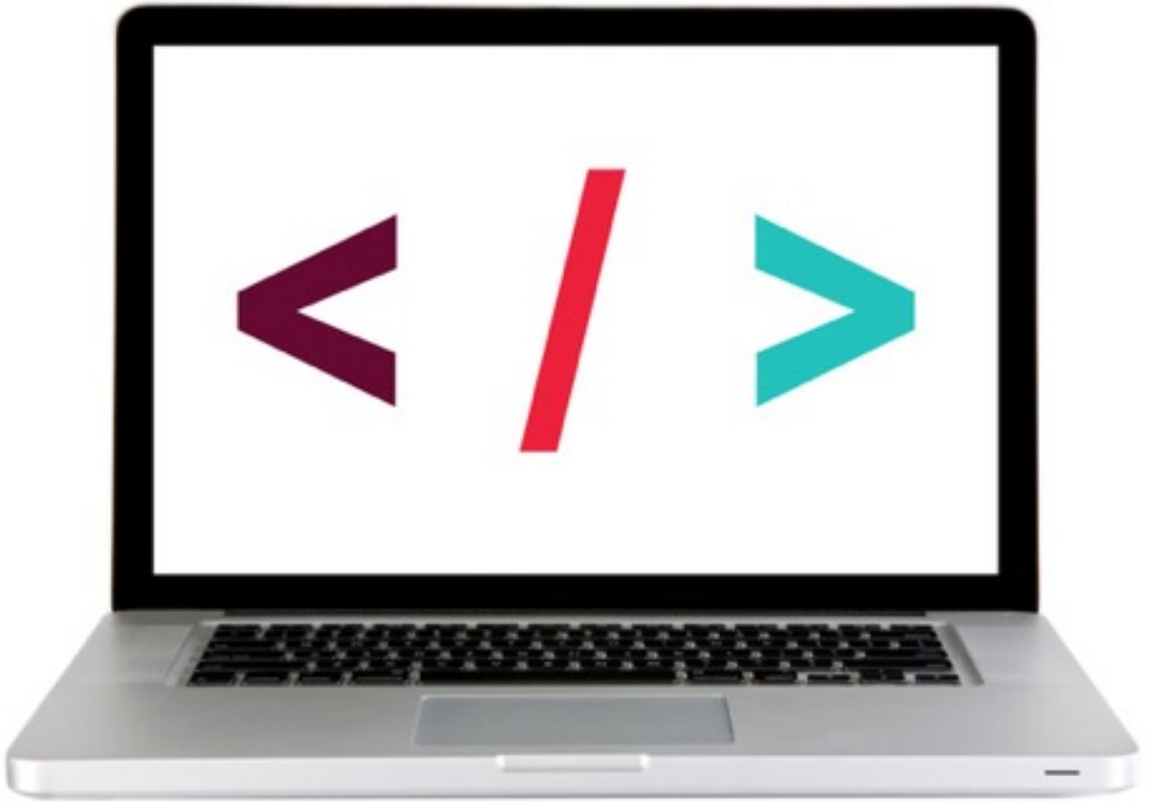
TIMING

20 min

1. Expand upon the code samples provided to build a layout of boxes

RESPONSIVE — LAYOUT DESIGN

LET'S TAKE A CLOSER LOOK



brightbrightgreat.com

RESPONSIVE DESIGN

“Day by day, the number of devices, platforms, and browsers that need to work with your site grows. Responsive web design represents a fundamental shift in how we’ll build websites for the decade to come.”

- Jeffrey Veen

RESPONSIVE DESIGN

RESPONSIVE DESIGN

LAB

ACTIVITY

KEY OBJECTIVE

- Use HTML/CSS to create a mobile layout

TYPE OF EXERCISE

- Code along w/ Eric to overwrite the layout to be 100% width

TIMING

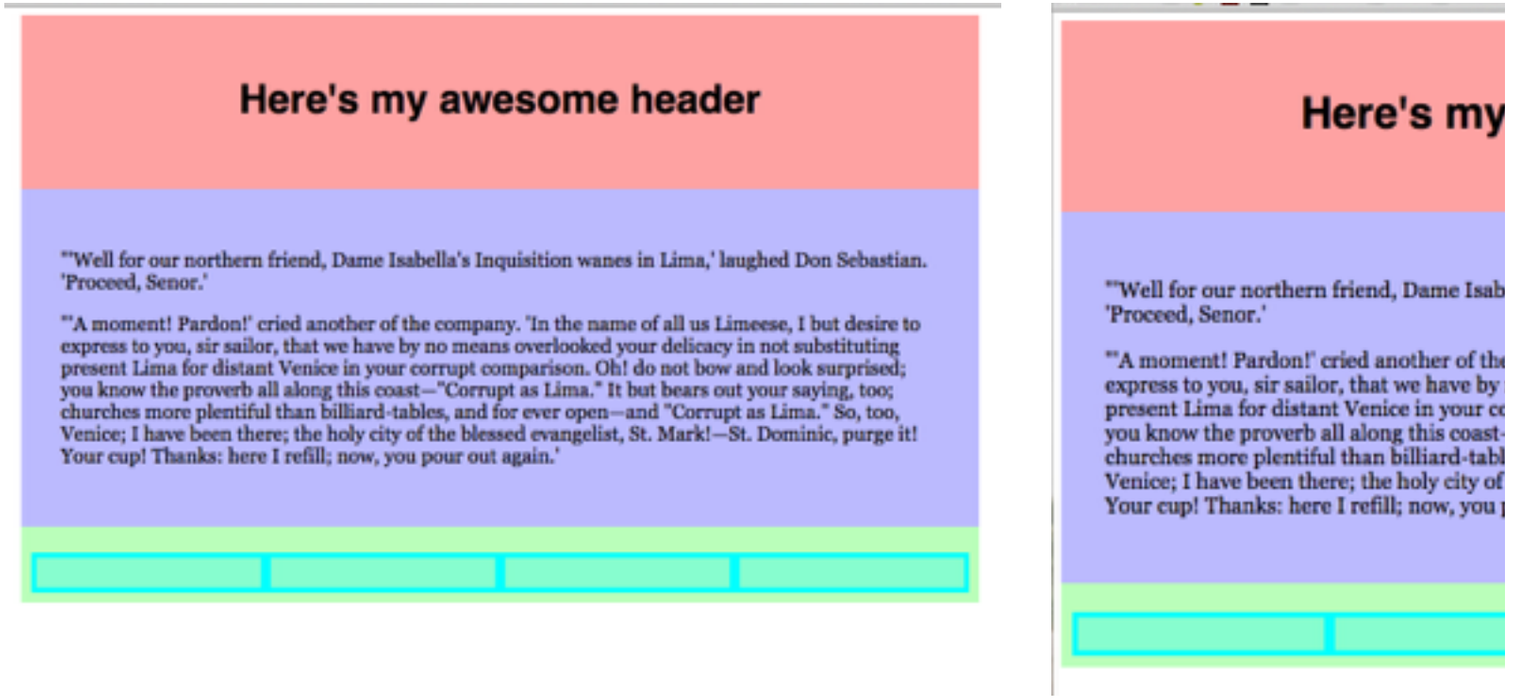
20 min

1. Open the style.css file from the first exercise and begin writing CSS to overwrite the previous layout at the **bottom**

RESPONSIVE — TYPES OF LAYOUTS

FIXED LAYOUT

- Relies on a container of a fixed width (uses static units)
- Resizing the browser/viewing it on a different device won't have an effect on the page

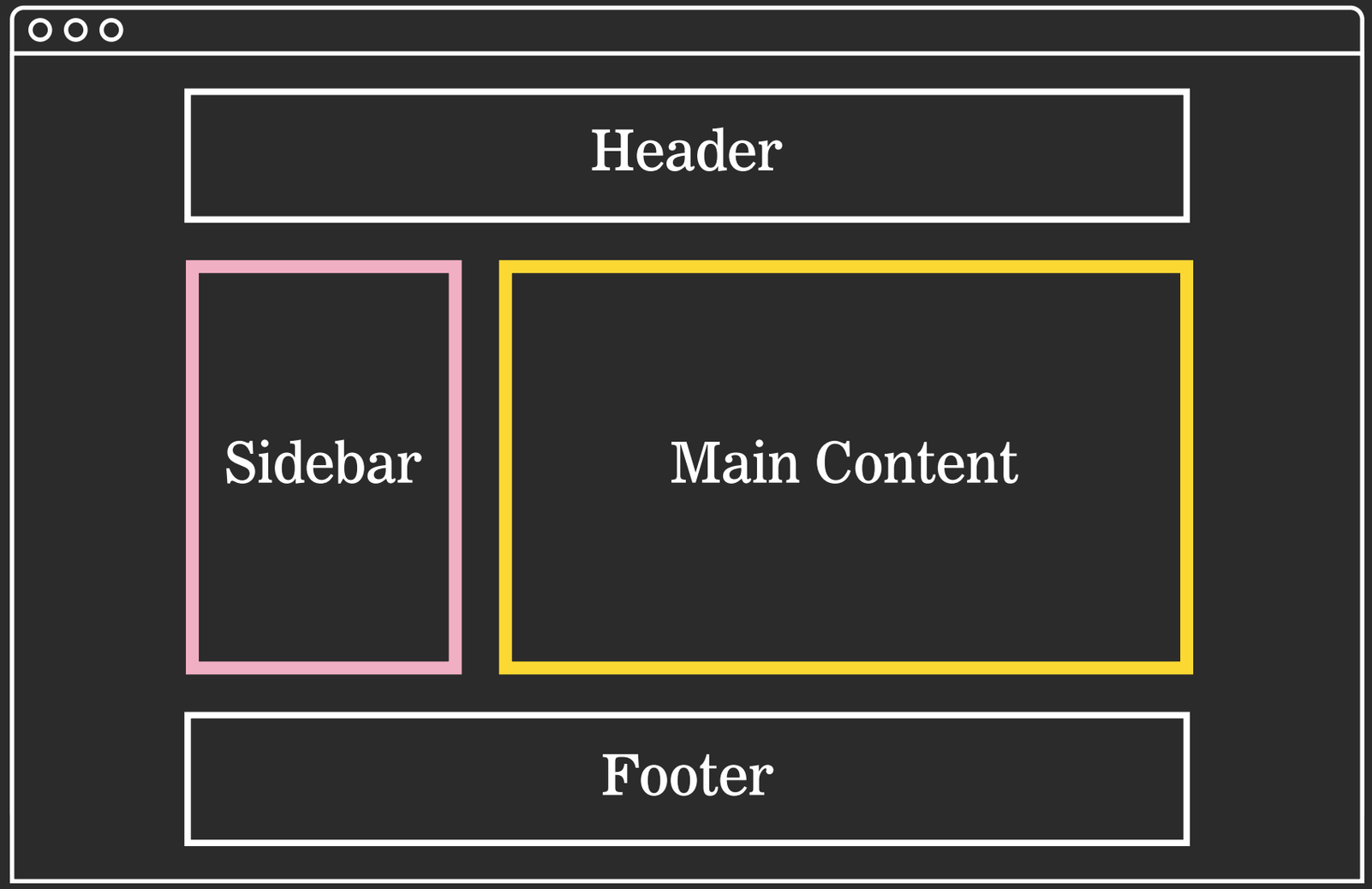


FIXED WIDTH LAYOUT

Fixed width layouts do not change size as the user increases/ decreases width of browser window

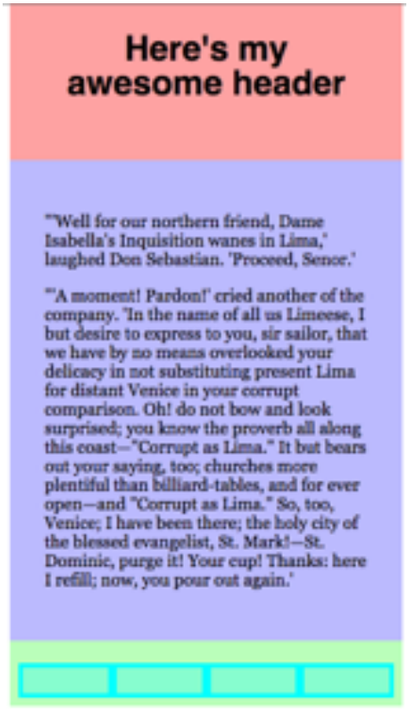
To create:

- Width of any main boxes is set in pixels
- Layout can be centered by setting the value of the left and right margins to auto



FLUID LAYOUT

- Uses relative widths (percentages)
- No media queries

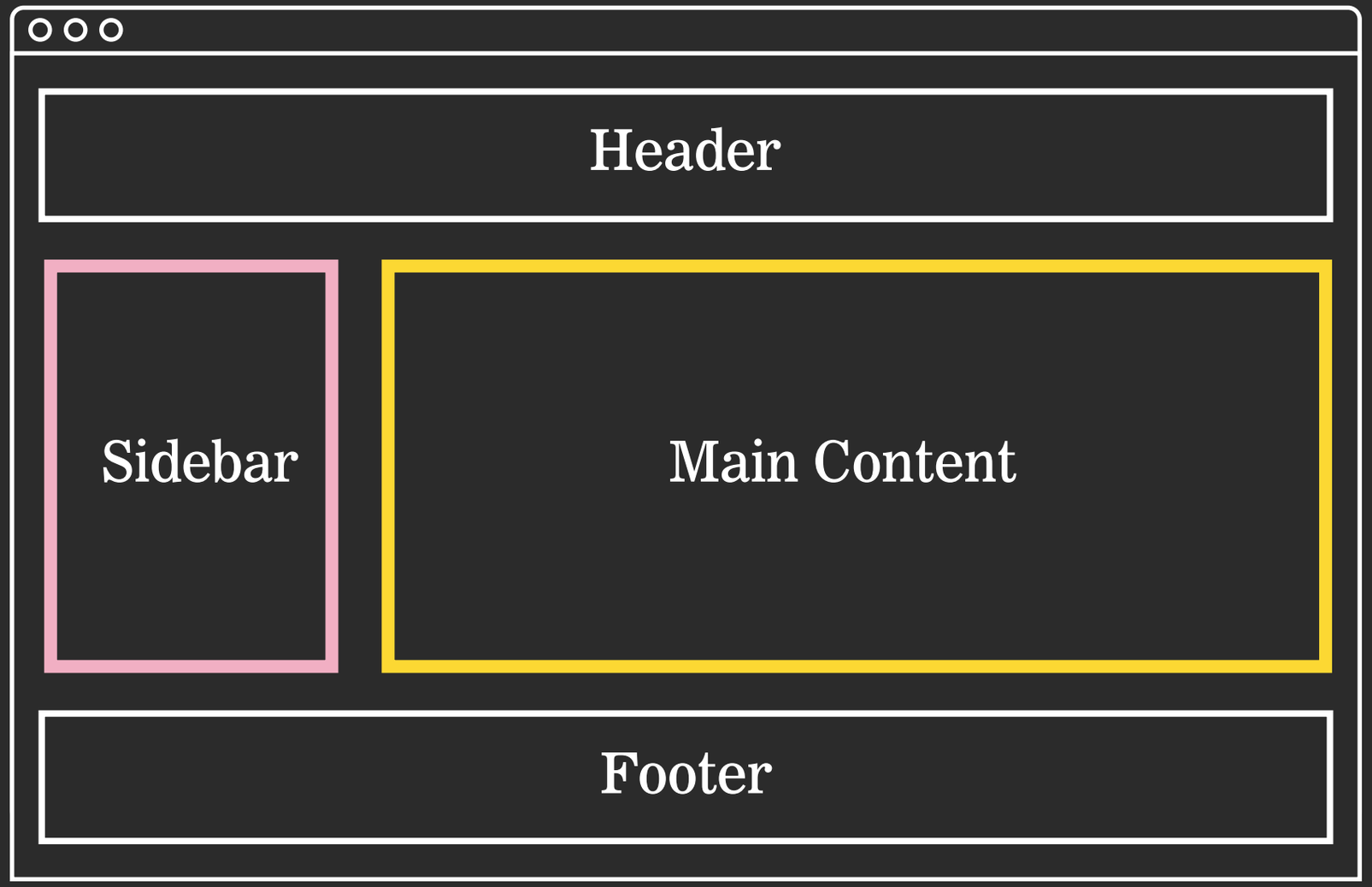


FLUID LAYOUT

Fluid layouts stretch and contract as the user increases/ decreases the size of their browser window

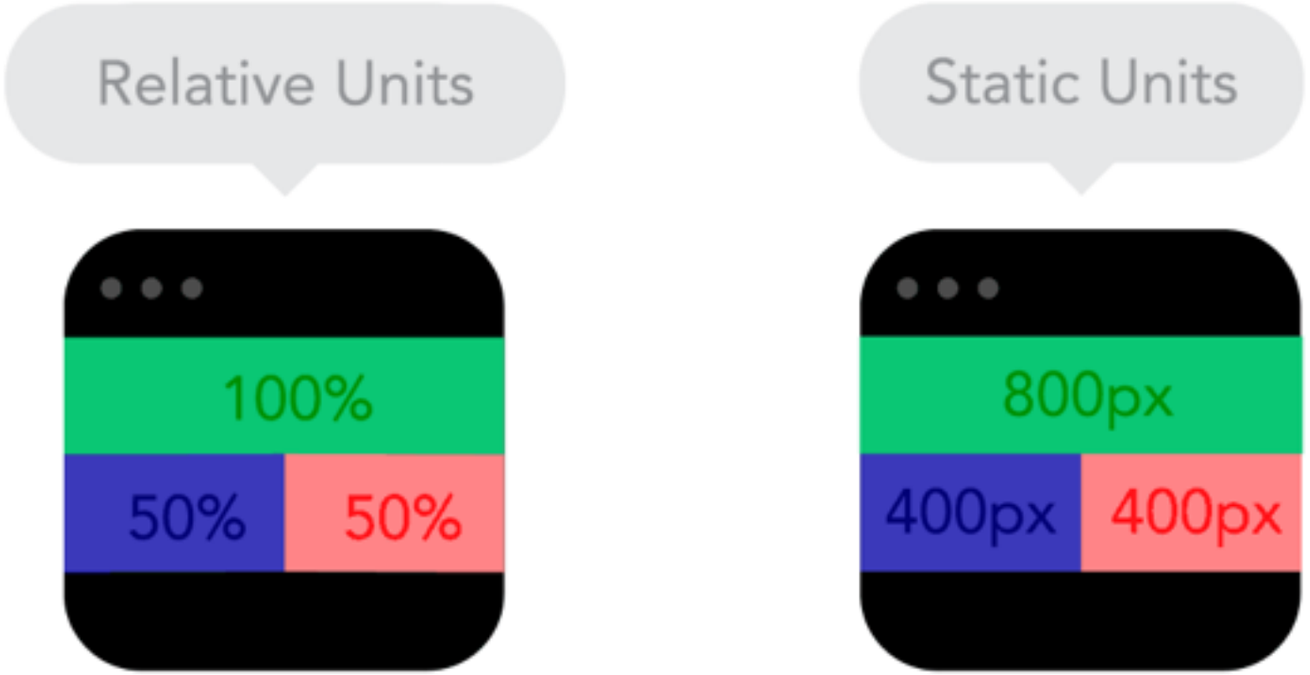
To create:

- Uses percentages to set the width of each box so that the design will stretch to fit the size of the screen



FIXED VS. FLUID

Fluid layout



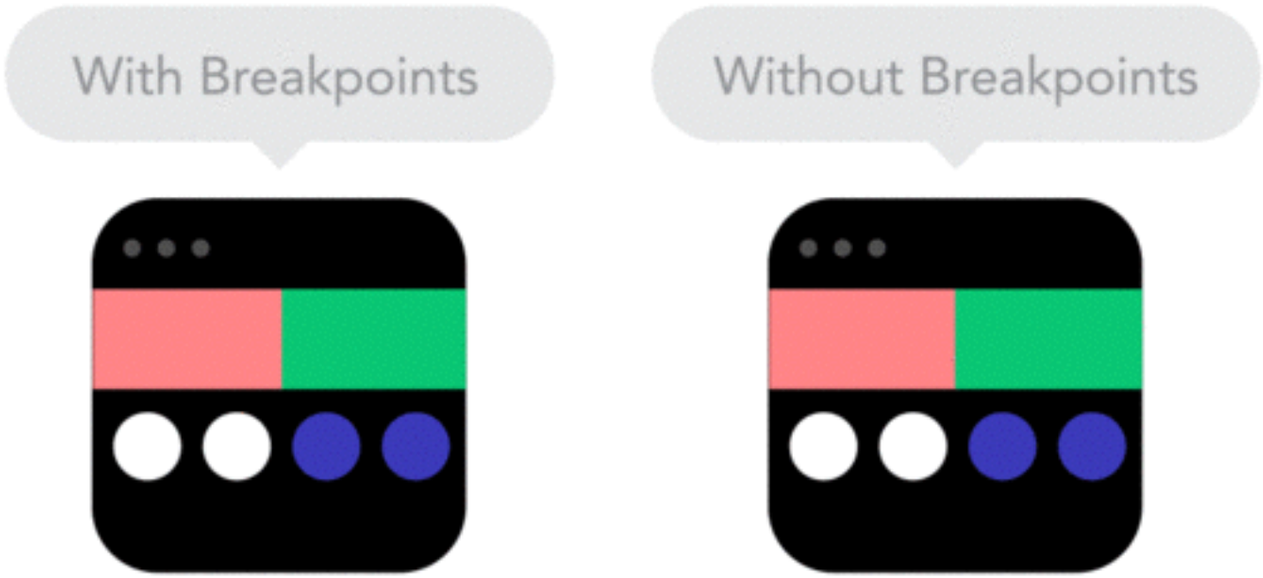
Fixed

Gif credit: [Fast Company]

RESPONSIVE LAYOUT

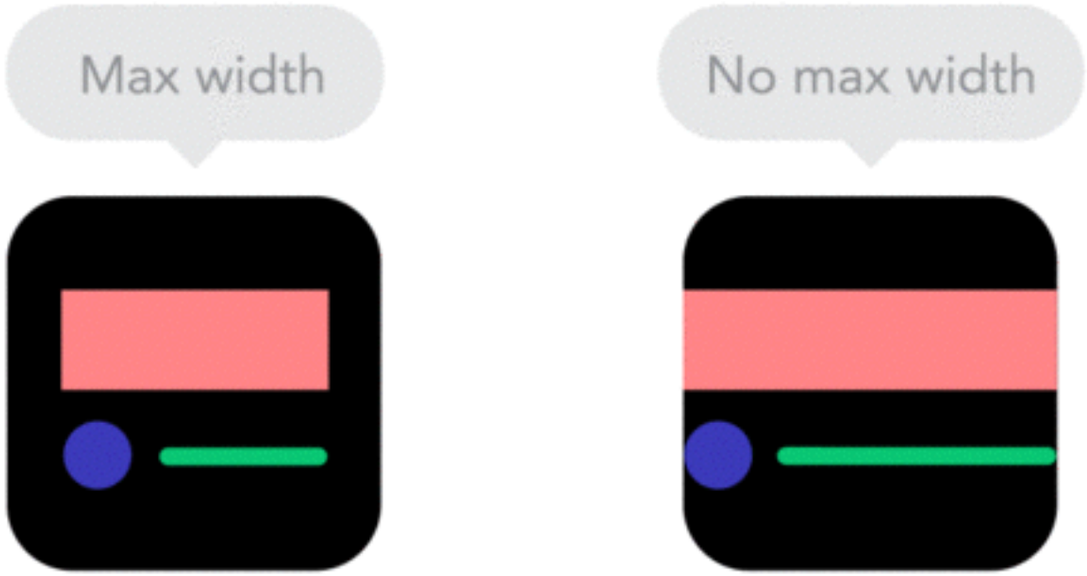
- Uses relative widths (built on a fluid grid)
- Use media queries to control design and content as it scales down or up with the browser or device

WITH BREAKPOINTS VS. WITHOUT BREAKPOINTS



Gif credit: Fast Company

MAX-WIDTH — A HELPFUL TOOL FOR LAYOUT



Gif credit: Fast Company

FIXED VS. RESPONSIVE

CHECK OUT THESE FIXED SITES:

- ups.com
- colourpixel.com

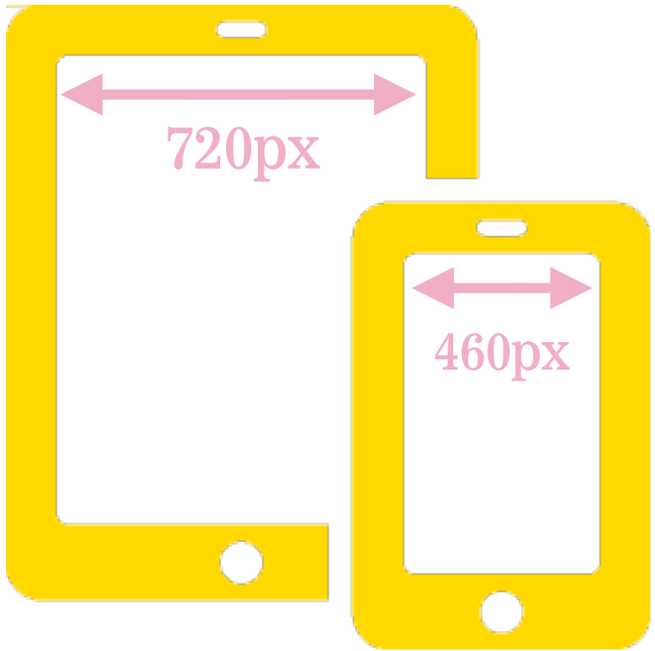
CHECK OUT THESE RESPONSIVE SITES:

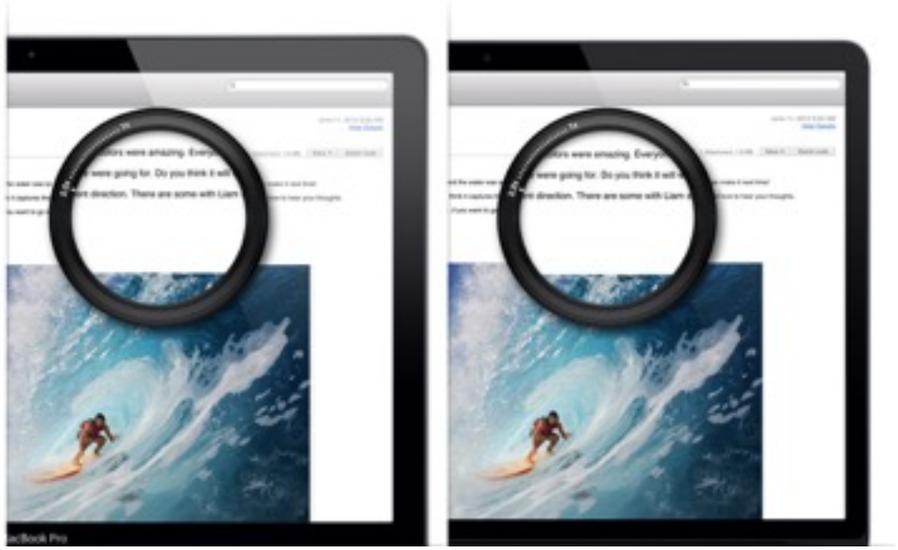
- GeneralAssemb.ly
- KinHR.com

RESPONSIVE — MEDIA QUERIES

MEDIA QUERIES

- Media queries allow us to target CSS rules based on screen size, device orientation, display density, etc.





MEDIA QUERIES

- We can use media queries to allow certain rules to apply for an iPad or iPhone, to add styles for a printer, or to create a responsive site.
- With media queries, we can allow most of our styles to remain the same, while we make **small tweaks for specific formats.**

MEDIA QUERIES — FIRST METHOD

Create separate stylesheets for different devices

For example:

- Have one main stylesheet as the default stylesheet
- If the screen becomes too narrow, short, tall, wide, etc. we can detect that and load in an additional stylesheet

```
<link rel="stylesheet" media="screen and (max-width: 460px)" href="css/iphone.css" />
```

MEDIA QUERIES — SECOND METHOD

Use media queries directly in your CSS

```
@media screen and (max-width: 600px) {
  .box {
    width: 100%;
  }
}
```

**Usually goes at the end of stylesheet.*

MEDIA QUERIES — SYNTAX

MEDIA TYPES

- **screen**: color computer screen
- **print**: print preview mode
- **all**: suitable for all devices

```
@media screen {
  /* Styles for color computer screen */
}
```

```
@media print {
   /* All your print styles go here */
   #header, #footer, #nav { display: none !important; }
}
```

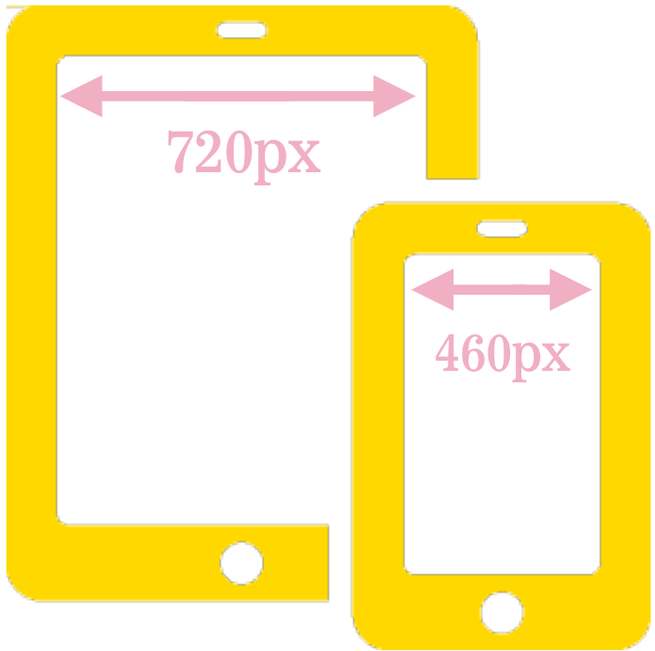
MEDIA QUERIES — SYNTAX

MEDIA FEATURES

- **width**: viewport width
- **height**: viewport height

```
@media screen and (max-width: 600px){
  /* Styles for screens with a maximum width of 600px */
}
```

```
@media screen and (min-width: 600px){
  /* Styles for screens with a minimum width of 600px */
}
```



****See a full list of features here*

MEDIA QUERIES — SYNTAX

MEDIA FEATURES

- **orientation**: orientation of the viewport

```
@media screen and (orientation: portrait){
  /* Styles for screens with a maximum width of 600px */
}
```

```
@media screen and (orientation: landscape){
  /* Styles for screens with a minimum width of 600px */
}
```

****See a full list of features here*

MEDIA QUERIES — SYNTAX

LOGICAL OPERATORS

- **and**: can be used to combine multiple media features together, as well as combining media features with media types.

```
@media (min-width: 700px) and (orientation: landscape) { ... }
```

- **comma-separated lists**: behave like the logical operator *or*

```
@media (min-width: 700px), handheld and (orientation: landscape) { ... }
```

- **not:** applies to the whole media query and returns true if the media query would otherwise return false

```
@media not print { ... }
```

- **only:** prevents older browsers that do not support media queries with media features from applying the given styles

```
@media only screen and (min-width: 400px) { ... }
```

VIEWPORT META TAG — AN IMPORTANT NOTE!!

- The viewport meta tag controls how a webpage is displayed on a mobile device.
- Without the tag, mobile devices will assume you want the full desktop experience and will set the viewport width at 980px (iOS)

DEVICE-WIDTH

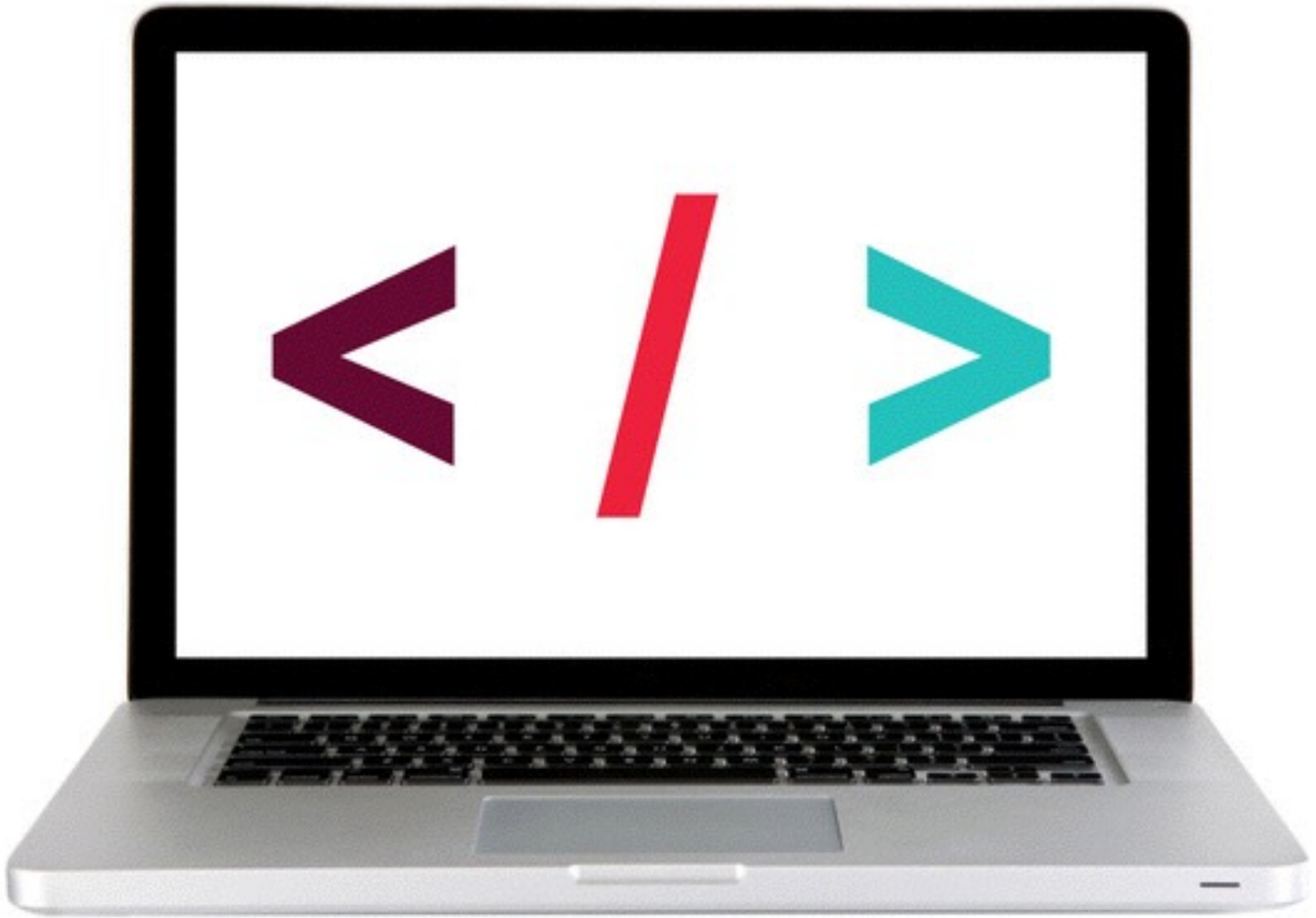
- This tells the browser “My Website adapts to your width”

INITIAL-SCALE

- Sets the initial zoom level and prevents default zooming

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

LET'S TAKE A CLOSER LOOK



LAB

ACTIVITY

KEY OBJECTIVE

- Apply media queries to achieve a responsive layout.

TYPE OF EXERCISE

Code along w/ Eric to add media queries to bring our 2 projects today together into one.

TIMING

25 min 1. Add media queries to make Boxes exercise responsive.

RESPONSIVE — REM/EM

EM

- *Relative* unit
- Sized based on the width of the letter “m”
- 1em = 100% font-size
- .5em = 50% font-size
- Based on **parent**

```
Parent { font-size:16px;}
Child {font-size:2em;}
```

Child’s font size is 32px (200% x 16px)

REM

- "Root" em
- Same as em **except** based on the font-size of the **html element**

PIXELS AND EMS AND REMS, OH MY!!

	RELATIVE?	BASED ON
PX	absolute	
EM	relative	parent
REM	relative	html element

THE BENEFIT OF USING RELATIVE UNITS

```
html { font-size: 16px; }
h1 { font-size: 33px; }
h2 { font-size: 28px; }
h3 { font-size: 23px; }
h4 { font-size: 19px; }
small { font-size: 13px; }
.box { padding: 20px; }

@media screen and (min-width: 1400px) {
  html { font-size: 20px; }
  h1 { font-size: 41px; }
  h2 { font-size: 35px; }
  h3 { font-size: 29px; }
  h4 { font-size: 24px; }
  small { font-size: 17px; }
  .box { padding: 25px; }
}
```

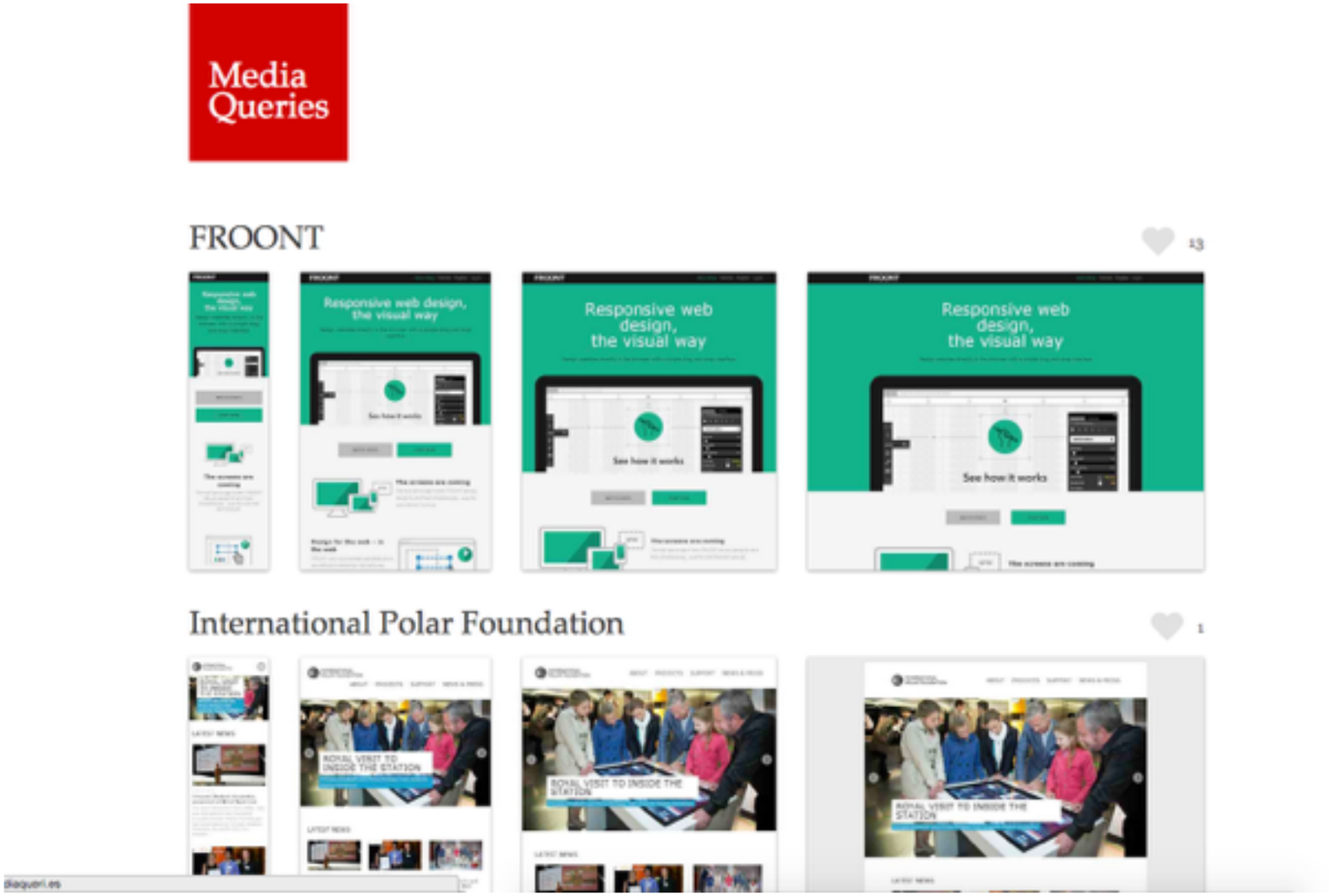
```
html { font-size: 16px; }
h1 { font-size: 2.074rem; }
h2 { font-size: 1.728rem; }
h3 { font-size: 1.44rem; }
h4 { font-size: 1.2rem; }
small { font-size: 0.833rem; }
.box { padding: 1.25rem; }

@media screen and (min-width: 1400px) {
  html { font-size: 18px; }
}
```

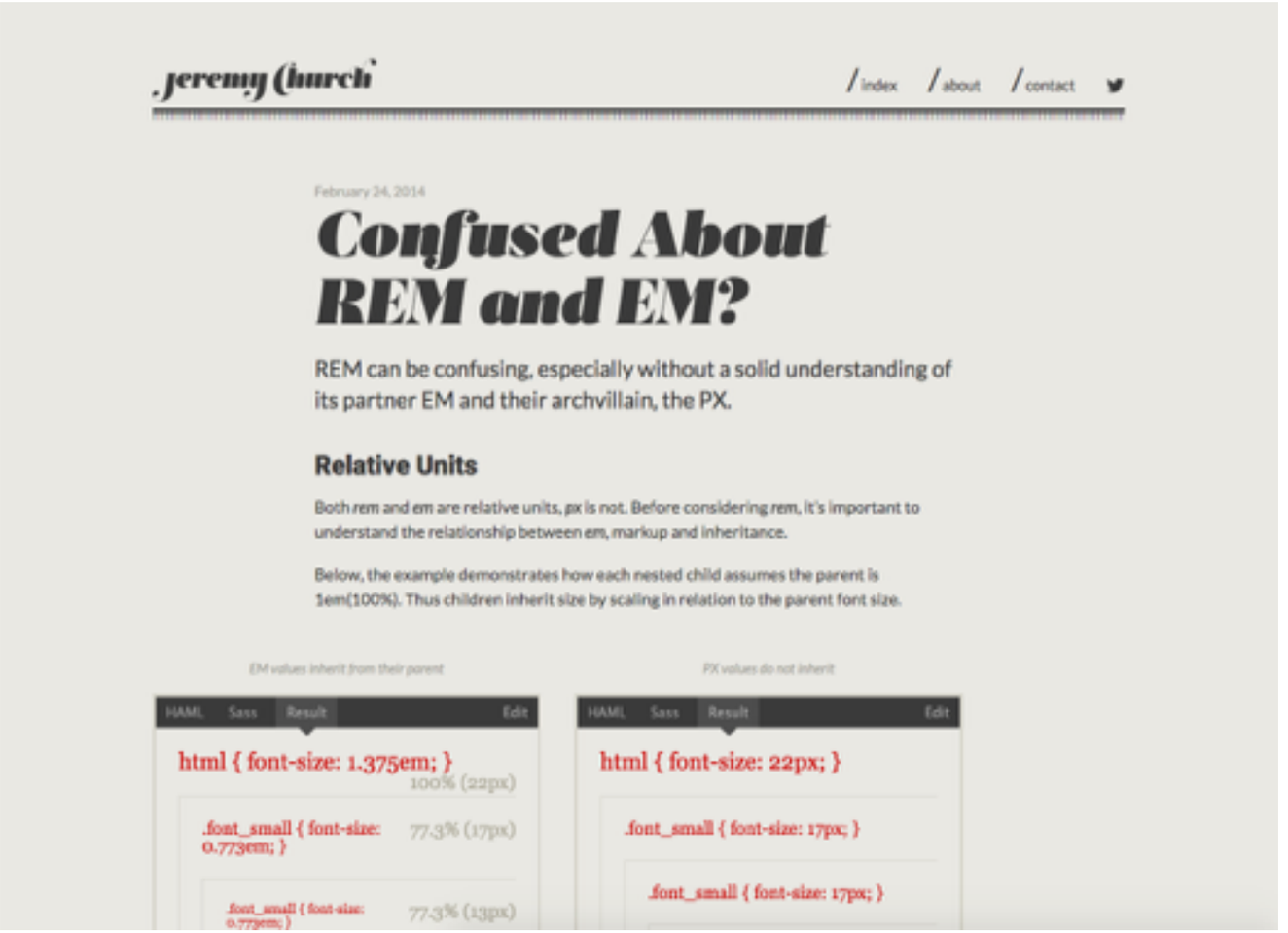
REVIEW RESOURCES

MORE RESOURCES — THIS IS RESPONSIVE

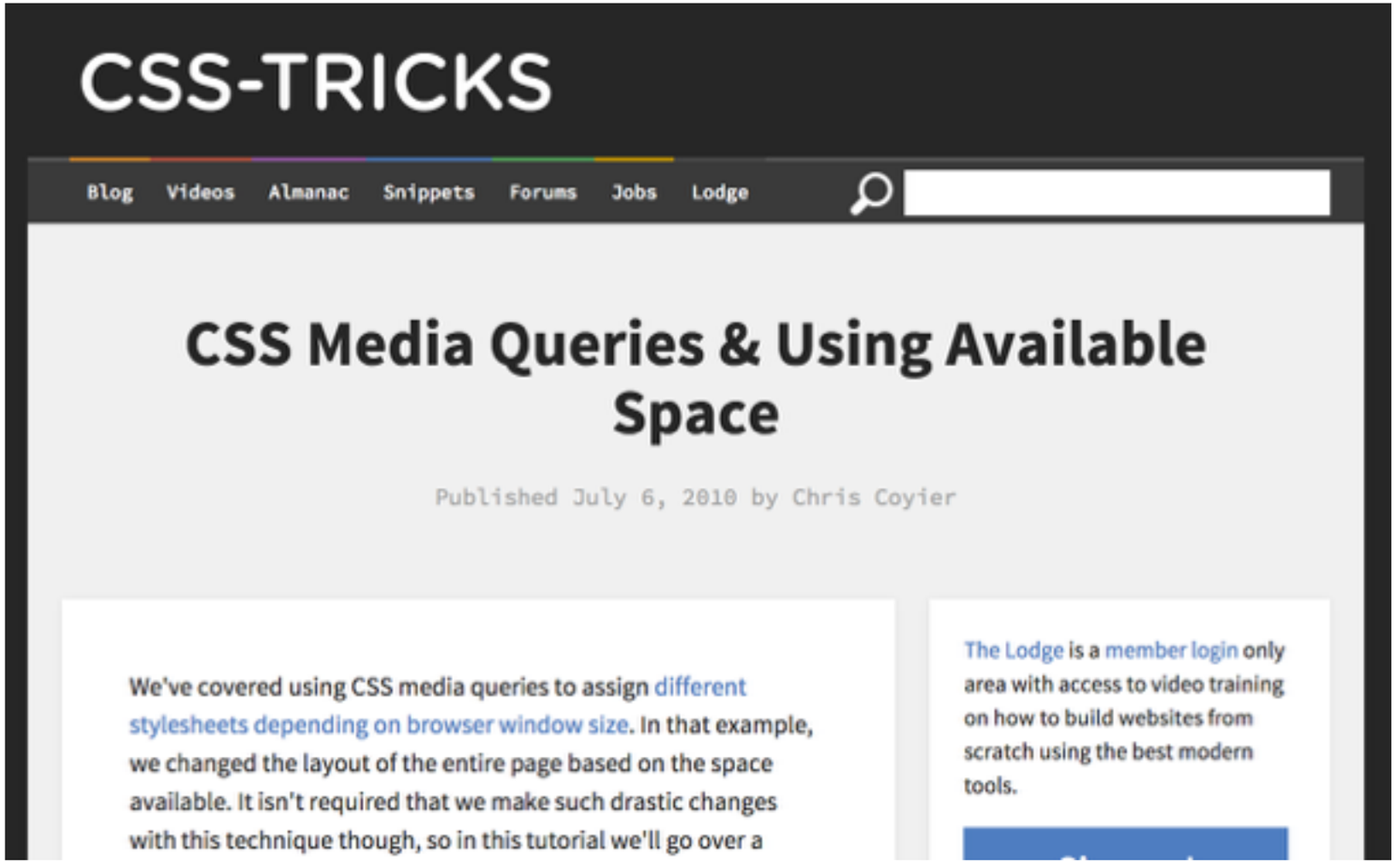
MORE RESOURCES — MEDIA QUERIES



MORE RESOURCES — REMS/EMS



MORE RESOURCES — MEDIA QUERIES



ACTIVITY

KEY OBJECTIVE

- Apply media queries to our old friend “Startup Matchmaker” to achieve a responsive layout.

TYPE OF EXERCISE

Coding by yourself or with a partner to update pre-existing code.

TIMING

Until 8:50pm	1. Add media queries to make [0] - startup matchmaker responsive.

LEARNING OBJECTIVES

- Describe responsive design.
- Know the difference between fluid, fixed and responsive layouts
- Apply media queries to achieve a responsive layout.

SNACKS & DESIGN

WEDNESDAY

LINDSEY

(GOOGLE SHEET IS PINNED IN SLACK)

EXIT TICKETS