FINAL PROJECTS

AGENDA



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

FEWD

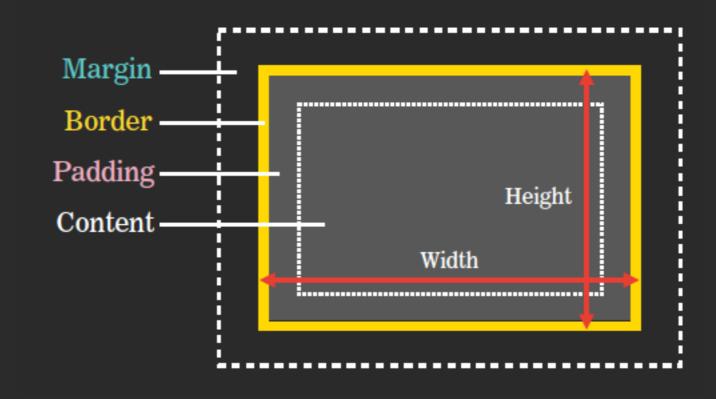
LEARNING OBJECTIVES

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

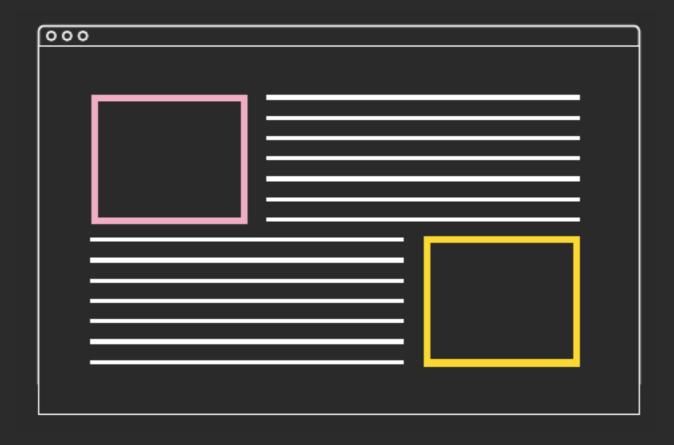
FEWD

REVIEW

BOX-SIZING: BORDER-BOX



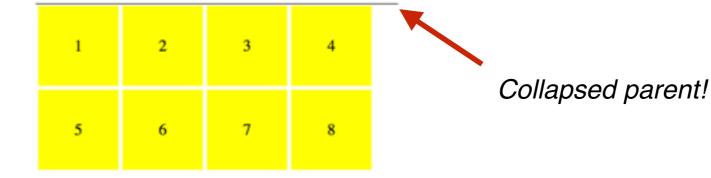
CSS — FLOATS



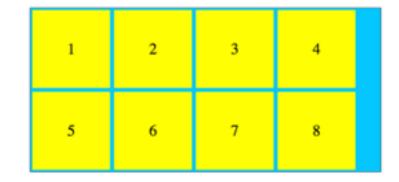
PARENTS OF FLOATED ELEMENTS

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

PROBLEM:



SOLUTION:



PT. 1 — ADD CSS CLASS:

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

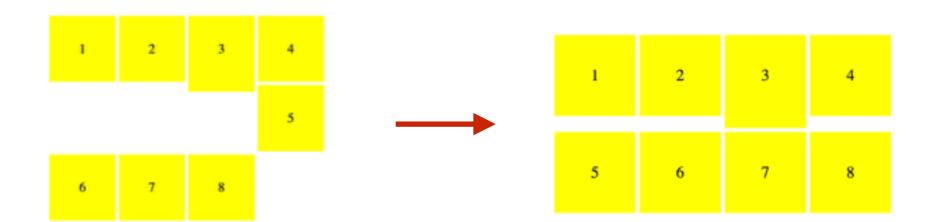
PT. 2 — ADD CLASS TO HTML:

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

CONFUSING NAMES — KEEPING THINGS STRAIGHT

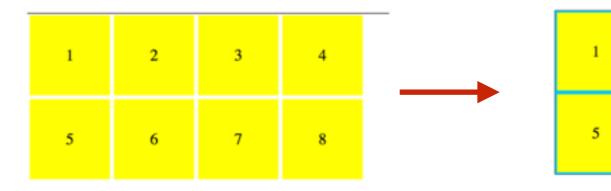
CLEAR: BOTH;

Make sure an element starts on a new line

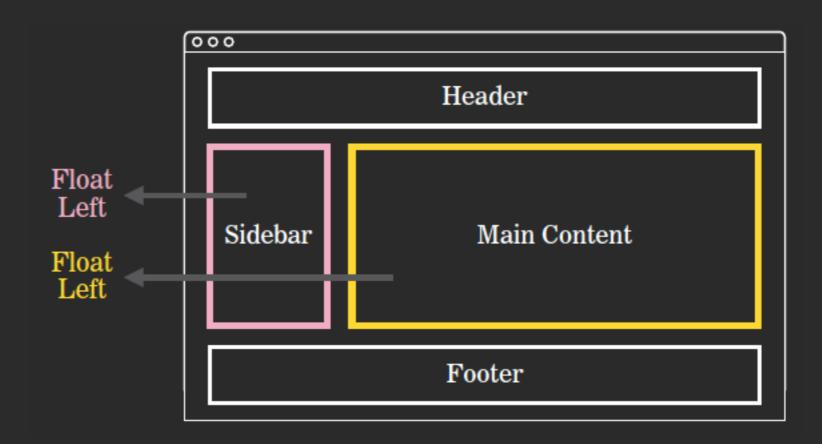


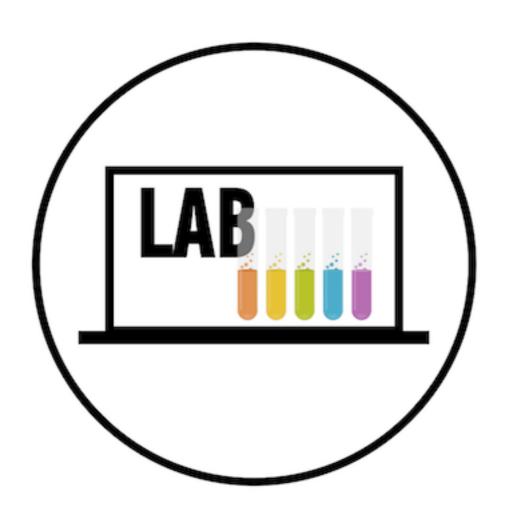
CLEARFIX:

Fixes collapsed parent



CSS — MULTI-COLUMN LAYOUT





ACTIVITY



KEY OBJECTIVE

Review HTML/CSS Layouts

TYPE OF EXERCISE

Individual/Partner

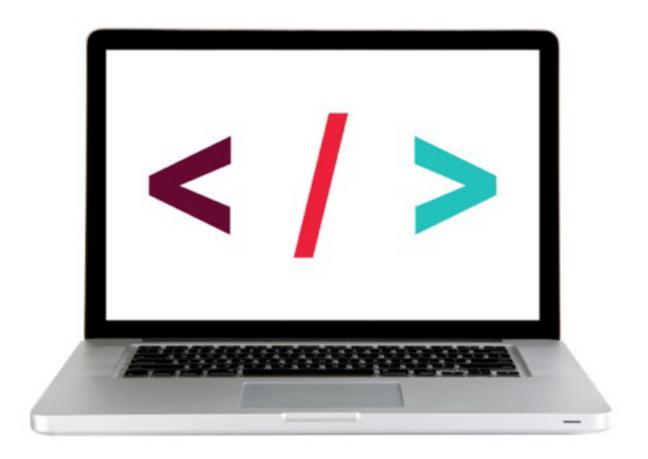
TIMING

20 min

1. Use HTML and CSS to recreate boxes.png

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."

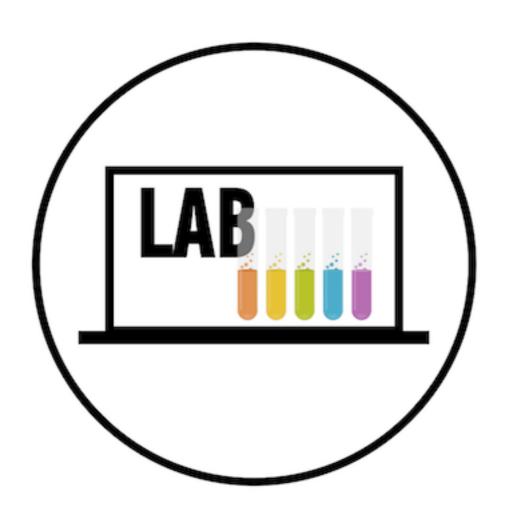
- Jeffrey Veen

RESPONSIVE DESIGN



RESPONSIVE DESIGN





ACTIVITY



KEY OBJECTIVE

Use HTML/CSS to create a mobile layout

TYPE OF EXERCISE

Individual/Partner

TIMING

20 min

- Open the main.css file from the first exercise and place a comment at the **bottom** (something like, /*overwriting CSS for new layout goes here*/).
- Below this line, add CSS that will make the original pag look like the boxes_2.png.

FEWD

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



Here's my

"Well for our northern friend, Dame Isabel 'Proceed, Senor.'

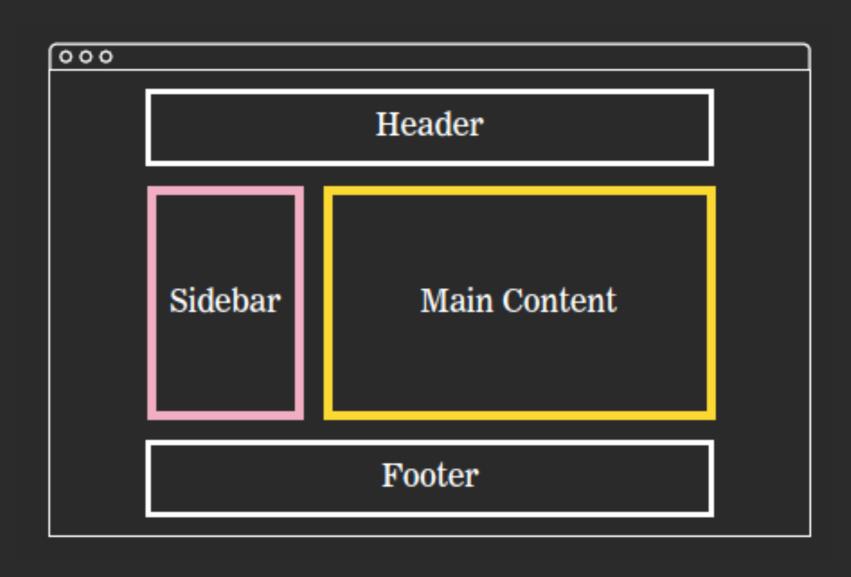
"A moment! Pardon!" cried another of the express to you, sir sailor, that we have by no present Lima for distant Venice in your cor you know the proverb all along this coast—churches more plentiful than billiard-tables Venice; I have been there; the holy city of the Your cup! Thanks: here I refill; now, you po

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

Here's my awesome header

"Well for our northern friend, Dame Isabella's Inquisition wanes in Lima,' laughed Don Sebastian. 'Proceed, Senor.'

"'A moment! Pardon!' cried another of the company. 'In the name of all us Limeese, I but desire to express to you, sir sailor, that we have by no means overlooked your delicacy in not substituting present Lima for distant Venice in your corrupt comparison. Oh! do not bow and look surprised; you know the proverb all along this coast—"Corrupt as Lima." It but bears out your saying, too; churches more plentiful than billiard-tables, and for ever open—and "Corrupt as Lima." So, too, Venice; I have been there; the holy city of the blessed evangelist, St. Mark!—St. Dominic, purge it! Your cup! Thanks: here I refill; now, you pour out again.'

Here's my awesome header

"Well for our northern friend, Dame Isabella's Inquisition wanes in Lima,' laughed Don Sebastian. 'Proceed, Senor.'

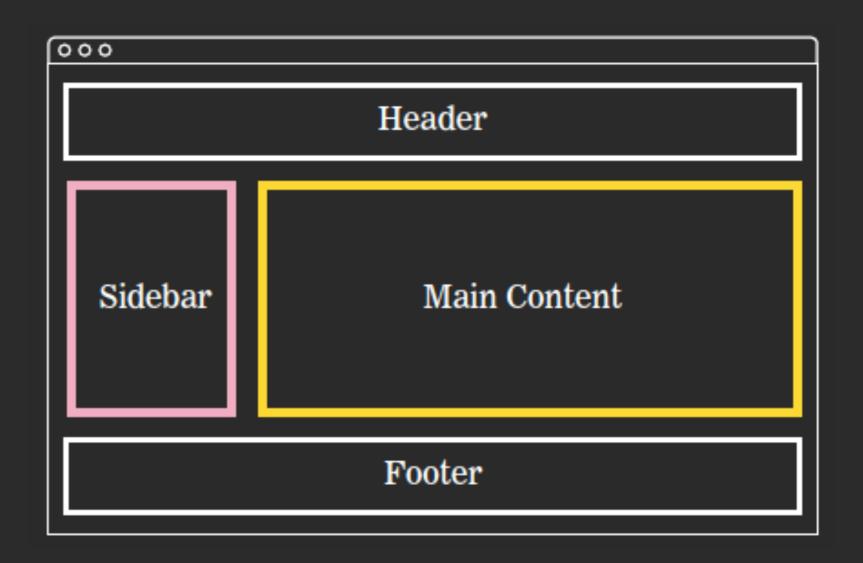
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FLUID LAYOUT

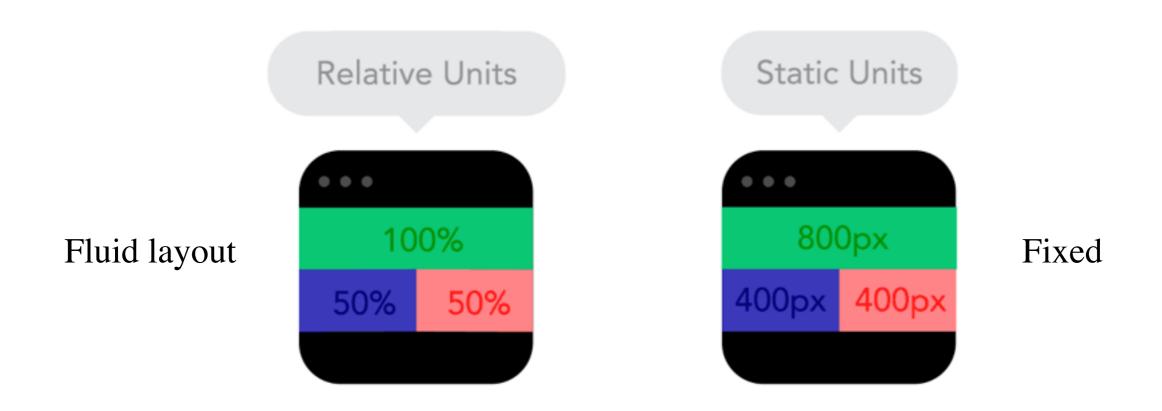
Fluid layouts stretch and contract as the user increases/ decreases the size of their browser window

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



fast company gif

RESPONSIVE LAYOUT

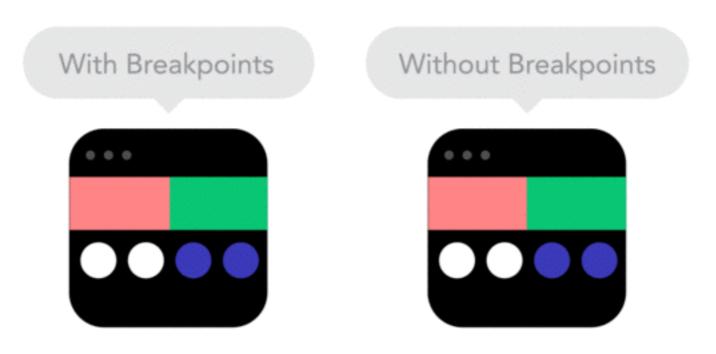
- Uses relative widths (built on a fluid grid)
- Use media queries to control design and content as it scales down or up with the browser or device





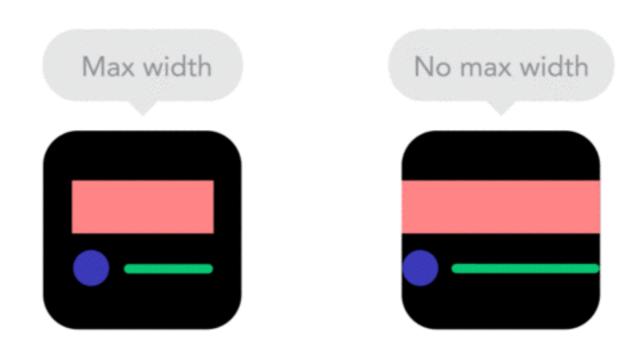


WITH BREAKPOINTS VS. WITHOUT BREAKPOINTS



fast company gif

MAX-WIDTH — A HELPFUL TOOL FOR LAYOUT



fast company gif

ACTIVITY



KEY OBJECTIVE

Describe the difference between fixed, fluid and responsive layouts.

TIMING

1 min

1. Turn to partner and discuss

2 min

2. Share with rest of class

FIXED VS. RESPONSIVE

CHECK OUT THESE FIXED SITES:

- <u>ups.com</u>
- colourpixel.com



CHECK OUT THESE RESPONSIVE SITES:

- General Assemb.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

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; }
}
```

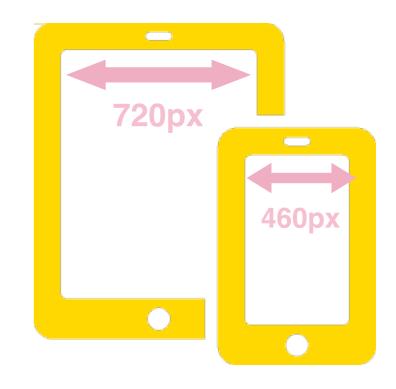
MEDIA QUERIES — SYNTAX

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 <u>here</u>

ASSIGNING PROPERTIES

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

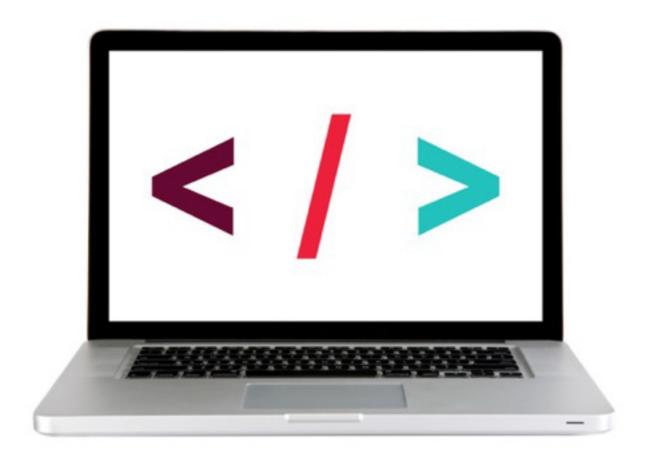
This tells the browser "My Website adapts to your width"

INITIAL-SCALE

Sets the initial zoom level and prevents default zooming

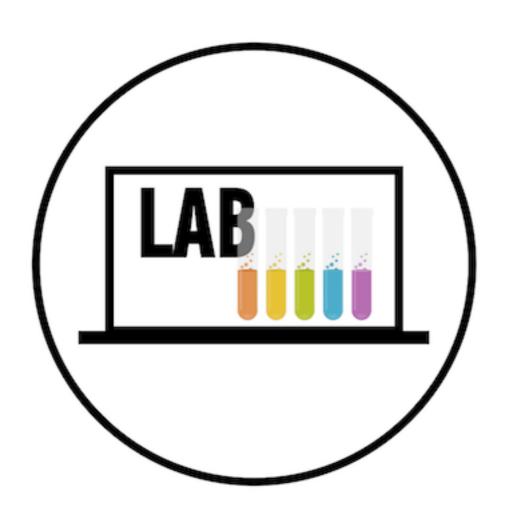
<meta name="viewport" content="width=device-width, initial-scale=1">

LET'S TAKE A CLOSER LOOK



FEWD

LAB



ACTIVITY

MAKE BOX LAB RESPONSIVE FOR TABLET AND MOBILE

RESPONSIVE —— REM/EM

EM

- Relative unit
- Sized based on the width of the letter "m"
- → 1em = 100% font-size
- \rightarrow .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 httml 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: 1em; }
h1 { font-size: 2.074em; }
h2 { font-size: 1.728em; }
h3 { font-size: 1.44em; }
h4 { font-size: 1.2em; }
small { font-size: 0.833em; }
.box { padding: 1.25em; }
@media screen and (min-width: 1400px) {
  html { font-size: 1.25em; }
```

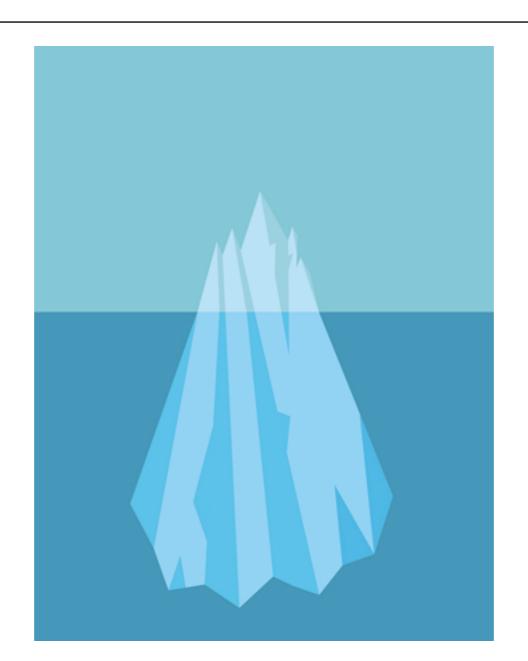
FEWD

LEARNING OBJECTIVES

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

MORE RESOURCES

MORE RESOURCES



MORE RESOURCES — MEDIA QUERIES

diagveri.es











International Polar Foundation

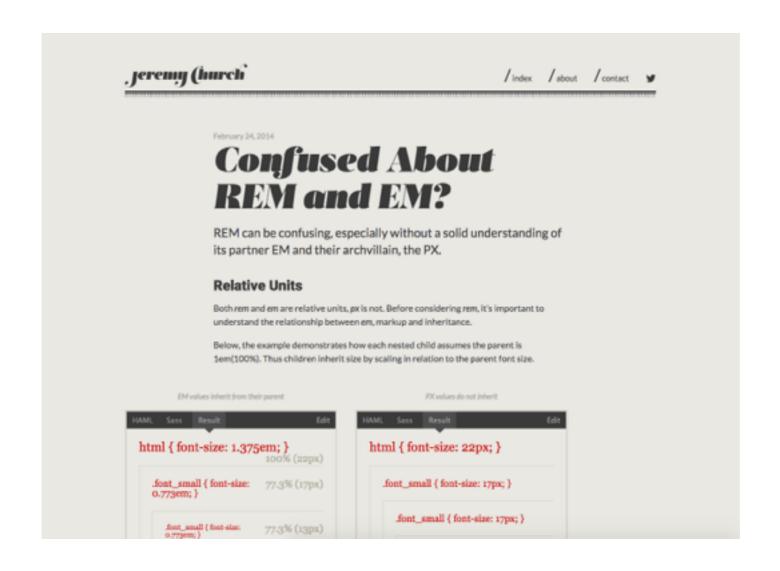




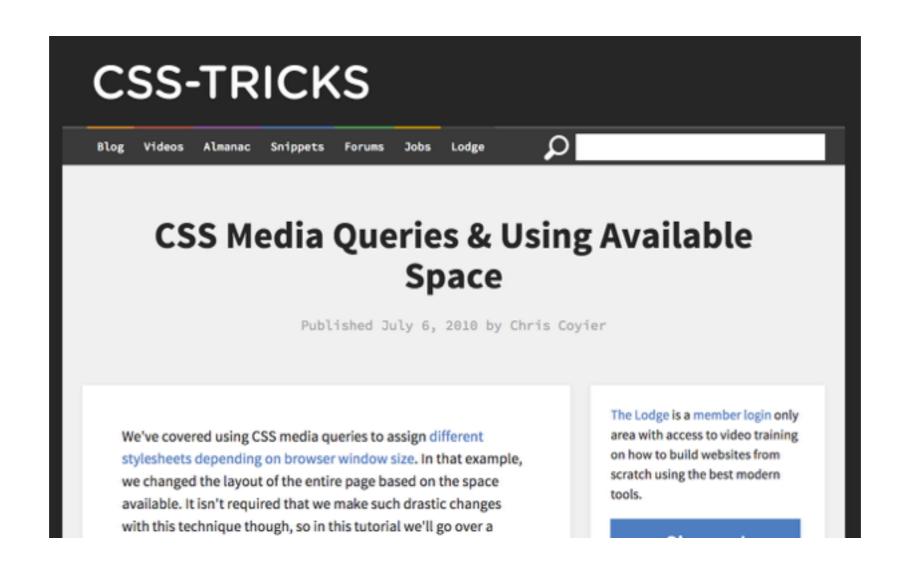




MORE RESOURCES — REMS/EMS



MORE RESOURCES — **MEDIA QUERIES**



HOMEWORK

HAVE CSS MOSTLY READY THIS SUNDAY

FEWD

EXIT TICKETS