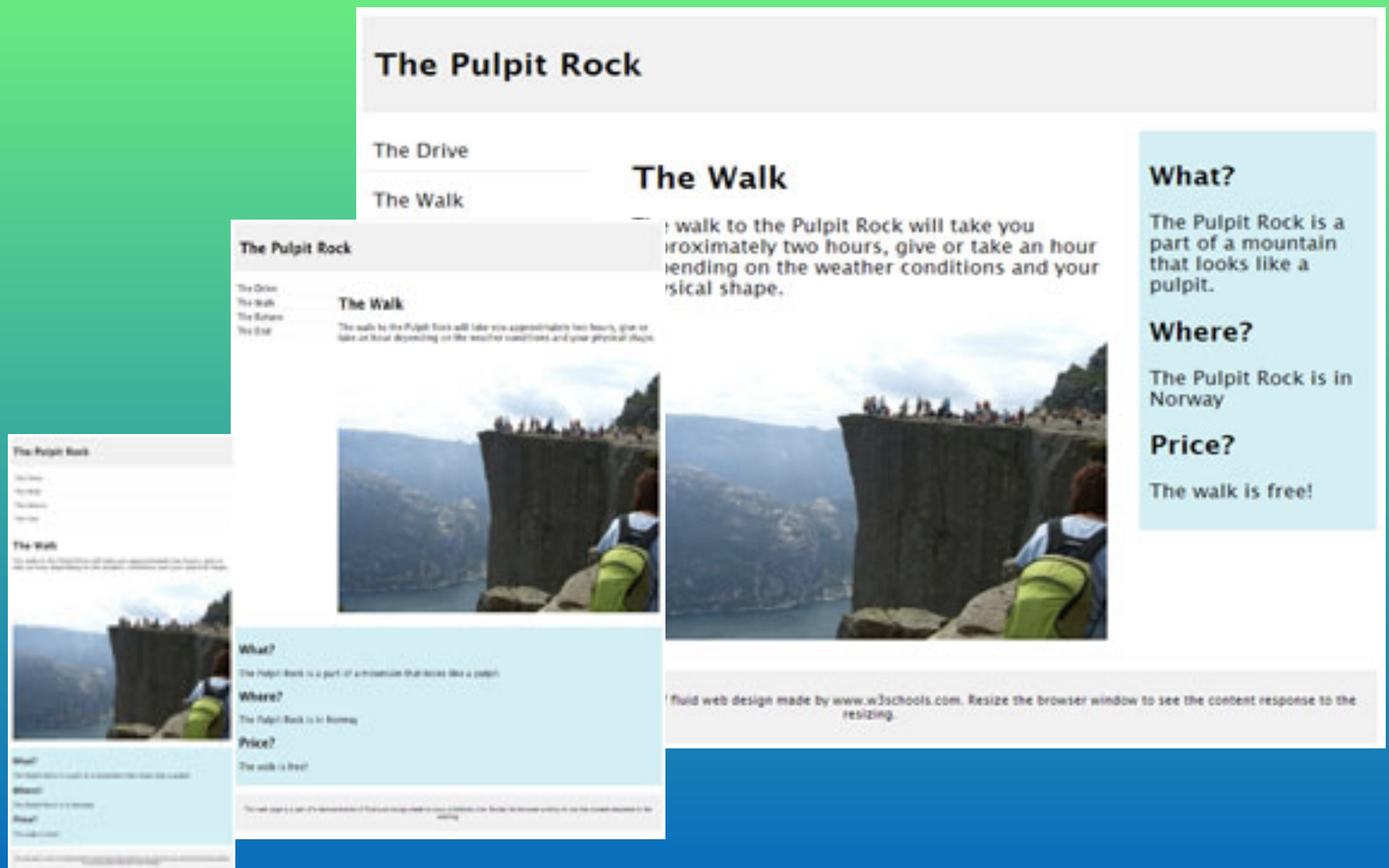


# Responsive Web Design



Responsive web design makes your web page look good on all devices.

Responsive web design uses only HTML and CSS.

Responsive web design is not a program or a JavaScript file.



Desktop

**Content  
adapts to  
fit any  
device**



Tablet



Phone

# The Viewport

The user's visible area of a web page

HTML5 introduced a method to let web designers take control over the viewport, through the `<meta>` tag.

# Use it!

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```



without

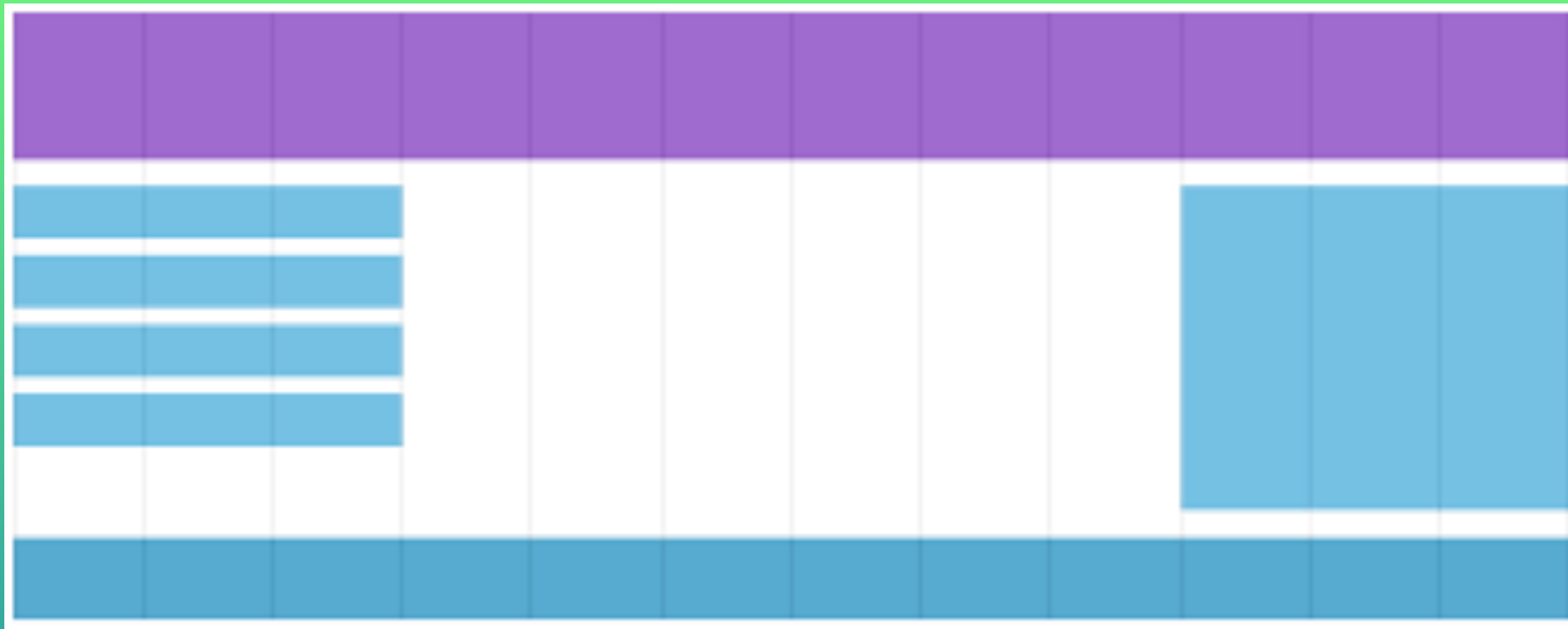


with

# Guidelines

- Users are used to scrolling websites vertically, not horizontally!
- Do NOT use large fixed-width elements (such as large images)
- Do NOT let the content rely on a particular viewport width
- Use CSS media queries to apply different styling for small and large screens

# 1 option: Use a grid



A responsive grid-view often has 12 columns, and has a total width of 100%, and will shrink and expand as you resize the browser window.

example: [https://www.w3schools.com/Css/css\\_rwd\\_grid.asp](https://www.w3schools.com/Css/css_rwd_grid.asp)

# Media Queries

Uses the @media rule to include a block of CSS properties only if a certain condition is true



# Example

```
@media only screen and (max-width: 500px) {  
  body {  
    background-color: lightblue;  
  }  
}
```

If max-width is 500 pixels,  
make background color blue

# Breakpoint

```
/* For mobile phones: */  
[class*="col-"] {  
    width: 100%;  
}  
@media only screen and (min-width: 768px) {  
    /* For desktop: */  
    .col-1 {width: 8.33%;}  
    .col-2 {width: 16.66%;}  
    .col-3 {width: 25%;}  
    .col-4 {width: 33.33%;}  
    .col-5 {width: 41.66%;}  
    .col-6 {width: 50%;}  
    .col-7 {width: 58.33%;}  
    .col-8 {width: 66.66%;}  
    .col-9 {width: 75%;}  
    .col-10 {width: 83.33%;}  
    .col-11 {width: 91.66%;}  
    .col-12 {width: 100%;}  
}
```

add a breakpoint where certain parts of the design will behave differently on each side of the breakpoint

many examples: [https://www.w3schools.com/Css/css\\_rwd\\_mediaqueries.asp](https://www.w3schools.com/Css/css_rwd_mediaqueries.asp)

If the max-width property is set to 100%, the image will scale down if it has to, but never scale up to be larger than its original size



```

```

# Mobile-first! (Images)



```
/* For width smaller than 400px: */  
body {  
    background-image: url('img_smallflower.jpg');  
}  
  
/* For width 400px and larger: */  
@media only screen and (min-width: 400px) {  
    body {  
        background-image: url('img_flowers.jpg');  
    }  
}
```

# Responsive Text

The text size can be set with a "vw" unit, which means the "viewport width".

That way the text size will follow the size of the browser

```
<h1 style="font-size:10vw">Hello World</h1>
```

# Responsive Frameworks

Responsive frameworks are  
templates of responsive stylesheets

Examples: W3.CSS, Bootstrap

Examples: [https://  
www.w3schools.com/html/  
html\\_responsive.asp](https://www.w3schools.com/html/html_responsive.asp)