What is the Canvas?

- HTML5 element
- Displays graphics
  - Charts, images, 2D animation
  - Graphical web apps, games, etc.
- Fully interactive with HTML/JavaScript
- Supported by every modern browser
Examples

Cloth:  http://andrew-hoyer.com/experiments/cloth/
Water:  http://www.mrdoob.com/#/115/Water_HTML5

21 Examples:
  http://net.tutsplus.com/articles/web-roundups/21-ridiculously-impressive-html5-canvas-experiments/
Let’s Get Started - The HTML

<html>
<head>  
<title>Canvas Example</title>  
</head>
<body>
  <canvas id="canvas" width="640" height="480">
    Get a better browser.
  </canvas>
</body>
</html>
Now The Javascript: A Simple Square

```javascript
var canvas = document.getElementById("canvas");
var ctx = canvas.getContext("2d");

ctx.fillStyle = "red";
ctx.fillRect(50, 50, 150, 150); // x, y, width, height
```
The Canvas
The "context" object allows you to draw.

- fillStyle, strokeStyle
- beginPath()
- moveTo()
- lineTo()
- arc()
- fill(), stroke()
- strokeText(), fillText()
- rect(), fillRect()
- drawImage()
- clearRect()
Example Code: [here](#)

- Rectangle
- Text
- **Lines & Paths**
- Circles
- Colors
- Images

- Animation
- **User Interaction**
- Particle System
- Saves & Transforms
- Video

*Demo*
Going 3D With WebGL

- 3D graphics using OpenGL in your browser
  - Hardware accelerated
  - Supported by Chrome and Firefox
    - (and Safari/Opera)

- Examples:
  - Google Maps
  - http://www.chromeexperiments.com/webgl/

- Three.js - cube, examples

*Demo