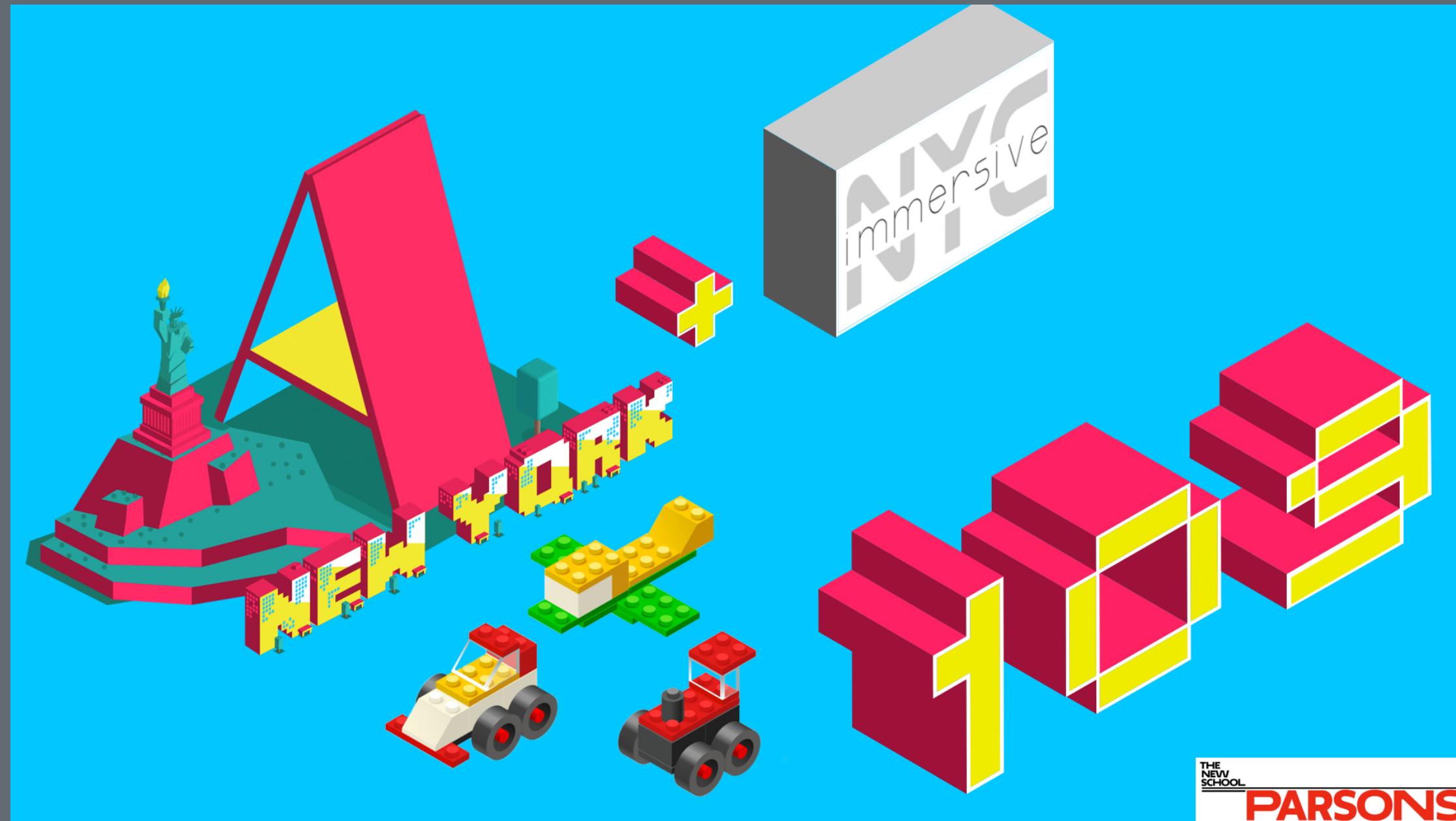


Welcome to A-Frame NYC



Poll Results! <https://qxr.li/poll2018>

1a) Components

1b) Multi-user WebVR

2) UI & Input

3a) Audio & Video

3b) GLTF & 3D assets

4a) Animation

4b) Progressive enhancement

Agenda

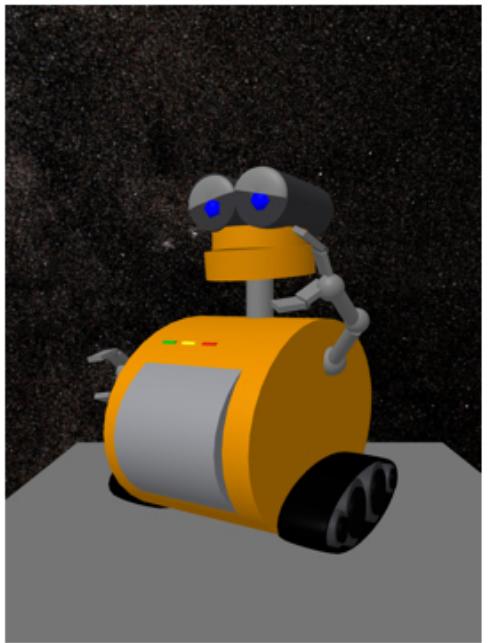
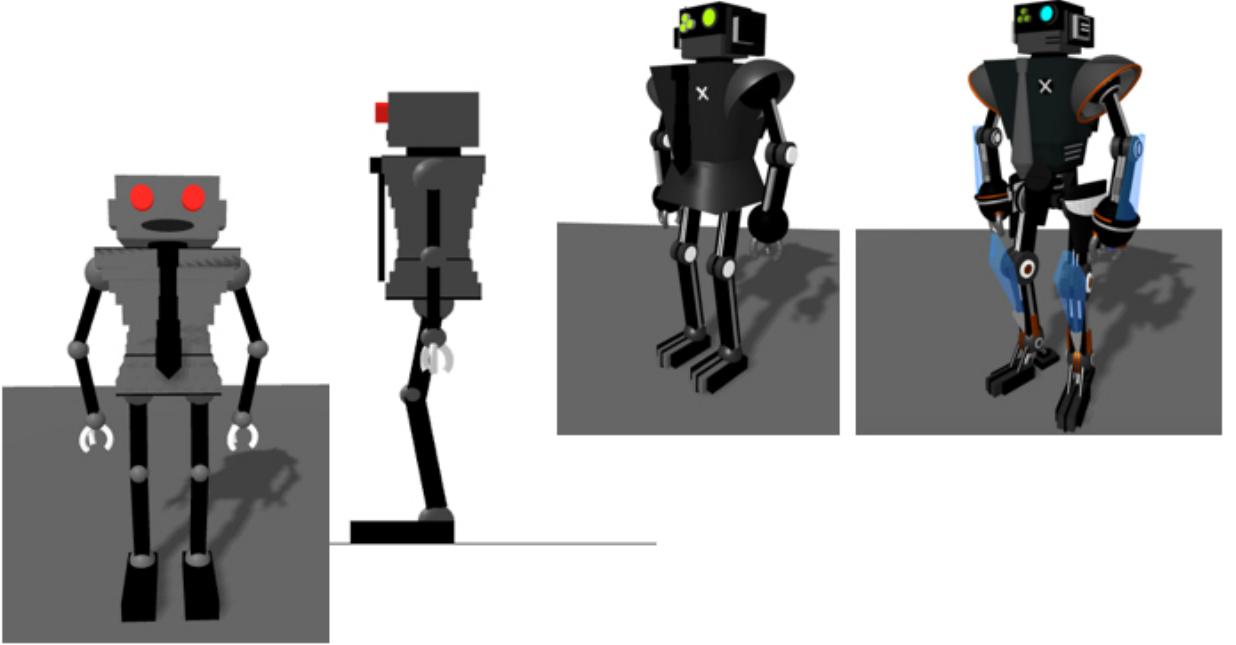
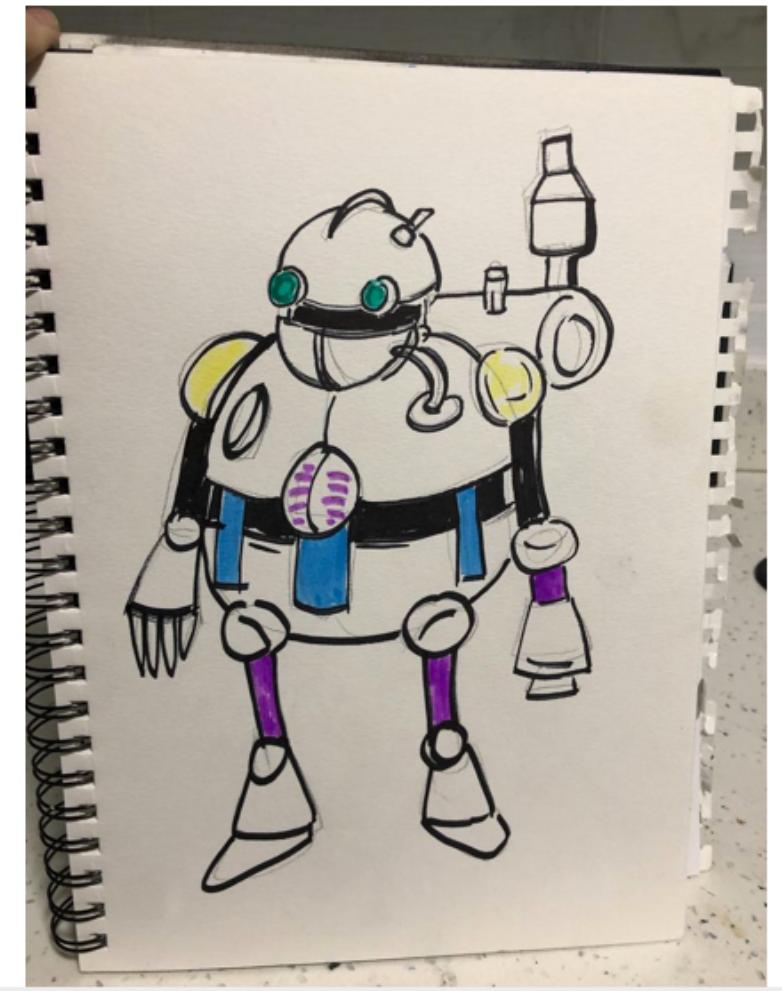
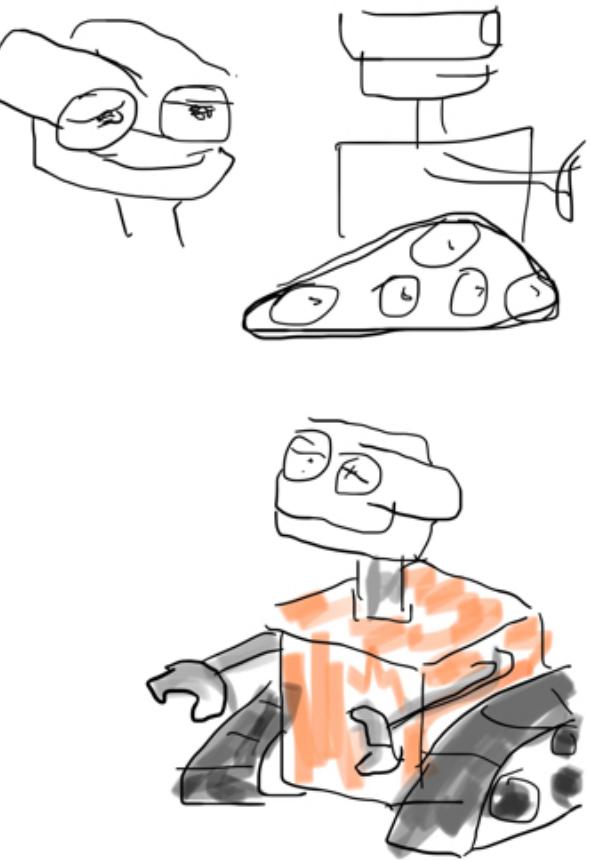
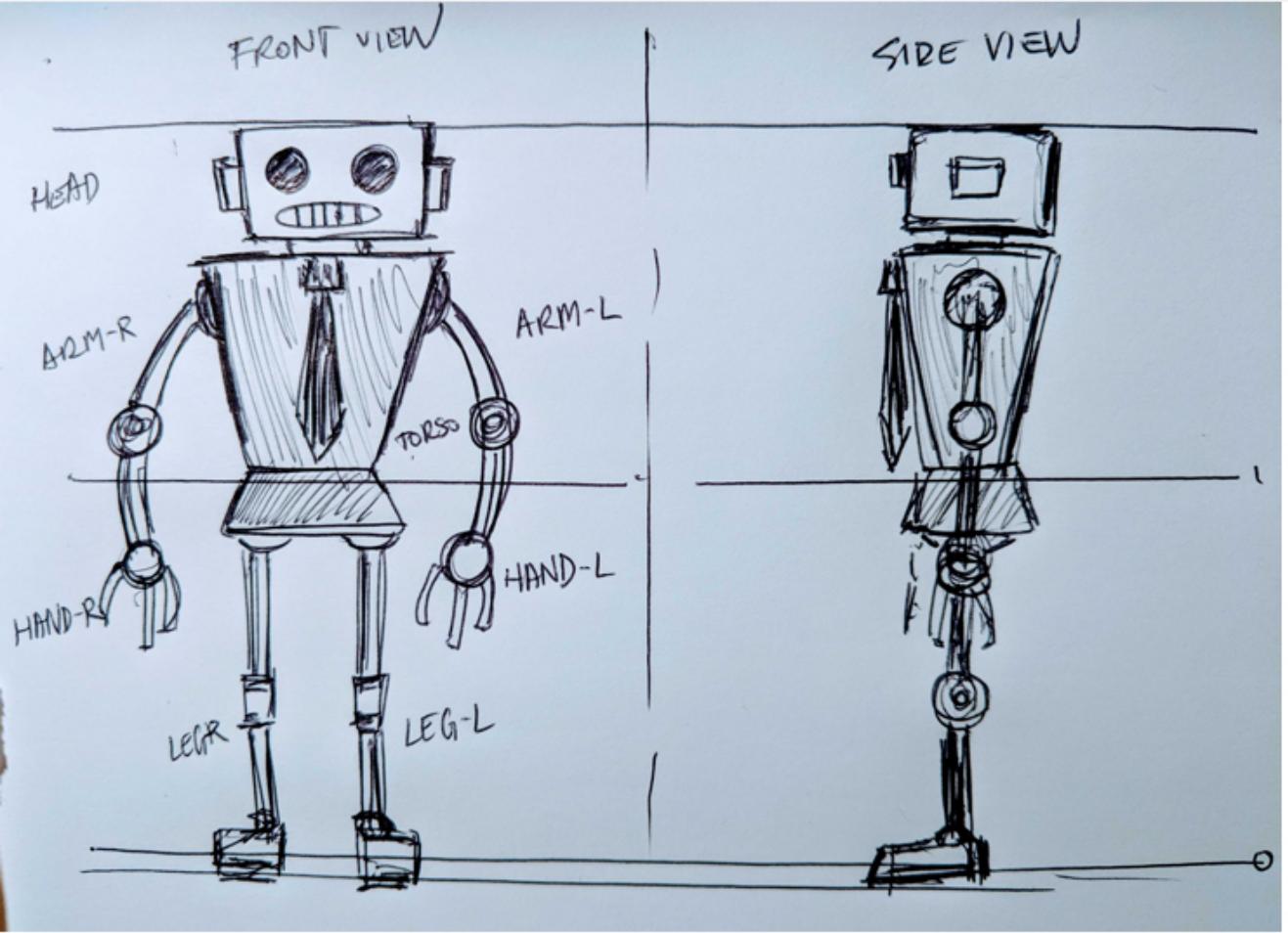
- Show & Tell (30 minutes total)
 - TwoTone & link traversing.
 - Members talk about their progress on "A-Robots"
- Presentation (20 minutes)
 - Think Lego: How to get started with components in A-Frame.
- Formation of workshop groups (10 minutes)
- Workshop (60 minutes)



datavized



Google News Initiative



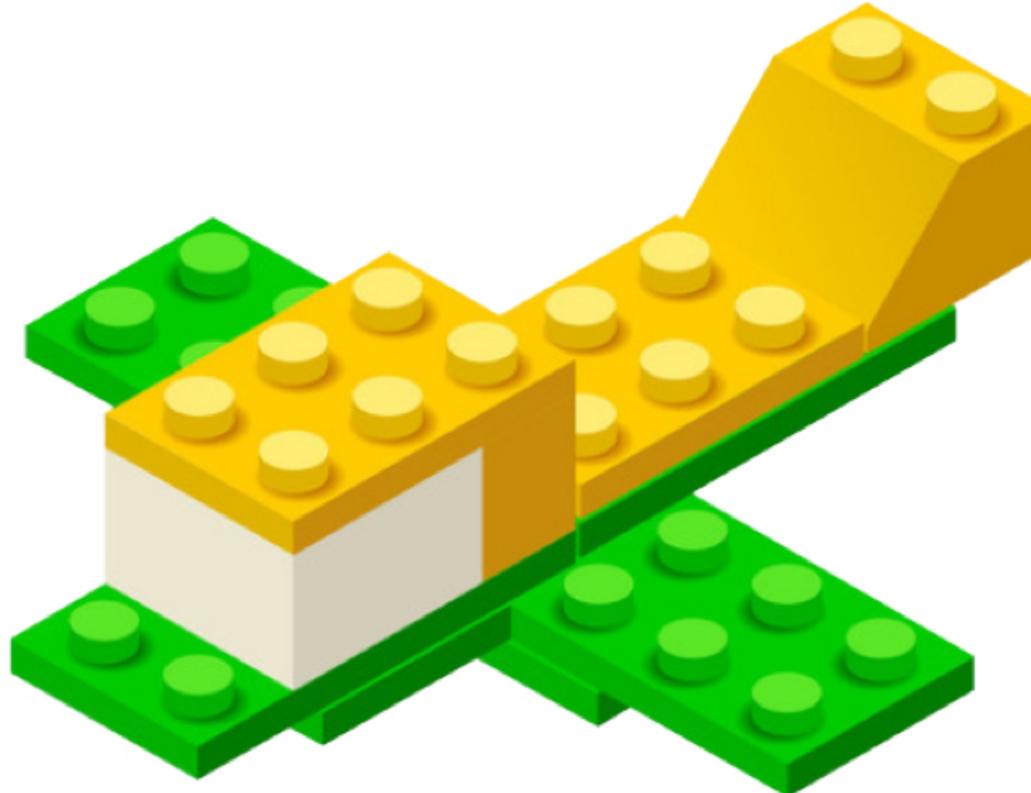
Nigel

Jeff

Pilar

Think Lego: How to get started with
components in A-Frame.

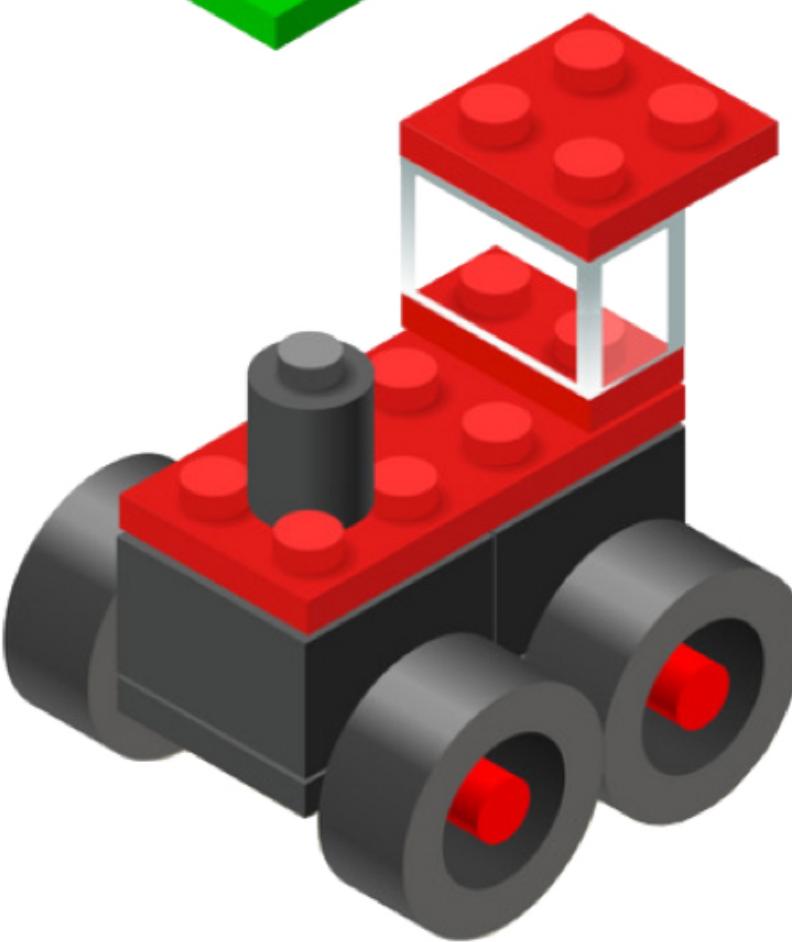
Flight

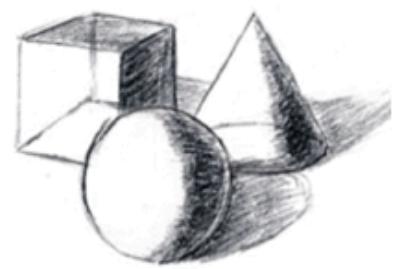


Speed



Strength





Entity

Parameters

primitive: box
width: 1
height: 1
depth: 1

Geometry

Parameters

opacity: 1
color: red
src:
metalness:0
...

Components

Material

Parameters

x: 0
y: 1
z: -2

Position

Parameters

foo: bar
baz: qux
waldo: true
fred: 1

Custom

...

Syntax

Html5

```
<button  
  type="button"  
  name="cta"  
  autofocus  
  style="background:red; border-radius: 5px 0 5px 0"  
>Click Me!</button>
```

A-Frame

```
<a-plane  
  width="1"  
  height="1"  
  color="red"  
  shadow  
  component="variable:value; othervariable:1 1 1;"  
></plane>
```

The Entity Component System

- **Entities** are represented by the `<a-entity>` element and prototype.
- **Components** are represented by HTML attributes on `<a-entity>`'s. Underneath, components are objects containing a schema, lifecycle handlers, and methods.
- **Systems** are represented by `<a-scene>`'s HTML attributes. Systems are similar to components in definition.

```
AFRAME.registerComponent('foo', {
  schema: {
    bar: {type: 'number'},
    baz: {type: 'string'}
  },
  init: function () {
    // Do something when component first attached.
  },
  update: function () {
    // Do something when component's data is updated.
  },
  remove: function () {
    // Do something the component or its entity is detached.
  },
  tick: function (time, timeDelta) {
    // Do something on every scene tick or frame.
  }
});
```

Let's look at an A-Frame example: The `scale` Component

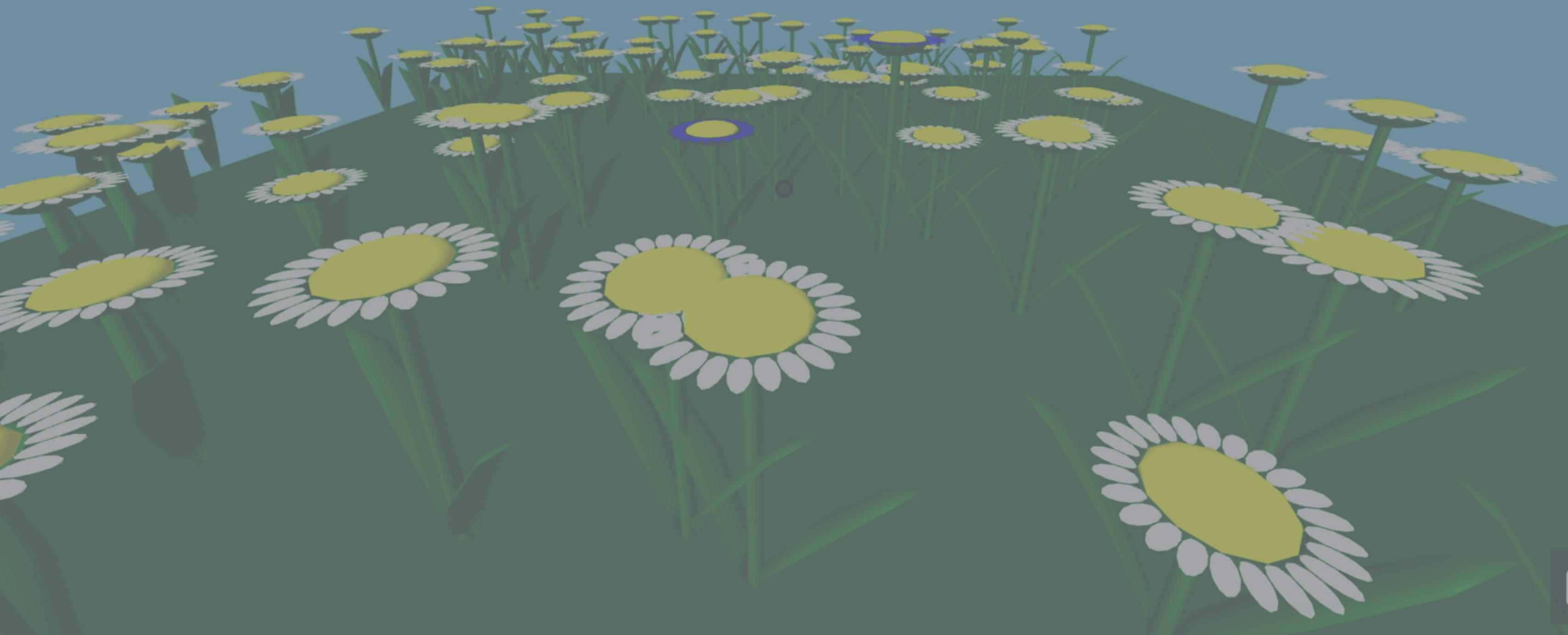
```
var registerComponent = require('../core/component').registerComponent;

// Avoids triggering a zero-determinant which makes object3D matrix non-invertible.
var zeroScale = 0.00001;

module.exports.Component = registerComponent('scale', {
  schema: {
    type: 'vec3',
    default: {x: 1, y: 1, z: 1}
  },
  update: function () {
    var data = this.data;
    var object3D = this.el.object3D;
    var x = data.x === 0 ? zeroScale : data.x;
    var y = data.y === 0 ? zeroScale : data.y;
    var z = data.z === 0 ? zeroScale : data.z;
    object3D.scale.set(x, y, z);
  },
  remove: function () {
    // Pretty much for mixins.
    this.el.object3D.scale.set(1, 1, 1);
  }
});
```

Sunflower in entities

Sunflower component field



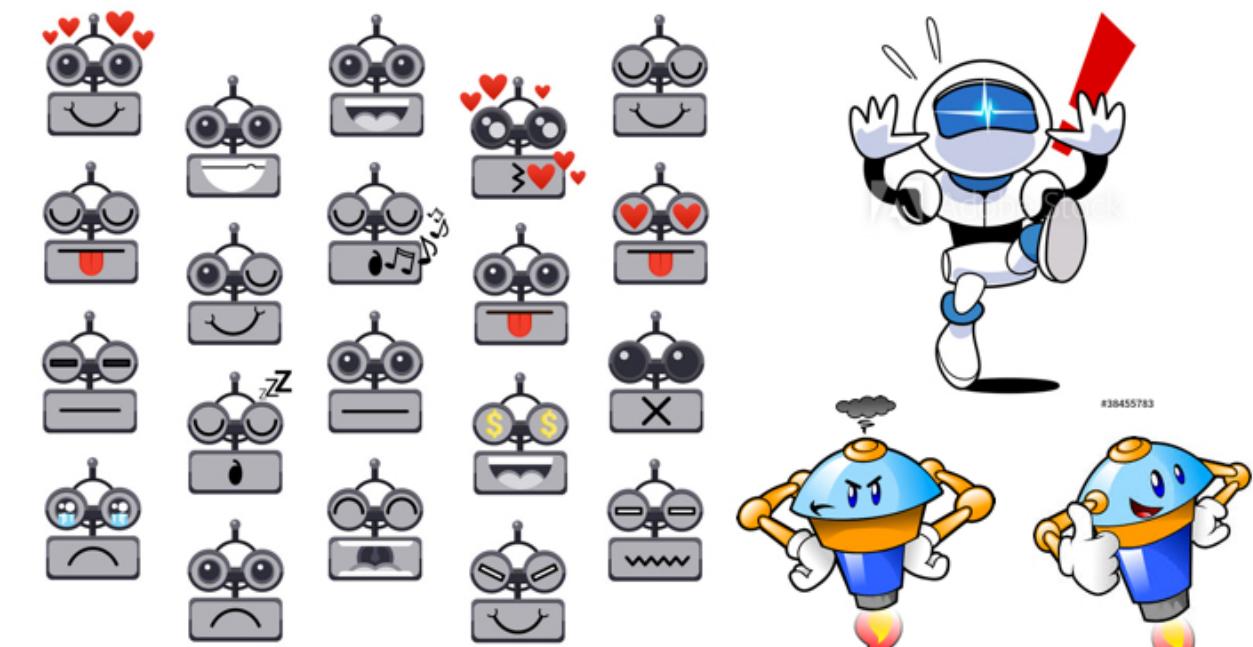
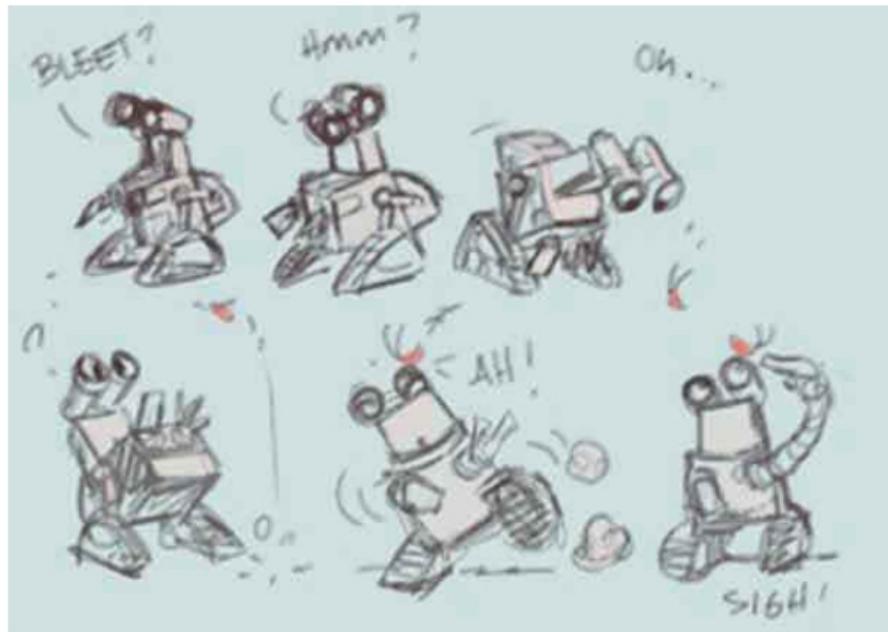
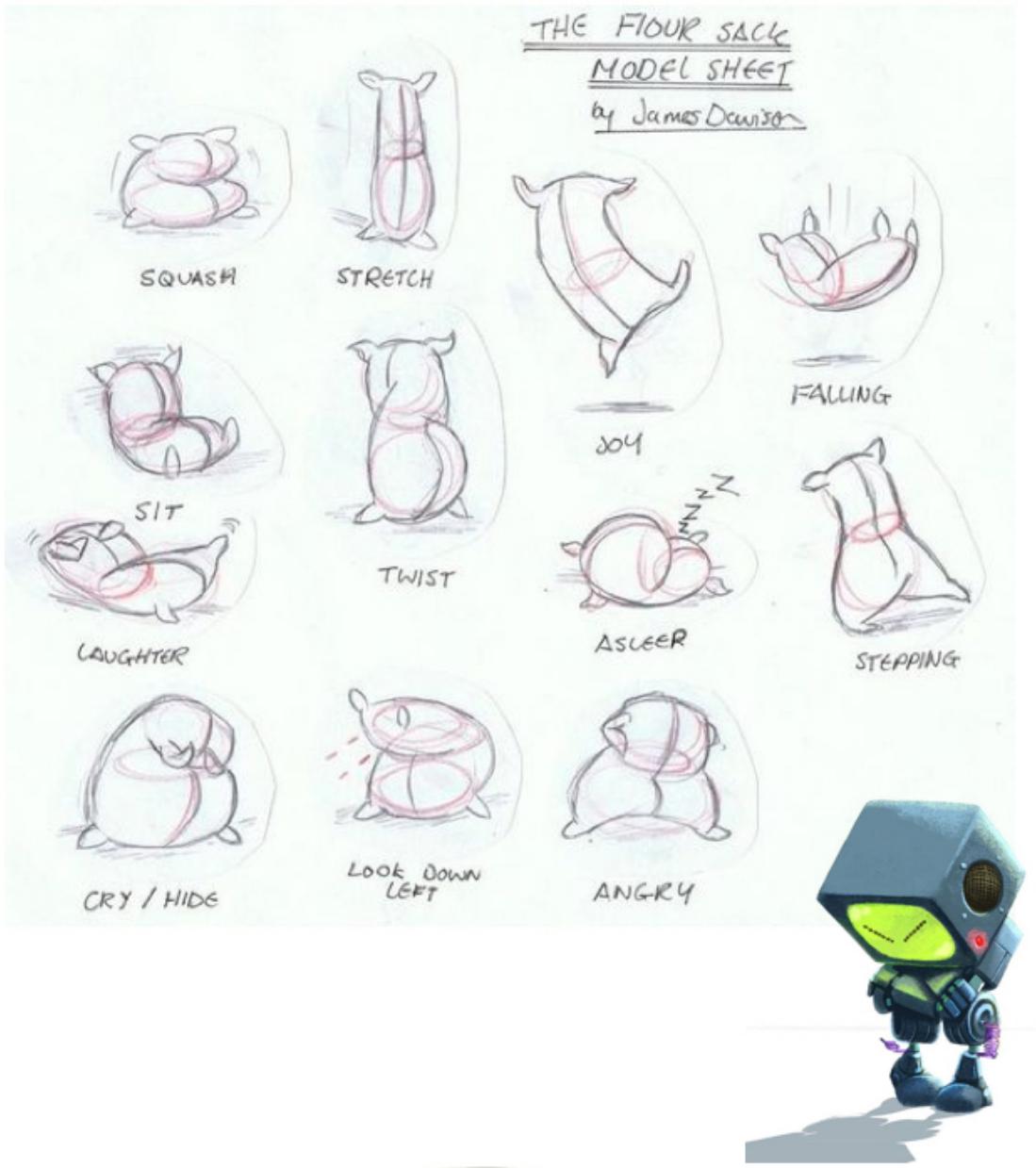
Take Home Project - Step 2

- Add six basic emotional expressions to your robot:
 - Cheerful • Charmed • Amused
 - Surprised • Sad • Angry

Tip: You can achieve this expressions by looking into facial impressions, body posture, or other creative ways, maybe even words on a screen, sign or speaking bubble. See [Facebook reactions](#) The Emotion Wheel



Dr. Robert Plutchik wheel of emotions: joy, sadness, acceptance, disgust, fear, anger, surprise and anticipation



<https://www.anki.com>

Discussion & Feedback

- **Members, bring your friends!** We need to grow our active members.
- **Take projects home** and send them in for feedback, we love to collaborate and help you learn. **Share** your projects and get important feedback.
- Catch up on older lectures: github.com/roland-dubois/aframe-meetup-nyc & Suggest topics to cover

Sign up for next meetup: A-Frame 110 on April 11 7:00 - 9:00 PM
@rolanddubois @debraeanderson