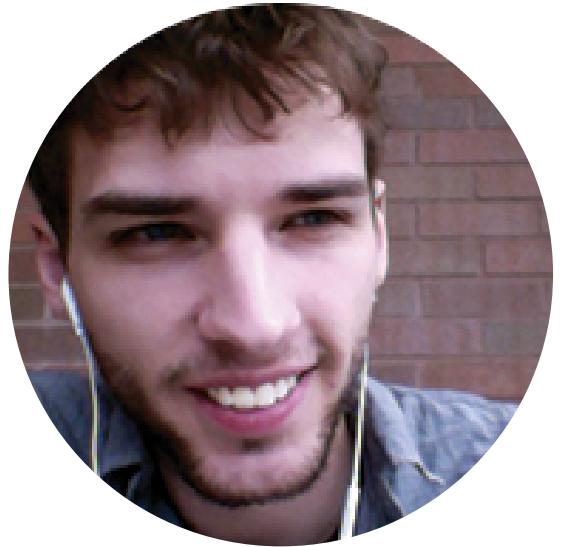




hello, world

# Meet the Team



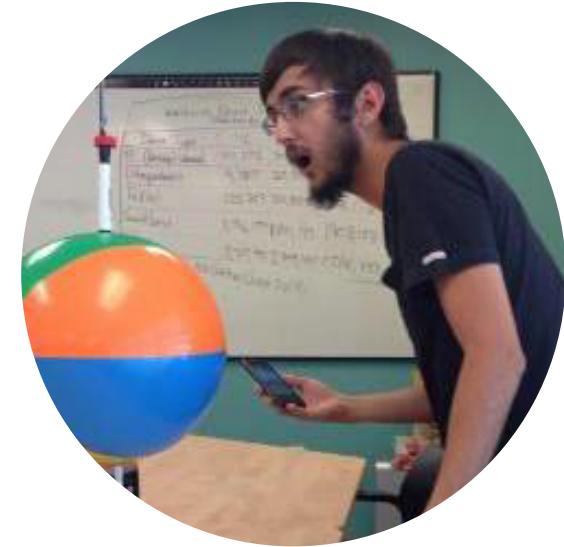
Nathan Buchar  
*Team Leader/Developer*



Hao Trung Pham  
*Developer*



Chelsea Triebwasser  
*Developer*



Sam Wechter  
*Developer*



DeAnna Azzolini  
*Design Lead*



Matt Broedel  
*Designer*



Christina Brooks  
*Designer*

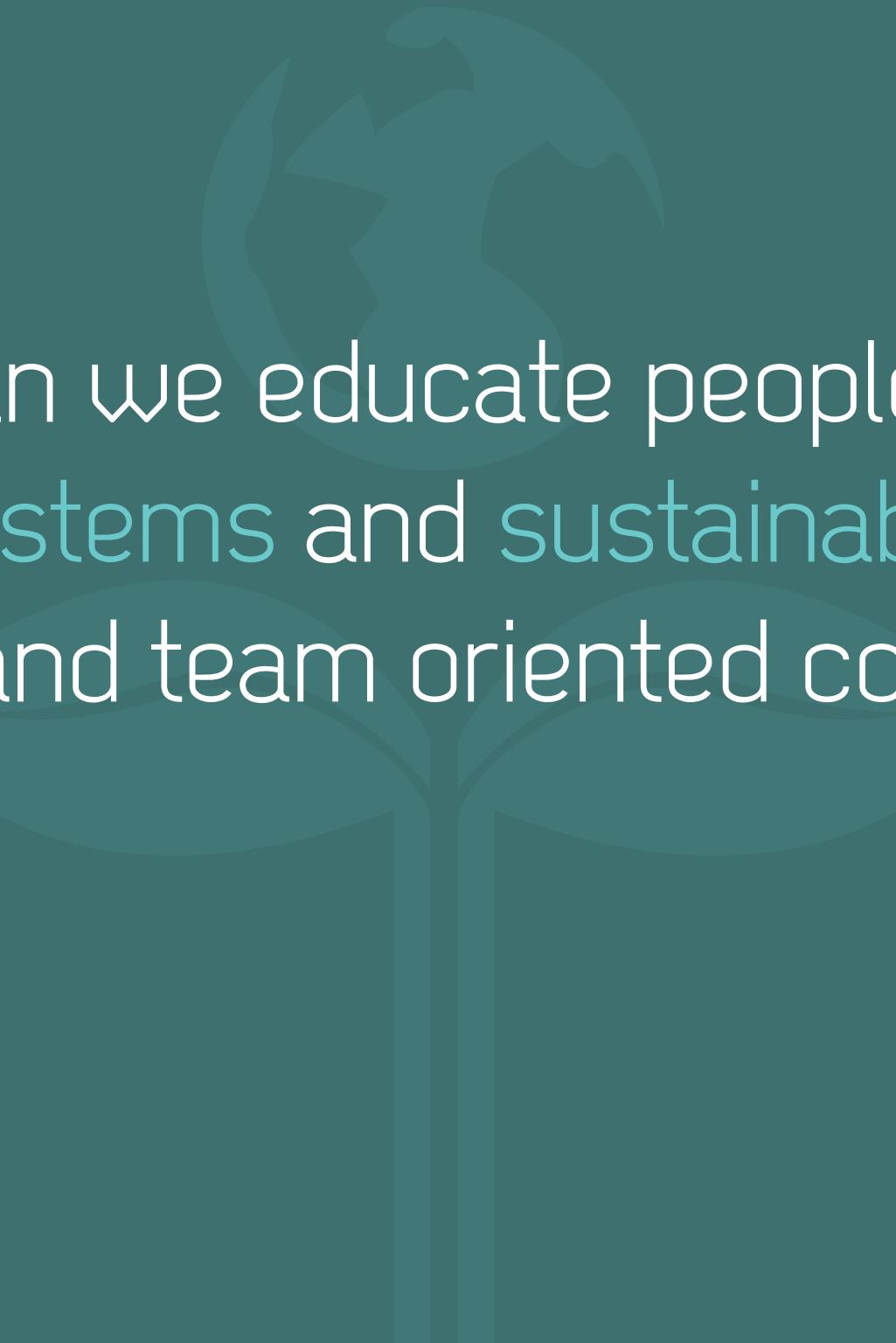


Min Ha  
*Designer*

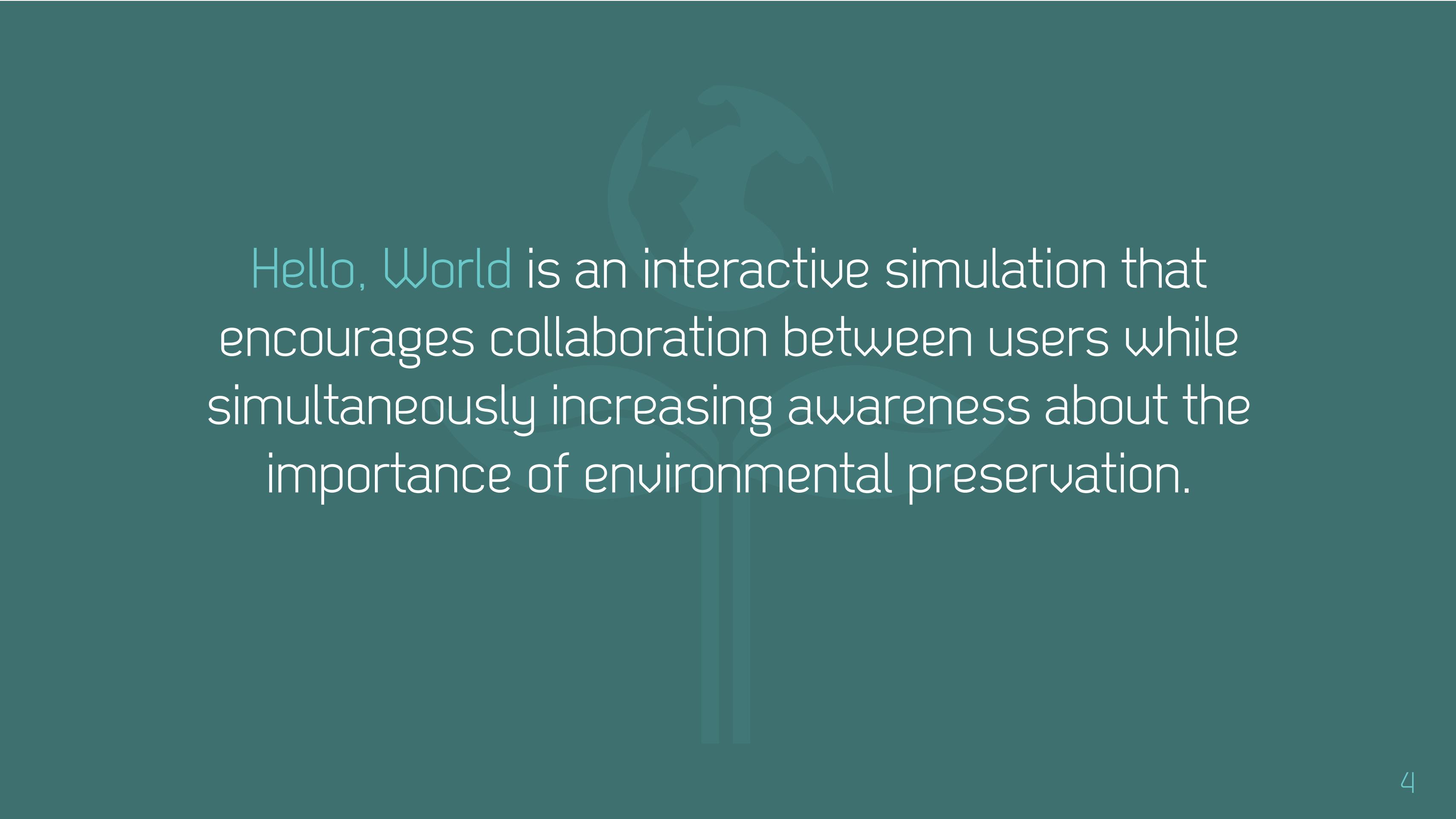
# The Presentation

- Project Abstract
- Objectives
- Project Specs
- Design Process
- Development Process
- Final Products
- Lessons Learned
- Future Direction
- Summary





How can we educate people about  
global ecosystems and sustainability through  
interaction and team oriented collaboration?



Hello, World is an interactive simulation that encourages collaboration between users while simultaneously increasing awareness about the importance of environmental preservation.

# Objectives

- **Abstract** ecosystems into simplified forms to facilitate learning
- **Showcase** the interconnectness of the natural world
- **Educate** users about the environmental “big picture”
- **Establish** the earth as a delicate place that is sensitive to change

# Project Specs | User Profiles



Male  
Age 10  
Middle School  
Average student  
Moderate gamer  
Plays sports  
From Rochester  
Middle class family  
Collects baseball cards  
Avid cartoon wather



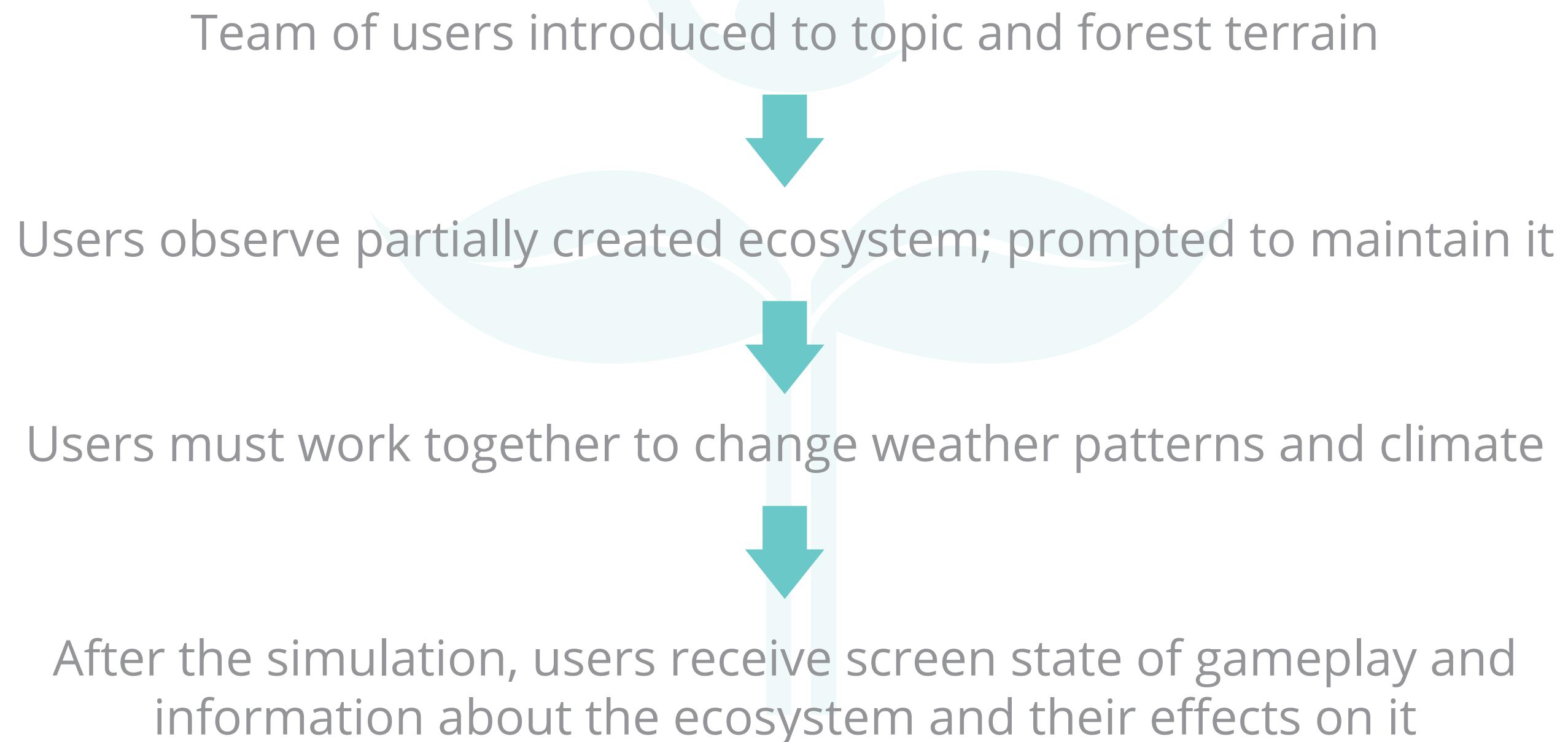
Female  
Age 21  
Private University  
Biology major  
Above average student  
Lower middle class  
Works part time  
Enjoys pop culture  
Active social life  
Hardworking



Married Couple  
Ages 32 and 34  
Upper middle class  
1 child, 3 yr old daughter  
Husband an engineer  
Wife stay at home mom  
Casual date nights  
Both college grads  
Active lifestyle  
Small social group

# Project Specs | User Flow

Entice visitors through presentation of display and graphics



# Project Specs | Technology

1 Projector



2 iPads



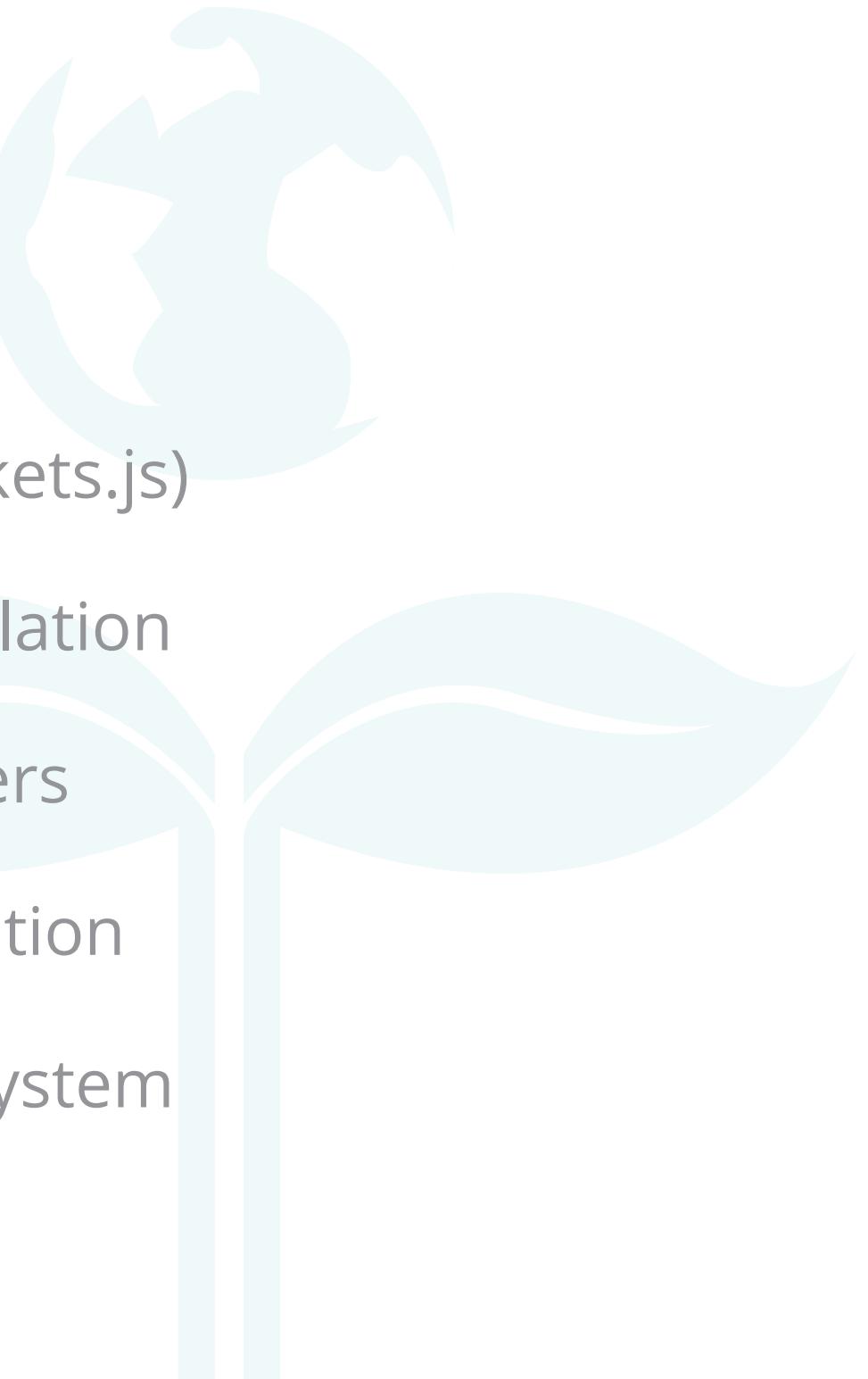
1 Desktop computer



- Javascript
- PHP
- HTML/CSS
- Node.js
- Canvas
- SVG

# Development Process

- Determine timeline
- Assign tasks
- Research technologies (Node.js, Sockets.js)
- Plan and start work on primary simulation
- Plan and start work on iPad controllers
- Build Sprite model classes for simulation
- Implement synthetic depth sorting system for simulation
- Implement all images



# Development Process

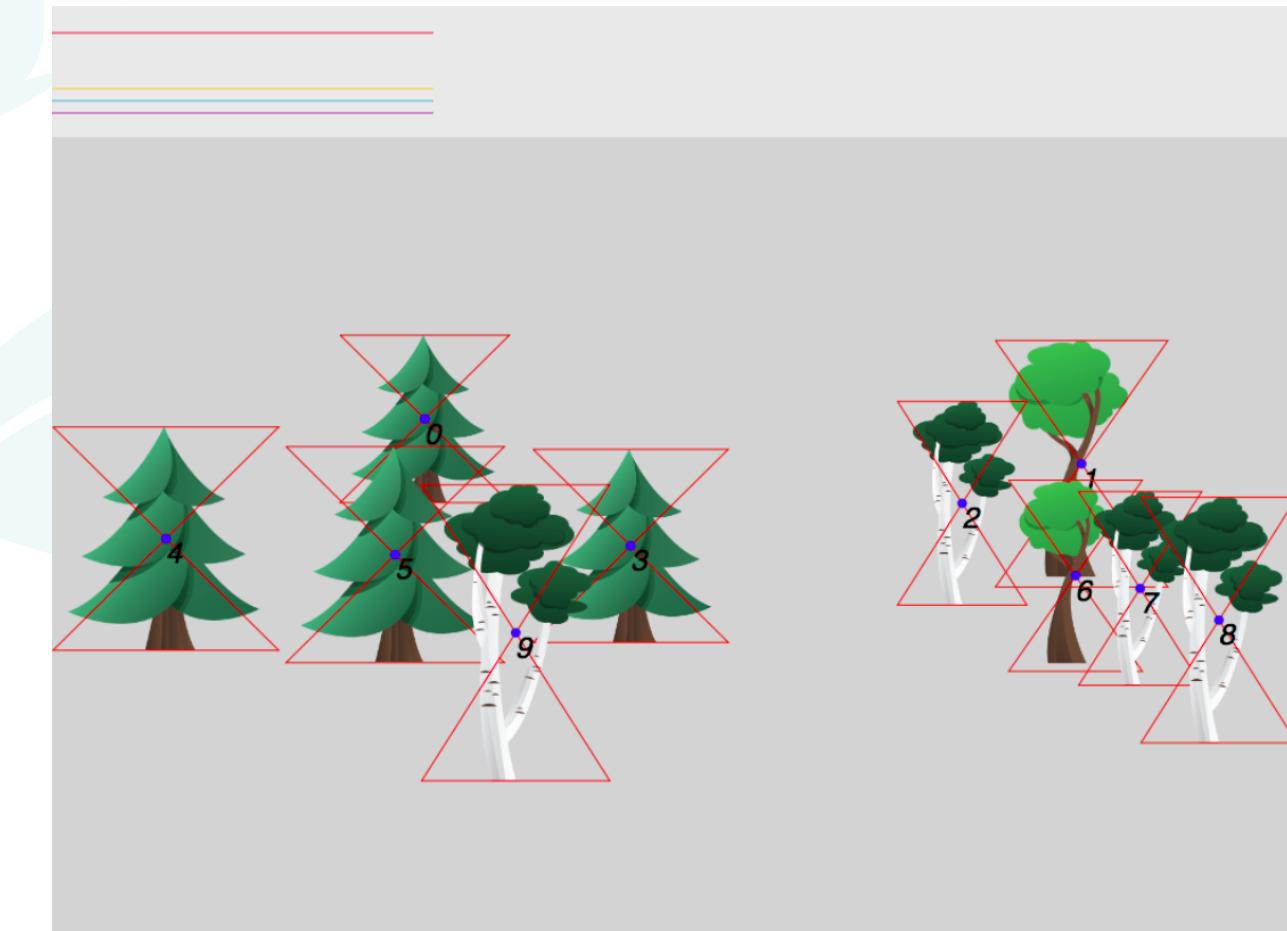
- Implement animation sequences
- Implement a basic life and death generator
- Link server with iPad controllers
- Link application with primary simulation
- Test entire application and review goals
- Bug fixes
- Brief user testing
- Various improvements
- Deployment

# Development Process

Before synthetic depth  
sorting

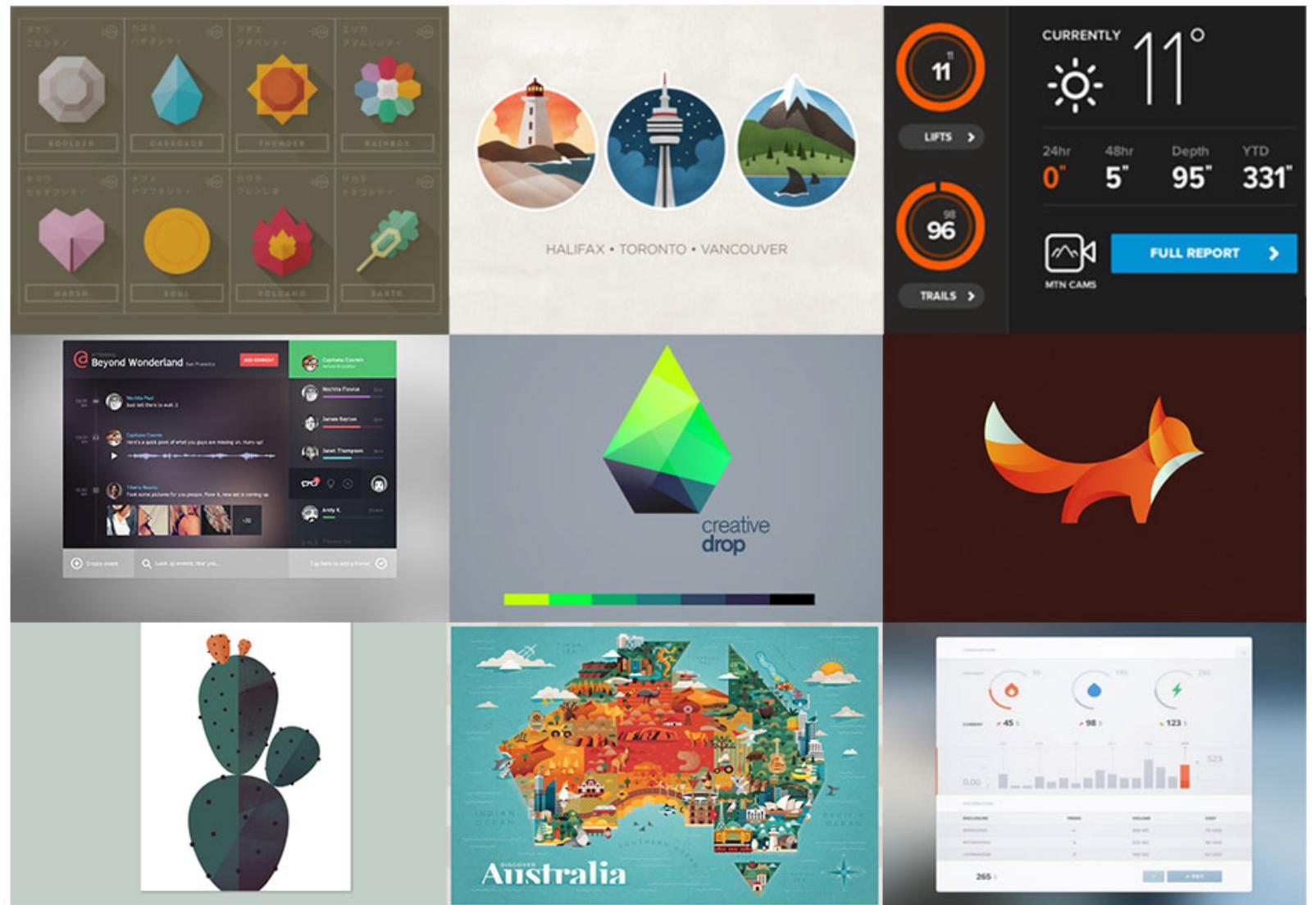


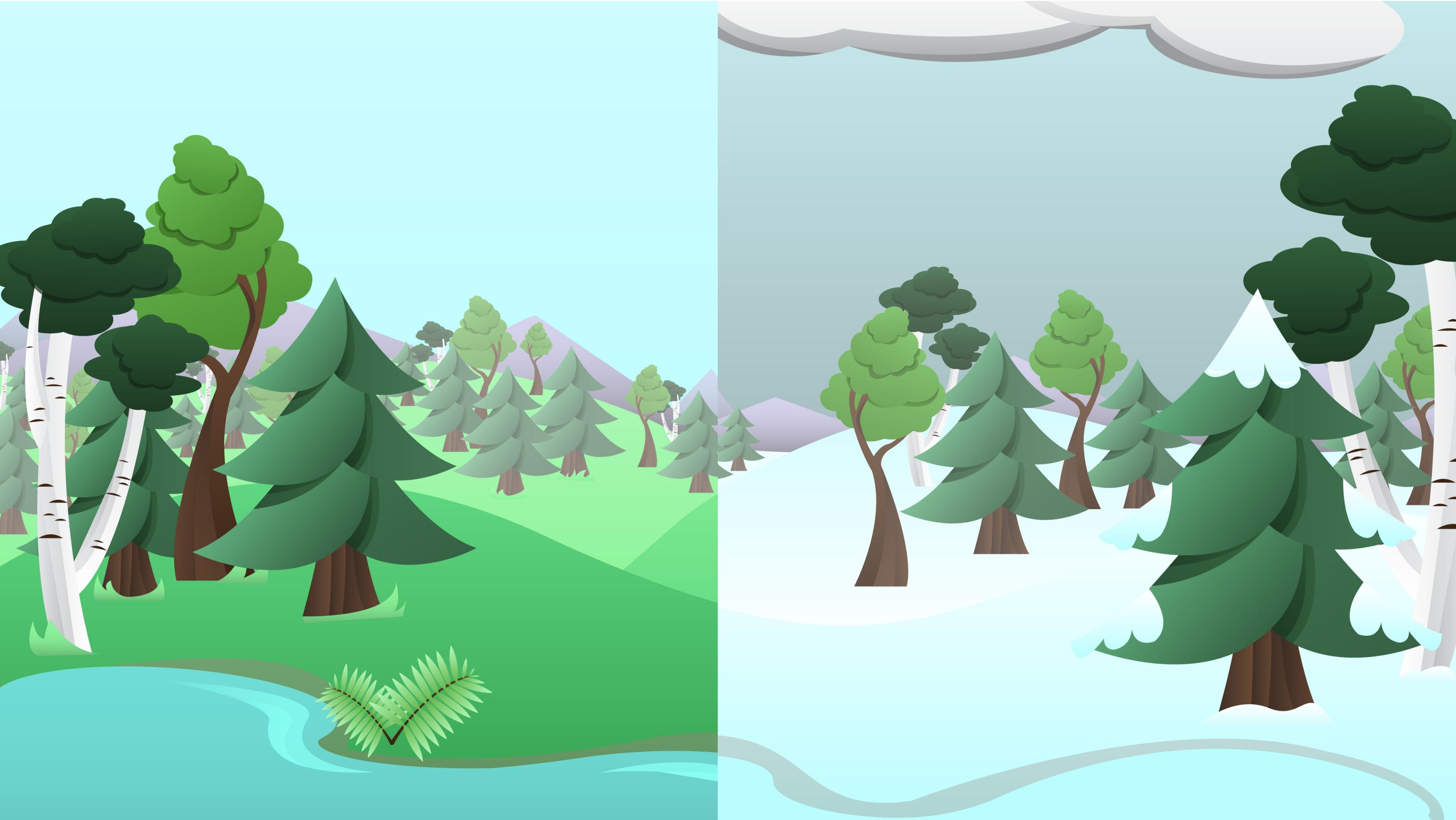
After synthetic depth  
sorting



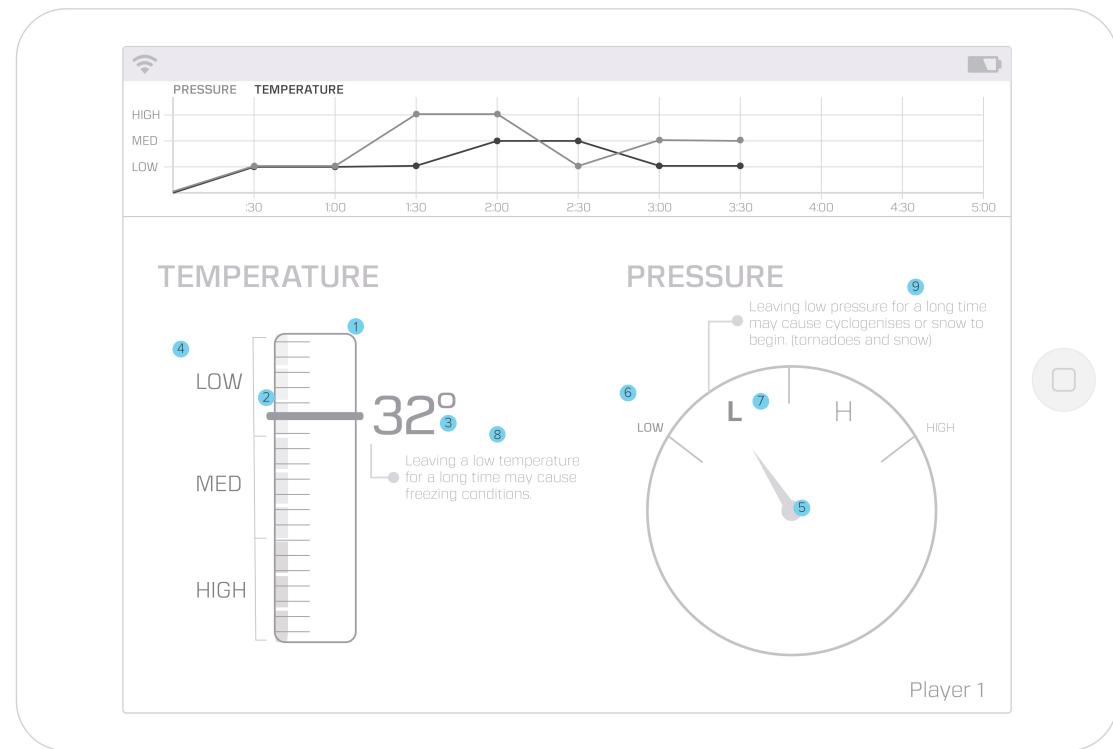
<http://guarded-shelf-3349.herokuapp.com>

# Design Process | First Steps

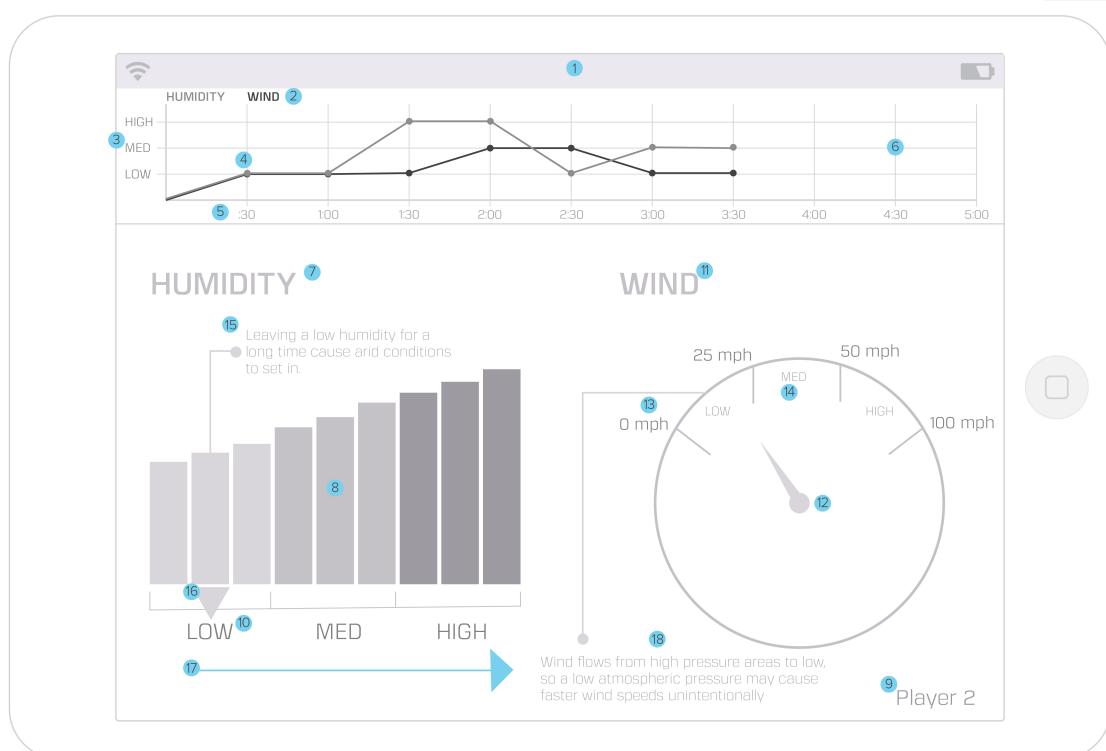




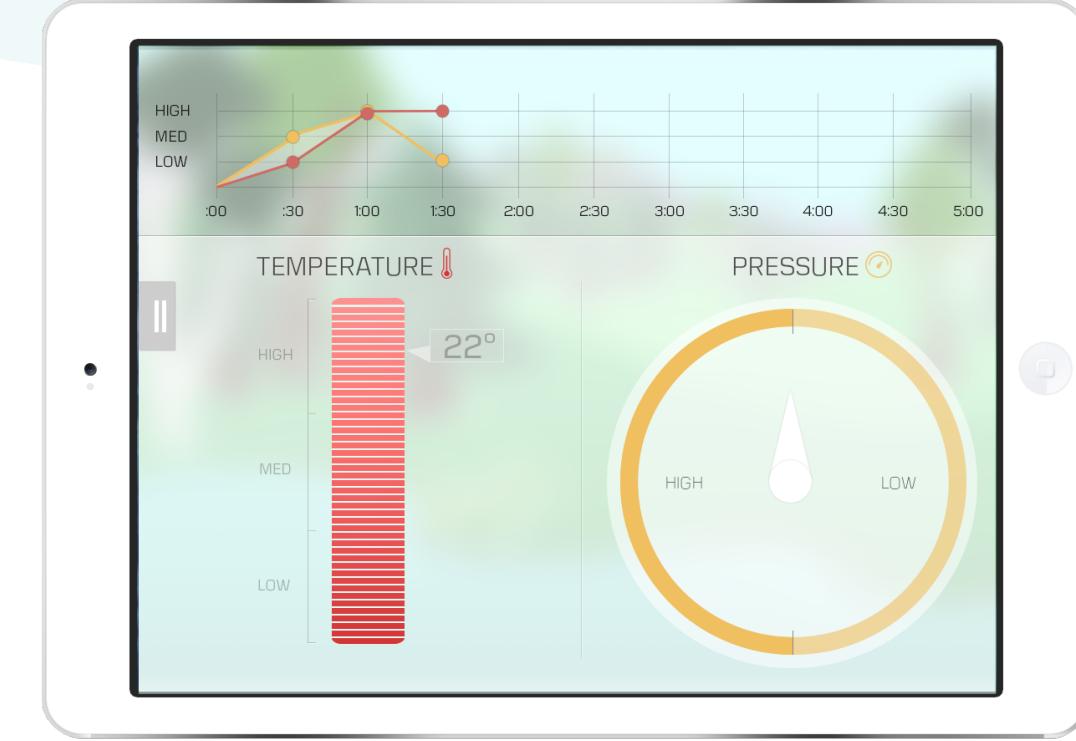
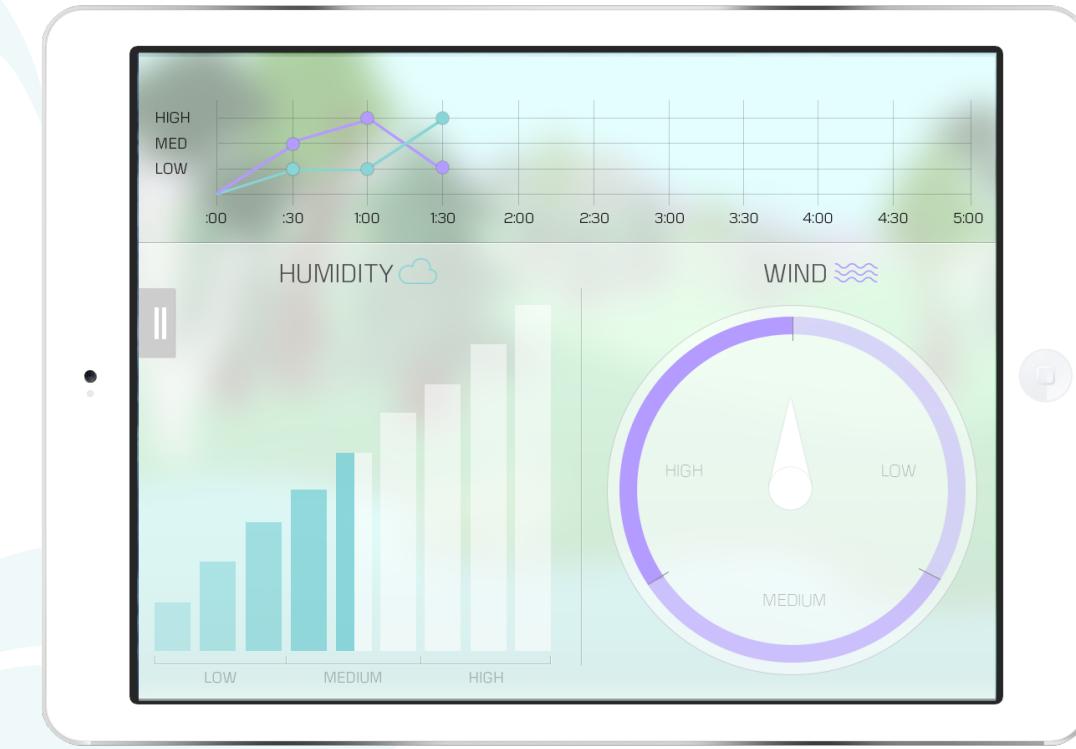
# Design Process | iPad Interfaces



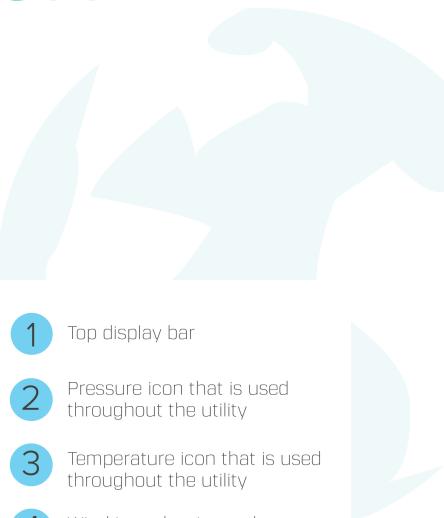
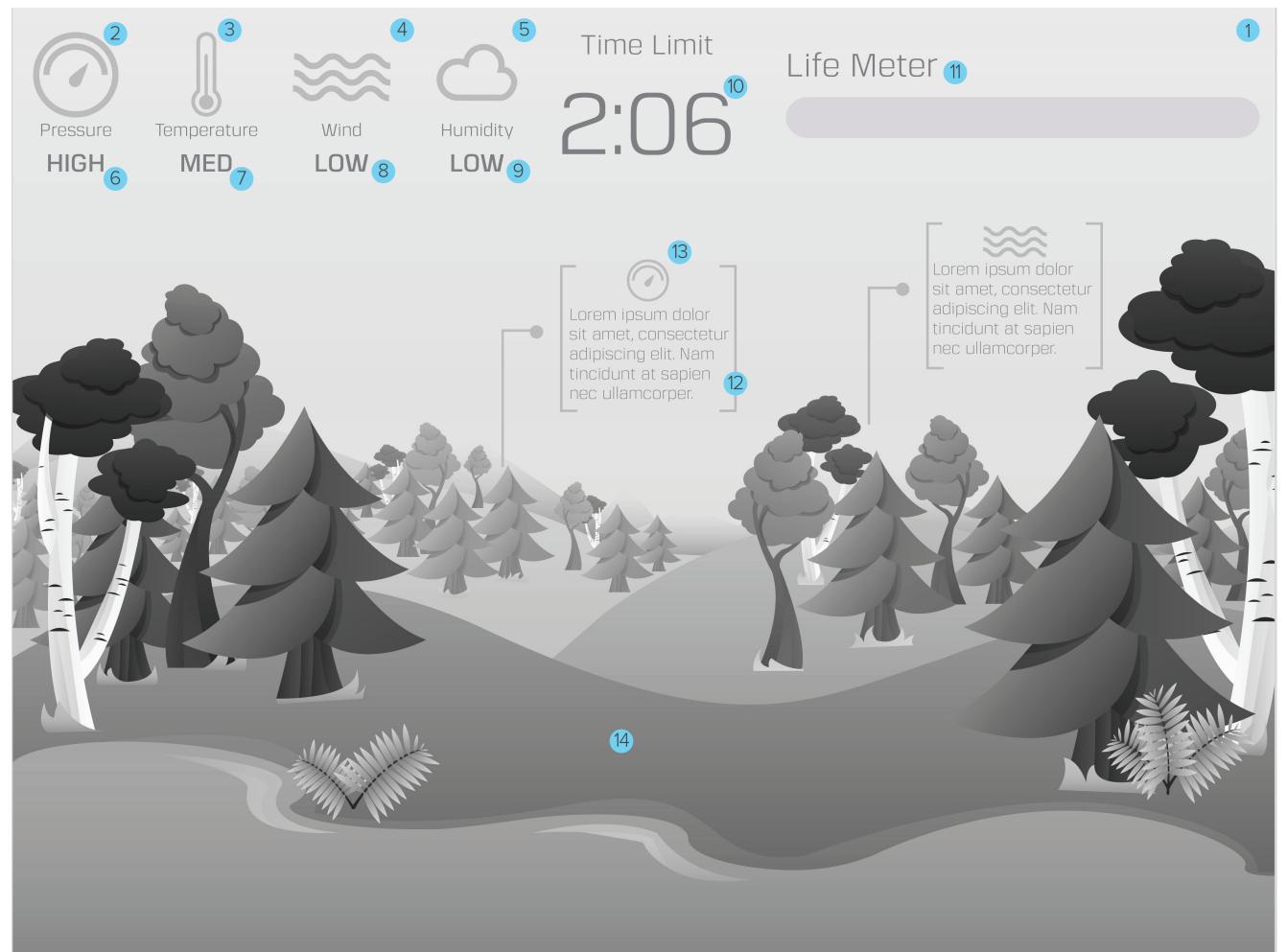
- 1 Temperature slider that contains temp. data
- 2 Slider that the user interacts with
- 3 Numerical indication of the user's selection on the scale
- 4 General representation of values of the scale
- 5 Dial that indicates the chosen selection
- 6 Description of the value chosen. Bolded when selected
- 7 Abbreviation value of selection. Bolded when selected.
- 8 Pop-up hint that appears as user interacts with the scale
- 9 Pop-up hint that appears as user interacts with the dial



- 1 Top default bar for iPad
- 2 Graph identifier for various data being displayed by different colors
- 3 Graph measurements of high, medium, and low
- 4 Data displayed on graph, that draws itself as the time goes on. Overlays each other
- 5 Measurement of time as the graph is drawn and the user interacts
- 6 Subtle grid to help visualize the graph's measurements
- 7 Title of widget
- 8 Interactive slide bar that user uses their finger to interact with
- 9 Player screen identification
- 10 Generalized labels for the slider
- 11 Title of widget
- 12 Indicator of section selected in dial
- 13 Numerical label
- 14 Generalized label
- 15 Pop-up tip when the user interacts with the scale
- 16 Arrow that indicate current selection in the scale
- 17 Arrow indicating finger movement interaction with the scale. For display purposes only
- 18 Pop-up tip when users interact with the scale



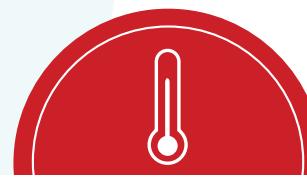
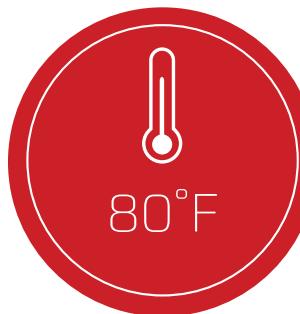
# Design Process | Terrain Screen



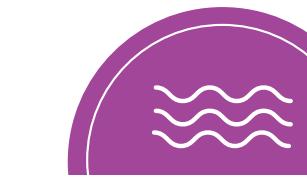
- 1 Top display bar
- 2 Pressure icon that is used throughout the utility
- 3 Temperature icon that is used throughout the utility
- 4 Wind icon that is used throughout the utility
- 5 Humidity icon that is used throughout the utility
- 6 Value for pressure from iPad UI
- 7 Value for temperature from iPad UI
- 8 Value for wind from iPad UI
- 9 Value for humidity from iPad UI
- 10 Time left of the terrain instance
- 11 Life meter that shows how the general life is building in the terrain
- 12 Hints and tricks for specific iPad interactions
- 13 Icon that displays which utility it's for
- 14 Main interactive terrain



# Design Process | Icon Iterations



80°F



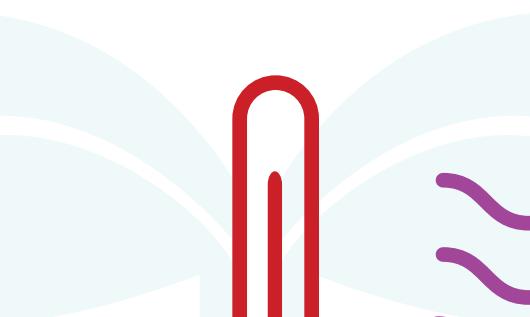
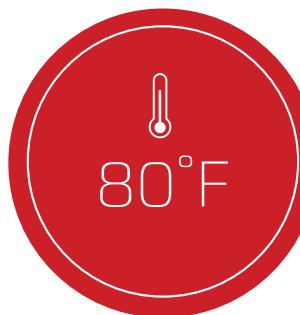
10 mph



35%



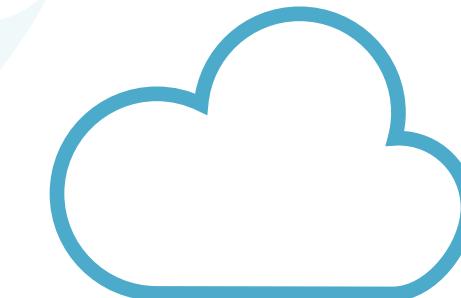
HIGH



80°F



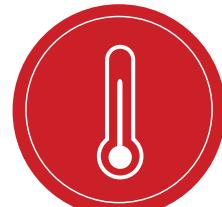
10 mph



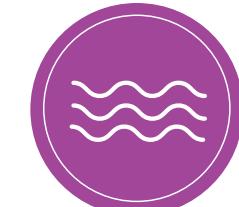
35%



HIGH



80°F



10 mph

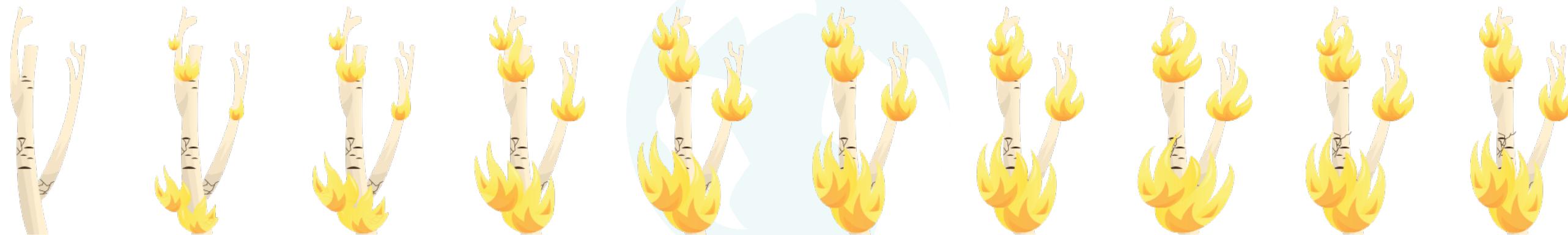


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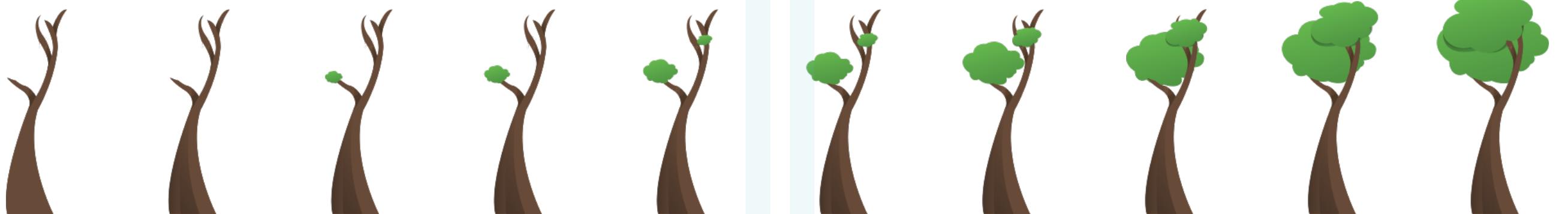


HIGH

# Design Process | PNG Sequence Examples



# Design Process | PNG Sequence Examples



# Design Process | PNG Sequence Examples



# Design Progress | Website Wireframes

## What is an ecosystem?

"An ecosystem is a complex set of relationships among the living resources, habitats, and residents of an area. Ecosystems vary greatly in size and the elements that make them up, but each is a functioning unit of nature. Everything that lives in an ecosystem is dependent on the other species and elements that are also part of that ecological community. When an ecosystem is healthy, scientists say it is sustainable. This means that all of the elements live in balance and are capable of reproducing themselves."<sup>1</sup>

### IMPORTANT ELEMENTS

- TEMPERATURE**: The degree or intensity of heat present in a substance or object.
- HUMIDITY**: A quantity representing the amount of water vapor in the atmosphere or a gas.
- WIND**: The perceptible natural movement of air, esp. in the form of a current of air blowing from a particular direction.
- PRESSURE**: The pressure exerted by the weight of the atmosphere.

### AFFECTS ON AN ECOSYSTEM

"Climate is an important environmental influence on ecosystems. Climate changes and the impacts of climate change affect ecosystems in a variety of ways. For instance, warming could force species to migrate to higher latitudes where temperatures are more conducive to their survival. Similarly, as sea level rises, saltwater intrusion into a freshwater system may force some key species to relocate or die, thus removing predators or prey that were critical in the existing food chain."<sup>2</sup>

<sup>1</sup> "Definition of an Ecosystem." USDA Forest Service, n.d. Web. 10 Apr. 2014.

<sup>2</sup> "Ecosystems Impacts & Adaptation." EPA. Environmental Protection Agency, n.d. Web. 10 Apr. 2014.

## What is Hello, World

Hello, World is an interactive simulation that encourages collaboration between users while simultaneously environmental preservation. Using modern technology and interactive collaboration, Hello, World is an engaging experience for users of all ages. It gives people an opportunity to experience Earth in a simple, abstract way, thus raising awareness of just how delicate our world is.

### INTERFACE ELEMENTS

Graph that highlights the data from the interactive widget controllers.

Wind controller that mirrors a barometer, interactive to the user's touch.

Humidity controller that is an interactive slider.

Pressure controller that mirrors a thermometer.

Temperature controller that is an interactive slider, mirroring a thermometer.

## WEATHER PATTERNS

- RAIN**: Moisture condensed from the atmosphere that falls visibly in separate drops.
- SNOW**: Atmospheric water vapor frozen into ice crystals and falling in light white flakes or lying on the ground as a white layer.
- DROUGHT**: A prolonged period of abnormally low rainfall; a shortage of water resulting from this.
- FIRE**: Combustion or burning, in which substances combine chemically with oxygen from the air and typically give out bright light, heat, and smoke.
- THUNDERSTORM**: A storm with thunder and lightning and typically also heavy rain or hail.
- WINDSTORM**: A storm with very strong wind but little or no rain or snow; a gale.

## Types of ecosystems

### FRESHWATER

~ 1.8% of earth's surface. Supports many species of life including fish, amphibians, insects and plants. Base of food-web is found in freshwater plankton.<sup>3</sup>

### TERRESTRIAL

Many & diverse types of ecosystems. There are seven major types. Location usually dependent on the latitude of the area, and amount of precipitation.<sup>3</sup>

### OCEAN

~75% of Earth's surface. 3 types of oceanic ecosystems. 40% of all photosynthesis occurs in oceans.<sup>3</sup>

## About Hello, World

Hello, World is an interactive simulation that encourages collaboration between users while simultaneously environmental preservation. Using modern technology and interactive collaboration, Hello, World is an engaging experience for users of all ages. It gives people an opportunity to experience Earth in a simple, abstract way, thus raising awareness of just how delicate our world is.

### OBJECTIVES

- Abstract ecosystems into simplified forms to facilitate learning**
- Showcase the interconnectedness of the natural world**
- Educate users about the environmental "big picture"**
- Establish the earth as a delicate place that is sensitive to change**

### TEAM MEMBERS

First Last Name  
First Last Name  
First Last Name  
First Last Name

### PROMOTIONAL VIDEO

### BLOG

<http://helloworldteam.tumblr.com/>

Ecosystems Types About  
<http://helloworldteam.tumblr.com/>

© Hello, World  
New Media Team Project  
2014

<sup>15</sup> List of objective with accompanying icons to illustrate each objective

<sup>16</sup> Picture of each team member

<sup>17</sup> Names of each team member

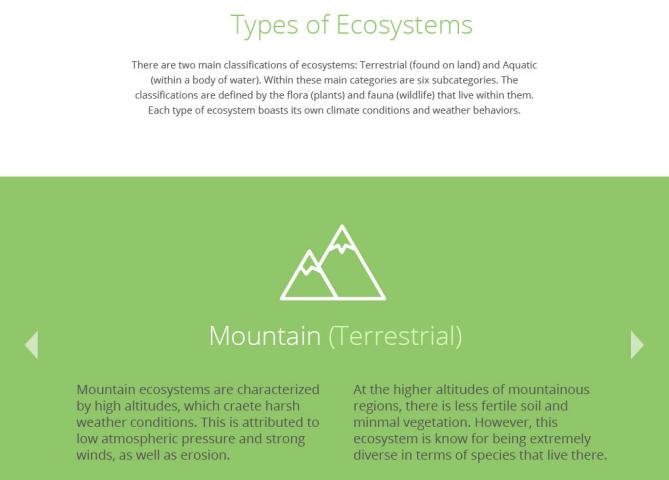
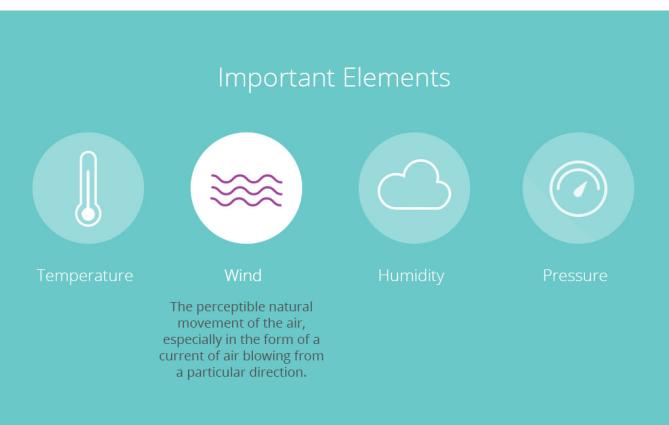
<sup>18</sup> Video that promotes the project

<sup>19</sup> Link to the blog

<sup>20</sup> Footer that includes link to the current section of the blog, and a copyright for our team and project to protect our work

19

# Design Progress | Website Designs



### About Hello, World

Hello, World is an interactive simulation that encourages collaboration between users while simultaneously increasing awareness about the importance of environmental preservation. Using modern technology and interactive collaboration, Hello, World is an engaging experience for users of all ages. It gives people an opportunity to experience Earth in a simple, abstract way, thus raising awareness of just how delicate our world is.

### Project Objectives

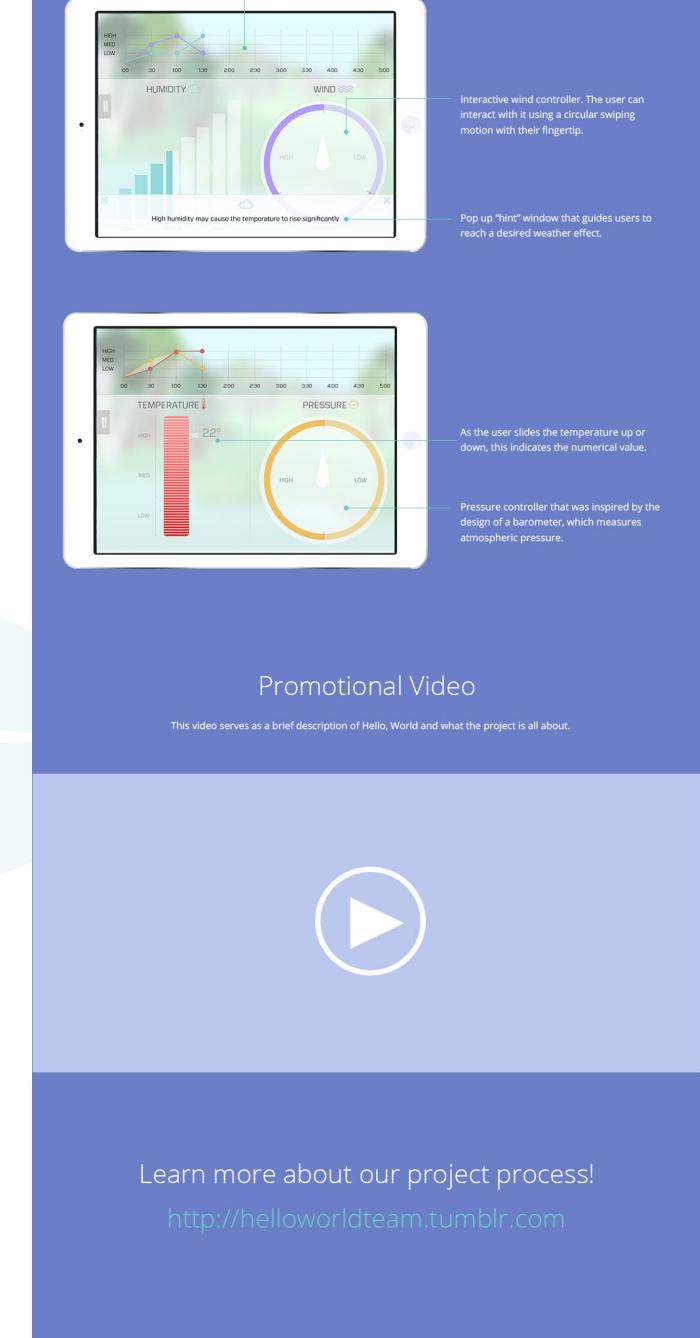
- Abstract ecosystems into simplified forms to facilitate learning
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### Featured Weather Patterns

- Fire**: Combustion or burning, in which substances combine chemically with oxygen from the air and typically give out bright light, heat and smoke.
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- Thunderstorm**: A storm with thunder and lightning; typically also with heavy rain or hail.
- Rain**: Moisture condensed from the atmosphere that falls visibly in separate drops.
- Windstorm**: A storm with very strong wind but little or no rainfall.

### Interface Elements

Graph that highlights the data from the



# Final Product | Promo Video



<http://vimeo.com/93605983>

# Final Product | Prototype Video

<https://vimeo.com/93687502>

# Lessons Learned

- Deadlines are extremely important
- Relying on team members
- Working as a team
- Communication is key



# Future Direction

- Implement more weather patterns, natural disasters, and smoother transitions between environments
- Implement more assets, such as animal life, shrubbery, clouds, etc.
- Better touch control
- Create more terrain environments and assets
- Implement main interface top bar



Using modern technology and interactive collaboration, Hello, World is an engaging experience for users of all ages. It gives people an opportunity to experience Earth in a simple, abstract way, thus raising awareness of just how delicate our world is.



# Thank you!

Check out our blog at: <http://helloworldteam.tumblr.com>

Check out our website at: <http://helloworld.cias.rit.edu/>