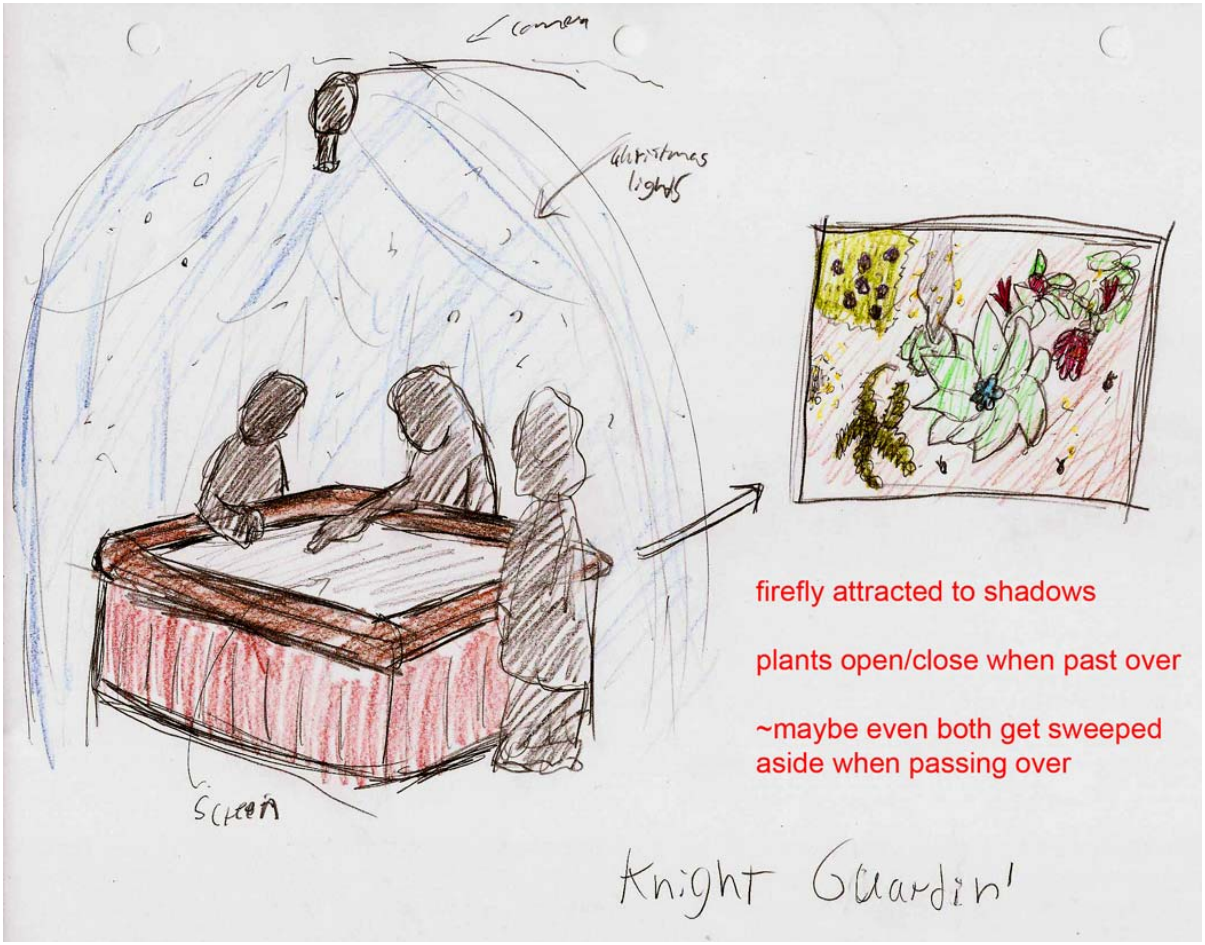
# Team Arcade Bonanza

**Theme:**
A Fascination with Nature




**User Group:**
Children between the ages of 12 - 16. In general, these children have more patience than younger youth. They are starting to consider their future and have stronger ideas of what they like/dislike.

Specifically we are looking to target children from middle class and upper middle class families. Most often they are familiar with technology. They have fewer opportunities to explore outside. They have less interaction with nature and more interaction with a diverse combination of different technologies (web, handheld devices, touch devices, gesture based such as the Kinect, gaming consoles).

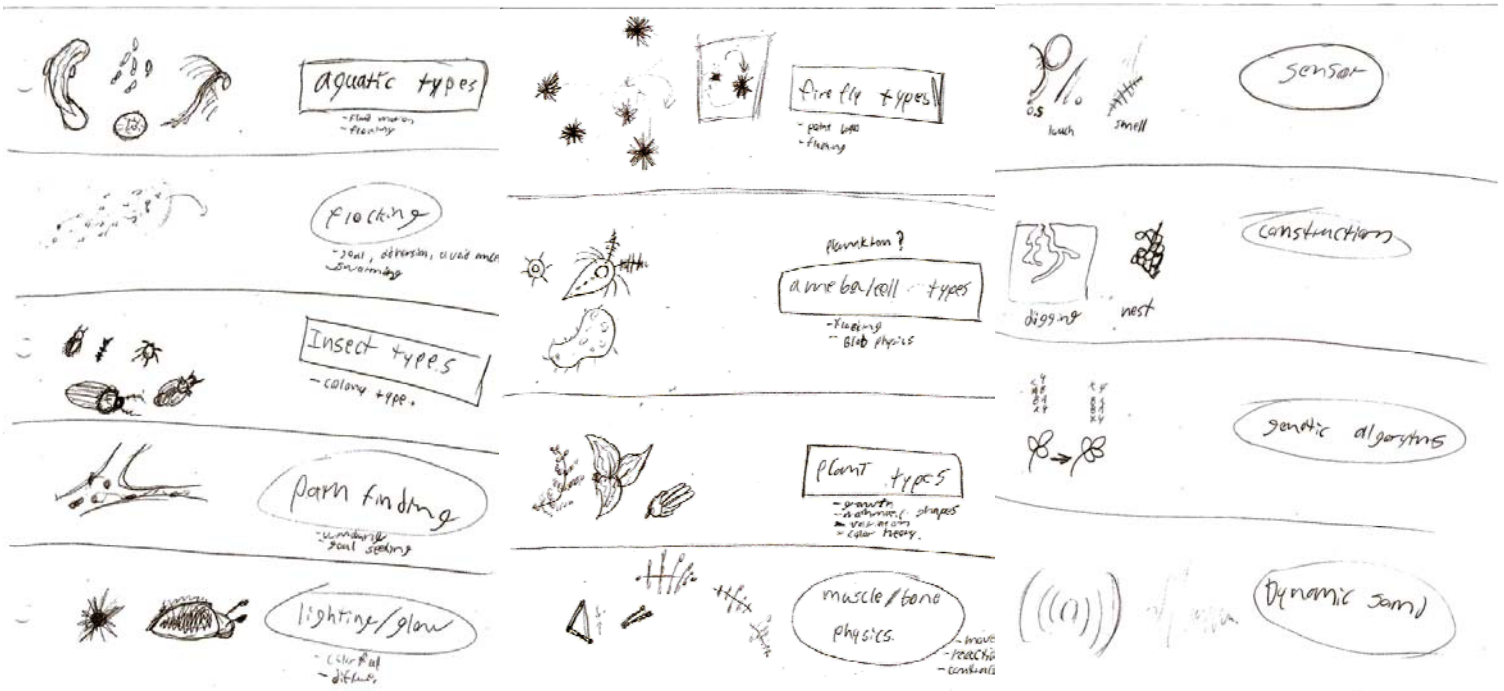
**Why?:**

> "Children do not give up their innate imagination, curiosity, dreaminess easily. You have to love them to get them to do that."
> - R. D. Laing

Parents often worry about the safety of their children. But preventing them the opportunities to explore on their own can be detrimental to their individual growth. They may lose their sense of wonder. We are trying to provide a safer method to allow kids a degree of freedom to explore and understand some small aspect of nature. We also hope to instill an interest in the subject matter we are showing. For the older end of our target range this could be more related to understanding the different components that make up our interactive piece from a technical standpoint and promoting an interest in media arts, mathematics or re-inspiring a sense of curiosity about the natural world. Most importantly we want to show young people that discovery has an intrinsic value on its own.

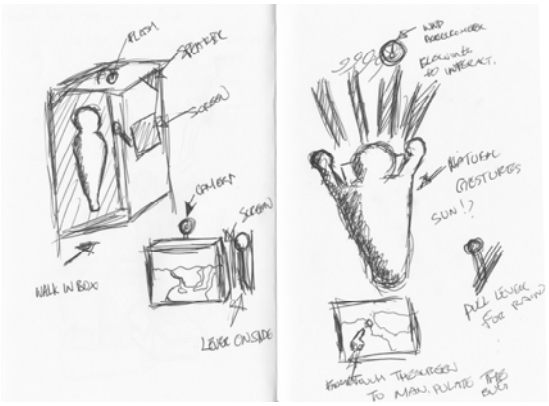
**Scope:**
A medium-sized exhibit piece using equal parts physical and digital components. It would be a single work with an artistic and exploratory focus, not intended for reproduction or sale.

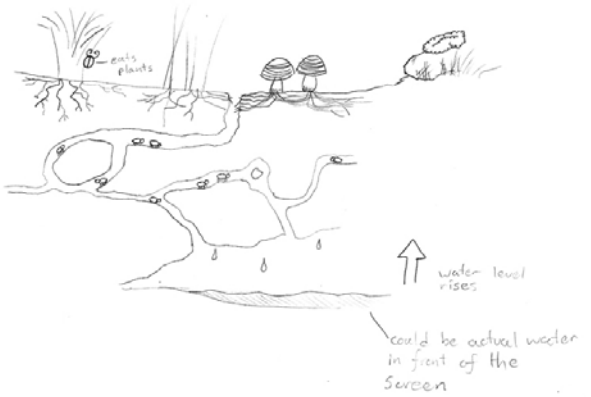
**What do we mean by "Nature":**
Rather than attempting to express "nature" in a general way, we'd like to look at and attempt to simulate a small aspect of it. This would require a discrete isolation of a specific component within the natural world and looking at it separate from other systems that most likely do influence it but that are beyond our scope. We've identified a series of patterns that we feel would be relevant to potentially explore.




Our Pattern Language: Demonstrates different potential patterns that we could simulate

**Goal:**
To make a reflection of a specific aspect of nature through a simulation that is visually appealing. By making something relevant from the observation point of visual media, mathematics, and the natural world, we hope to instill a sense of fascination and curiosity into our young audience.




## Idea:

Regardless of the final form of the project, we've identified a few qualities that are required for us to maintain our project's overall vision.

Interactive Paradigm: Sharing

Sharing a discovery with others is often a big part of what makes it meaningful. Kids sharing the things they've found or interacting with different aspects of our piece at once help provide a sense of perspective and also make the exploration more meaningful.

Essential qualities for natural elements:

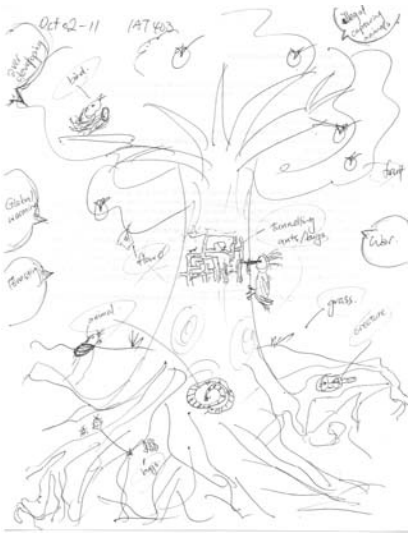
A mini-ecosystem with a few simulated creatures/plants that depend on each other in some way.

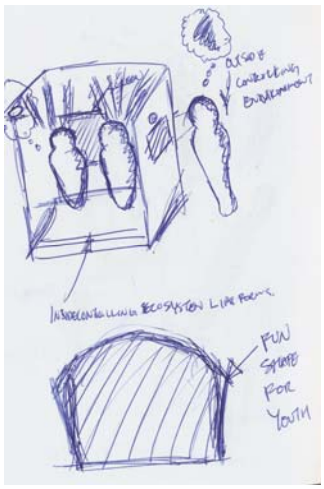
A higher level, more global influence such as weather or perhaps the participants themselves.

Essential physical/interactive elements

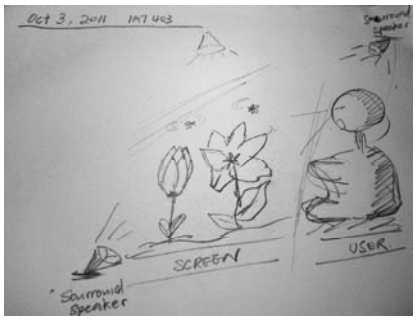
Interaction occurring on at least two different levels of the system.

Tree of Life: Interactions between the tree and many other systems






Social Interactions




Watching Plants and Bugs

## References:

**WolfQuest:** ***The Minnesota Zoo and Eduweb***
Wolfquest is a life simulation game that gets the users to play the role of a wolf in the wild.The game takes the player through many of the actions that real wolves do: hunting, marking territories, finding a mate, raising pups, and defending yourself. It extends to multiplayer games, where users act as a pack with other people. like our project it seeks to immerse and fascinate the user with the subject matter by placing them in an active role where their actions effect the environment.

**Still ALife:** ***Christa Sommerer & Laurent Mignonneau***
Generating natural forms from the presence of observers. A Large screen that displays natural and abstract forms are generated based on proximity to visitors.

**Flower:** ***Thatgamecompany***
A beautiful and immersive game,
Control flower petals drifting in the wind and explore nature scenes. The game world changes as you drift by other flowers. The goal of this game was to arouse positive emotions in the player.

## Resources

***What skills does this project demand?***

- Arduino
- Wiring
- Programming:
  - Communicating with Arduino (Input)
  - Generative Systems
  - Graphics (Output)
- Interaction Design
- Fabrication

***What do we have?***

All: design and interaction design knowledge
Kinson: Prototyping: 3d modeling, Fabrication: carpentry, Graphic Design, Experience working with Children
Shane: Programming: Media arts, Fine Arts
Margaret: Graphic Design, Psychology, Hobby Computer building
Nathan: Programming: Media arts
Lanz: Prototyping: 3d modeling, Programming: Informatics, Sound Design, Experience working with Children

***What are we lacking?***

All things considered our skill-set is pretty broad but there are still things where we lack experience.

Wiring:
We will be doing a lot of wiring when connecting our interactive components. Help can be found from the technicians in Solid Space and from an electrician we know (if necessary).

Fine Arts:
Even if we get things to function well it takes a certain degree of artistry to get our project to really look great. We have a pretty technical team so we'll need to constantly work at this and get feedback from peers and mentors about the look and style of the piece.

## Conclusion:

We still have a lot of room to explore with this idea. We want to encourage children to engage themselves with nature and learn to not fear their environments. By giving them a safe space to experience this (by providing them a secure sense of experiencing discovery), hopefully children will be fascinated enough to explore nature themselves. And if not nature, we may at least inspire a curiosity in the technology involved in the piece's production and an appreciation for how media, mathematics, and the natural world are related.