Relephant Findings

OUR LEARNING GAME: HOUSE OF ANIMALS

Phobey Cass, Shivalika Jain & Liz Newman | HCI 590 | June 6, 2017

WORKSHOP LOGISTICS

WORKSHOP 1

DATE & TIME
Sunday, April 23rd
3:00 p.m. to 4:00 p.m.

LOCATION
Oak Park Public Library

DESIGN TEAM
We had 8 participants

Pseudonym	Gender	Grade - Age
Mike	Male	3rd - 8
Greg	Male	2nd - 8
Rachel	Female	3rd - 9
Maggie	Female	3rd - 8
Lindsey	Female	3rd - 9
Leonard	Male	2nd - 8
Neil	Male	1st - 7
Mick	Male	5th - 11

WORKSHOP 2

DATE & TIME
Sunday, May 7, 2017
2:45 p.m. - 4:10 p.m.

LOCATION
Oak Park Public Library

DESIGN TEAM
We had 6 participants

Pseudonym	Gender	Grade - Age
Mike	Male	3rd - 8
Greg	Male	2nd - 8
Maggie	Female	3rd - 8
Lindsey	Female	3rd - 9
Leonard	Male	2nd - 8
Andy	Male	5th - 11

WORKSHOP 3

DATE & TIME
Sunday, May 21, 2017
1:00 p.m. - 2:30 p.m.

LOCATION
Phobey's Residence

DESIGN TEAM
We had 5 participants

Pseudonym	Gender	Grade - Age
Mike	Male	3rd - 8
Greg	Male	2nd - 8
Rachel	Female	3rd - 9
Lindsey	Female	3rd - 9
Leonard	Male	2nd - 8

ASSENT FROM THE CHILDREN

We received consent from the children's parents at Workshop 1 and 2.

To begin every workshop we obtained verbal assent from all of the children by asking the following questions:

1. "Are you guys happy to be here and excited to participate?"

2. "Is it okay if we take pictures of you during the workshop?"

3. "Is it okay if we take a video of you while you play with the learning game? No one besides the 3 of us will ever see the videos."

All the children responded with a nodding gesture or the word "Yes" to all three questions.

We also reminded the children that they can take a break at any time.

WORKSHOP 1: BRAINSTORMING

NOMINAL FOCUS GROUP BRAINSTORMING

Our team thought about games that will teach children about animals and their habitats.

First we had the children write down or draw as many ideas as they could on different Post-its or sheets of paper.
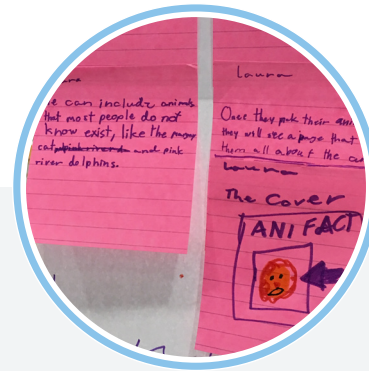
Then everyone got a chance to explain their ideas to the group and created a categorized list of themes.
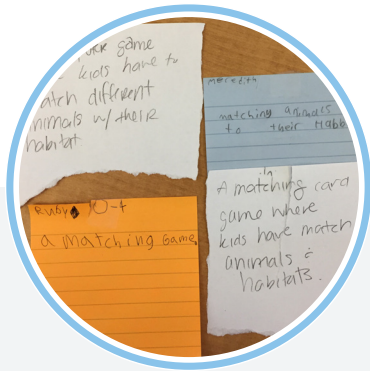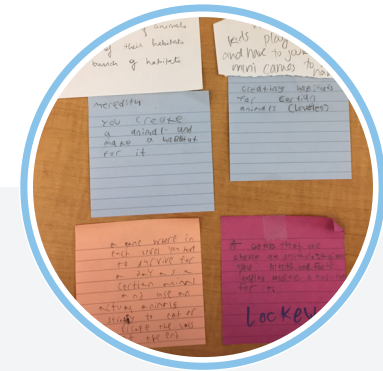

MATCHING GAMES

"Matching animals to their habitats"

- Maggie

FUN FACTS

"We can have a wheel that is filled with different types of animals that you can click on. Then when they click on an animal the game will show them fun facts about that animal. ANIFACT"

- Rachel

BUILDING HABITATS

"A game that you choose an animal, it gives you hints and facts and you make a habitat for it and take care of it."

- Leonard

WORKSHOP 2: PROTOTYPING

LAYERED ELABORATION

We divided our team into three groups and focused on designing three high level screens for our tablet-based learning game. However, during Workshop 2 we decided to divide one of the screens into two separate screens.
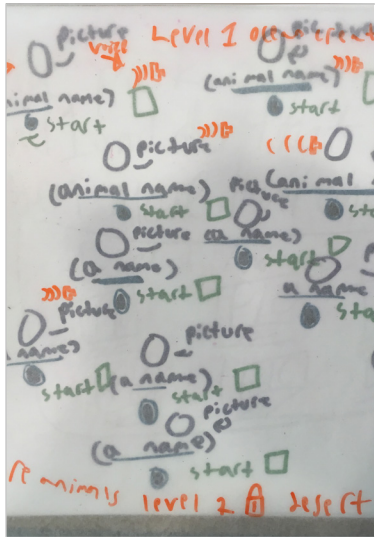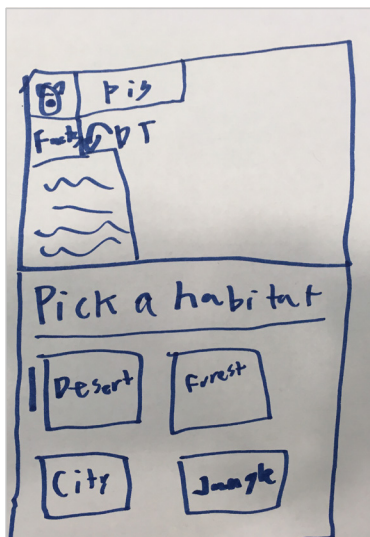

ANIMAL SELECTION

- Levels with different animals
- Animal thumbnails
- Lock and progress icons
- "Start" buttons
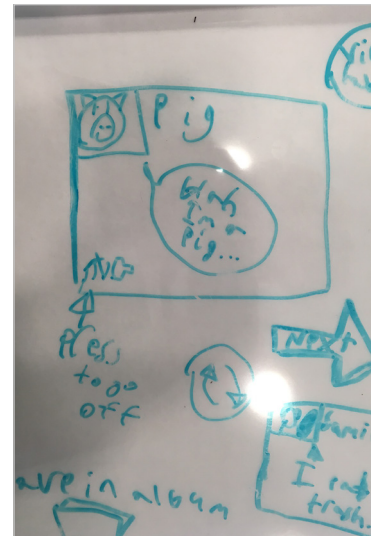
FUN FACTS

- Real photos of the animal
- 5-6 animal fun facts
- The facts can be saved to the player's Field Notes
- The notes will be accessible at all times during the game
- Players can add their own animal facts

HABITAT MATCHING

- Showcase 7 habitats of the world: Desert, Grasslands, Forest, Ocean, Polar, Rain Forest, Wetlands
- An "X" will appear if the wrong habitat is selected
- The selected habitat will become the background of the building interface


BUILDING A HABITAT

- Library of environmental elements to add to the habitat
- Happiness Meter will react to elements
- "Undo" and "Helpful Hints" buttons
- Ability to create their own environmental elements

OUR PROTOTYPE

Based on the designs our team created during Workshop 2, we built an interactive tablet-based prototype of our learning game. We used Sketch and Invision to generate colorful, visual and interactive layouts to bring our learning game to life.

Our prototype revolves around learning about African Elephants and their habitat.
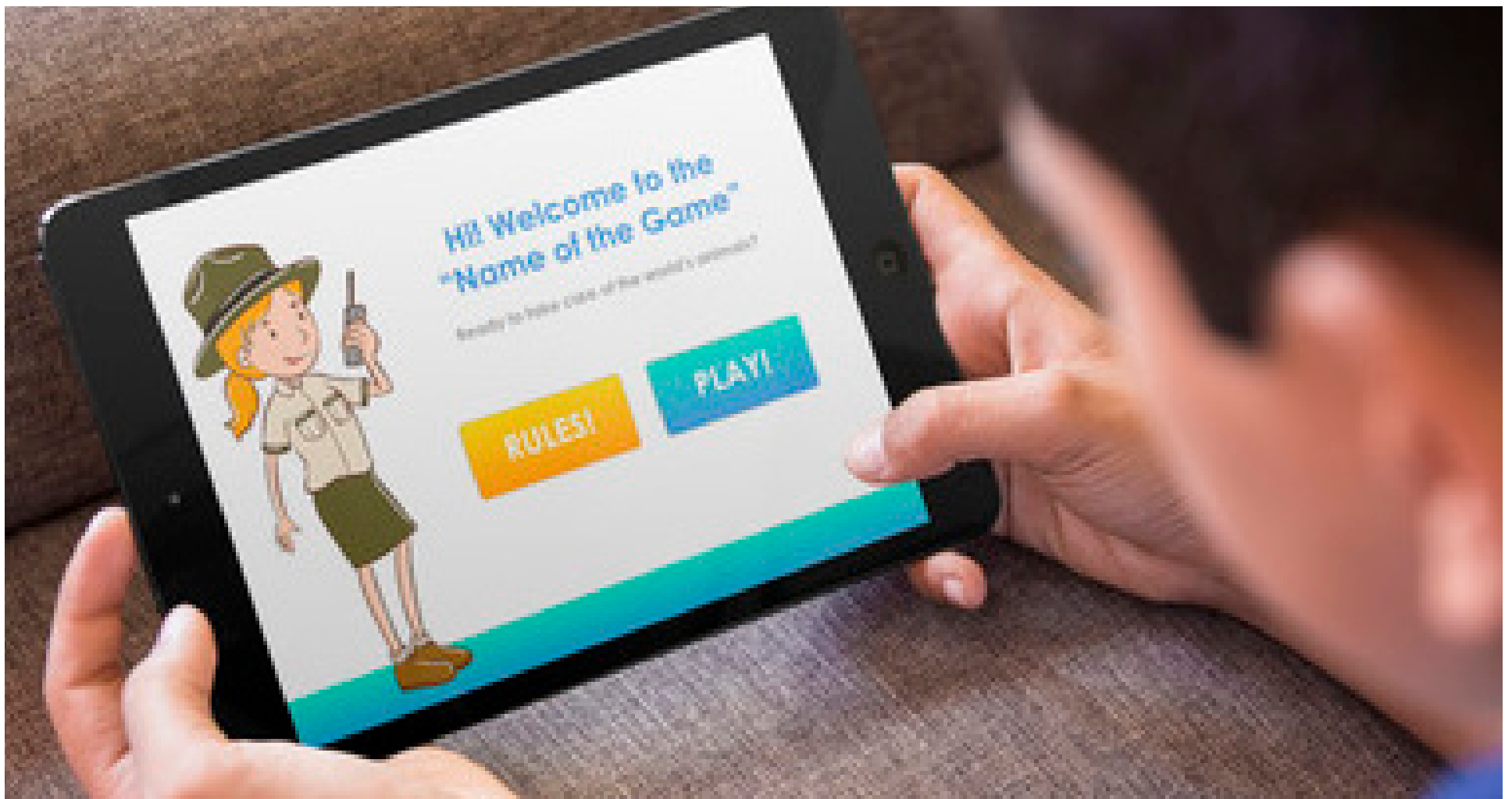
OUR PROTOTYPE: ANIMAL SELECTION
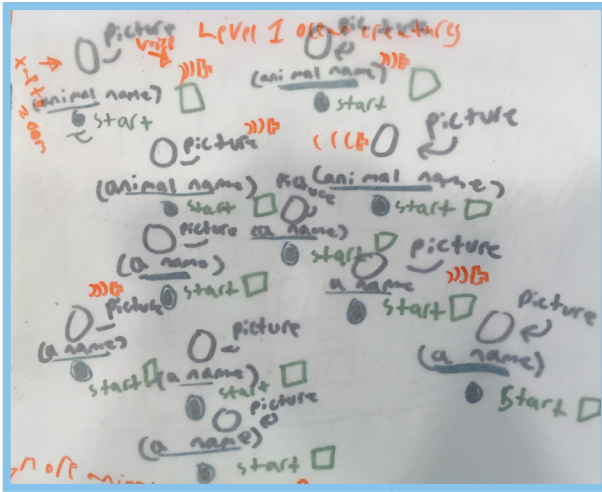
Hi Fellow Ranger! Let's start learning about animals. Select which animal you want learn about today

LEVEL 1

POLAR BEAR	AFRICAN ELEPHANT	WHALE
REPLAY	PLAY »	RESUME »

LEVEL 2

CAMEL	CROCODILE	SLOTH
LOCKED	LOCKED	LOCKED

LEVEL 3

FIELD NOTES   AUDIO   SETTINGS   EXIT

OUR PROTOTYPE: FUN FACTS

OUR PROTOTYPE: HABITAT MATCHING

Pick a habitat

Desert   Forest

City   Jungle
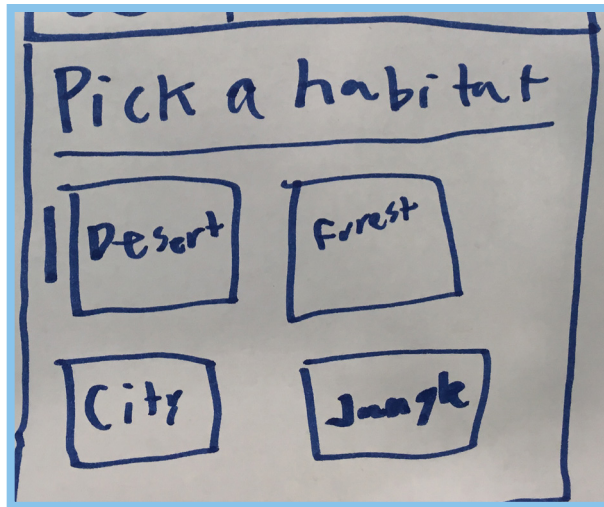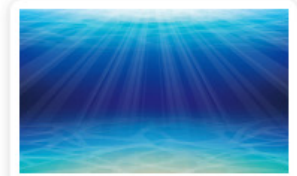
WHAT IS THE AFRICAN ELEPHANT'S HABITAT?

Now that we know what an African Elephant needs in their habitat, **let's try to find the best habitat for an African Elephant.**
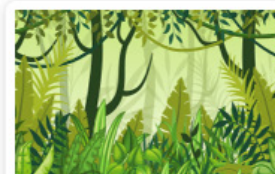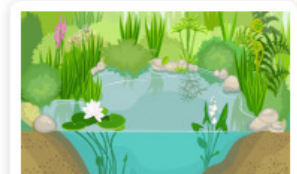
DESERT

GRASSLANDS

OCEAN

POLAR REGIONS

RAIN FOREST

TEMPERATE FOREST

WETLANDS

FIELD NOTES   AUDIO   SETTINGS   EXIT

OUR PROTOTYPE: BUILDING A HABITAT

WORKSHOP 3 ACTIVITIES

We worked with each of our team members to evaluate the prototype During each evaluation session we conducted numerous activities to evaluate the **usability**, **learnability**, **effectiveness**, **satisfaction** and **fun** for our learning game called House of Animals.
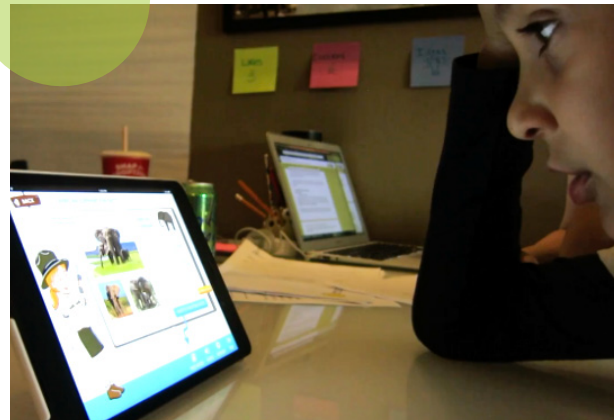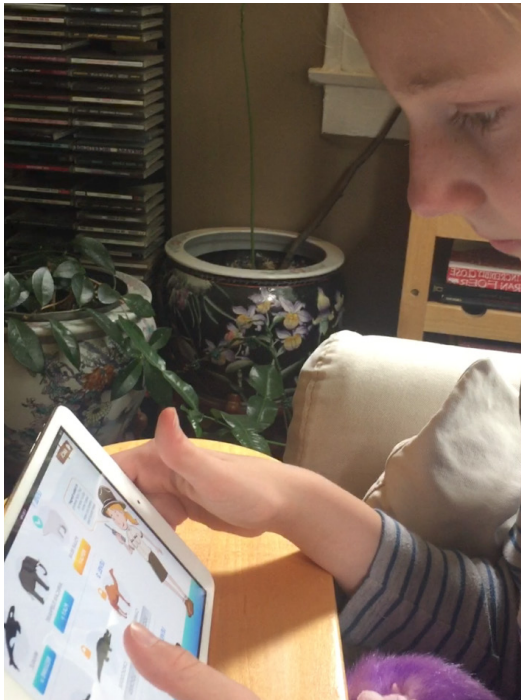
Think Aloud Technique

Druin's Technique (Sticky Notes)

Pre and Post Test Fact Question

Fun-O-Meter

Smiley-O-Meter

WORKSHOP 3 FINDINGS

1. INTUITIVE GAME FLOW

2 out of 5 participants completed the full happy path successfully.

3 out of 5 participants only encountered one error - Saving their Field Notes.

"hmm it does not seem to be working when I click to save them down here"

- Greg

## 2. INSTRUCTIONS AND FEEDBACK

All of the participants reacted well to the ranger who gave instructions.

"I think the instructions are helpful, because if we didn't have them then we would be like uhhhh what are we doing?"

- Leonard

All of the participants thought the game provided effective feedback, such as the book closing after saving the field notes and the happiness meter growing.

WORKSHOP 3 FINDINGS
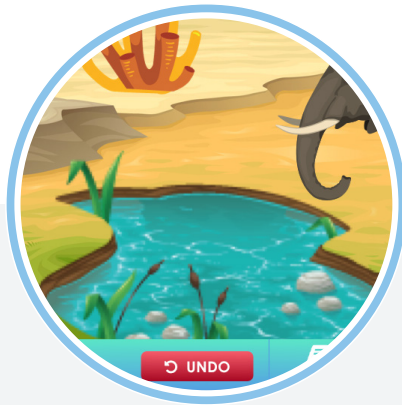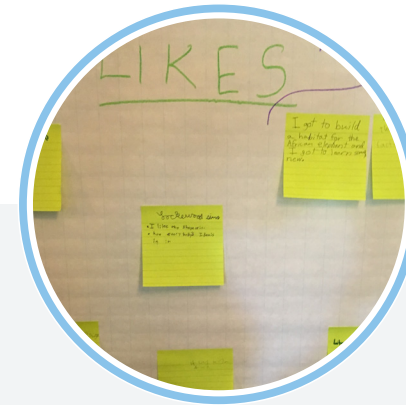
3. USER CONTROL AND FREEDOM

4 out of 5 participants easily fixed the mistake of adding seaweed, by clicking the "UNDO" button.

1 participant tried to click directly on the seaweed to remove it.

The children wanted to change the functionality of the "UNDO" button.

"I want the 'UNDO' button to turn into a delete button so that way I can delete whatever I want."

- Mike

4. RESPONSE TO THE PROTOTYPE

Overall our design team reacted very positively to our prototype.

"It is cool because, I can see all of our ideas in the game!"

- Leonard

Most of the dislikes involved the lack of full functionality.

"I do not like how all the buttons did not work."

- Greg

WORKSHOP 3 DESIGN IMPLICATIONS

Removal of Misleading Cues

In order to enhance the experience we will remove the arrow that points from the "Save Your Field Notes" button to the "Field Notes" toolbar.

Reducing the Presence of the Virtual Coach

The ranger will appear and function as she currently does for the user's first time playing. Once the player has completed their first habitat, the ranger will no longer interrupt the player at every step. Instead she will be located in the bottom left corner.

Gradual Increments of Happiness Meter

We will make the game more challenging by increasing the number of elements needed to make an animal happy and make the happiness meter grow in more gradual increments.

Ability to Selectively Remove Elements

A "Delete" button will cause all of the habitat elements to shake and a small "X" icon will appear next to each element. Clicking on the "X" icons next to the elements will make it easy for the player to effectively and efficiently remove elements from the habitat.
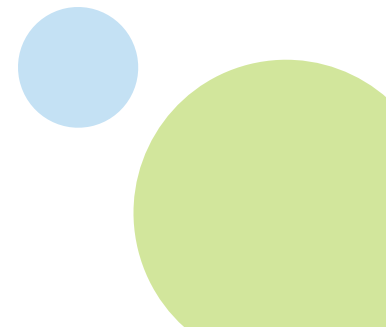
REFLECTION

- All the tasks, including getting the children together, explaining the agenda and conducting the activities need more time especially when working with five or more children.

- The children were not only very familiar with terminology and concepts related to building the learning game, but possessed impressive foresight in considering how the game might be used.

- We discovered that not all children were comfortable working in pairs and we had to adapt our plan in the spur of the moment to accommodate the situation.

- Female participants were more hesitant than male participants in sharing their ideas and any feedback that could be perceived as negative.

- We saw first-hand the benefits of demonstration to supplement directions when explaining a new process.
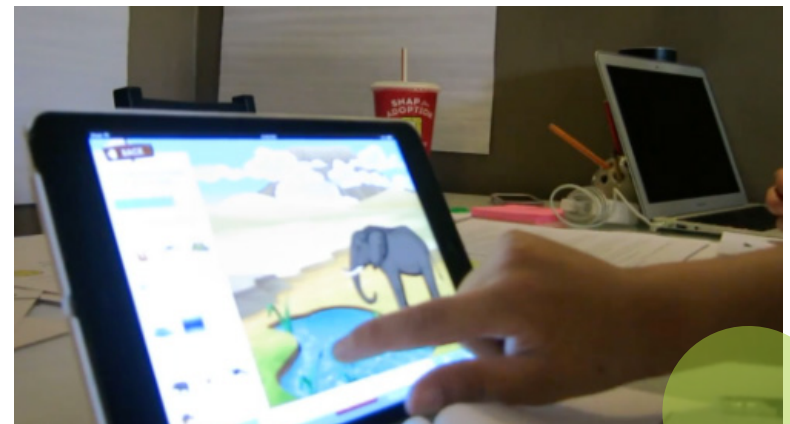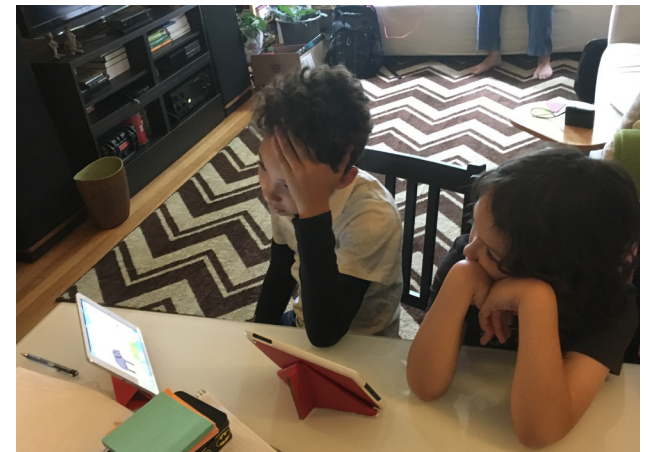
THANKS FOR HELPING US!

To say thank you, we created Certificates of Achievement for the children. This gave the children something to remember their time with us and provided them with a feeling of accomplishment.

CERTIFICATE OF ACHIEVEMENT

AWESOME
DESIGN
TEAM

Thank You

for being a part of our awesome design team! We really appreciate you participating in our workshops and helpng us design a great new game.

Let's save the animals of the world!

Thank You!
Just remember... Nothing is IRELEPHANT