



# Math Outside the Box

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# System



# Purpose



# Outline

- User Testing
  - participants,
  - apparatus
  - tasks
- Test Measures
- Results
- Moving Forward

# Participants

- Ashlee's tutees'
  - two 1st grade students
  - one 2nd grade student
- Student's parent

# Device



# Simple Task

## Social: Kid's Profile Page

The screenshot shows a user interface for a child's social profile. At the top, there is a navigation bar with a home icon, a back arrow, and the word "Profile". The main area features the name "Brandon" in large green letters. To the left of the name is a circular profile picture of a young boy. To the right, there is a "Search Friends" input field and a list of three friends: May Ling, Tasha Scott, and Daniel Minardi, each with a small profile picture. Below the name and picture, there are four achievement items, each with a hexagonal icon and text: "10 challenges completed" (blue icon), "Achievement 2" (yellow icon), "2nd grade Math completed" (orange icon), and "Achievement 4" (green icon). The background is a colorful illustration of a green landscape with a path and clouds.

Profile

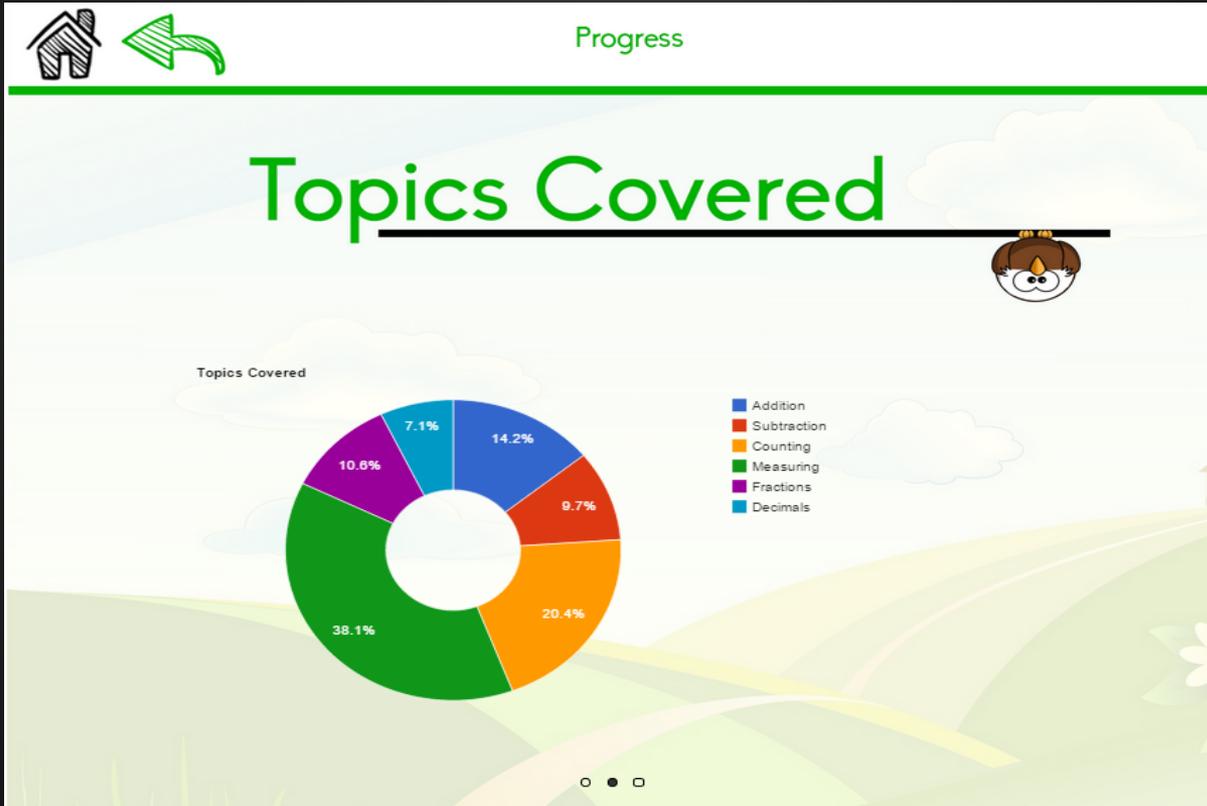
# Brandon

Search Friends

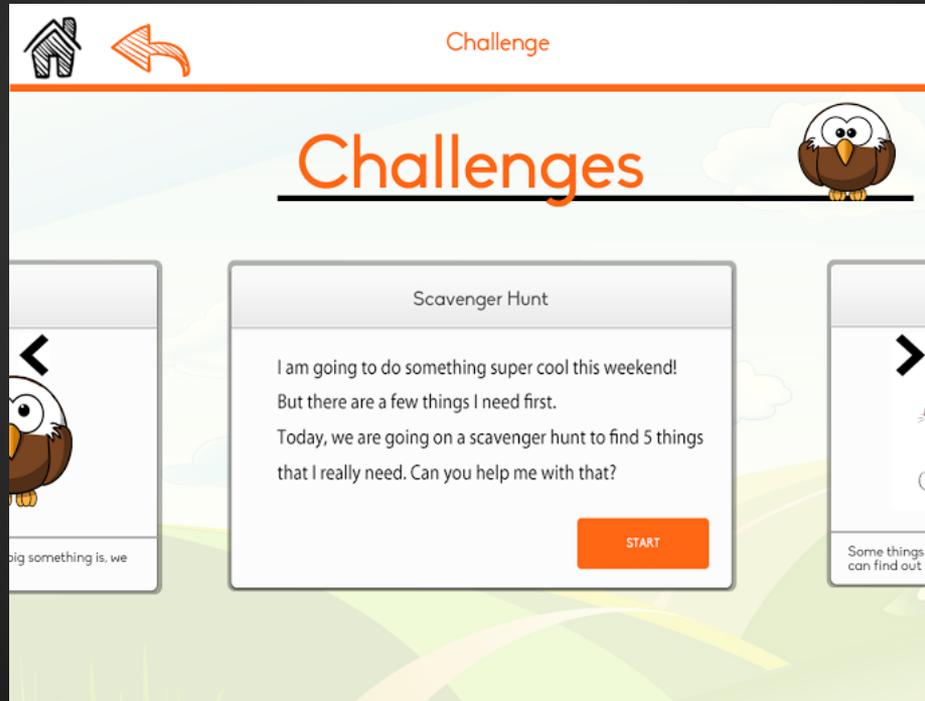
- May Ling
- Tasha Scott
- Daniel Minardi

- 10 challenges completed
- Achievement 2
- 2nd grade Math completed
- Achievement 4

# Moderate Progress: Analysis for Parents



# Complex Task Learning: Challenges



The screenshot shows a user interface for a 'Challenge' section. At the top, there is a navigation bar with a home icon, a back arrow, and the word 'Challenge'. Below this, the word 'Challenges' is prominently displayed in orange, underlined, with a cartoon owl character to its right. The main content area features a central card titled 'Scavenger Hunt'. The text on the card reads: 'I am going to do something super cool this weekend! But there are a few things I need first. Today, we are going on a scavenger hunt to find 5 things that I really need. Can you help me with that?'. An orange 'START' button is located at the bottom right of the card. To the left and right of the central card are partial views of other cards, each featuring a left and right arrow and a cartoon owl character. The background of the interface is a light green and yellow landscape with rolling hills and a blue sky with clouds.

Challenge

## Challenges

### Scavenger Hunt

I am going to do something super cool this weekend!  
But there are a few things I need first.  
Today, we are going on a scavenger hunt to find 5 things  
that I really need. Can you help me with that?

START

Some things are  
can find out by

# Procedure



# Test Measures

- time spent completing the challenges
- discoverability
- ease of use

# Results



Challenge

## Which is bigger?



Backpack vs Pillow



Your answer  
in inches:

Enter



Your answer  
in inches:

Enter

Measure the lengths of your backpack and your pillow using your ruler and let me know how big they are by typing your answers in the boxes and hitting enter.



# Results



# Future Experiments

- setup process
  - have kids create a profile
  - parent data will dynamically generated
- different types of challenges

# Design Changes

## Kids

- more visual instructions
- mascot that offers hints/help
- “Enter” button

## Parents

- clearer graphs

# Moving Forward

- step-by-step instructions
- information about state standards
- decreasing navigation for child



Questions?