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# Pandemic Learning Loss

Why Reinforcement App Games Work!

# Marty Schultz

President

ObjectiveEd



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Educational Technology and  
Accessibility Consultant

Perkins Path to Technology



# Jason Stewart

Director of Customer Success

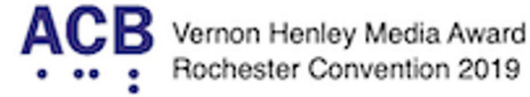
ObjectiveEd



# Learning Objectives

- Explain how to reverse learning loss through skill reinforcement.
- Identify O&M, pre-ETS and braille literacy skills that can be reinforced through gamification.
- Describe how student progress is tracked on a web dashboard.
- Justify the importance of digital data collection of student progress for the preparation of upcoming lessons and IEP progress reports.





- Part 1: Pandemic Learning Loss & ObjectiveEd Overview
- Part 2A: Diane Brauner: O&M
- Part 2B: Diane Brauner: Sonic Math Fundamentals
- Part 3: Pre-Employment Transition
- Part 4: Jason Stewart: BuddyBooks



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# Practice What You Teach

Reducing Pandemic Learning Loss



# Poll #1 – Your caseload

- **What age students do you work with?**
  - pre-K to 3rd grade
  - 3rd grade to 6th grade
  - 7th grade or higher
  - Adults
  - Not Applicable





# Pandemic Learning Loss





## You can reduce Skill Fade through Reinforcement Learning

- Based on Learning Theory Research
- Your student practices what you teach
- Practice leads to mastery

Amy Collaizzi,  
M.Ed., TVI,  
Norfolk Public  
Schools



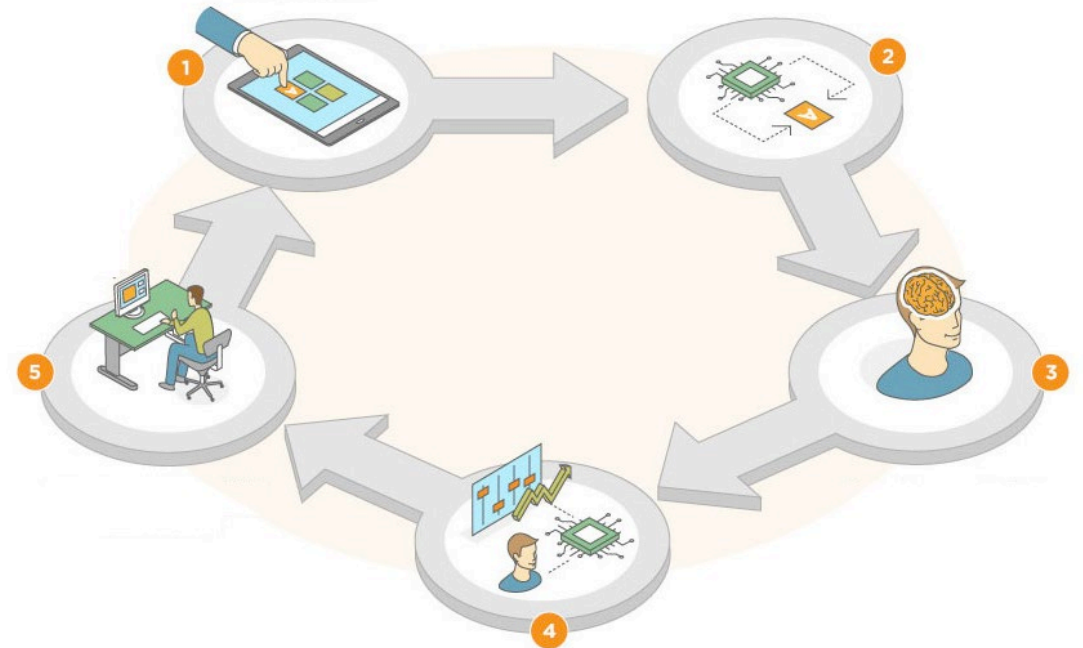
# Poll #2 – Skill Fade & Reinforcement

- How often do you have to re-teach a skill?
  - Sometimes
  - Often
  - Never



# How It Works

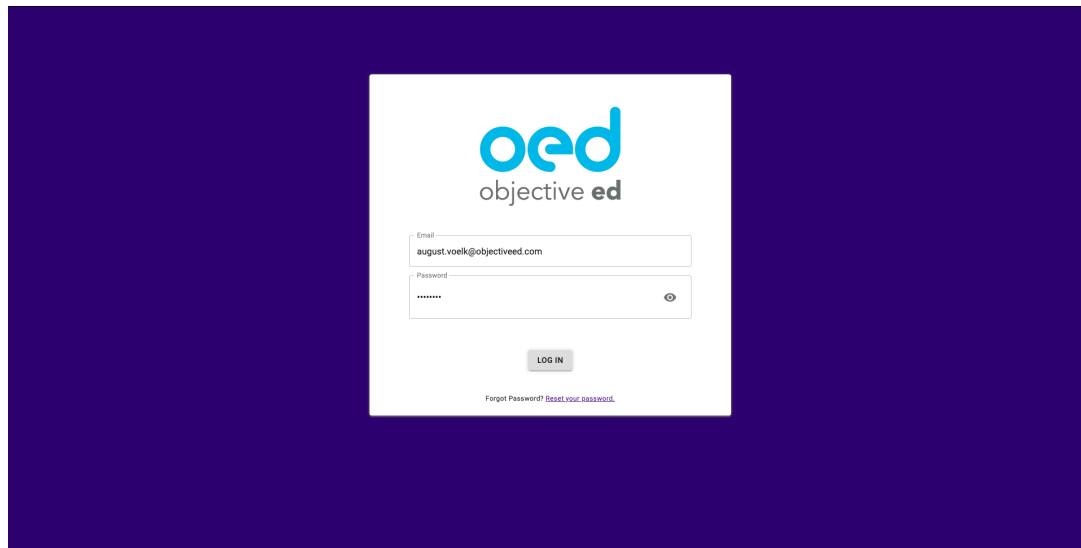
1. Based on IEP, you specify (more) skills for your student to learn
2. Game adjusts itself to match skills student should practice
3. Student plays game, reinforcing the skills you've taught them
4. Game evaluates student progress, adjusting itself to keep student engaged and entertained
5. You monitor your student's progress on web dashboard



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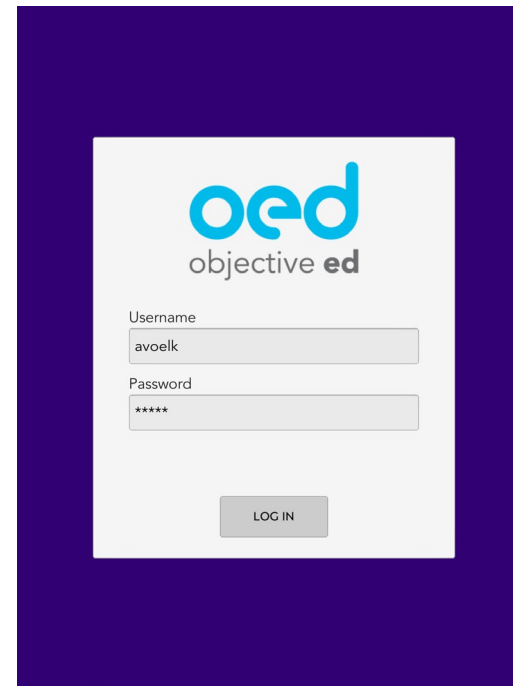
# Login Pages

## Teacher Web Dashboard



The screenshot shows a login form for the Objective ED Teacher Web Dashboard. The form is centered on a white background with a dark blue border. At the top, the logo "oed objective ed" is displayed. Below the logo, there are two input fields: "Email" with the value "august.voelk@objectiveed.com" and "Password" with masked characters. A "LOG IN" button is positioned below the password field. At the bottom, there is a link for "Forgot Password? Reset your password."

## Student's Device



The screenshot shows a login form for the Objective ED Student's Device. The form is centered on a white background with a dark blue border. At the top, the logo "oed objective ed" is displayed. Below the logo, there are two input fields: "Username" with the value "avoelk" and "Password" with masked characters. A "LOG IN" button is positioned below the password field.



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# Teacher Web Dashboard: Assign & Configure Skills



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# Teacher Web Dashboard: Monitor Progress





# Data-driven Progress Accountability

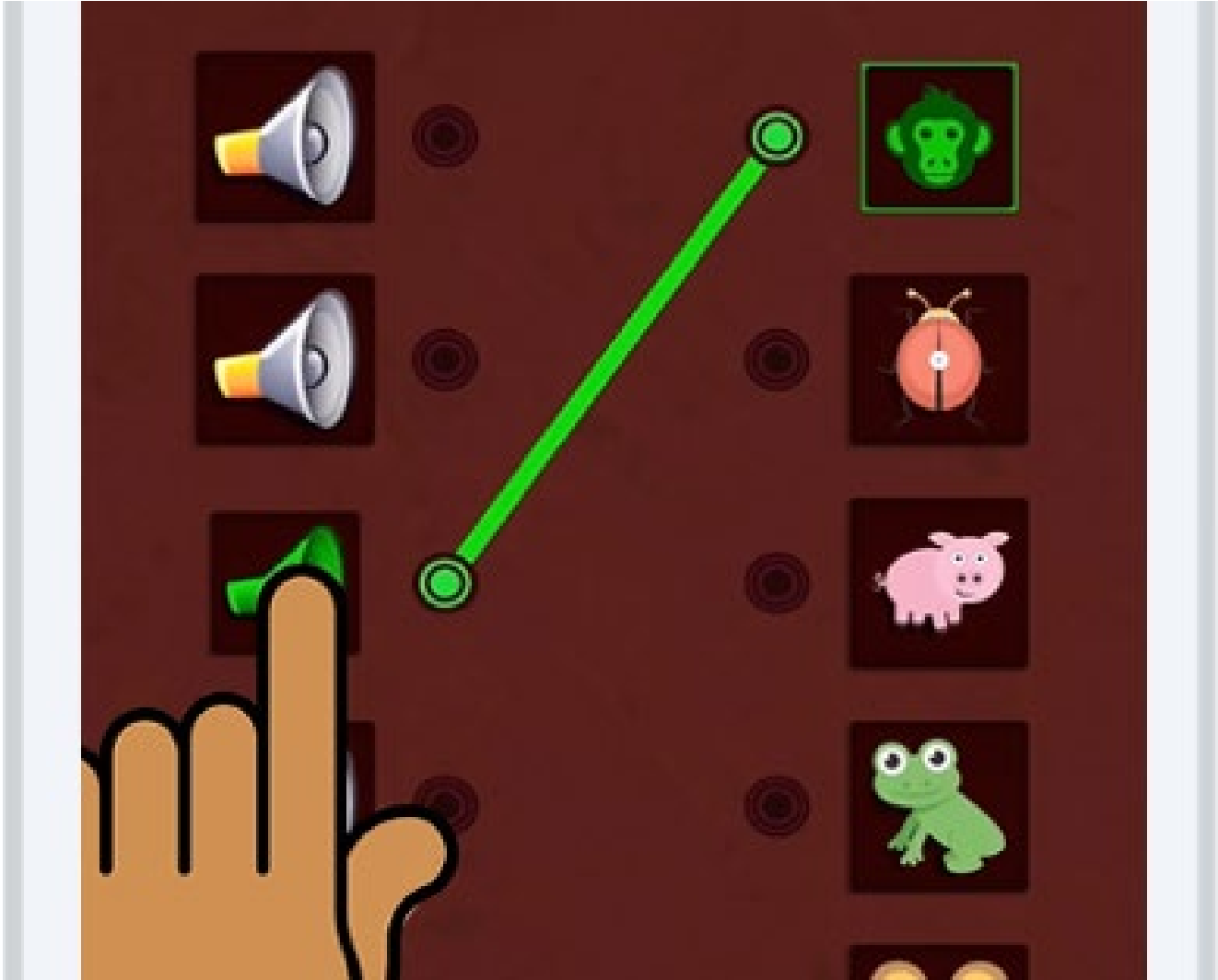
- Usage
- Percent skill improvement
- Types of skills improved



Kristina Smith,  
Dept. of  
Special  
Education  
Services,  
Hollister, MO



# Fully Accessible Audio App



# Poll #3 – Expanded Core Curriculum

- **Which of the following ECC skills do you help students with?**
  - Braille Literacy
  - Directionality
  - Wayfinding & Navigation
  - Assistive Technology
  - Sensory Efficiency, such as Listening Skills
  - pre-ETS / Transition
  - Other



# Reinforcement Aligned with the Expanded Core Curriculum



# Reinforcement Curriculum Solutions part 1

- Early Directionality Relative/Clock/Cardinal
- Advanced Directionality Multistep Directions



# Reinforcement Curriculum Solutions part 2

- Wayfinding in Pretend Town Mental Mapping
- Mental Mapping of Student's Neighborhood



# Reinforcement Curriculum Solutions part 3

- Gestures and Reaction Time
- Gestures and Working Memory
- Listening Skills





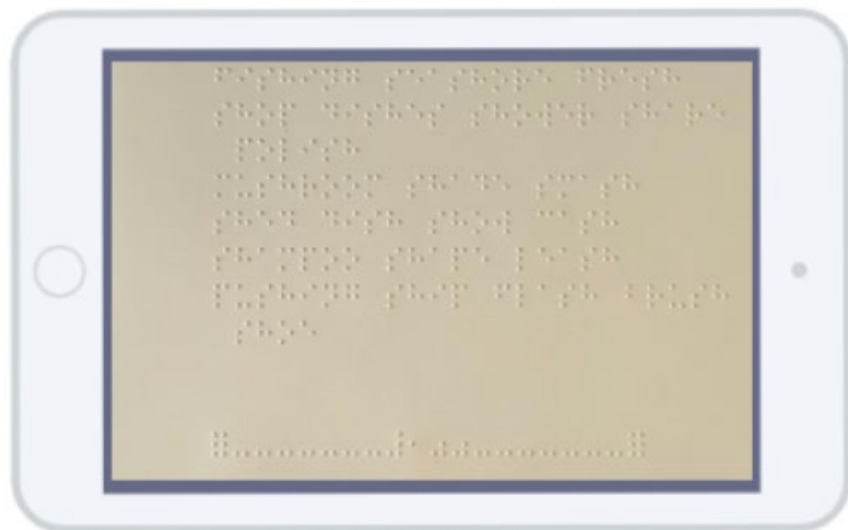
# Reinforcement Curriculum Solutions part 4

- Sound Identification
- Sound Identification and Grid Concepts
- Sound Localization



# Reinforcement Curriculum Views

**Early Braille Literacy Braille Sheets**



**Advanced Braille Literacy Braille AI Tutor**



# Reinforcement Curriculum



# Positive Reinforcement

- Reward Games
- Daily Goals
- Scores
- Personal Pet



# Part 1: Pandemic Learning Loss Questions



# Diane Brauner

Perkins Paths to Technologies

[www.perkinselearning.org/technology](http://www.perkinselearning.org/technology)



# O&M:

the ability to travel  
safely & fearlessly in  
familiar and  
unfamiliar  
environments



# Orientation Skills

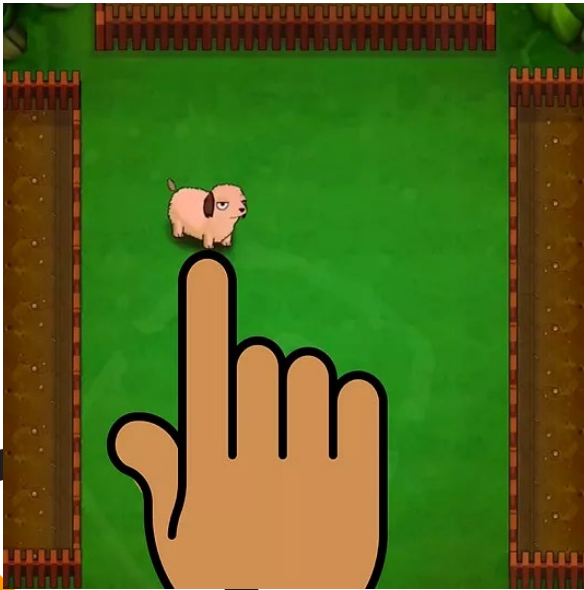
- Directionality
- Spatial Relationships
- Names of hallways/streets
- Cardinal Directions
- Mental Maps
- Awareness of what is nearby (businesses, landmarks)
- Multi-step instructions/directions





# O&M Gamification

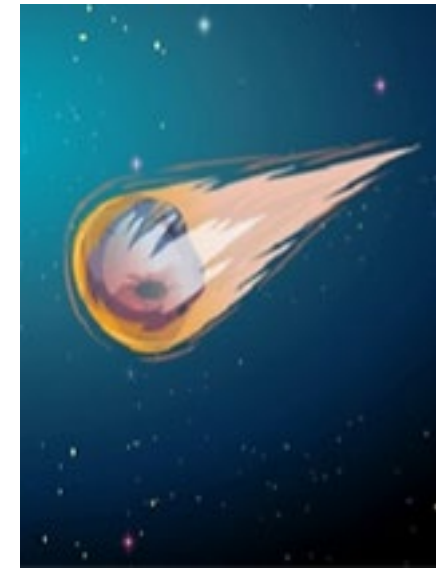
Barnyard



oed logo



Audio Asteroid



# Cardinal Directions



# Temple Explorer

- Practice advanced directionality
- Cardinal directions
- Mental mapping
- Multi-step instructions



# Own Your Real Estate

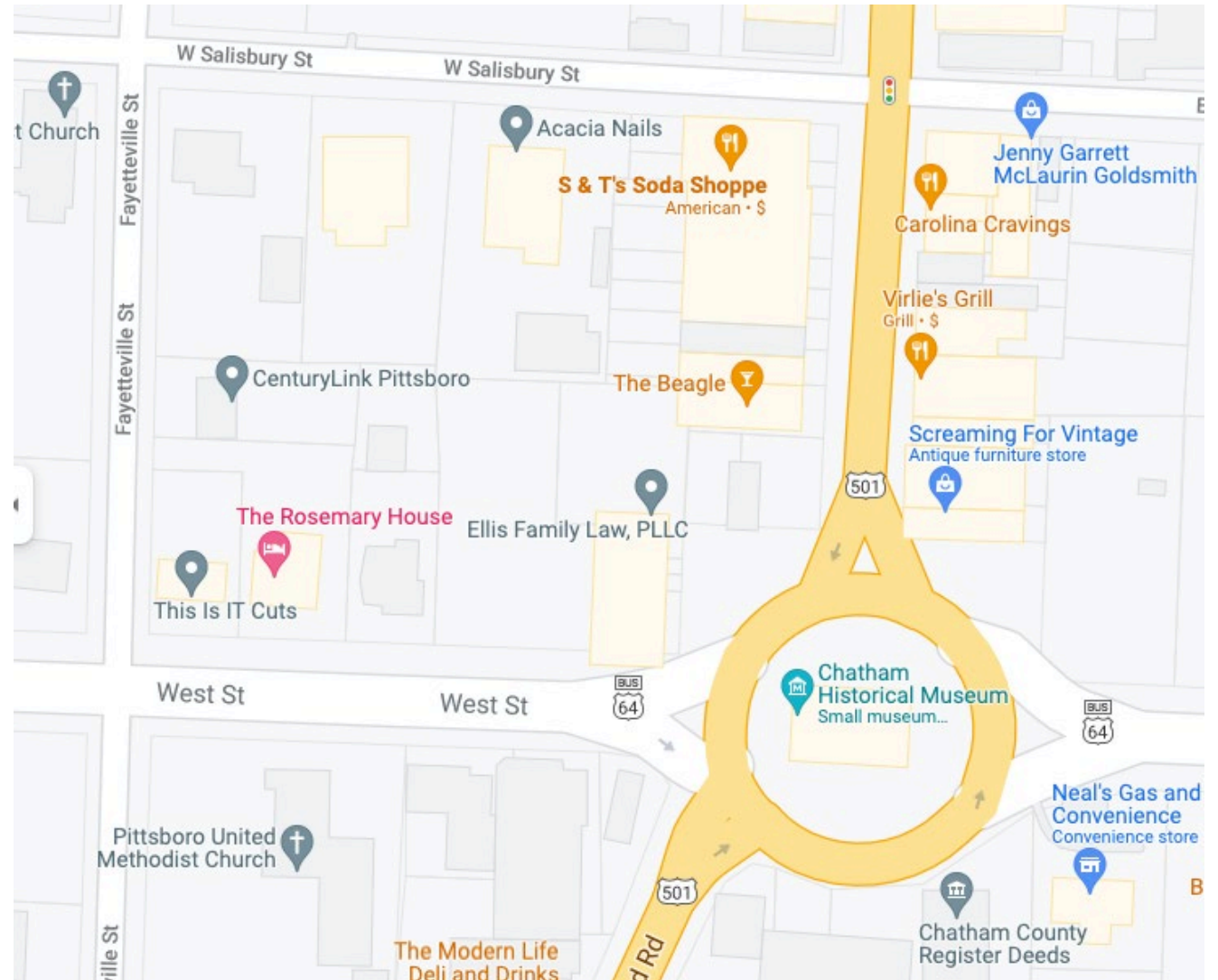


# Wayfinder

- Mental Map
- Navigation
- Time and Distance
- Basic Street Crossing Concepts



# Google Maps

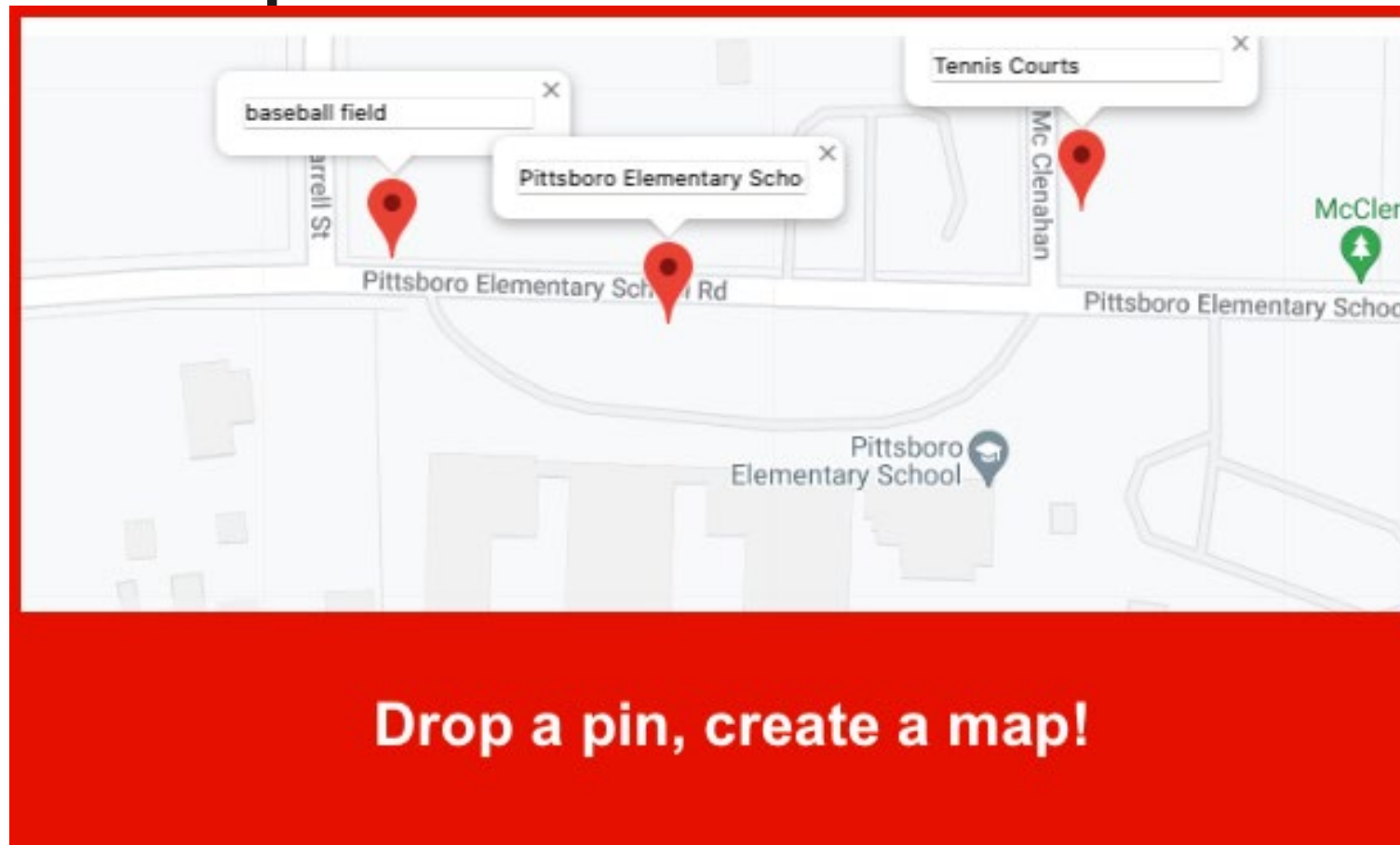


# Map Explore

- Mental Map
- Street and block concepts
- Names and locations of businesses and landmarks
- Overview of area



# Custom Maps





# Map Explore

- Mental Map
- Street and block concepts
- Names and locations of businesses and landmarks
- Overview of area

Kevin's Neighborhood and School Map



# Listening Speed



# Part 2: O&M Questions?



# Sonic Math Fundamentals



# Sonic Math Fundamentals Information

- Diane Brauner, Perkins "Paths to Technologies"
- Dr. Derrick Smith, Univ. of Alabama, Assoc. Prof., BVI Math Education
- Sara Larkin, Statewide Math Consultant, Iowa Services for BVI
  
- Phase 1: Pre-school
- Phase 2: Grades 1 to 3
- Long term: All grade school

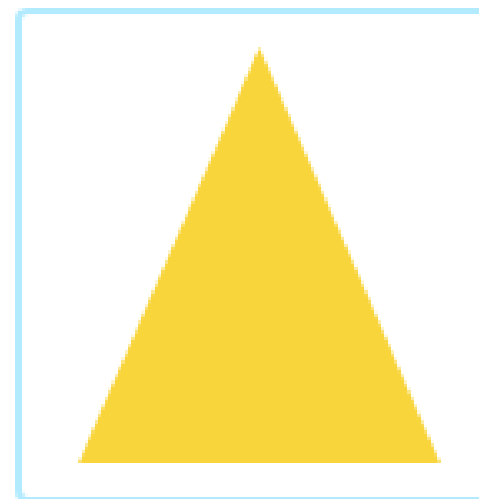
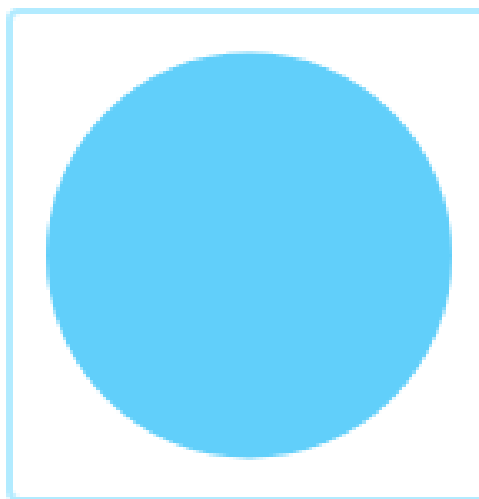
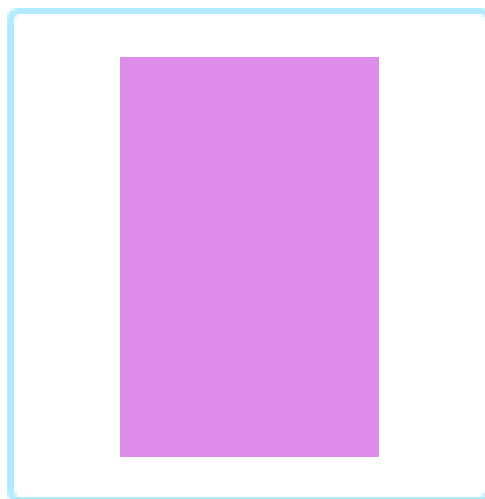


# Digital Math

Skill preview 

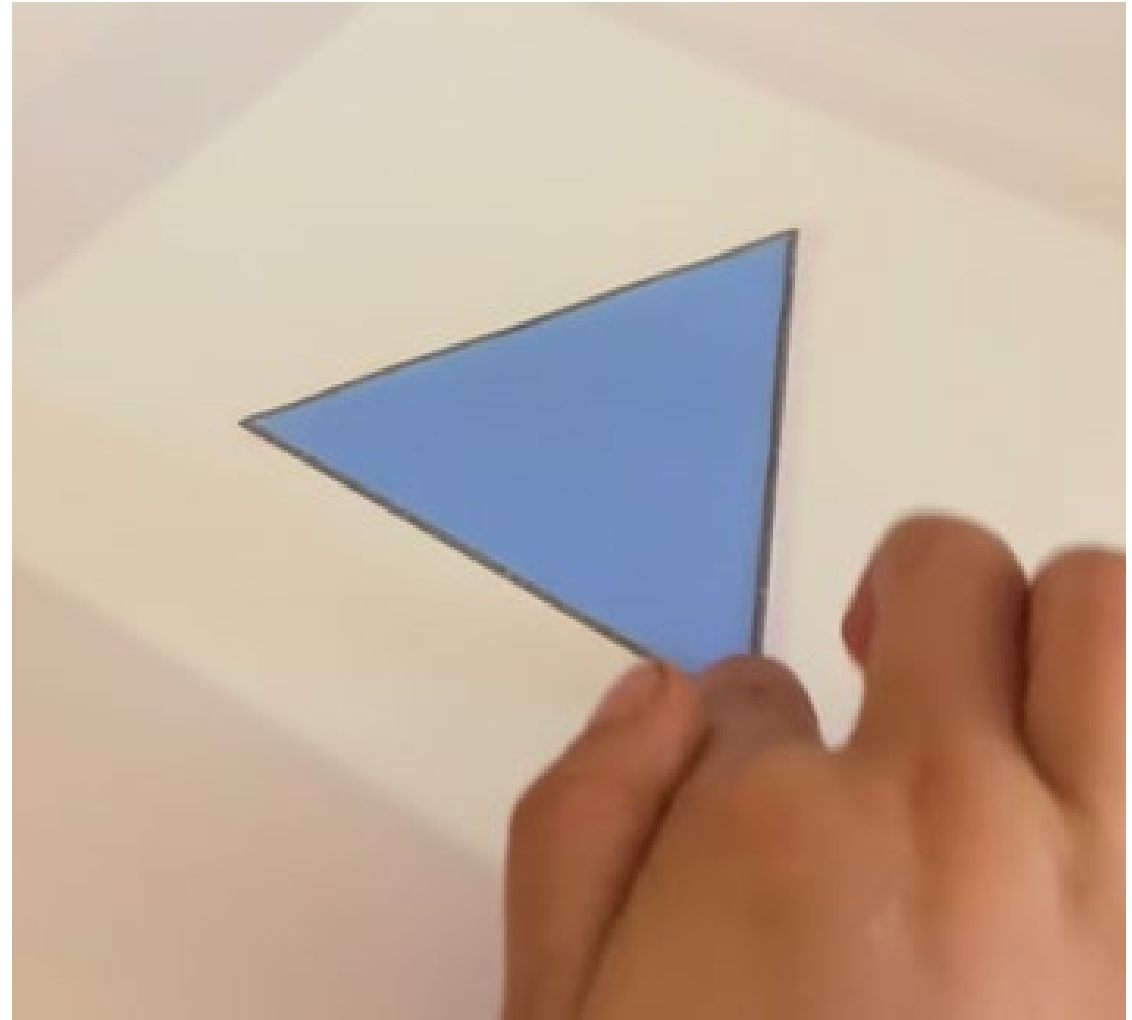
 Search

Which shape is a **triangle**?

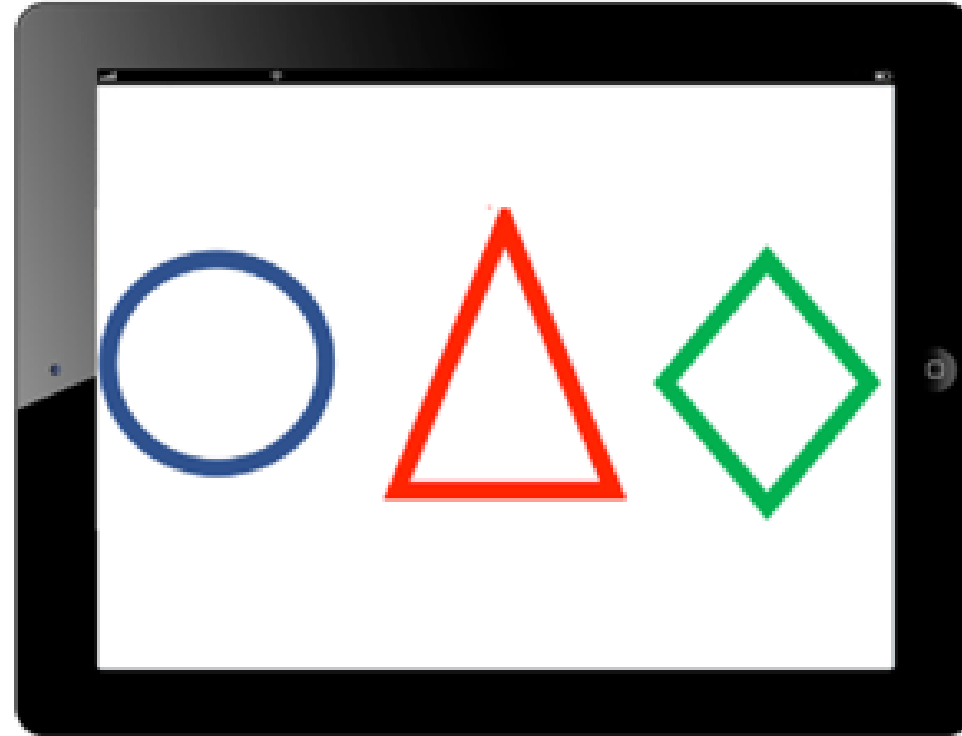


# Sonic Math

- Find, trace and identify digital lines and shapes
- Reinforce math concepts
- Reinforce directional terms
- Reinforce tech skills
- Increase listening skills (including sonification)
- Follow directions



# Part 2: Sonic Math Questions?





# Poll #4 – How would you use ObjectiveEd

Where do you think these reinforcement tools should be used ?

- During my lesson
- In the resource room, outside of my lesson
- In the regular ed classroom, outside of my lesson
- In the student's home, outside of my lesson



# How to Get Started



# Getting Started



# Pre-ETS

Part 3



# Transition

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# Transition Adventure Overview

5 chapters:

- finding a summer job
- preparing for the interview
- interviewing
- performing their first day on the job
- Blind & Low-vision story versions



# Transition Adventure part 1

- (Narrator) You step inside the plant shop, ready to interview for a job as a nursery assistant.
- (The player hears sound effects of a busy flower shop).
- (Narrator) You realize that you'll need to go up to the front counter, but you're not sure where it is.
- (Narrator) Your options are:
  1. Walk forward until you find something, or
  2. Ask for help, or
  3. Stand there until someone helps you.



# Transition Adventure part 2

- (Narrator) You pick 2.
- Ask for help. You ask aloud if anyone knows how to get to the counter. Someone walks up to you and says:
- (In-game actor) Hi! I'm one of the staff here. I can show you to the counter if you'd like.





# Transition Adventure part 3

- (Narrator) Your options are:
  1. May I take your arm for guidance? or
  2. Just tell me how to get there.
- (Narrator) You pick 1.
- May I take your arm for guidance?
- (In-game actor) Sounds good.
- (Narrator) The staff member offers their arm. Taking it, you make your way to the counter.



# Transition Adventure

- 600 Decision Points
- 300 relate to:
  - problem solving,
  - independent living skills
  - self advocacy



# Self-Advocacy skills

- (In-game actor) Thank you. Have a seat. Gordon will be with you shortly.
- (Narrator) As he mentions sitting down, you realize that you don't know where any of the seats are.
- (Narrator) Your options are:
  1. Where would you like me to sit?
  2. I can't see where the seats are.
  3. Can't you tell that I have low vision?



# Testing Results

- 12 teens Carroll Center, Massachusetts
- Ages 16-20, blind or low-vision
- Monitored via Zoom by Proctors
  - graduate students in a VI training program, associated with AFB.
- Teens interviewed after each chapter
- Teens & Proctors surveyed at end of story



# One teen said:

**“Definitely a good way to help teens get information on how to apply for a job, do an interview, work at an actual job”**



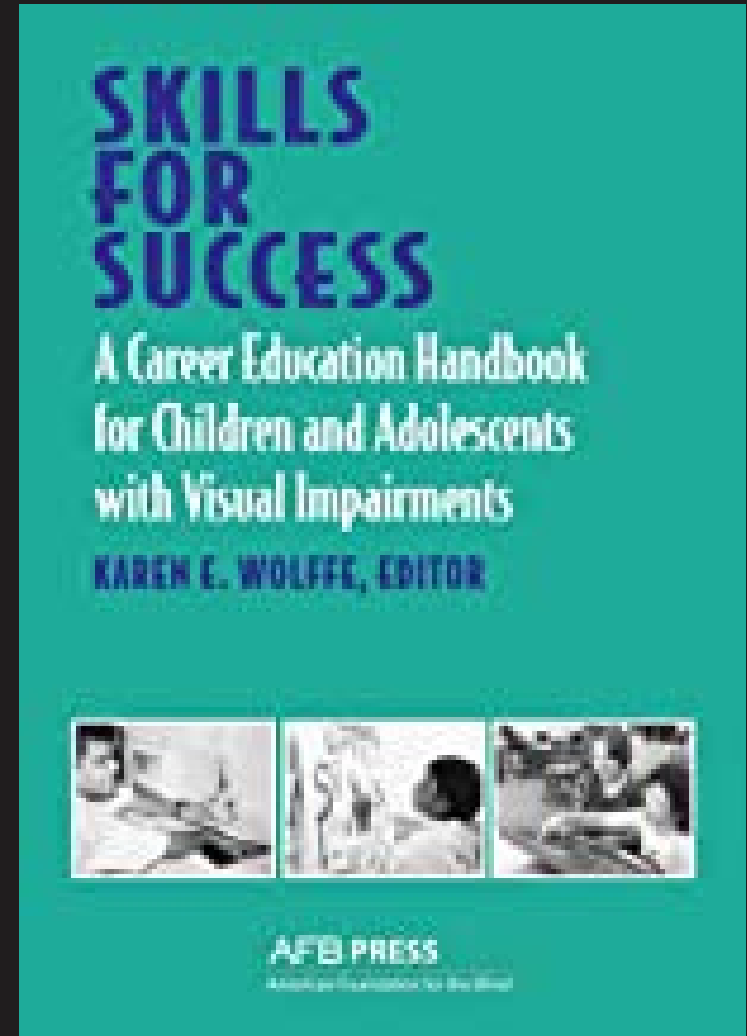
# Student Opinions

- Teens were motivated or very motivated
  - Teens were engaged or very engaged
  - Game was self-explanatory, not confusing
- Teens comments:
    - Want more stories
    - Want more work on resumes
    - Want more work on interview skills
    - A fun way to learn



# Next Steps

- Transition Adventure is now available as part of the ObjectiveEd Curriculum
- Applying for grants to build more stories
- Added to R&D team:
  - Karen Wolffe – “Skills for Success” author
  - Sharon Sacks – Former superintendent of CA SB



# Buddy Books

Part 4





# ObjectiveEd Pathways

- Braille AI Tutor

- Words = Sentence?
- Sentence
- Braille Display
- Speaking
- Oed
- Words

- Buddy Books

- Words = Sentence?
- Sentence
- Read from screen
- Speaking
- Oed
- Words & Phonemes



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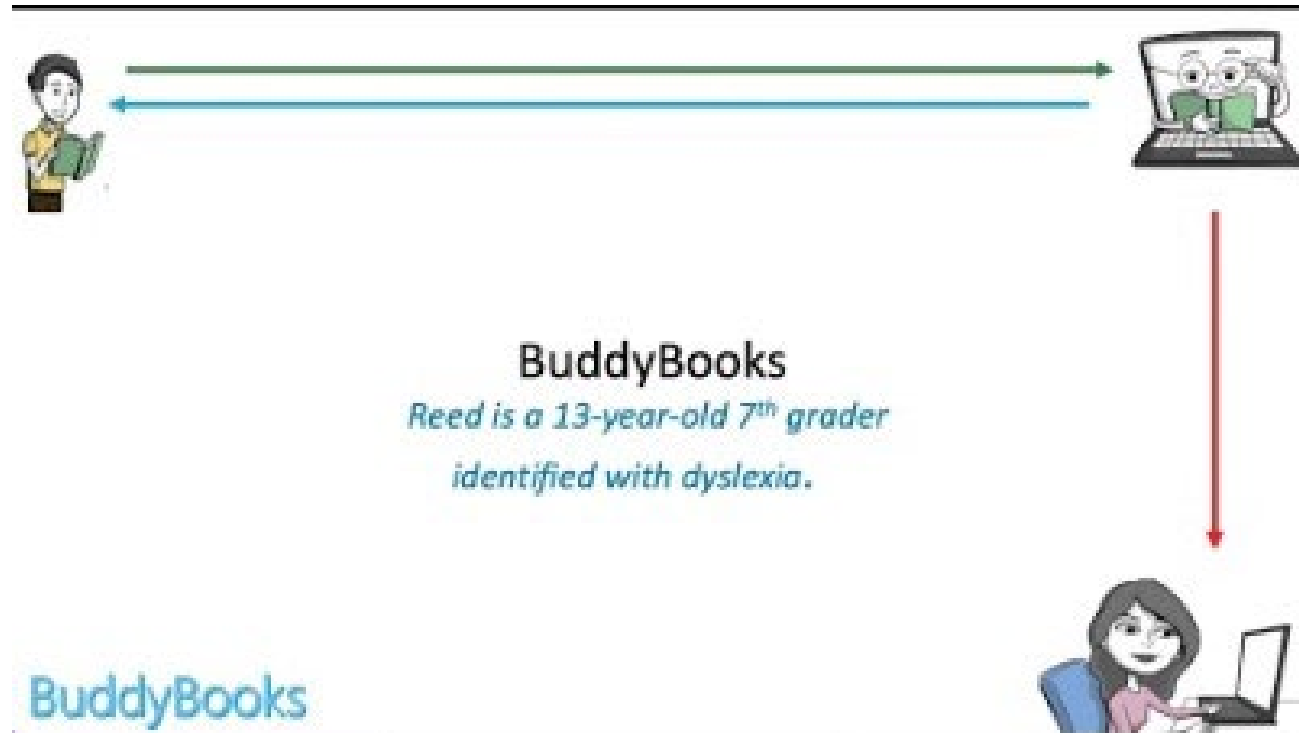
# BuddyBooks Features

**BuddyBook Features**

- ✓ Utilizes AI to Provide Better Reading Accountability for Teachers
- ✓ Provides Valuable Progress Data for Teachers
- ✓ Has students re-read passages they struggled with



# BuddyBooks



# Contacting Us

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