

# Increasing Youth Environmental Engagement Through Location-based Mobile Games



Susan Baron and Bob Coulter  
Missouri Botanical Garden





The image is a composite of two satellite photographs of Earth, one above and one below a central text box. The top photograph shows a view of the Earth's surface with green landmasses and blue oceans, set against a black background. The bottom photograph shows a similar view but with prominent white cloud patterns swirling over the oceans. The text is centered in a yellow rectangular box with a fine grid pattern.

Complex global challenges require  
good scientific thought





Years 10-13 are important for  
developing identity



We are connected and mobile





# Informal Community Science Investigators (iCSI)

- Location-based mobile games
- Informal learning institutions
  - Ages 10-13
- Science learning and positive community involvement



# iCSI Team



MISSOURI  
BOTANICAL  
GARDEN

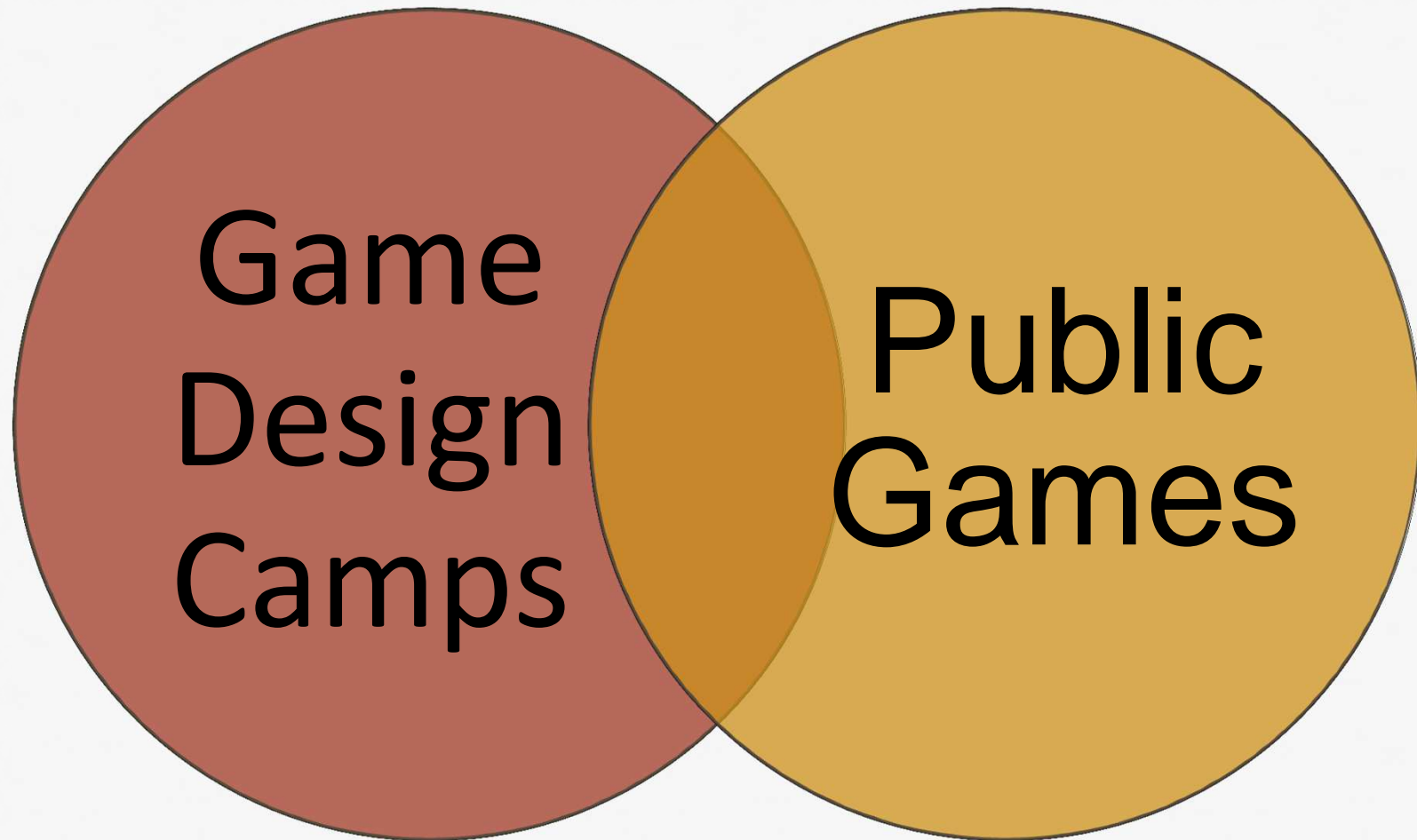


Massachusetts  
Institute of  
Technology





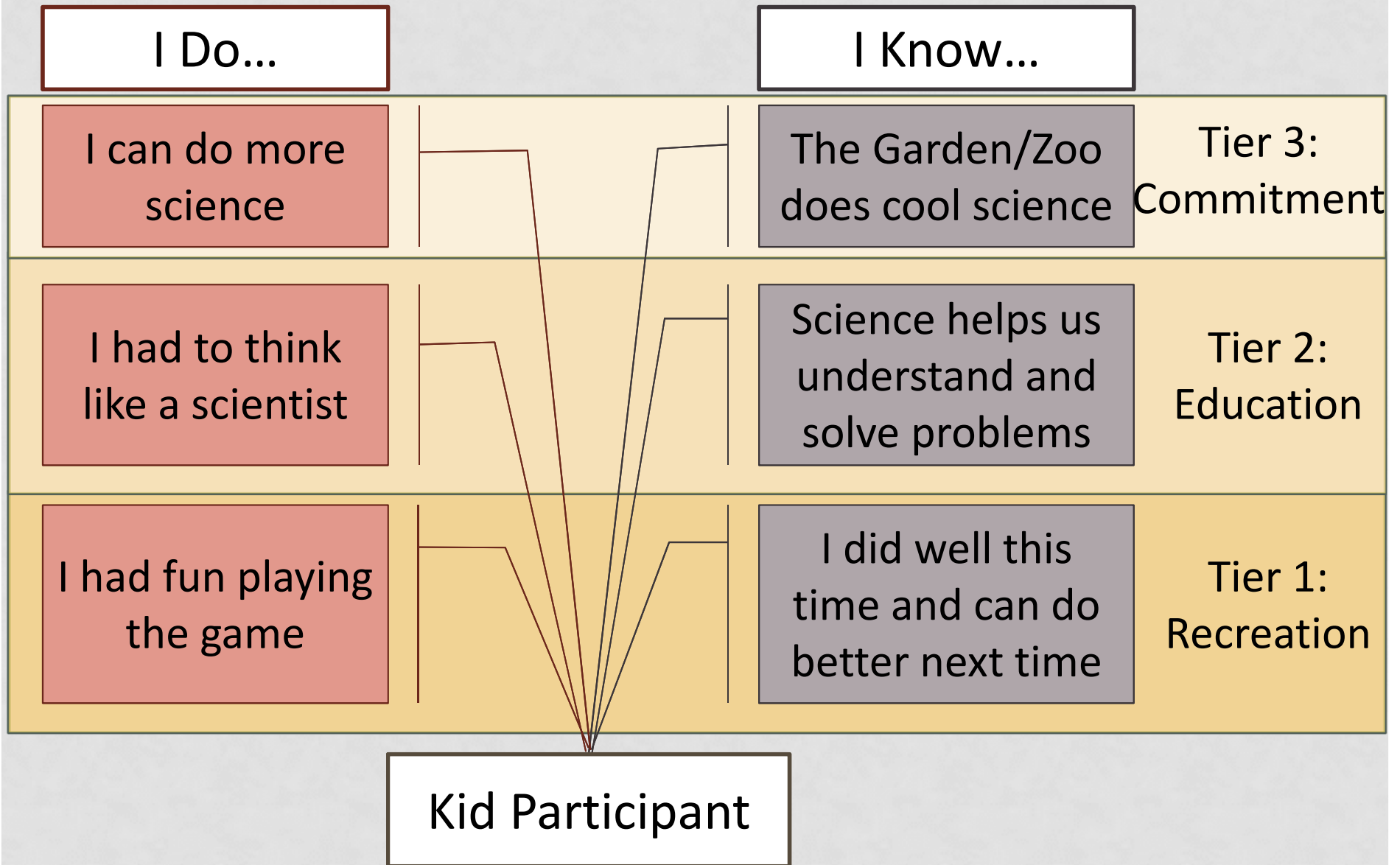
# iCSI Program



Surround

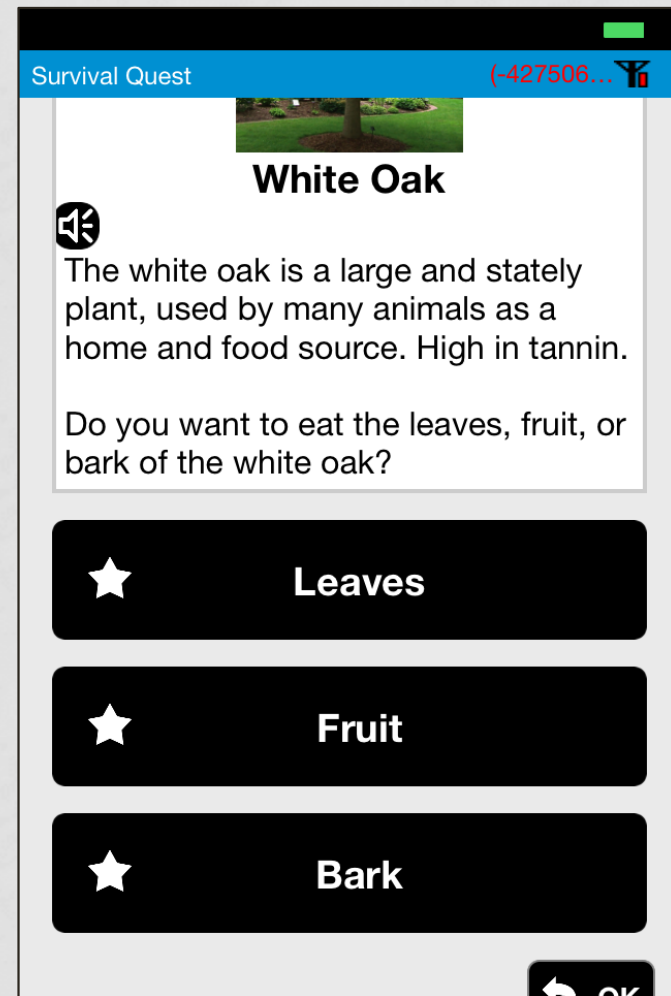
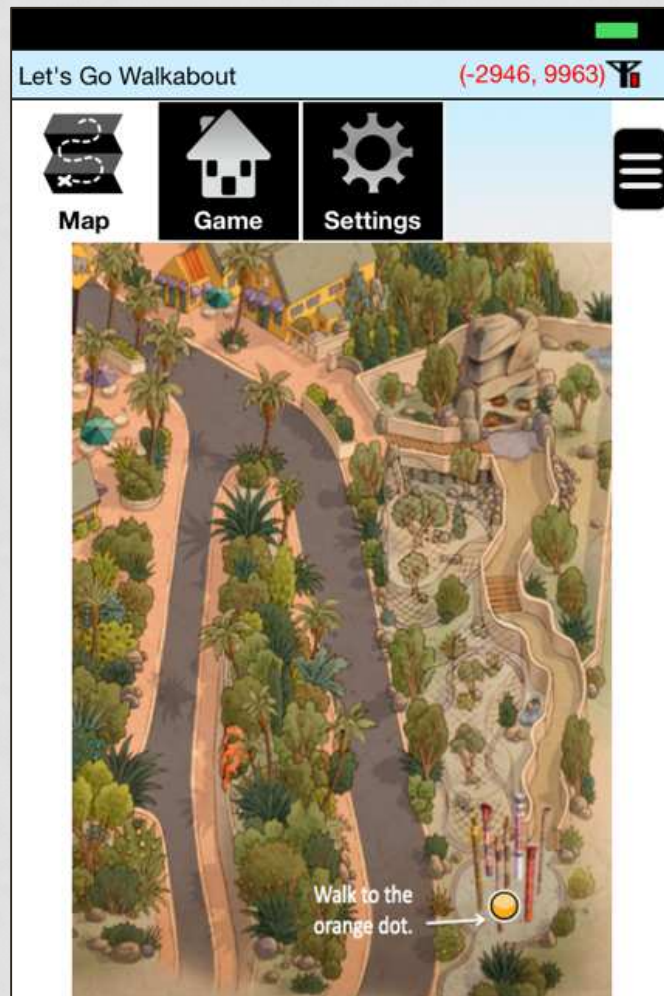


# Participant Outcomes



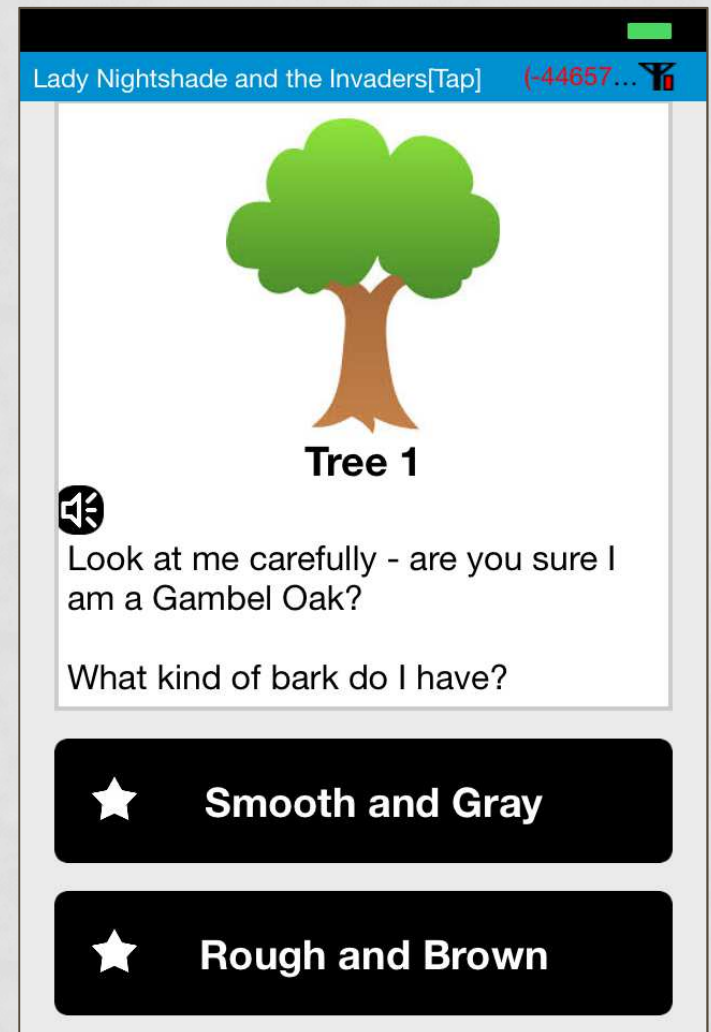


# What Is a Location-Based Game?



# Why Location-Based Games?

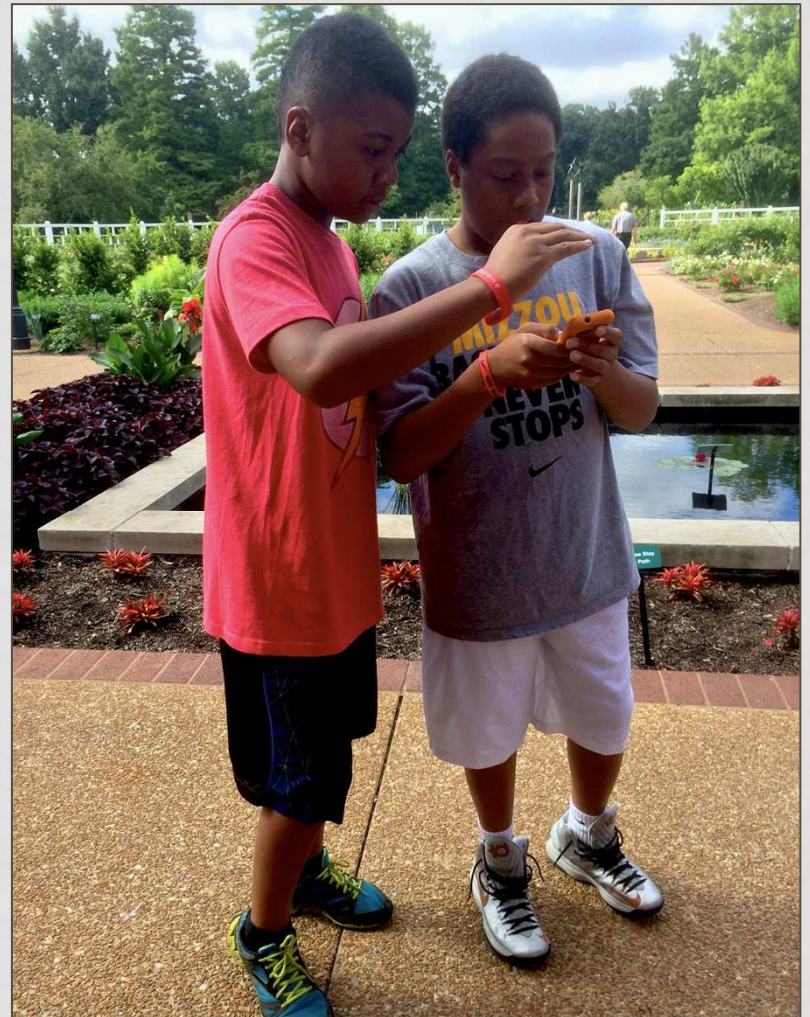
- Games can be useful teaching tools
- More interactive than a tour
- Kids report noticing and learning new things
- Encourage interaction with the physical environment





# Challenges

- Software development
- New paradigm for games
- “Do” stage—moving from games to action
- Finding visitors aged 10-13

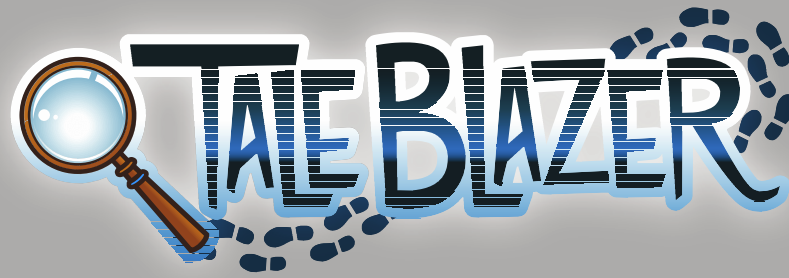


# Successes


- Fun!
- Better games
- Summer camps
  - A lot of interest
  - Fun and learning
  - Retention









www.taleblazer.org







My Games




New Game




Summary



Error Check




Save Game




Survival Quest

MapAgentsPlayerWorldSettings


DetailOverview




Linnean House




Linnaeus




Common Ho...




Prickly Pear




Linnaeus




Redbud Tree




Pear Tree




Pecan Tree




Carmelia




Nuthatch




Grasshopper




Rose




Hosta



Keeeeeeeeee...



Hawk




Caterpillar

Show all agents

New Agent

Agent Dashboard



Name

Linnean House

Description

You are the yellow dot on the map. Walk to Linnaeus (the green square) to begin. Linnaeus in front of the Linnean House. The Linnean House is southeast of the main entrance.

Control

when game starts

when player bumps Linnean House

when player picks up Linnean House

when player drops Linnean House

Action

if

then

if

then

when player bumps Linnean House

exclude me (Linnean House) from world



A photograph of four children standing in a park, looking up at the trees. The children are wearing colorful clothing: a green hoodie, a grey vest over a dark shirt, a pink hoodie, and a grey shirt with black shorts. They are standing on a wooden bench. The background is filled with lush green trees and foliage, with sunlight filtering through the leaves. A large, semi-transparent yellow banner with a fine grid pattern is overlaid on the top half of the image, containing the text "Thank You!".

# Thank You!

- Susan Baron: [susan.baron@mobot.org](mailto:susan.baron@mobot.org)
- Bob Coulter: [bob@lrec.net](mailto:bob@lrec.net)



# References

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