

*Discovery Agents:
the mobile game for outdoor education*



Mary Clark, M.Ed., PD A.D., B.Sc.
Discovery Agents CEO

Vicki Israel, Assistant General Manager,

City of Los Angeles, Department of Recreation and Parks
April 7th 2016, California Trails and Greenways Conference



The idea



Using technology to get kids outside

What it is

- Outdoor mobile education game
- Blends gamification with experiential outdoor education
- Uses best practices in mobile gaming
- **Active gaming: must move to learn**



How to Play

- Kids hike trails at participating parks to unlock educational challenges
- Solving challenges earns points!

◀ They sure are cute

Color in the Raccoon



Reward: +3

CHECK ANSWER

◀ Holy-emia

The Wollemia Pine is one of the world's oldest and rarest plants, dating back to the time of the dinosaurs. It has unusual dark green foliage and brown bubbly bark. Look around. Which of these is the Wollemia Pine?



Reward: +2



Discovery Agents

The Facts

- Youth are using technology and playing games more than ever.
- Youth inactivity is on the rise.
- Youth obesity is a health epidemic.
- Children are disconnected from nature.



AGENTS OF WATER



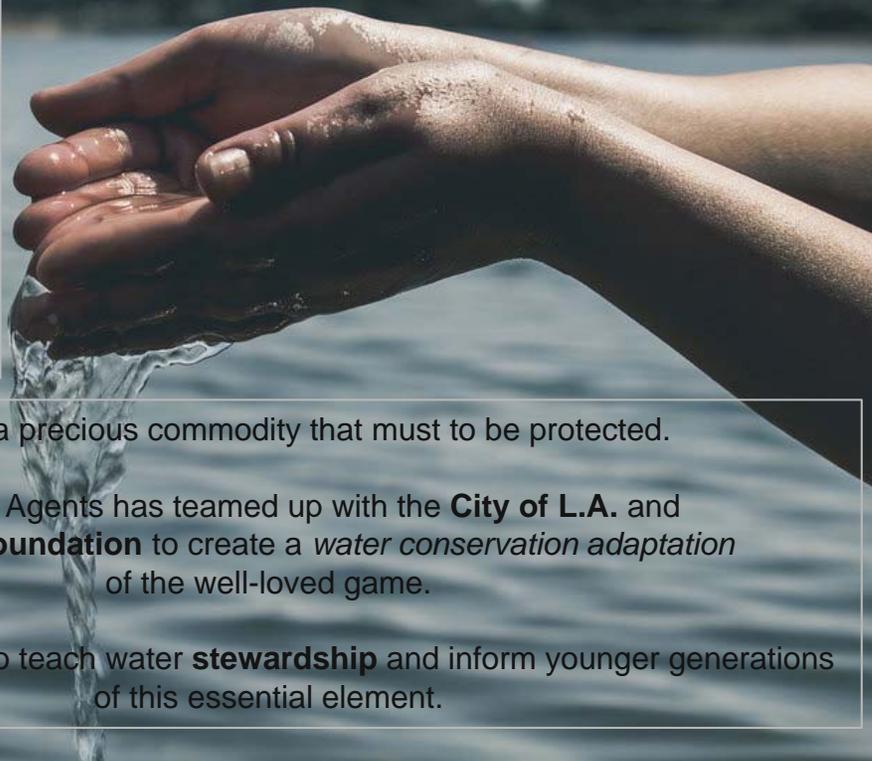
Water Facts:

1% of the World's water is suitable for human use

(epa.gov/watersense)

40/50 States expect to experience water shortage over the next decade

(epa.gov/watersense)



Water is a precious commodity that must to be protected.

Discovery Agents has teamed up with the **City of L.A.** and **Coca-Cola Foundation** to create a *water conservation adaptation* of the well-loved game.

Parks are now able to teach water **stewardship** and inform younger generations of this essential element.

Where Discovery Agents is now



1. U.S.F.S. Region 6
- Mount St. Helens

2. Los Angeles County
- Kenneth Hahn SRA

2. U.S.F.S. Region 5
- Chilao Visitor Center
- El Cariso Nature Trail
- Grassy Hollow Visitor Center
- San Juan Loop Trail
- Vogel Flat Picnic Site

2. Orange County Dept. of Edu.
- Fullerton Sports Complex
- Ladera Vista Jr. High

2. City of LA
- Cabrillo Beach
- Griffith Park
- Echo Park Lake

3. Cumberland Forest

4. Prince George County
- Watkins Regional Park

5. U.S.F.S. Headquarters
- National Mall,
Washington D.C.

6. U.S.F.S. Region 8
- Land Between The Lakes

7. U.S.F.S. Region 8
- Sam Houston Ntl' Forest

8. Texas State Parks
- Sheldon Lake State Park
- McKinney Falls State Park
- Cedar Hill State Park
- Huntsville State Park

9. U.S.F.S. Region 10
- Portage Glacier and Portage Valley
- Mendenhall Glacier Visitor Centre

10. Calgary Parks Foundation
- ARC Resources Interpretive Wetlands
- Cityscape Wetlands
- Rotary Nature Park

10. City of Calgary Parks
- Bowmont Park
- Ralph Klein Park
- Devonian Gardens
- Reader Rock Garden
- Central Memorial
- Sandy Beach
- Carburn Park
- Nose Hill
- Prairie Winds

10. Calgary Zoo

10. Alberta Provincial Parks
- Fish Creek Provincial Park

Where Discovery Agents is going

Over 87 Sites under development in 2016



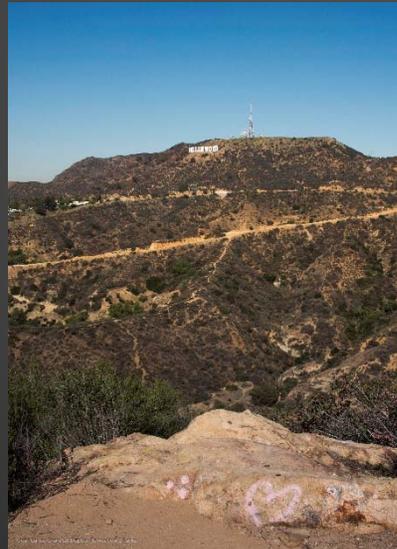
● Existing sites

● Upcoming sites

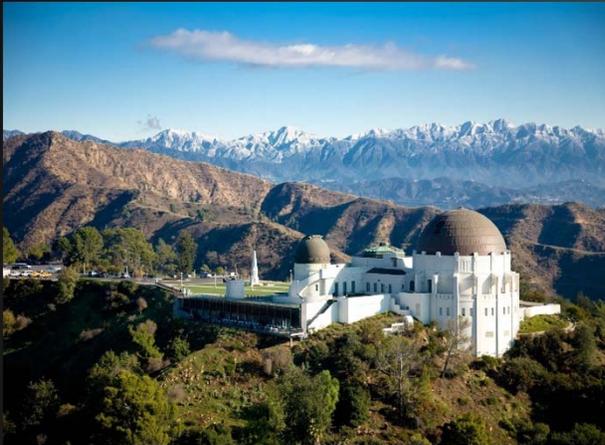


CITY OF LOS ANGELES DEPARTMENT OF RECREATION AND PARKS

- Partners since 2012
- 3 sites were chosen
- Griffith Park
- Cabrillo Beach
- Echo Park



Griffith Park



Cabrillo Beach



Echo Park



Griffith Park

- The largest municipal park with urban wilderness area in the U.S.
- Over 4,300 acres of natural chapparal-covered terrain, landscaped parkland, and picnic areas
- App features the Charlie Turner Trailhead: a 3-mile hike that begins at the Griffith Observatory and leads to a viewpoint with an unparalleled 360-degree view of the Los Angeles basin.



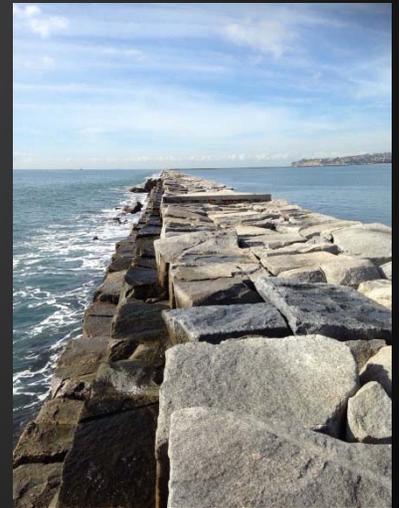


“As the City of Los Angeles strives to inspire more youth and their families to get outdoors and enjoy our many parks and natural spaces. I can think of no better partner to work with than the [Discovery Agents] team. I am proud to be a supporter of their efforts to connect young people with nature and science, and am eager to see their initiatives reach even more young people in Los Angeles...I hope you will join me in working with [Discovery Agents] to inspire youth to get outdoors. With your support, we can help to provide young people with life-changing opportunities to get active, be healthy and enjoy a stronger connection to nature in our great city.”

- Former Councilmember Tom LaBonge
4th District

Cabrillo Beach

- One of two beaches operated by the City of Los Angeles
- Cabrillo features a mile-long shoreline, fishing pier, Cabrillo Beach Aquarium, famous tide pools and a salt marsh
- App highlights the beach's salt marsh, aquarium, tide pools, bathhouse, boat launch and pier



Echo Park

- A Los Angeles park since 1892, Echo Park Lake has become a Los Angeles icon
- In 2013, the Department completed a \$45 million rehabilitation project on the historic landmark
- Features fishing, pedal boats, picnic area, boat house and lotus flowers (June- September)
- Players discover the park's boat house, fountain island, lotus beds and water lilies.



“The iconic Echo Park Lake in the 13th District is a great resource for recreation and now education. Outdoor physical activity is vitally important for children and youth, and thanks to the Agents of Nature app, young Angelenos can explore the park and use technology to engage with the natural environment”



- Councilmember Mitch O'Farrell
13th District

Arts, Parks, Health, Aging and the L.A. River Committee Chair

Hansen Dam Recreation Center

- The dam was built in 1940 by the US Army Corps of engineers to control flooding of the Los Angeles Basin.
- This location features equestrian and walking trails, a recreation lake, camping, a swim facility, and a walkway along the dam's top.
- The app will highlight the community and wildlife which utilize Hansen Dam and the importance of the dam's flood control function.





Map of Potential Question Locations: Hansen Dam Recreation Center



Reseda Park Lake



- Reseda Park Lake is home to a variety of local and migratory aquatic birds.



- Man-made islands were installed to increase water quality and provide nesting habitat for the birds.
- Existing interpretive signage will be used in conjunction with the app.



South Los Angeles Wetland Park



- This site was a brownfield, which was converted into a water treatment wetland.
- The wetland works in conjunction with water treatment equipment to clean 680,000 gallons of urban runoff each day.
- Includes emergent, upland, and riparian habitat, trails, boardwalks, viewing platforms, and interpretive signage.



U.S. Forest Services (USFS)



Following the City of L.A.'s lead, the USFS will provide the App at 5 Sites.

- Chilao Visitor Center
- El Cariso Trail
- San Juan
- Grassy Hollow
- Vogel Flats



USFS Sites



- Chilao Visitor Center – offers an introduction to the Angeles National Forest through exhibits, trails and activities.
- El Cariso Nature Trail – a family-friendly trail, 1.35-mile loop situated on the range's main divide.
- San Juan Trail – A scenic loop through the some of the densest and loveliest oak woodlands in the Santa Ana Mountains.
- Grassy Hollow Visitor Center – located 100-feet from the Pacific Crest Trail, the center boasts panoramic views of the mountains and valley below, bird viewing area and wildlife exhibits.

Discovery Agents

Another Tool in the Toolbox

- Agents of Nature is designed to complement and reinforce existing educational tools.
- Rather than replacing nature walks, field guides, interpretive signs, and other traditional methods of environmental education, Agents of Nature will supplement these approaches.
- Key messages from sites' educational programming will be integrated into Agents of Nature.



Griffith Park Launch Event



- Griffith Park App was launched September 15, 2014 in partnership with Get to Know, VERIZON and the City of Los Angeles Department of Recreation and Parks
- 30 students from Allesandro Elementary School attended the event and were the first app users
- Local media also covered the event



Griffith Park Launch Event





Studies by UBC and
Kyoto University tell
us mobile education
is working.

Discovery Agents – Kyoto University



Mobile Learning for Forest Education

- Kids were given environmental education game with GPS, which gave them information at established points
- Given post-game content quiz and survey

Results:

- 95% of users said they'd play it again
- 100% were more interested in nature
- 98.3% enjoyed learning from the quiz and sketch activities



Source: Yoshimura et al., 2005

Discovery Agents - UBC Study



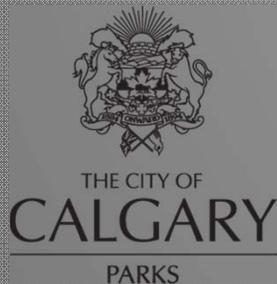
Research partners

City of Calgary

University of British Columbia

Mitacs

Calgary Catholic School District



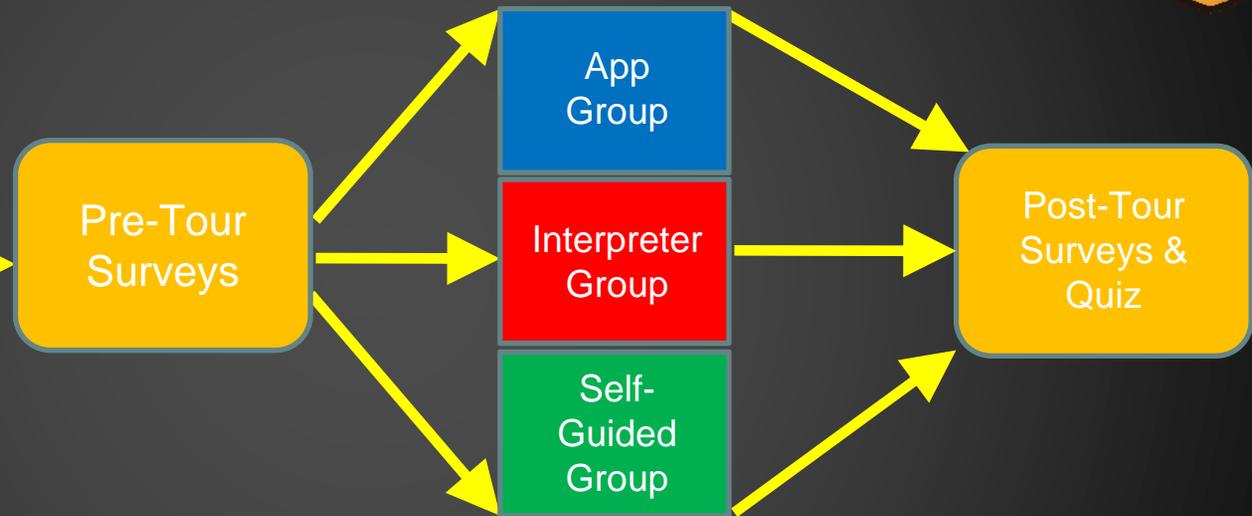
a place of mind



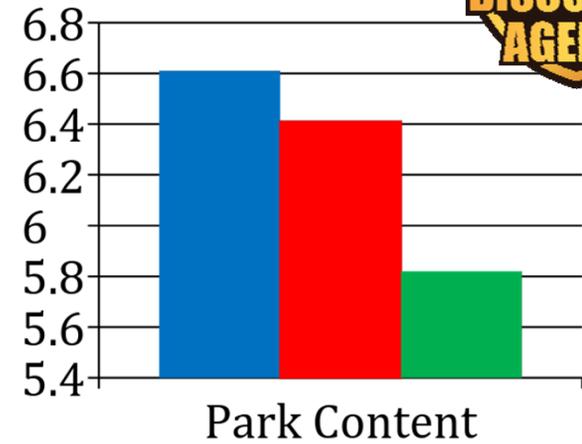
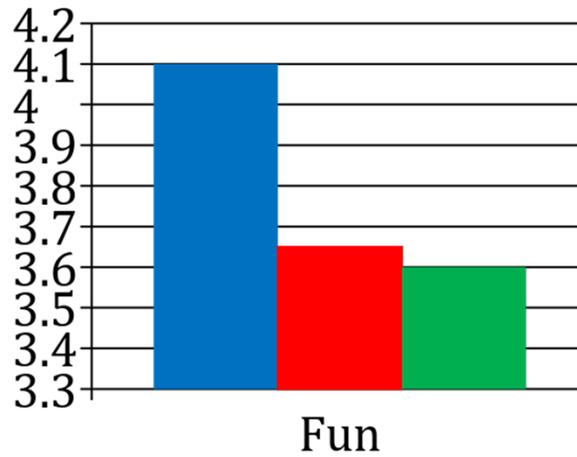
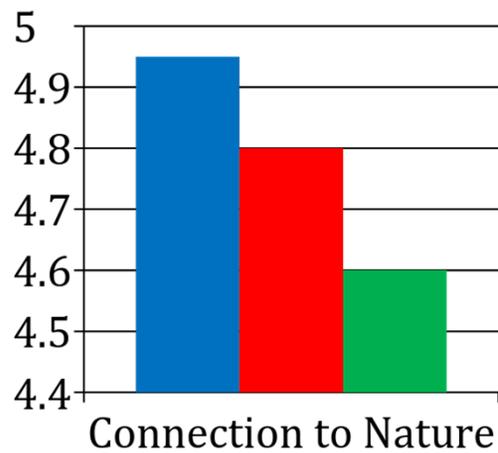
The logo for Mitacs, featuring the word "Mitacs" in a bold, blue, sans-serif font.



Research Methodology

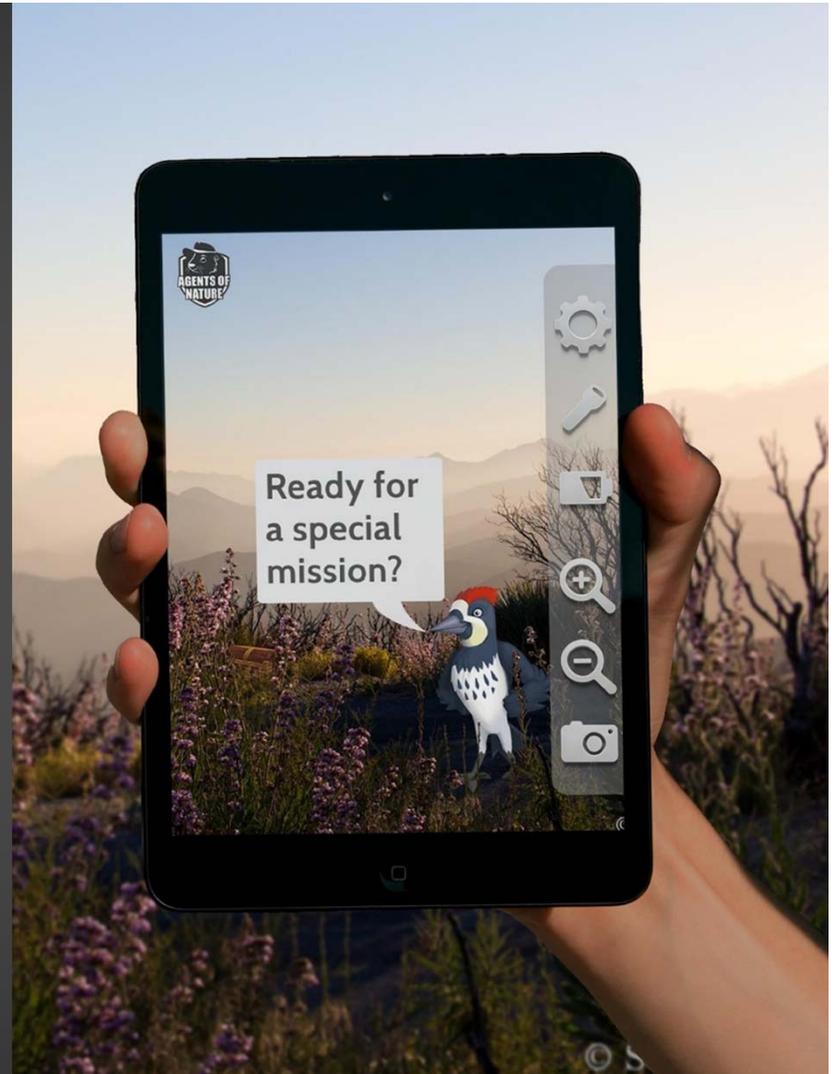


Measuring Results



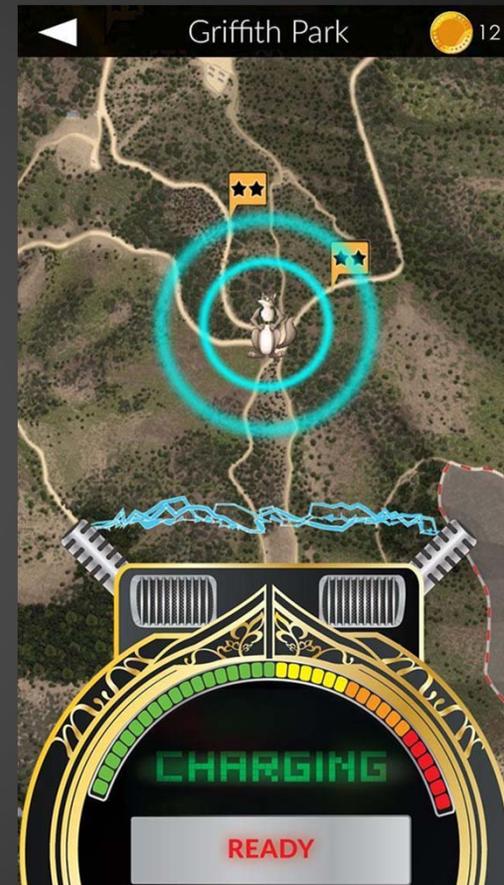
Did you know Discovery Agents...

- Works with or without wifi and cellphone links
- Augmented Reality & Virtual Objects
- Users can unlock immersive augmented reality mini-games



GPS Based- Secret Agent Gadget

- Geo-triggered challenges
- Removes possibility of vandalism at mission sites
- Allows for a more interactive and exciting way to discover challenges



To download Discovery Agents visit our website:
DISCOVERYAGENTS.NET
or search for Agents of Discovery in the Apple App Store & Google Play



Questions and Discussion

Mary Clark, M.Ed., PD A.D., B.Sc.
President
mclark@discoveryagents.net
1-855-564-7328

Vicki Israel
Assistant General Manager
City of Los Angeles, Department of
Recreation and Parks
Vicki.Israel@lacity.org
1-213-202-2633



Full Bibliography available at
www.discoveryagents.net