

MicroRangers To The Rescue!

A new mobile app from the Museum brings an invisible world to life



Microbiologist

Download *MicroRangers* and scan the image above to meet a character from the game.



The world's most amazing ecosystems are in danger, and it's up to you to save them! That's the premise of *MicroRangers*, a new mobile game for Android and iOS smartphones that uses augmented reality to turn the Museum's first floor into a series of animated adventures that highlight how microbial life can impact the health and security of larger life forms like towering trees, charismatic animals, and, yes, humans.

"Most biodiversity is too small to be seen without a microscope. But those microbes are just as important as other forms of life in keeping ecosystems healthy," says Susan Perkins, who advised on *MicroRangers* and is co-curator of *The Secret World Inside You* exhibition about the human microbiome.

The game has been in development since 2014, as Museum educators have worked with high schoolers in Museum programs as well as with game designers at Playmatics and Geomedia to create a unique experience based on iconic exhibits and dioramas that many longtime Members know well—but, through *MicroRangers*, may rediscover in a new way.

"Well-designed games are powerful learning spaces, where players can learn through experimentation and failure, which is the nature of science as well," says Barry Joseph, associate director for digital learning at the Museum. "They also serve as great tools for collaborative learning alongside friends and family!"

Game play begins in the Hall of Biodiversity, which serves as a sort of home base. From there, players are dispatched to solve science-based mysteries in the Milstein Hall of Ocean Life, Hall of North American Forests, and the Bernard Family Hall of North American Mammals, with directions, clues, and three-dimensional animations popping up on their phones.

Nine levels, each posing different challenges and introducing different lessons based in the Museum's halls, create new and interesting connections that offer a different way to interact with even the most familiar exhibits.

One challenge in the Hall of North American Forests, for instance, pits players against the scourge of chestnut blight. Using their phones, players eliminate the devastating fungus from trees that spring to digital life all around the hall. Augmented reality coins, available at the Membership desk in the Theodore Roosevelt Rotunda, help bring characters in the game, like the animated scientists you meet on missions, to life.

"The way we're using augmented reality will mean the game is all around you," says Hannah Jaris, a senior coordinator who helped lead the development of *MicroRangers*.

With scientist characters guiding players through a diversity of ecosystems, newly minted *MicroRangers* will also be able to learn about the tools and techniques researchers use to study life in forests, on coral reefs, and everywhere in between.

Many players will play just the first level to get a taste of the



In prototypes of *MicroRangers*, youth program participants and Museum staff stood in for characters in the game.

game—it takes about 20 minutes, Joseph estimates—while others could play through to completion, exploring all three halls in depth over the course of several hours. And frequent visitors like Members can play over the course of multiple trips to the Museum at any pace they choose. Whichever way visitors play, says Joseph, *MicroRangers* feels like a full game experience for both casual players and more dedicated gamers.

Museum educators collaborated on *MicroRangers* with teenagers, the app's natural audience, on everything from content and game design to early voice-overs for the game's characters—in large part, Joseph says, to show that the Museum is not just a place youth can come to learn, but one where they can contribute.

"From the very start, we wanted young people to be not just participants in a focus group, but co-designers of their own science education," says Joseph.

And while *MicroRangers* has already been a learning experience for the youth and staff who helped develop the game, designers say the ways people play the game will provide design lessons for the future. How users are playing the game and what activities and interactions they embrace or ignore will help to shape the experiences offered by future Museum games.

"The ideal Museum visit is also the ideal game," says Joseph. "You connect with exhibits, connect with the people around you, and learn something new."

MicroRangers is free and available to download from the iOS App Store and Google Play. To learn more, visit amnh.org/MicroRangers, and visit the Membership desk in the Theodore Roosevelt Rotunda to pick up augmented reality coins to play the game. (Limited quantities, while supplies last.)

MicroRangers is generously supported by a grant from the Anna-Maria and Stephen Kellen Foundation.

MORE GAMES FROM THE MUSEUM

From CD-ROMs to space flight simulators to card games produced for special exhibitions, the Museum has been developing engaging, educational interactive experiences for decades. *MicroRangers* is the latest, but here are a few other new games now out from the Museum:

GUTSY

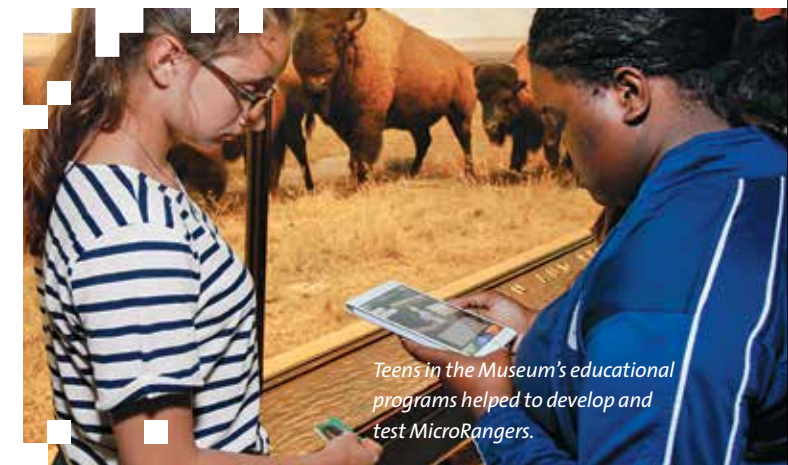
A card game developed as a companion to *The Secret World Inside You*, *Gutsy* lets you take lessons about the microbiome home and share them with others. Learn more about the way that different microbes interact in the human body and get an up-close and personal understanding of the many species that call you home. Developed by veteran game designers and Curator Susan Perkins, *Gutsy* is a fast-paced card game that combines education and entertainment. Now available in Museum shops.

PTEROSAURS: THE CARD GAME

Developed alongside the 2014 special exhibition *Pterosaurs: Flight in the Age of Dinosaurs*, *Pterosaurs: The Card Game* challenges players to build functioning food chains using a shared deck of 51 cards representing various ancient forms of life, including flowers, fish, and the flying phenoms of the title. The player with the most chains at the end of the game wins! Visit bit.ly/PterosaurGame to download the game for free.

OLogy

Digital learning has been an area of focus since the launch of the Museum's award-winning science website for kids, *OLogy*, where interactive lessons and web-based games have been available to anyone with an Internet connection since 2000. Visit bit.ly/MicroBIOlogy to see *OLogy's* Microbiology section!



Teens in the Museum's educational programs helped to develop and test *MicroRangers*.