



CASE STUDY

Google Expeditions Brings Learning to Life for Students at Honolulu's 'Iolani School



'Iolani School

Honolulu, Hawaii

www.iolani.org

Textbooks and videos can't really replicate the exhilaration of seeing a volcano erupt or a WWII tank rolling into battle—but now, teachers can share virtual versions of those experiences with their students through AR, or augmented reality. With Google Expeditions, Michael Fricano II, a K–6 Technology Integration Specialist and Technology Teacher at 'Iolani School in Honolulu, gives students the thrill of exploring objects from their history and natural science lessons as if they were right there in the classroom. An app that works with mobile devices, Google Expeditions lets students see, walk around, and inspect virtual objects in 3D, creating vivid “a-ha!” moments. Michael shares how he uses AR to get young students excited about learning.

Why did you decide to use Expeditions with AR in your classroom?

During the original Google Expeditions AR pilot, I brought Expeditions AR into a high school history class studying WWII. Students showed a higher level of engagement in this lesson in comparison to regular teaching methods. They were out of their seats, walking around, and exploring the AR objects!

Expeditions is very easy to use. I don't have to spend much time setting things up for our teachers. Sometimes they need to change the pace in their classrooms, so being able to quickly and easily pull up a tour for students to support the learning makes it a great tool for the classroom.

How does Expeditions help you accomplish your instructional goals?

Google Expeditions is a powerful learning tool in my teacher toolbelt, along with other multimedia tools. But I turn to it the most because it offers a level of engagement that few other tools can.

When I introduce students to the concept of AR, they typically don't realize that they're already using it in gaming and messaging apps. But when we're having a discussion about World War II and the intense and fierce battles across land and sea, something magical and powerful happens in the learning process. I can use AR to literally drop a 3D tank or U.S. battleship into the middle of the classroom. It takes a few minutes for students to comprehend that they're able to see and interact with them through their devices. But after that initial awe wears off, you begin to see students making deeper connections as the discussion morphs into a virtual field trip across time and space.

What strategies do you use when teaching with Expeditions?

There are over 1000 AR and VR tours in Expeditions, so I typically give my students a collection of tours to use in self-guided mode. This lets them personalize their learning and choose what interests them the most about a topic.

For example, in our volcano lesson, I gave students a list of several tours and YouTube VR videos. They were free to explore that content in any order and share their experiences with other students. The tours ranged from standard volcano facts to traveling the world exploring active and extinct volcanoes. Letting the students choose their learning paths helped them feel more ownership over the process. The students wanted to explore the Expeditions content and were instantly applying their learning and vocabulary to describe what they saw.

Students already knew about volcanoes from textbook lessons, but the VR tours and YouTube VR videos expanded their knowledge and connected their understanding to real-world examples. This year I hope to expand on this lesson by adding in the AR tour, which shows how volcanoes are formed, their different types and stages.

What advice would you give to a teacher who's using Expeditions for the first time?

Our students are digital natives. They'll have Expeditions figured out within a few seconds of opening the app. Don't be afraid to let them guide the experience. If you're going to use Expeditions in guided mode, why not let the students be the guide instead of you? Put the learning in their own hands.

“Students begin to make REAL connections with learning because of the curiosity that augmented reality inspires. It's a truly amazing experience to watch and be a part of as a teacher.”

—Michael Fricano II, K-6 Technology Integration Specialist and Technology Teacher, 'Iolani School, Honolulu, Hawaii

How do you feel your students benefited from experiencing Expeditions in the classroom?

My students are more interested and engaged in learning when we use Expeditions. It's a completely different experience for them because it brings learning to life right in front of them!

How do you think Expeditions can impact student engagement and learning?

It's a constant battle in the classroom to keep students engaged and wanting to learn, and it becomes harder and harder as they get older. Cutting-edge technology, such as VR and AR, can help with levels of engagement because it's new for everybody...including students! Not only does AR engage older students by making lessons more interactive, but it's the perfect experience for our kindergarten students, as it allows for them to explore their curiosity through a more engaging medium.

What do students enjoy about Expeditions?

Students enjoy the opportunity to travel the universe and bring unimaginable experiences into their classrooms!

About Google Expeditions

Google Expeditions is an immersive learning tool that helps teachers engage students through rich virtual and augmented reality tours. Expeditions works on Android and iOS across phones, tablets, and even standalone VR devices like the Lenovo Mirage Solo. Learn more at g.co/expeditions.

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