Electronic Field Trips Increase Interest in Science

INITIATIVE
Connecting students to scientists and their science through well-planned field trips can help students relate to scientists as individuals, understand the context and purpose of science, and enhance student interest in and attitudes toward science. However, distance, logistics, economics and changes in school policy increasingly limit or eliminate traditional field trips for many schools. Through zipTrips™, Purdue brings real-world scientists to middle schoolers to increase their access to STEM researchers; nurture their knowledge, interest and enthusiasm for STEM fields; and enhance teacher confidence in implementing an electronic fieldtrip in the classroom. Purdue zipTrips™ are professionally produced, visually appealing, and fast-paced electronic field trips (EFTs) in science-based education. The EFTs connect students across the country and the world with real-world scientists at Purdue who are doing cutting-edge research, increasing interest and enhancing perceptions of science, scientists and science careers. They are available live via web streaming and videoconferencing, and students are able to interact with scientists through email and a social media program called Hotseat, also developed at Purdue. zipTrips™ were created as a collaboration among Purdue’s College of Veterinary Medicine College of Agriculture, Information Technology @ Purdue, and the Discovery Learning Research Center in Discovery Park.

IMPACT
The zipTrips™ team has developed and assessed four different EFTs for a total of 10 live trips:
- We’re All Animals (grade 6) introduces students to similarities and differences between humans and animals.
- Disease Detectives (grade 7) shows students how scientists use clues, like a detective, to understand what causes disease and to design prevention and treatment strategies.
- It’s a Gene Thing! (grade 8) helps students understand how DNA affects the way humans and animals look and act.
- The Science of Nutrition (grades 6-8) examines some of the ways eating and physical activity impacts kids’ health.

To date, more than 50,000 students from over 1300 classrooms in 38 states and several countries have participated in a zipTrips™!
DLRC research has documented:
- Positive impacts of zipTrips™ on students’ perceptions of science and science careers;
- Significant decreases in negative stereotypical images of science following exposure to zipTrips™; and
- Enhanced positive attitudes towards science and awareness of science careers.

Research on zipTrips™ indicates that EFTs can be an effective way to enhance student interest in science and science careers. Moreover, use of innovative Hotseat technology adds to the use of email as a way of communicating with scientists during live broadcast shows and holds promise for revolutionizing interactivity in a distance learning environment.

zipTrips™ have been recognized with 5 different awards, including an international Accolade Award of Merit in the 2009 “Live Television Events” category; and awards from The Association for Communication Excellence in 2010, 2011 and 2012.