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The Air Zoo: Daily Flights Now Available to Classrooms Everywhere

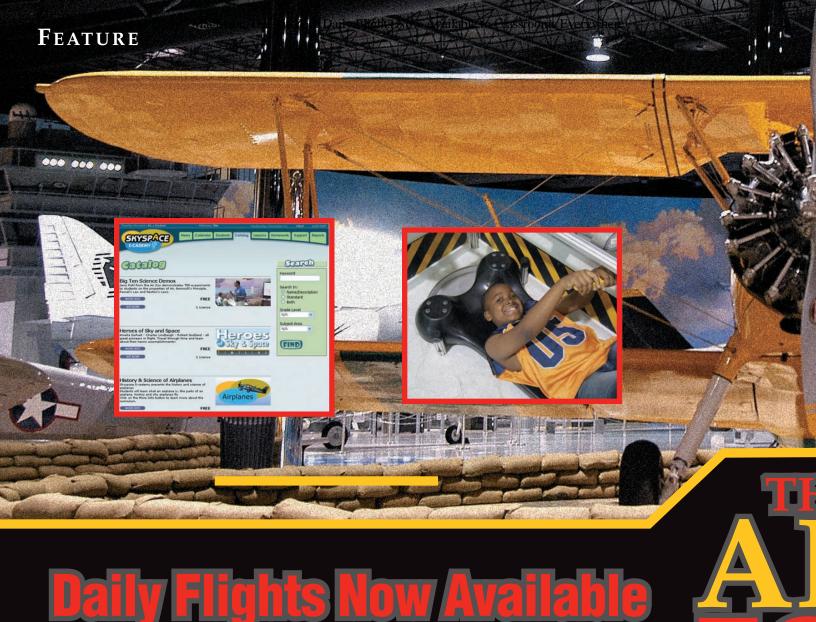
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By Jennifer MacLean

oday's world is full of electronics, gadgets and high-tech gizmos. With the ever-changing methods of communication, it is no wonder that we see upgrades and updates everywhere. At the Air Zoo in Kalamazoo, Michigan, ways of teaching science and history have taken these technologies and integrated them to create an innovative educational environment.

For the past three and a half years, the Air Zoo's approach to education has been a unique blend of entertainment and learning. The aviation museum-meets-indoor amusement park offers visitors a chance to see historic and rare aircraft and artifacts along with experiential components such as the Midwest's first 4D theatre, 360-degree fullmotion flight simulators, a 3D space shuttle ride and more. The Air Zoo's philosophy is that fun can be educational.

The Air Zoo accommodates for schools that do not have the transportation funding to visit; classroom visit admissions are at a greatly reduced price and all students on the Federal Free and Reduced Price lunch program are admitted free.

But what if a school is just too far away to visit the Air Zoo? To address this concern, the SkySpace E-cademy was created. A free online educational community for teachers and students offered by the Air Zoo and sponsored by the W.K. Kellogg Foundation, the mission of SkySpace E-cademy is to increase students' knowledge of science and history via the Internet. The online community allows schools and classrooms to use technology in order to access the valuable resources the Air Zoo has—its educators and artifacts.

SkySpace E-cademy is a free interactive and

multimedia-based curriculum and is developed in accordance with the National Education Science Standards (especially the History and Nature of Science and the Physical Sciences). It also meets the Michigan Curriculum Framework Science Standards.

"The initial goal of SkySpace E-cademy was to help the Air Zoo make its educational resources available to a wider audience, but that's only part of it," says Stewart Bailey, deputy director of education at the Air Zoo. "It is a dynamic system which helps teachers excite their students about learning science, math, history and technology using the medium of the internet. The lessons are fun and they utilize children's natural curiosity in the magic of flight to show how the science behind the magic is part of their



to Classrooms Everywhere

everyday lives."

Designed for sixth
through eighth grade,
with plans to expand grade
levels in the future, SkySpace allows teachers
to choose from four different topics of flight:

balloons, kites, airplanes and rockets. Before starting the lessons, students take a pre-assessment test that will allow their teacher to determine what concepts they already understand and what they have yet to learn. Post-assessments are also available and can

help teachers visually see how much a student-or the class as a whole-has learned.

The Air Zoo understands the increased demands of teachers and the push to make every minute spent in the classroom count. That's why SkySpace E-cademy isn't just



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The SkySpace E-cademy website student page.



The SkySpace E-cademy website lessons example.



The SkySpace E-cademy website teacher page.



The SkySpace E-cademy website catalog page.
Produced by The Berkeley Electronic Press, 2008



about learning science. Each lesson is crosscurricular and brings in different subjects like literacy, history, and math. Many lessons have vocabulary work and students are required to write paragraphs in others. For example, the ballooning section teaches students about Thaddeus Lowe who used balloons during the Civil War. In the kite section, students learn about Homan Walsh, the boy who flew a kite across Niagara Falls, which led to the first cable of a bridge being strung across the waterfall.

"The students liked the ease of use and the games for review. The units worked as an introduction and a conclusion to my handson units. Nice interface for the students and teacher," commented one teacher who was part of the beta-testing last year.

In addition to SkySpace E-cademy's online curriculum, teachers can use other free featured courses offered by the Air Zoo including Big Ten Science Demos where Jerry Pahl, an Air Zoo educator, demonstrates ten experiments to students on the properties of air, Bernoulli's Principle, Pascal's Law, and Newton's Laws. Another free course offered is called *Living in Space* and is a 10-week course authored by Dr. Lynn Bondurant, a former NASA educator who teaches the students how astronauts live in space. Students engage in Internet Missions to find answers to questions including: the effects of weightlessness, what is space food, where does water come from and how do astronauts breathe, sleep, exercise and stay clean.

Within the SkySpace E-cademy website, students can easily keep track of their online lessons, homework and due dates. Teachers are able to see where the students are in their work, how well they are doing, and even check to see if they have started a lesson. They are also able to assign different assignments to individual students who might need more practice or who might need a more challenging task.

"The SkySpace E-cademy system is designed to make teachers' jobs easier by giving them lots of 'class management tools.' Having Fun at the Air Zoo.

Using the various functions, they can assign homework, see progress of the entire class at one glance and assess what the students have learned in a concrete way that relates to grade level expectations and curriculum benchmarks," says Bailey.

SkySpace E-cademy also allows teachers to communicate with other teachers via discussion boards. This tool allows them to share website links, activity suggestions and any

other idea that they feel might be beneficial to other teachers.

The Air Zoo also helps teachers keep in touch with the aerospace world by posting news and events on each teacher's main page, such the upcoming 50th anniversary of America's first satellite launch. The museum provides links for teachers to learn more about the subject. In turn, teachers can post "events" and "news" items to their students' pages-including school news.

The Air Zoo's SkySpace E-cademy is very user-friendly and offers free, personalized online web training sessions daily Monday through Friday at 5 p.m. EST to help teachers become familiar with using the system. All you do need to pre-register for this free session and have access to a phone and Internet connection. Topics covered include posting news and calendar events, registering students, choosing and assigning courses, tracking student progress and using the chat room and discussion boards.

Teachers utilizing SkySpace won't feel lost or out-of-touch, as they also receive enewsletters that include ideas for activities, education material, new improvements to the system and invitations to personalized online training sessions.

So what is the future of SkySpace E-cademy?

"It may sound corny, but the future of SkySpace E-Cademy is looking up! We started with curriculum aimed at middle school students, but there has been a lot of interest in expanding it to a high school level," says Bailey. "There have been requests to use the program under license in other countries including Canada and Poland, so it's definitely going to expand on a global basis. And we intend to continually add content so that there is always something new for the teachers to use and the kids to learn."