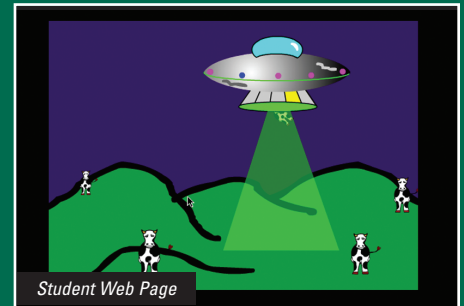


## Web Design Courses in K-12 Schools

By Kim Cavanaugh

A popular unit or course cropping up in many schools is Web Design. A Web Design course provides technical know-how and uses many learning skills that contribute to academic and career success in the future.



Congress Middle School in the School District of Palm Beach County in Boynton Beach, FL, now offers "Introduction to the Web," "Web Design" and "Web Animation." All the students begin by learning the basics of HTML and web technologies. This includes how web servers work, how the Internet operates, search engines, databases and the types of file formats that can be displayed by web browsers.

Once students have the fundamentals down, the course moves to using web design software as a visual web design tool. Students learn how to create page layouts, structure their websites and manage their files. The fundamentals of graphic design are investigated as they relate to the Web. Students work with "bitmap images" – a common web format for low-resolution web graphics.

Students also create animated GIFs – another web format for low-resolution web animated graphics. They also use JavaScript to create images that can be hotlinked to other pages or sites. Students then build interactive movies using web design software. They also learn to work with more advanced animation techniques and the use of sound files.

The culmination of the Web Design course is a group project where students work in teams of two or three. The students are presented with the task of teaching an educational fact or concept using the skills they have developed. Topics students at Congress Middle School have explored include: the plight of tigers, reptiles indigenous to Florida, environmental problems facing the Everglades, heroes of the Civil Rights movement and a study of the Jurassic period.

Students who take a web design course – no matter what their technical background – end up building their own web pages using the HTML programming. They emerge with technical know-how and better computer skills—and a real sense of accomplishment.

Kim Cavanaugh teaches web design classes in the School District of Palm Beach County in Boynton Beach, FL.

**"I found that even with activities involving math, I had more students willing to try and try again when we used the PDAs rather than just a calculator."**

— Wayne School District Teacher

tion created by the teacher on a desktop PC. They can review this presentation on their PDA without needing to go to the lab to work. A word processor is used to create the content for another presentation that can be sent over to PowerPoint or Word on the PC. When finished, students can beam their edited works to the teacher or sync with a desktop computer.

### PDAs & Concept Mapping

The PDAs' concept mapping software has also proven beneficial. Trevor and Heather's classes have had great success with creating brainstorming maps, vocabulary banks and charts using the PDA's concept mapping software. These are used for pre-writing activities and classroom discussion. In Heather's class, students use their handhelds to work on journals and they use the address portion of the PDA to maintain a math vocabulary log.

Students also use the IR beaming feature to weekly send these journal entries to Heather's Palm, which she takes home and grades right on her PDA. Students can take home the PDA's and used them for their homework. This has been a boon for those without a computer in the home.

Students have found all types of benefits of having the handhelds at their disposal throughout the day. Calculators, periodic tables, interactive star charts and spreadsheets are available for their use without the need for a PC at their desks. Also, teachers can use the quiz-making software that comes with the PDAs to create tests and assess student knowledge.

Next year, the Metropolitan School District of Wayne is planning for over 400 handhelds to be provided to every 7th grade student at South Wayne Jr. High School as well as being available for 8th and 9th grade classes. The PDA's and their keyboards will be allowed to go home with the students and will help to bridge the technology gap that exists.

To other schools that are considering such programs, a few words of advice are offered. First, although these PDA devices are simple, teachers need to be provided with training and direction on how to help students use these tools productively. A defined project objective is important for success. Technical problems can and will occur, even with handhelds.

So be prepared for these instances with extra units and the ability to quickly "reimage" the handheld, which means to install a new operating system on a handheld. Be prepared for a learning curve for teachers who have never used a PDA.

The use of PDA's in classrooms is providing another great tool to stimulate learning. A renewed sense of purpose and energy is in the palm of their hands. ■

Pete Just is Technical Supervisor in the Wayne School District in Wayne, IN.

## PDA COMPANIES

### DELL COMPUTER CORP.

877/499-3355  
www.dell.com  
Dell Axim X30

### HANDSPRING, INC.

888/565-9393  
www.handspring.com  
Handspring Treo 600 PDA

### HEWLETT PACKARD

800/752-0900  
www.hp.com  
HP iPAQ Pocket PC h1945 PDA

### PALM, INC.

800/881-7256  
www.palmone.com  
palmOne Tungsten E Handheld

### SONY

877/865-7669  
www.sony.com  
Sony CLIE PEG-TJ27 PDA

### TOSHIBA

800/867-4422  
www.toshiba.com  
Toshiba Pocket PC e800 PDA

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