SPIRIT Newsletter

Editorial

Although the school year is not yet half over, our teachers from 2009 have already begun making amazing impact on their students! This issue spotlights two of these teachers—Urban Reyes and Jill Parry. In future issues, we will begin spotlighting past and present SPIRIT counselors and students, so if you have a story to share, please let us know.

Melissa has also begun sharing one of her interests: interesting facts from computer history. Because there are so many, this article will take several issues to be completed. She's also continuing to challenge our readers with her riddles and jokes, so be sure to send her your answers to be entered in her contest.

The SPIRIT team looks forward to seeing all of the 2009 teachers at the December 4 in-service at Purdue and wishes everyone a happy Thanksgiving!....Alka

Letters to the Editor/Corrections

Hi Alka,

The newsletter looks GREAT!!! Thanks for featuring me (I love the article Jane wrote! - One slight correction-It has that I am from Holland, IN instead of Holland, OH) I love the Ask Alice section. I have had that same question that was featured in the newsletter. This will be a good way to get some answers to Alice questions. I also like the jokes and riddles and the section with professional development and grant opportunities. Looking forward to next month's issue.

Bonita Adams

Note from Editor: Thank you for your feedback and correction, Bonita. Your ongoing Alice activities are helping SPIRIT's message reach even more people and make a positive difference in even more classrooms!

Monthly Joke and Riddles   By: Melissa Weddle

As previously announced, there will be a surprise for the person to guess the most riddles correctly. The person with the most guesses and the most creative guesses will be awarded a prize, so submit your guesses now!! If you are curious about the answers to last month's riddles, feel free to email me. To submit a guess, send responses to Melissa at mweddle@purdue.edu.

1. A woman shoots her husband, then holds him under water for five minutes. Finally, she hangs him. Five minutes later they enjoy a wonderful dinner together. How can this be?

2. What has a neck and no head, two arms but no hands?

3. What question can you never honestly answer yes to?

1/2(10) =

What is the Answer?

OK   Cancel

Math Anticipation— A Game that Does it All By: Jane Nawrocki

Ever since Pong (the first commercially successful video game) arrived in 1972, today's students have been adjusting their brains to the speed, the interactivity, and the high-quality graphics in computer and video games. So says Marc Prensky in his article titled "Computer Games and Learning: Digital Game-Based Learning."

Urban Reyes (Spirit 2009), Computer Science teacher for Los Angeles Unified School District, was relying on the powerful lure of the very digital experience described by Prensky when he designed an Alice world entitled Math Anticipation. In this game, the student plays a Pong-like game. If (s)he misses the bouncing ball with a user-controlled paddle, a randomly-selected math question appears. In order to continue playing, the student must correctly answer the question.

At this point, Urban's game design gets very interesting. The responses of the questions answered incorrectly are tracked by the Alice world and are displayed when the game is terminated. This data provides the teacher the ability to determine the strengths and/or weaknesses of the individual student. Based on this assessment, appropriate enrichment or remediation can be designed specifically for the particular student. Urban considers this the best feature of the game.

As the school's information systems person, Urban had identified the great need for an assessment tool that would both 1) engage the students and 2) provide immediate feedback to the teachers. In response to this recognized need, Urban created his Math Anticipation game to help assess Math skills of the ninth graders who were just entering high school. A second motivation in the design of this game was to make it re-usable. Urban planned this Alice world so that it could be used repeatedly by all teachers for all subjects. As a result the questions of the world can be edited easily to reflect all content areas and all levels of difficulty.

When asked if he had created any other template (re-usable) Alice worlds, Urban quickly replied. "No, I have been overwhelmed since my return. We just finished 'norming'-- determining the number of teachers based on the budget and number of students. This is another hat that I wear as the school information systems person." But Urban did add that he has plans to create a couple Alice games to be used for professional development that he will lead after the winter break.

Urban working with a student playing Math Anticipation

This author awards 5 stars to Math Anticipation because it:
- Is easily edited for all content areas and all grade levels
- Tracks and reports student's errors
- Is engaging for student
- Provides immediate feedback for teachers.

Anticipation Math is available for download from SharePoint.

Urban may be contacted at: **ureyes@lausd.net**

Jill's Aperture and F-Stop Success Story By: Jane Nawrocki

Jill Parry, instructor of Digital Multimedia Communication and 3D Animation at Kokomo-Center Consolidated School Corporation, stated that she had done everything that she could think of—except stand on her head—to teach the concepts of aperture and f-stops to her high school students. And, without much success, she added. After checking last year's records, Jill reported that about 70% of the students earned a D or below on the quiz covering the aperture concepts.

However, in July during Spirit 2009, Jill decided to try a very different technique to drive home the concepts of aperture and f-stop. She designed and created a very clever and attention-grabbing Alice world entitled **Fun with Aperture and F-stop**. Jill describes this world as having three parts: 1)an explanation of aperture and its measurement (in f-stops); 2)a demonstration of the inverse relationship between the aperture and the f-stop setting number; and 3)a "quiz" to which a student responds to several questions to help reinforce learning or to encourage a review or the lesson. Although Jill encountered several problems (floating body parts, very complicated if…else... structures) during the development of the Alice lesson, she is very pleased with the resulting world because it "is both a visual clarification [of concepts] and a reinforcement tool [for students]." She adds that "the visual side-by-side comparisons between the aperture and the f-stop settings drive home the concept."

Jill's Digital Media students loved the world. Their interest level was extremely high as evidenced by numerous requests to "play it again, please." In addition, several students viewed the world on classroom computers "just for fun." What's the old adage about practice makes perfect?

And this year the students' performances on the Aperture and F-stop quiz were almost perfect! Only one student out of 25 scored a D and none failed, reported Jill. There's no denying that Alice played a major role in this turnaround. The visual, 3-D comparison of aperture and f-stops taught and reinforced in the Alice world made the difference in the comprehension and resulting success of the students.

(**Note**: Jill added that an additional, unexpected benefit of this world is that "it can stand alone as a teaching tool for students who miss the initial teaching of the concept due to absence.")

Jill may be contacted at: jparry@kokomo.k12.in.us

Jill with student studying the Alice World

Screen Shot of Alice World

Unity 3D: 3D Gaming Created with Ease By: Melissa Weddle & Travis East

Unity is a multi-platform game development tool, initially designed to ease game creation, and has now been fully integrated as a professional application. The Unity game engine is connected to the Unity development environment. This tight integration allows the Editor to do everything a published game can do. The simple, visual, and intuitive nature of the Editor makes building games fun again. This software has recently become a free download. Games can be written for Mac, Windows, and Web Player. More advanced versions than the free download are capable of interfacing with the iPhone, iPod Touch, and Wii.

To download the free version, go to: http://unity3d.com/unity/download. When you see the register button after you install, click on it and you can license the Indie version for free. For more information about Unity 3D, visit the Unity 3D website at http://unity3d.com/unity/.

Travis East has volunteered to do a presentation/introduction on Unity 3D at a future teacher in-service if time permits. If you have any questions about use and download, you can contact Travis East (teast@nhj.k12.in.us).

Did you Ever Wondered about the History of Computers? By: Melissa Weddle

Here is brief history of computers (source: http://www.computerhope.com/history/). I don't know about anyone else, but I was particularly interested in when important things have happened in computer history. Because there are so many important events, this article will appear in several parts over the course of multiple newsletters. I hope you all enjoy this timeline as much I enjoyed finding all of the information!

- 1911: Company now known as IBM on is incorporated June 15, 1911 in the state of New York as the Computing - Tabulating - Recording Company (C-T-R), a consolidation of the Computing Scale Company, and The International Time Recording Company. The company name is changed to IBM on February 14, 1924.

- 1936: German Konrad Zuse creates the Z1, one of the first binary digital computers and a machine that could be controlled through a punch tape.

- 1937: Iowa State Collegiates John Vincent Atanasoff and Clifford Berry begin work on creating the binary-based ABC (Atanasoft-Berry Computer). Considered by most to be the first electronic digital computer. The first prototype was created in 1939.

- 1938: The company now known as Hewlett Packard creates its first product the HP 200A.

- 1941: German Konrad Zuse finishes the Z3, a fully operational calculating machine.

- 1944: The first binary, and partially programmable computer, Colossus, was created at Bletchley Park.

- 1945: The term bug as computer bug was termed by Grace Hopper when programming the MARK II.

- 1946: F.C. Williams applies for a patent on his cathode-ray tube (CRT) storing device, an original form of random-access memory (RAM). In 1947, the memory system was in working order.

- 1952: Alexander Sandy Douglas created the first graphical computer game of Tic-Tac-Toe on a EDSAC known as "OXO."

- 1954: The first version of the programming language FORTRAN (formula translator) is published by IBM.

- 1955: Bell Labs introduces its first transistor computer. Transistors are faster, smaller and create less heat than traditional vacuum tubs, making these computers more reliable and efficient.

- 1956: On September 13, 1956 the IBM 305 RAMAC is the first computer to be shipped with a hard disk drive that contained 50 24-inch platters and was capable of storing 5 million characters and weighed a ton.

- 1958: William Higinbotham created the first video game called Tennis for Two.

- 1958: The first integrated chip is first developed by Robert Noyce of Fairchild Semiconductor and Jack Kilby of Texas Instruments. The first microchip was demonstrated on September 12th.