

Packetville Press

Newsletter for Educators

Penny's Tips

Lessons

Packetville lessons and activities are designed as examples of materials you can put to use in your classroom. It's a good idea to play the games and then look through the lessons to see which materials will be appropriate for your students. All of the lessons can be downloaded to your computer.

Game Cheatsheets

In the Educators' Resources you'll find what we've named *Cheatsheets*. These documents supply you and your students with a list of guidelines for playing the *Peter Packet* and *Penny's Search* games. They are handy to have nearby when playing the games.

Girls and Math, Science, and Technology

If you look at the number of girls taking the College Board Advanced Placement (AP) tests in mathematics, science, and technology, you'll notice that the numbers of girls taking these tests is increasing in subjects such as biology, chemistry, and calculus. However, the percentages of girls taking AP tests in physics and computer programming is still significantly lower than the number of boys taking these examinations. (See *Girls Catching Up?*)

Girls Catching Up?

So often we worry about why more girls are not electing to go into careers in mathematics, science, and technology and wonder if our past efforts in dealing with this problem shows any promise.

In the article, *Has the Gender Gap Closed?* (Technology & Learning, May 2006), Gertrude Abramson, professor at Nova Southeastern University, and Chris Stephenson, Executive Director of ACM's (Association for Computer Machinery) Computer Science Teachers Association, debated the subject. Abramson held that the gender gap was closing in most areas but not in fields such as engineering, physics, and computer technologies.

Stephenson's comments targeted the problems of encouraging women to prepare for fields in computer science. She noted that "the percentage of females taking either the A or AB (Computer Science AP Test) dropped to 15%." In 1999, the percentage was 17%. Today, Stephenson tells us that only 5.7% of full professors of computer science are women.

In the study, *The Incredible Shrinking Pipeline*, author Tracy Camp, Colorado School of Mines, explains that the percentage of females taking computer science decreases from high school through graduate school. In addition, the percentage of computer science degrees awarded to women "has decreased almost every year over the last decade." (http://www.mines.edu/fs_home/tcamp/cacm/paper.html).

Therefore, when it comes to technology studies and women, something seems to be missing. What happens to all those little girls in elementary school who loved working on computers and had no difficulty keeping up with the boys? Why aren't they pursuing bachelors degrees in computer science so that they can move forward in the field and take advantage of excellent career opportunities?

Stephenson believes, "We need to take a hard look at not just what and how we teach, but at the serious misconceptions our students have about the disciplines of computer science and the educational opportunities it provides." Consider

this quote from John White, Dean of Engineering, Georgia Institute of Technology, "If we want a different outcome, we are going to have to do things differently. We are making too little progress."

Working toward a different outcome is what Packetville is all about. The games and activities on the Packetville site are attractive to girls as well as to boys. You'll find, however, that there is a strong female emphasis in the games and activities for *Penny's Search* and *Career Capture*. One lesson is designed for girls only and just about all the career opportunities in the games highlight information about women in math, science, and technology. Packetville shows students that computer and engineering careers cross over to fields like marine science, medicine, music, etc.—careers that are definitely of interest to many girls. The program tackles the misconceptions mentioned by Stephenson as it gives students the opportunity to learn about the advantages of taking courses that will open doors to a wonderful future.

Percentages of Females Taking Selected Advanced Placement Tests

Biology – 59%
Calculus – 48%
Chemistry - 46%
English Language & Composition – 63%
Computer Science A and AB – 15%
European History – 53%
Physics B – 35%
Physics C, Electricity & Magnetism – 23%
Spanish Literature – 65%
Statistics – 50%

Numbers (girls and boys) taking the AP Computer Science Exam: 24422 in 2001; 19021 in 2005.

Numbers (girls and boys) taking English Language & Composition: 135428 in 2001; 230709 in 2005

(http://www.collegeboard.com/about/news_info/ap/2006/)



What You Need to Know About Social Networking



It wasn't so long ago that term *Social Networking* had nothing to do with kids and computers. It was all about business connections, getting jobs, fund raising, and engaging in interactions that provided necessary introductions.

Today social networking, at least among preteens, teens, and young adults means logging onto an Internet site, posting information about oneself, and connecting with peers. Social networking sites such as *MySpace*, *Bebo*, *FaceBook*, and others have become favorite places for young people to meet. Instead of going to the mall or a friend's house, teens and preteens go online. As a teacher, you need to realize that the Web culture is part of your students' world. That said, it's your job to learn about it so that you can help your students be as safe as they can possibly be.

To be sure, you've probably heard lots of negatives about social networking, but the headlines in the newspapers don't tell the whole story. Much of the interaction on these sites is typical teen talk and no different from when young people get together off line. Problems arise when young people post personal information, when they seek friendships with people online rather than at school or in the neighborhood, when they encounter what are called cyberbullies (online bullies), when they are disrespectful to others online, and when they spend too much time online.

What most concerns adults and what has been highlighted in the media lately is the fact that child predators are known to frequent social networking sites. There have been lots of articles in the newspapers and on television about kids who meet strangers online and then set up a time to meet them in person. Some of the meetings have disastrous results, ones that are reported in the news. Sometimes these meetings are set up by law enforcement officers in an attempt to catch child predators.

To keep your students safe from online child predators, you and your students need to be alert to the possible dangers of social networking sites. You should know that even though most of these sites have a minimum age for membership that many children younger than the minimum age sign up. They simply list their age as several years older. Therefore, don't be surprised if your social-savvy and Web-savvy fifth and sixth graders have profiles on a social networking site. These sites look intriguing to younger children, and if their friends are signing up, they will want to join, too. — Even if it means lying about their age.

Chances are that those who meet the requirements for minimum age may list their age as older. —And chances are that they'll want to post information and photos that make them look more mature than they are.

All this adds up to lots of kids' profiles that have misleading and false information in them. The profiles of your students are right there with the profiles of college students, young adults, and others who are members of the site. No one knows if anyone on these sites is who they claim to be. The idea behind the sites is to give people a place to interact with each other— just like going to the soda shop in years past. In the soda shop, however, they won't find information, some of which quite inappropriate, about millions of people. —And in a soda shop, millions of people won't be able to access information about your students.

The best thing you as a teacher can do to keep your students safe is to set rules for their Internet use at school and to check to make sure that the rules are followed. Supervision of their online activities is a must. Chances are that your school does not allow student interaction on social networking

sites. Social networking sites may have been blocked by your network administrator, but if they have not, unless you are using the sites for a particular educational project, you should request that they be blocked. Realize that that blocking is a continuing process, for new sites that need to be blocked often appear on the Internet.

You might also talk about social networking and its problems with your students' parents. Show their parents how to sign up for social networking sites so that they will be able to learn what types of content are posted on them and what their children are posting. Discuss the setting up of rules related to social interaction online. Major rules, for example, should address the following: username (not sexy, macho, crude), password (a smart password, not something that others' can guess), types of photos and other information that can be posted, not giving out any identifying information, setting profiles to private, realizing some people online are not who they claim to be, when (and for how long) they can go online, not downloading files sent by people they really don't know, not interacting with people they don't know, and never setting up meeting with anyone they consider a 'friend' but have never met in person.

Social networking is growing fast, and huge numbers of young people are online on these sites everyday. Although adults should do what they can to supervise and protect those young people in their lives, it's the young people who have to learn to be safe online. They need to take responsibility for their actions and to use their common sense to keep them out of trouble.

To find excellent information on social networking, suggestions for family rules, suggestions for monitoring, child safety software, etc., check out the social networking information provided on CableVision's *Power to Learn* < http://www.powertolearn.com/internet_smarts/interactive_case_studies/index.shtml#social_net. The site features a slide show for your students and information for teachers and parents. Other valuable information can be found on these sites:

Blogs, Profile Sites, Diary Sites or Social Networking Sites

<http://www.wiredsafety.org/internet101/blogs.html>

Center for Missing and Exploited Kids

<http://www.missingkids.com>

Cyber911 Help

<http://www.wiredsafety.org/911/index.html>