

Community

Practice NECC 2007

to

Linking Research

Atlanta, GA

Cybersecurity

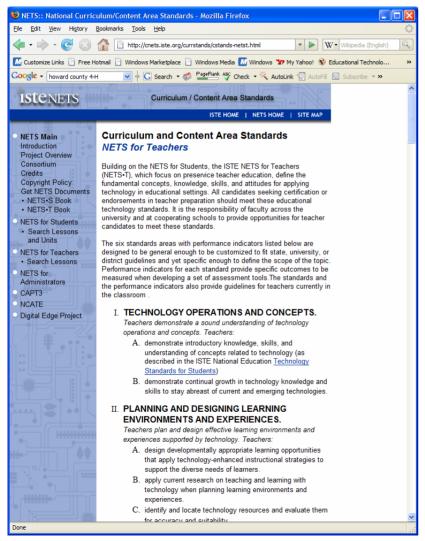
**Davina Pruitt-Mentle** 

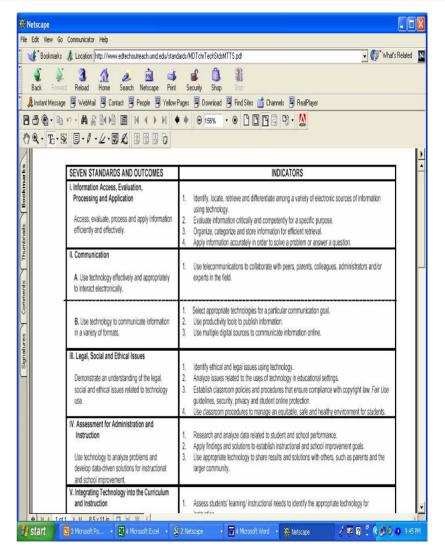
Educational Technology Policy, Research and Outreach



### Maryland Teacher Technology Standards and ISTE NETS\*T









### IV. Social, Ethical, Legal and Human Issues



### What is your Interpretation?

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice.

**ISTE NETS\*T** 

The International Society for Technology in Education (ISTE) NETS for Teachers Project, developed through a US Department of Education, *Preparing Tomorrow's Teachers to Use Technology* grant

- 1. model and teach legal and ethical practice related to technology use
- 2. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities
- 3. identify and use technology resources that affirm diversity
- 4. promote safe and healthy use of technology resources
- 5. facilitate equitable access to technology resources for all students



### IV. Social, Ethical, Legal and Human Issues



### What is your Interpretation?

 model and teach legal and ethical practice related to technology use

#### **ISTE NETS\*T**

The International Society for Technology in Education (ISTE) NETS for Teachers Project, developed through a US Department of Education, *Preparing Tomorrow's Teachers to Use Technology* grant

# Establish classroom policies and procedures that ensure compliance with

- Copyright Law
- Fair Use Guidelines
- Security
- Privacy
- Student Online Protection
- Expectations and Procedures
- Disability Statement
- Proper Citation
- FERPA/ Teach Act
- Acceptable Use Policies
- Netiquette



### III. Legal, Social and Ethical Issues



### What is your Interpretation?

Promote safe and healthy use of technology resources

#### **ISTE NETS\*T**

The International Society for Technology in Education (ISTE) NETS for Teachers Project, developed through a US Department of Education, *Preparing Tomorrow's Teachers to Use Technology* grant

Use classroom procedures to manage an equitable, safe and healthy environment for students.

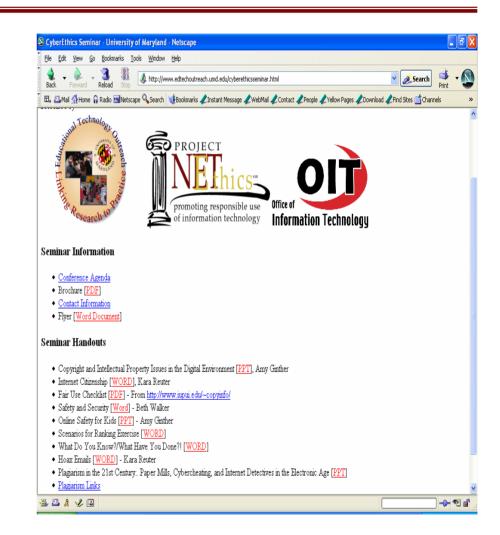
- Ergonomics
- Assistive Technology
- Equitable Access
- Cybersafety
- Filters



#### **Past Focus**



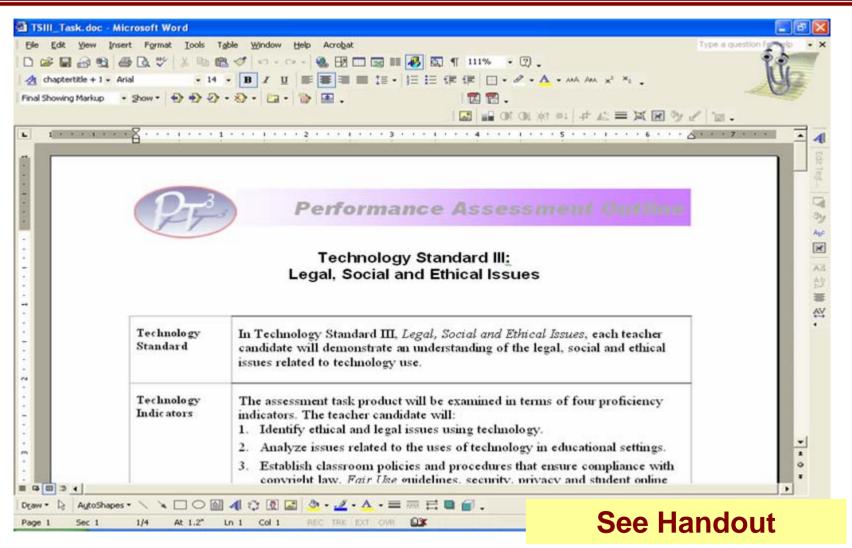
- Copyright and Intellectual Property Issues in the Digital Environment (ethics)
- Fair Use Checklist (ethics)
- Online Safety for Kids (safety)
- Plagiarism in the 21st
   Century: Paper Mills,
   Cybercheating, and Internet
   Detectives in the Electronic
   Age (ethics)





#### **Performance Assessment Outline**

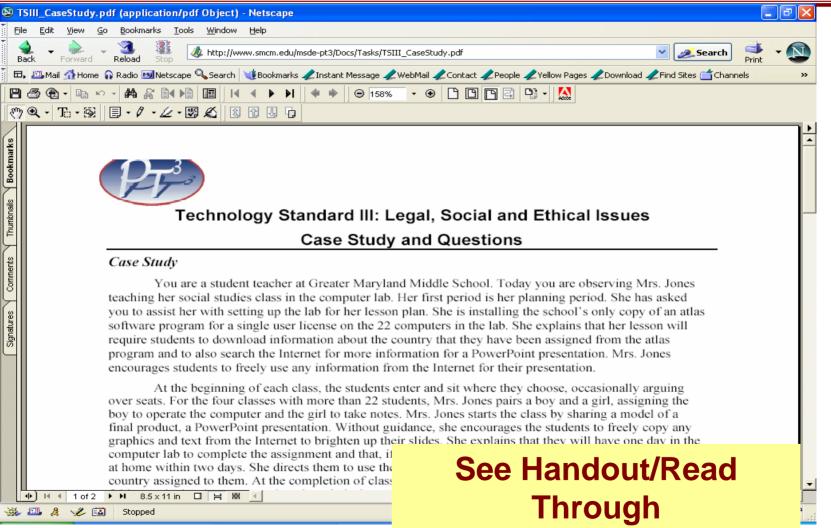






### Case Study And Questions







#### **Answers**



- Can be found at Maryland PT3
   Performance Task site
- http://www.smcm.edu/msdept3/TaskIII.htm



### Top Ten Educator Awareness Problems



- Passwords (security)
- Backing Ups
   Files/Patches/Anti-Virus
   Protection (security)
- Copyright (ethics)
- Cyberbullying (safety/ethics)
- Issues w/ new technology (social networking/blogs/cell phones) (safety/ethics/security)

- Plagiarism/Modeling (correct citation) (ethics)
- Equity Issues –DD (ethics)
- Equity Issues –AT/508 knowledge (ethics)
- Internet Citizenship (security/ethics)
  - Hoaxes
  - Attachments
- Internet Citizenship (ethics/security)
  - Downloading



#### C3<sup>TM</sup>:New Directions



- CyberSecurity
- CyberSafety
- CyberEthics



#### **ETPRO Efforts**



- C3™ Institute
- Electronic Portal
- Workshops
- PT3 pre-service module (part of undergraduate course)
- Online 3 credit graduate course
- April is Cyber- Awareness Month!
- October is Cyber Security Awareness Month!
- C3 Conference (October 4 & 5, 2007)
- NCSA-National Cyber Security Alliance National Campaign for C3 Awareness
- National Cyber Security
   Alliance's
   Cyber Security Assembly Toolkit
- National C3 Baseline Study







### **Cybersafety**



#### Curricula



- iKeepSafe
- NetSmartZ
- iSAFE
- CyberSmart
- StaySafeOnline
- MANY others
- ToolKit





**See Handouts** 



### **Online Activity Together**



#### Blog Beware Quiz: NetSmartz

 http://www.netsmartz.org/news/blogbew are.htm



# Social Networking Sites & Activities (Group Review)



- FTC <a href="http://onguardonline.gov/socialnetworking.html">http://onguardonline.gov/socialnetworking.html</a>
- NetSmartZ <a href="http://www.netsmartz.org/netteens.htm">http://www.netsmartz.org/netteens.htm</a>
- StaySafeOnline.org
   <a href="http://www.staysafeonline.org/basics/family.html#">http://www.staysafeonline.org/basics/family.html#</a>
- Social Networking Sites
   http://www.edtechoutreach.umd.edu/mindtools.html#networkingenviron
- More <a href="http://www.edtechoutreach.umd.edu/civics.html">http://www.edtechoutreach.umd.edu/civics.html</a>



### What's the difference between CIPA, COPPA, COPA, and CDA?



#### Children's Internet Protection Act (CIPA)

 Any school or library that receives discounted rates for telecommunications services under the E-Rate program, or receives funding through the Library Services & Technology Act or Title III, in order to purchase computers used to access the Internet, or to pay for direct costs associated with accessing the Internet, must comply with federal mandate to filter or block (passed 2000).

#### Children's Online Privacy Protection Act (COPPA)

 Requires commercial Web sites oriented to minors to get parental permission to collect personally identifiable information from children under age 13 (passed 1998).



#### COPPA? CIPA?



- The U.S. Federal Trade Commission (FTC) has the responsibility for enforcing COPPA and the Federal Communications Commission (FCC) regulates CIPA
- CIPA requires schools and libraries prove that Internet access to objectionable material is not available to any user under 17 years of age.
- COPPA requires U.S.-based Web-sites that collect personal information from people under the age of 13 to obtain permission from parents or guardians before asking for such data.



#### COPA & CDA



- Children's Online Protection Act (COPA)
  - Prohibited commercial Web sites from providing "harmful to minors" content to (passed 1997). Because of an odd legal twist, COPA has been bouncing around the legal system without a final resolution. The law already has been reviewed by the U.S. Supreme Court once--which agreed with a temporary ban on enforcement--but the justices said they wanted more information about the current state of filtering technology and stopped short of a definitive ruling on its constitutionality.\*\*
- Communications Decency Act (CDA)
  - Passed as part of the <u>1996 Telecommunications Deregulation Act</u>.
     The CDA prohibited "indecent" communication over the Internet. It was found unconstitutional by a unanimous Supreme Court decision in 1997.

\*\*Source: http://news.zdnet.com/2100-9588\_22-6169621.html



# Cyber bullying (Group Review)



- Take the Cyber bullying Quiz @ http://www.wiredkids.org/ktt\_universal/g ames/javascript/cyberbullying\_quiz\_1/in dex.html
- Cyber bullying Poll @ http://www.internetsuperheroes.org/cyb erbullying/
- Other savvy Resources
   http://www.kn.att.com/wired/fil/pages/list
   cyberbuve.html





### **Cyberethics**



# Copyright and Intellectual Property Issues



# Copyright and Intellectual Property Issues in the Digital Environment

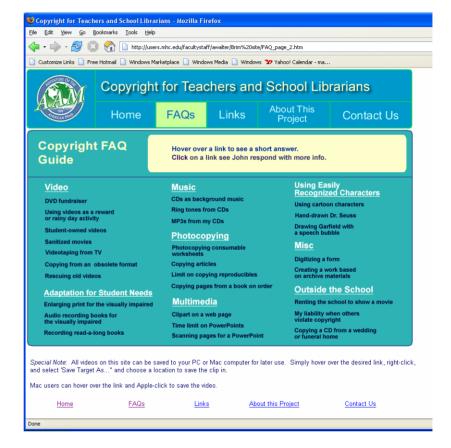
University of Maryland
Guidelines for the Acceptable Use of
Computing Resources



# Copyright for Teachers & School Librarians





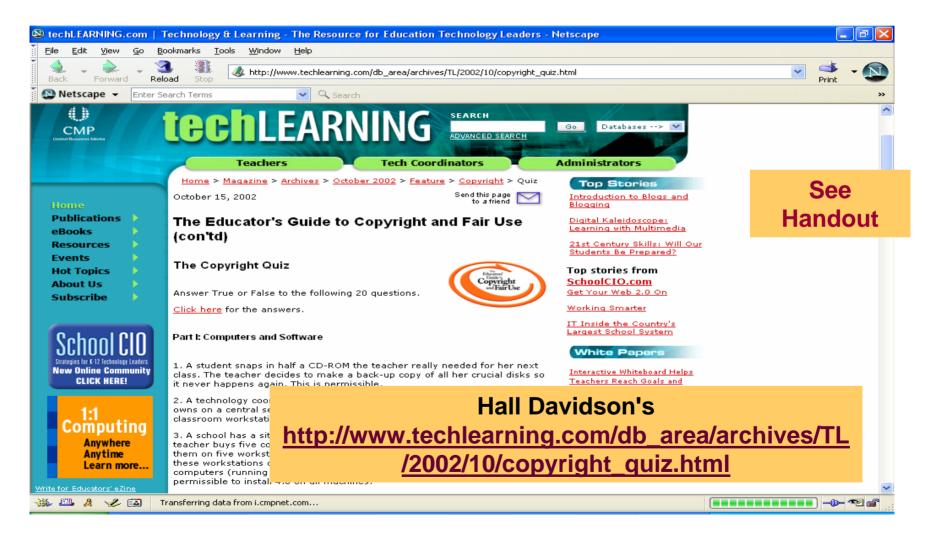


Will move to: <a href="http://www.aamprogram.org/resources/copyright.aspx">http://www.aamprogram.org/resources/copyright.aspx</a>



# The Educator's Guide to Copyright and Fair Use Copyright Quiz (Group Together)

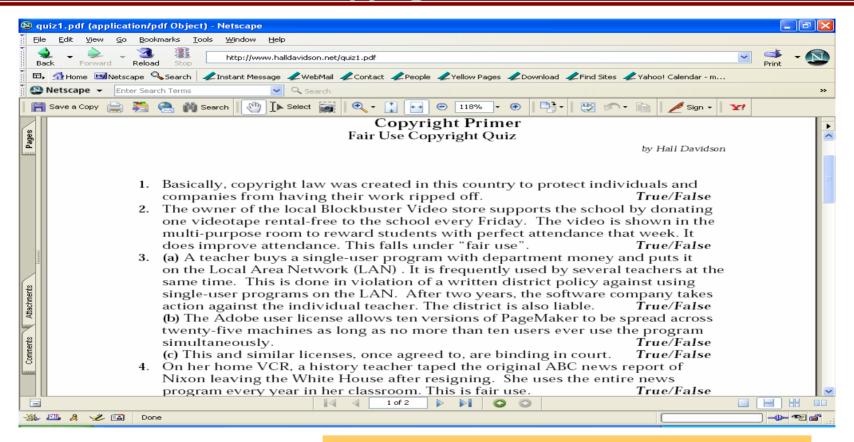






# The Educator's Guide to Copyright and Fair Use Copyright Primer



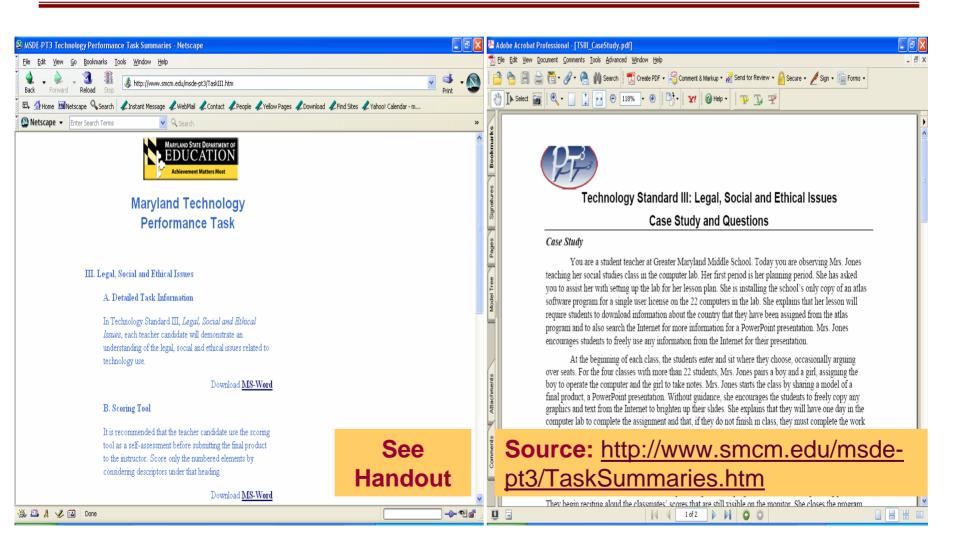


http://www.halldavidson.net/quiz1.pdf



### Maryland Technology Performance Task III







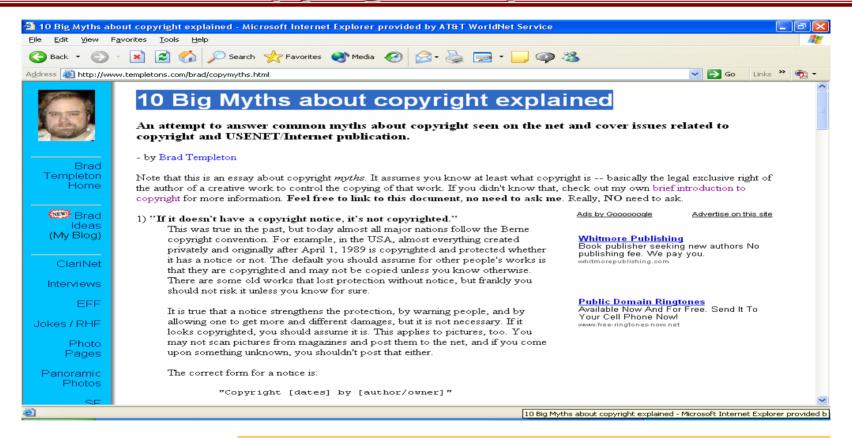


### **Tutorials**



# 10 Big Myths About Copyright Explained



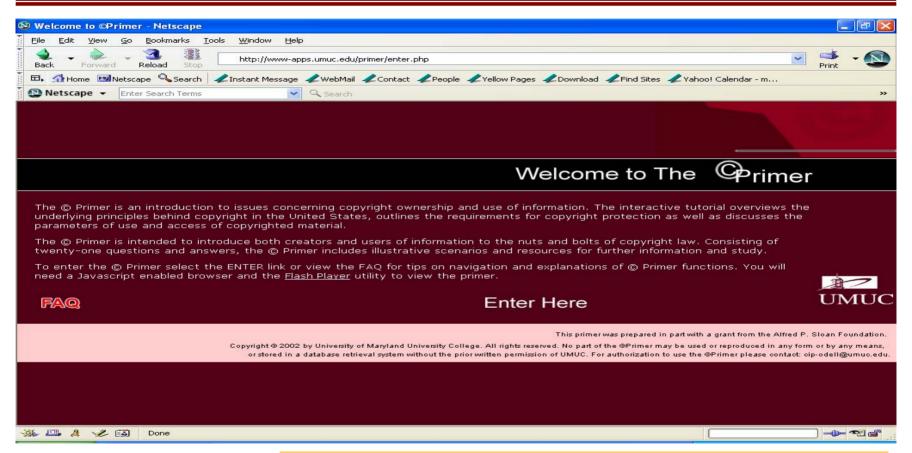


Brad Templeton
http://www.templetons.com/brad/copymyths.html



#### **©Primer**



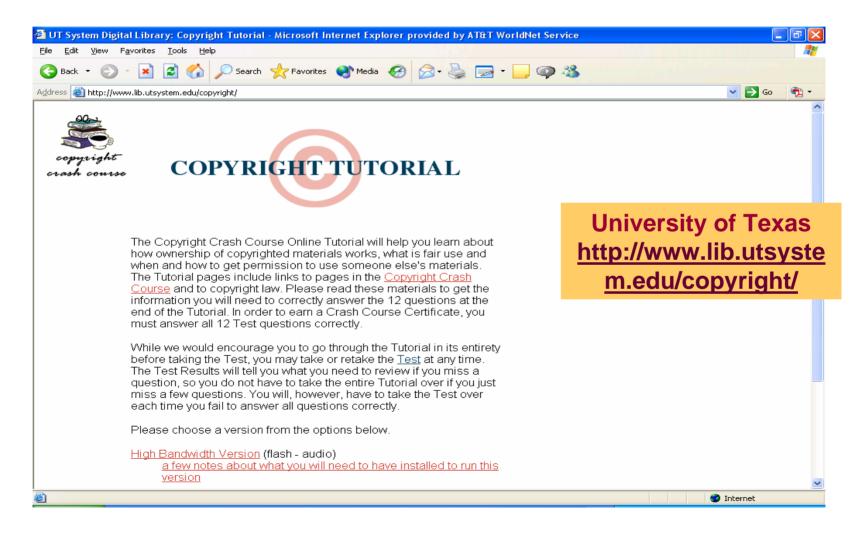


UMUC <a href="http://www-apps.umuc.edu/primer/enter.php">http://www-apps.umuc.edu/primer/enter.php</a>



### **Getting Started**

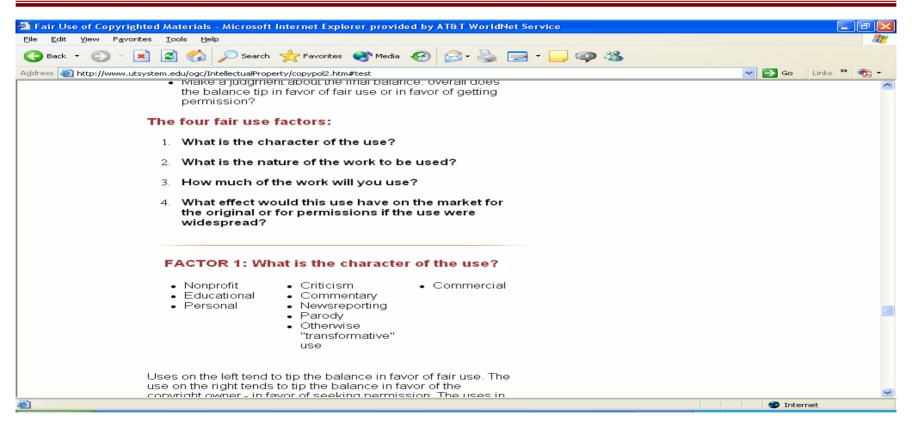






### Copyright Tutorial cont.





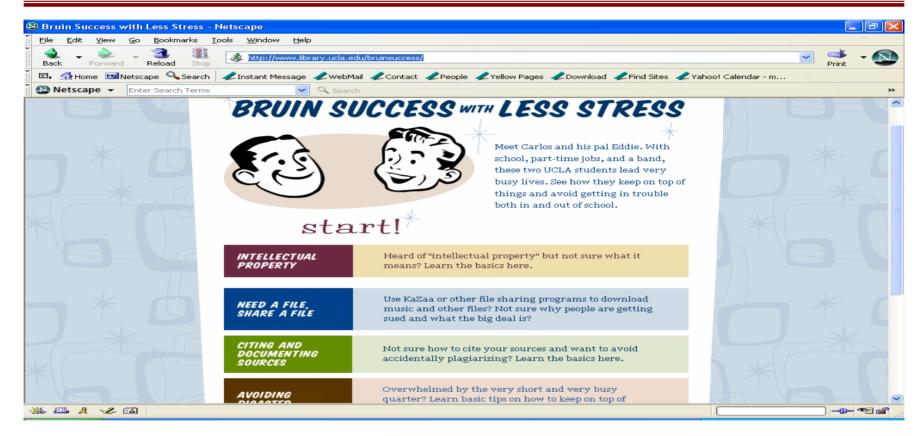
Source: deep link-

http://www.utsystem.edu/ogc/IntellectualProperty/copy pol2.htm#test



# Bruin Success with Less Stress



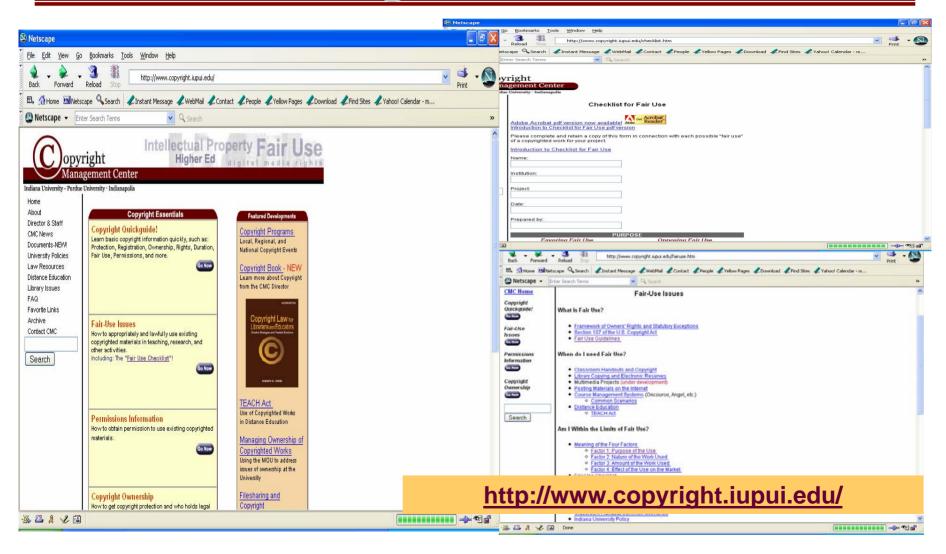


http://www.library.ucla.edu/bruinsuccess/



# Purdue Copyright Management Center







# A Visit to Copyright Bay: Fair Use Harbor





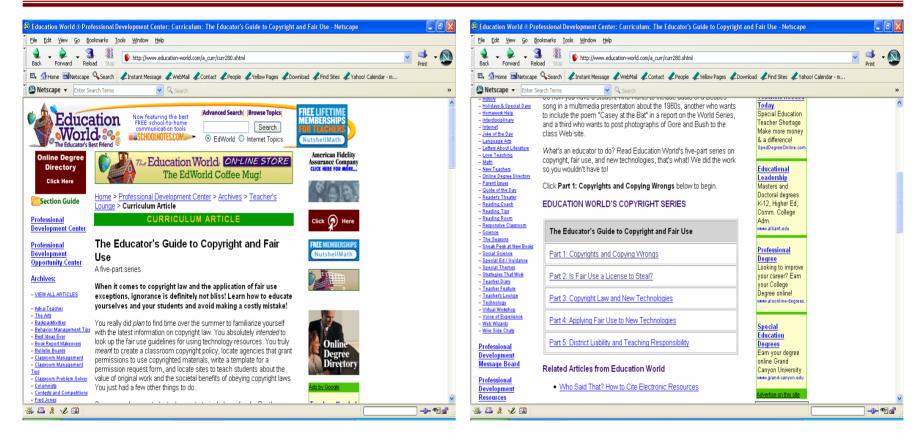
http://www.stfrancis.edu/cid/copyrightb ay/fairuse.htm Laura Gasaway ,

<u>University of St. Francis</u>



### The Educator's Guide to Copyright and Fair Use: A five-part series





http://www.educationworld.com/a\_curr/curr280.shtml http://www.educationworld.com/a\_curr/curr280b.shtml



# Copyright Snippets: Warm-ups



Place in Order

Workplace.html

Monitor/oct00

http://

www.apa.org/

• Article in an Internet-only newsletter

(1998, July).

http://www.telehealth.net/subscribe/newslettr4a.html1

*2*(2).

**Retrieved from** 

Glueckauf, R. L., Whitton, J., Baxter, J., Kain, J., Vogelgesang, S., Hudson, M., et al.

Telehealth News,

Videocounseling for families of rural teens with epilepsy -- Project update.

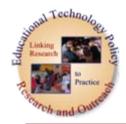


# Article in an Internet-only newsletter



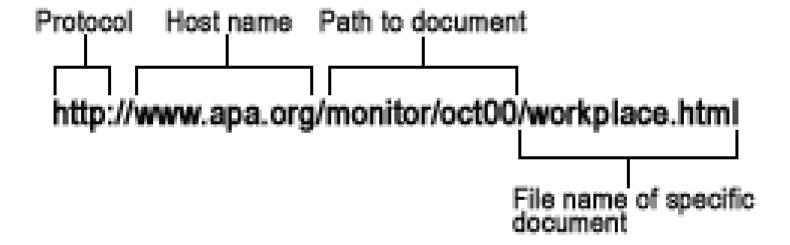
 Glueckauf, R. L., Whitton, J., Baxter, J., Kain, J., Vogelgesang, S., Hudson, M., et al. (1998, July). Videocounseling for families of rural teens with epilepsy ---Project update. *Telehealth News*, 2(2). Retrieved from http://www.telehealth.net/subscribe/newslettr4 a.html1

**APA** style format



### Components of URL





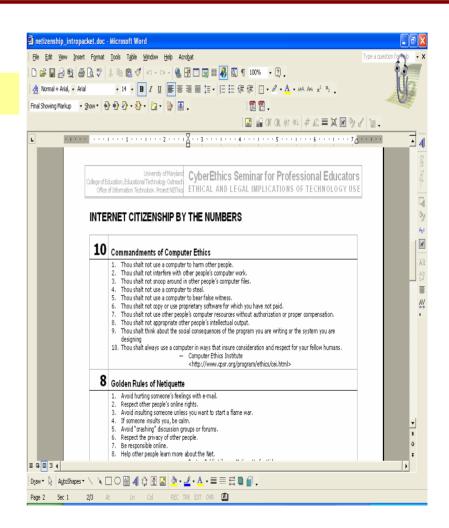


## Internet Citizenship



#### **Presentation by Karen Reuter**

 http://www.edtechoutr each.umd.edu/cyberet hicsseminar.html

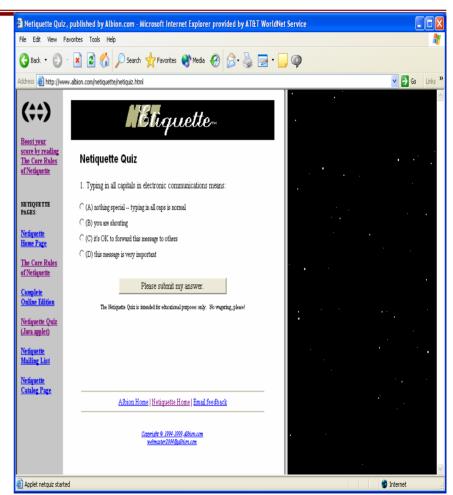




#### Other Netiquette Snippets: Warm-ups



- Take the Core Rules Netiquette Quiz
  - http://www.albion.com/netiquette/corerules.html

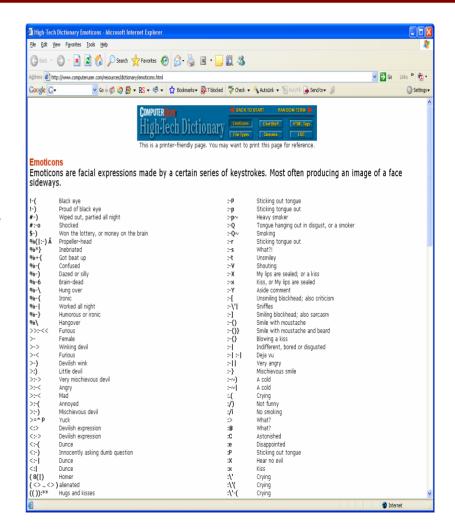




# **Emoticons and Jargon**



- Go to <u>http://www.computeruser.com/r</u> <u>esources/dictionary/emoticons.h</u> tml
- Online Lingo <u>http://www.netlingo.com/emailsh</u> <u>.cfm</u>
- Which ones are you familiar with?
  - Which ones have you used?
  - Reflect on why it is important to understand the jargon (or at least where to go to find out) as a parent?
  - As an educator?



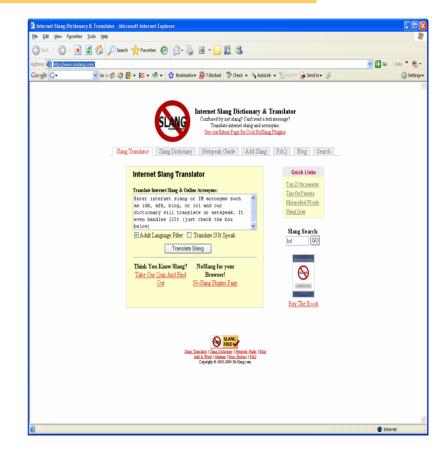


#### Online Translator



#### emoticons, jargon, slang and leet.

- Using an online slang translator http://www.noslang.com/about.p hp (talks about what it is) <a href="http://www.noslang.com/">http://www.noslang.com/</a> translate the following message
  - John: gg.wth were they thinking?
  - Steve: Tnx. imho we pwned them.
  - John: I agree rotflmao.
  - Steve: They need to rtfm.
  - John: ttyl
- What was the message? Was this online slang translator helpful? Why or why not?





# **Plagiarism**



# Plagiarism in the 21st Century: Paper Mills, Cyber-cheating, and Internet Detectives in the Electronic Age

 http://www.edtechoutreach.umd.edu/ cyberethicsseminar.html



## Plagiarism Snippets: Warmups

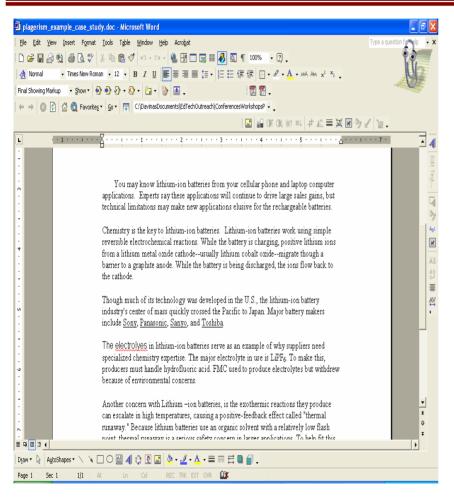


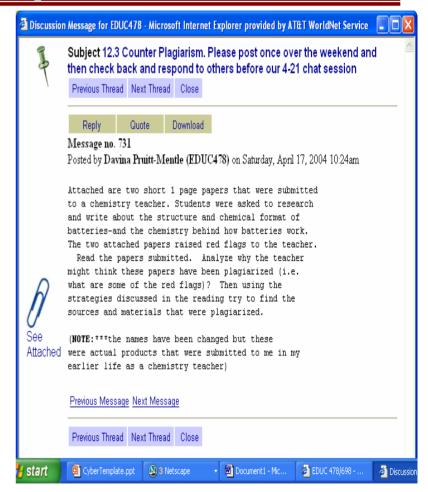
- Examine paper-mill sites some of them are listed below (you do not have to look at them all)
  - A-1 Term Papers <a href="http://www.a1-termpaper.com/index.shtml">http://www.a1-termpaper.com/index.shtml</a>
  - Academic Term papers <a href="http://www.academictermpapers.com/">http://www.academictermpapers.com/</a>
  - Top 100 Essay sites <a href="http://www.freeessay.com/top100/">http://www.freeessay.com/top100/</a>
  - Pink Monkey http://www.pinkmonkey.com/
  - School Sucks <a href="http://www.schoolsucks.com/">http://www.schoolsucks.com/</a>
  - Cheat House <a href="http://www.cheathouse.com/">http://www.cheathouse.com/</a>
- Discuss the quality of a few of the sites above and the materials gained. How easy were the sites to navigate? What levels were the sites targeting? Were you able to find papers/materials that met your specific needs? Rate the quality of the materials located. How easy would it be for a student to access the materials?



# Plagiarism Snippets: Warm-ups







#### **See Handouts**



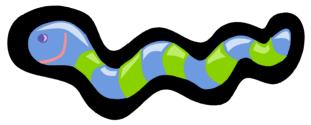


# Cybersecurity





# chishing For Worms,



Just What Are Worms, Adware,

Spyware, and Phishing

**Expeditions?** 





#### **Definitions**



- Worm: a self-replicating computer program, similar to a computer virus. It is self-contained and does not need to be part of another program to propagate itself.
  - Example: Sobig and Mydoom.
- Virus: attaches itself to, and becomes part of, another executable program;
  - Macro viruses are written in the scripting languages for Microsoft programs such as Word and Excel.
- In general, a virus cannot propagate by itself whereas worms can. A worm uses a network to send copies of itself to other systems and it does so without any intervention. In general, worms harm the network and consume bandwidth, whereas viruses infect or corrupt files on a targeted computer. Viruses generally do not affect network performance, as their malicious activities are mostly confined within the target computer itself.

From Wikipedia - http://en.wikipedia.org/wiki/Computer\_worm



#### **Definitions**



- Trojan Horse: A malicious program that is disguised as legitimate software
  - These are often those attachments to email that entice you to open them
- Malware: Software designed to infiltrate or damage a computer system, without the owner's consent
  - Includes computer viruses, Trojan horses, spyware and adware



#### What to do



- Signs of infection
  - May seem sluggish or slow down significantly
  - Might 'lock up' more often than usual
  - Browser program may not work correctly
  - Pop-up ads
  - Unusual hard drive activity

- Ways to get rid of
  - Use your anti-virus software (you have one right!!!)
    - Scan all your drives
  - Use Microsoft Malicious Software Removal Tool
    - http://www.microsoft.com/s ecurity/malwareremove/def ault.mspx
  - McAfee:

     http://ts.mcafeehelp.com/?si
     telD=1&resolution=1280x10

     24&rurl=vrContactOptions.a
     sp
  - Symantec: 
     http://security.symantec.co
     m/sscv6/default.asp?produc
     tid=symhome&langid=ie&ve
     nid=sym



#### **Chain Letter Hoax**



- Definition: An email which urges the recipient to forward the email to other people
- DEAR SIR,

URGENT AND CONFIDENTIAL BUSINESS PROPOSAL

I AM MARIAM ABACHA, WIDOW OF THE LATE NIGERIAN HEAD OF STATE, GEN. SANI ABACHA. AFTER HE DEATH OF MY HUSBAND WHO DIED MYSTERIOUSLY AS A RESULT OF CARDIAC ARREST, I WAS INFORMED BY OUR LAWYER, BELLO GAMBARI THAT, MY HUSBAND WHO AT THAT TIME WAS THE PRESIDENT OF NIGERIA, CALLED HIM AND CONDUCTED HIM ROUND HIS APARTMENT AND SHOWED HIM FOUR METAL BOXES CONTAINING MONEY ALL IN FOREIGN EXCHANGE AND HE EQUALLY MADE HIM BELIEVE THAT THOSE BOXES ARE FOR ONWARD TRANSFER TO HIS OVERSEAS COUNTERPART FOR PERSONAL INVESTMENT.

ALONG THE LINE, MY HUSBAND DIED AND SINCE THEN THE NIGERIAN GOVERNMENT HAS BEEN AFTER US, MOLESTING, POLICING AND FREEZING OUR BANK ACCOUNTS AND EVEN MY ELDEST SON RIGHT NOW IS IN DETENTION. MY FAMILY ACCOUNT IN SWITZERLAND WORTH US\$22,000,000.00 AND 120,000,000.00 DUTCH MARK HAS BEEN CONFISCATED BY THE GOVERNMENT. THE GOVERNMENT IS INTERROGATING HIM (MY SON MOHAMMED) ABOUT OUR ASSET AND SOME VITAL DOCUMENTS. IT WAS IN THE COURSE OF THESE, AFTER THE BURIAL RITE AND CUSTOMS, THAT OUR LAWYER SAW YOUR NAME AND ADDRESS FROM THE PUBLICATION OF THE NIGERIAN BUSINESS PROMOTION AGENCY. THIS IS WHY I AM USING THIS OPPORTUNITY TO SOLICIT FOR YOUR CO-OPERATION AND ASSISTANCE TO HELP ME AS A VERY SINCERE RESPONSIBLE PERSON. I HAVE ALL THE TRUST IN YOU AND I KNOW THAT YOU WILL NOT SIT ON THIS MONEY.



#### **More Definitions**



- Adware: Software package which automatically plays, displays, or downloads advertising material to a computer after the software is installed on it or while the application is being used.
- Spyware: designed to intercept or take partial control of a computer's operation without the informed consent of that machine's owner or legitimate user.



#### What to do



- Signs of infection
  - An affected computer can rapidly become infected with large numbers of spyware components.
  - Pop-up advertisements
  - Unwanted behavior and degradation of system performance.
  - Significant unwanted CPU activity, disk usage, and network traffic
    - Slows down other programs
    - Stability issues application or system

- Ways to get rid of or protect
  - Anti-spyware programs
    - OptOut
    - Ad-Aware SE
    - Spybot Search & Destroy



#### **Definitions**



#### Spamming

 Sending of unsolicited bulk unsolicited e-mail and received by multiple recipients

#### Solutions

- Source-based blocking solutions prevent receipt of spam
- Content filtering solutions identify spam after it's been received
- Disposable identities

#### Spoofing

- one person or program successfully pretends to be another by falsifying data and thereby gains an illegitimate advantage
- "Webpage spoofing,": a legitimate web page such as a bank's site is reproduced in "look and feel" on another server under control of the attacker. They fool users into thinking they are connected to a trusted site, to gather user names and passwords.



### **Identity Theft**



#### Phishing

- Phishing is a popular and growing method of identity theft, typically performed either through email or through the creation of a Web site that appears to represent a legitimate company. Victims are asked to provide personal information such as passwords and credit card numbers in a reply email or at the bogus Web site.
- "Spear phishing" the practice of targeting an attack to a specific group is gaining in sophistication and frequency.

#### Pharming

A scamming practice in which malicious code is installed on a personal computer or server, misdirecting users to fraudulent Web sites without their knowledge or consent. Pharming has been called "phishing without a lure."



# **Identity Theft**



http://www.ftc.gov/

On Guard <a href="http://onguardonline.gov/phishing.html">http://onguardonline.gov/phishing.html</a>

 The Federal Trade Commission reports that identity theft now affects more than 10 million people every year representing an annual cost to the economy of \$50 billion



#### **Activities**



- NCSA StaySafeOnline <a href="http://staysafeonline.org/basics/quiz.html">http://staysafeonline.org/basics/quiz.html</a>
- James Mason's Computer Security Awareness tutorial page
  - http://www.jmu.edu/computing/security/ -
- George Mason University's IT Security Quiz
  - http://itu.gmu.edu/security/quiz/
- STAYSAVEONLINE.org
  - http://staysafeonline.org/basics/quiz.html
- Carnegie Mellon's Home Computer Security tutorial site
- Microsoft Spyware Quiz part 1 and part 2
   http://www.microsoft.com/athome/security/quiz/spywarebasics1.

http://www.microsoft.com/canada/athome/security/quiz/default.mspx



#### **Activities**

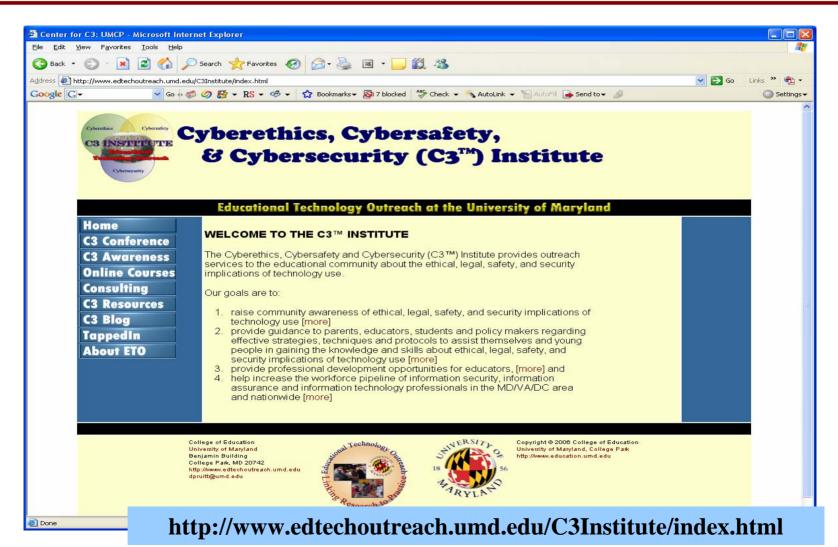


- Humorous video on Passwords at George Mason's Security Website <a href="http://itu.gmu.edu/security/practices/">http://itu.gmu.edu/security/practices/</a>.
- The University of Arizona's Security
   Awareness Posters
   http://security.arizona.edu/posters.html
   and
   the <a href="http://www.itd.umich.edu/posters/">http://www.itd.umich.edu/posters/</a>
   University of Michigan's posters (my favorite).



### C3™ Institute







#### **Electronic Portal**



#### Cyberethics, Cybersafety, and Cybersecurity (C3)

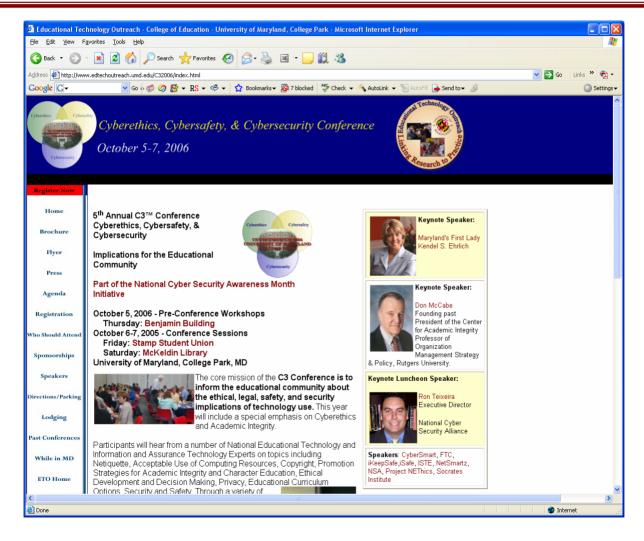
 http://www.edtechou treach.umd.edu/C3I nstitute/c3resources
 .html





#### C3<sup>™</sup> Conference

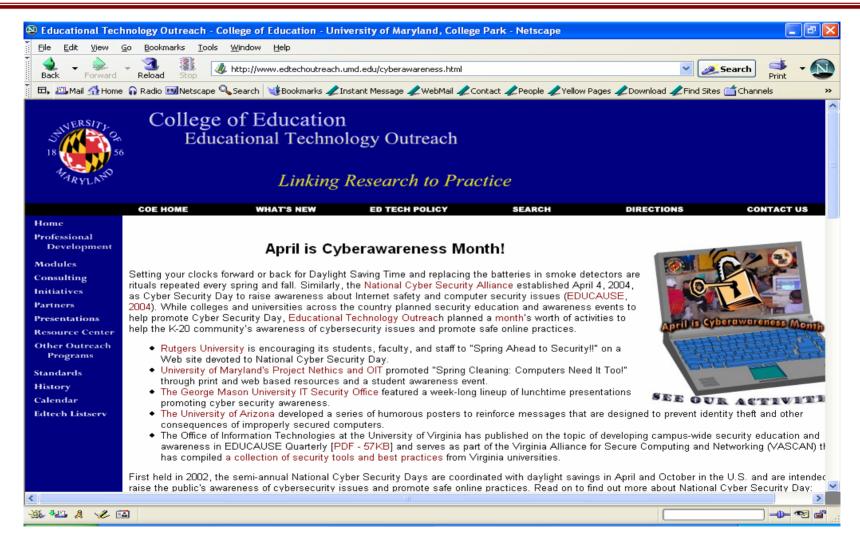






# April/October Cyber- Awareness Month!





# Questions

