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# Information, Media, and Technology Skills in the CTE Classroom

## Technical Assistance Packet

*Resources Prepared by*  
PCG's Center for Resource Management and  
participants in the *Maine CTE 2008–09 Literacy Institute*

*for the*  
Maine Administrators of Career and Technical Education (MACTE) and the  
Maine Department of Education



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# Information, Media, and Technology Skills in the CTE Classroom

## Technical Assistance Packet

*Purpose of this Packet:* This technical assistance guide to Information, Media, and Technology Skills in the CTE classroom will help CTE teachers understand how to use these powerful tools in their classrooms and labs.

*The Challenge:* Every CTE program area has core knowledge and concepts that students must learn in order to understand the technical materials that they are reading in manuals or online; pass CTE certification tests (both written and performance based); and prepare work summaries, logs, and descriptions of services proposed or performed. We also want our students to be able to use information, media, and technology skills to further their work and knowledge. To be effective 21<sup>st</sup> century workers, our students must be able to exhibit a wide range of functional and critical thinking skills related to information, media, and technology.

*How to Address the Challenge:* Participants in the **Maine CTE 2008–09 Literacy Institute** identified resources that they and their student could use to expand their use and understanding of the role of Information, Media, and Technology Skills in the CTE Classroom. These materials provide us with a guide to the wide range of technological resources available to support literacy and learning in the CTE classroom, lab, and field.

The materials in this packet were developed by PCG-CRM and Participants in the **Maine CTE 2008-09 Literacy Institute**. Explanations and examples of all of the literacy support strategies mentioned are found in the CTE Literacy Strategies Manual at every Maine CTE center or online in the Content Literacy Guide at [http://www.ccsso.org/projects/secondary\\_school\\_redesign/Adolescent\\_Literacy\\_Toolkit/](http://www.ccsso.org/projects/secondary_school_redesign/Adolescent_Literacy_Toolkit/).

In this Technical Assistance Packet, you will find:

- Overview of the Information, Media, and Technology Skills as Defined in the *Framework for 21<sup>st</sup> Century Skills*
- 21<sup>st</sup> Century CTE Technology Skills Inquiry Teams
- Technology Inquiry Team Tasks
- Online Reading Resources for CTE Teachers and Students\*
- Online Writing Resources for CTE Teachers and Students\*
- Visual Media Resources for CTE Teachers and Students\*
- Media Presentation Resources for CTE Teachers and Students\*
- Literacy Map for Career and Technical Education
- Initial Online Resources for Technology Inquiry Teams

\*Note: Resources Prepared by Participants in the *Maine CTE 2008-09 Literacy Institute*.



## Overview of the Information, Media, and Technology Skills as Defined in the Framework for 21<sup>st</sup> Century Skills

People in the 21st century live in a technology and media-suffused environment, marked by access to an abundance of information, rapid changes in technology tools, and the ability to collaborate and make individual contributions on an unprecedented scale. To be effective in the 21st century, citizens and workers must be able to exhibit a range of functional and critical thinking skills related to information, media and technology.

### INFORMATION LITERACY

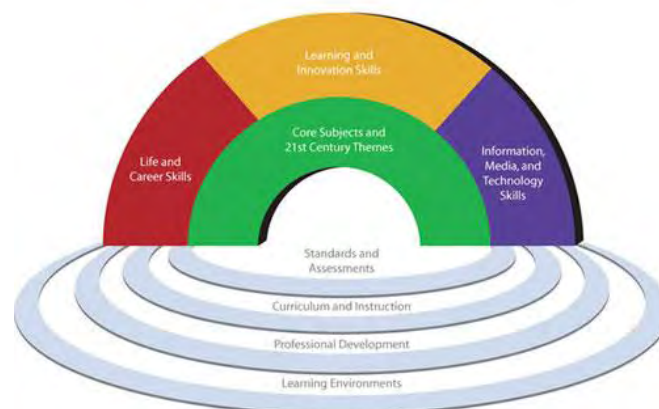
- Accessing information efficiently and effectively, evaluating information critically and competently and using information accurately and creatively for the issue or problem at hand
- Possessing a fundamental understanding of the ethical/legal issues surrounding the access and use of information

### INFORMATION, COMMUNICATIONS, AND TECHNOLOGY

- Understanding how media messages are constructed, for what purposes and using which tools, characteristics and conventions.
- Examining how individuals interpret messages differently, how values and points of view are included or excluded and how media can influence beliefs and behaviors.
- Possessing a fundamental understanding of the ethical/legal issues surrounding the access and use of information

### MEDIA LITERACY

- Using digital technology, communication tools and/or networks appropriately to access, manage, integrate, evaluate, and create information in order to function in a knowledge economy
- Using technology as a tool to research, organize, evaluate and communicate information, and the possession of a fundamental understanding of the ethical/legal issues surrounding the access and use of information



Source:[http://www.21stcenturyskills.org/index.php?option=com\\_content&task=view&id=61&Itemid=120](http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=61&Itemid=120)



## 21<sup>st</sup> Century CTE Technology Skills Inquiry Teams

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In today's highly interactive workshop, participants will choose technology topics related to CTE literacy instruction to research, discuss, document, and share with your colleagues. All findings will be compiled and distributed at the February workshop. To choose one of the following teams, consider whether: 1) you have expertise to share with others, 2) want to further develop a technology interest, or 3) if you'd like to explore an unfamiliar topic.

### **INFORMATION LITERACY**

#### **A: Strategies for Accessing and Evaluating Online Information**

What are the "how to's" that students need to know to effectively access online information? What do they need to do to determine the accuracy of the information they find?

#### **B: Online Reading Resources for CTE Teachers and Students**

What are some key online reading resources for CTE literacy and learning for teachers and/or for students?

### **INFORMATION, COMMUNICATIONS, AND TECHNOLOGY**

#### **C: Strategies and Resources for Writing Online**

What are some key online writing resources for CTE literacy and learning for teachers and/or for students?

#### **D: ICT Literacy Maps for CTE**

What are the key Information, Communication, and Technology (ICT) standards and outcomes that are particularly relevant to CTE instruction?

### **MEDIA LITERACY**

#### **E: Strategies and Resources for Media Presentations**

What are some key media presentation resources for CTE literacy and learning for teachers and/or for students?

#### **F: Visual Media for CTE Literacy and Learning Instruction**

What are some key visual media resources for CTE literacy and learning for teachers and/or for students?



## Technology Inquiry Team Tasks

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### INFORMATION LITERACY

#### Group A: Strategies for Accessing and Evaluating Online Information

##### Team task:

1. Activate your prior knowledge: Brainstorm and record your team's ideas about how to find good information online. Then brainstorm how to evaluate the accuracy of online information.
2. Read the resources listed in the workshop handout on accessing and evaluating online information. As you read, select and record criteria in two lists on your template: 1) How to Find Good Information Online, and 2) How to Evaluate the Accuracy of Online Information. Then organize your list in the best sequence to guide students' online reading.
3. Use the lists to create two student posters that CTE teachers can post near their computers to guide students during online research. 1) How to Find Good Information Online, and 2) How to Evaluate the Accuracy of Online Information.
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, research and create a third poster: How to Compare Multiple Texts on the Same Topic.

### INFORMATION LITERACY

#### Group B: Online Reading Resources for Teachers and Students

##### Team task

1. Activate your prior knowledge: Brainstorm your team's ideas about online reading resources you use to plan and develop CTE instruction or that you have students access and read.
2. For each resource, complete the Online Reading Resources template by listing the organization, the web address, and a bulleted list of its contents. Check whether the site is useful for CTE teachers or students or both. Then mark the degree the site is beneficial for CTE literacy and learning: H = high, M = Medium, L = Low.
3. Research the listed resources for online reading. Add information about each resource to the Online Reading Resources template
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, do a web search for additional sources of online reading materials and add them to your resource template.



## Technology Inquiry Team Tasks

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### INFORMATION, COMMUNICATIONS, AND TECHNOLOGY

#### Group C: Strategies and Resources for Writing Online

##### Team task:

1. Online writing resources you use to plan and develop CTE instruction or that you have students access and read.
2. For each resource, complete the Online Writing Resources template by listing the organization, the web address, and a bulleted list of its contents. Check whether the site is useful for CTE teachers or students or both. Then mark the degree that the site beneficial for CTE literacy and learning: H = high, M = Medium, L = Low.
3. Research the listed resources for online writing. Add information about each resource to the Online Writing Resources template
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, do a web search for additional sources of online writing materials and add them to your resource template.

### INFORMATION, COMMUNICATIONS, AND TECHNOLOGY

#### Group D: ICT Literacy Maps for CTE

##### Team task:

1. Activate your prior knowledge: Brainstorm your team's ideas about the technology standards that you think apply across all CTE program areas. Stimulate your thinking by reviewing the ITEA poster.
2. Review the ALA Information Literacy Standards, ISTE's Educational Technology Standards and ICTE literacy maps for science, math, English, and geography. Highlight points that apply to most CTE program areas.
3. Using the ICT Literacy Map for Career and Technical Education template, develop an ICT literacy map for the CTE classroom/shop.
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, create a student poster that summarizes what CTE students need to know about technology, using student-friendly language.



## Technology Inquiry Team Tasks

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### **MEDIA LITERACY**

#### **Group E: Strategies and Resources for Media Presentations**

##### Team task:

1. Activate your prior knowledge about media presentation resources that students can use to create presentations.
2. Complete the Media Presentations Resources template about the purpose and benefits of each resource. Check whether the site is useful for CTE teachers or students or both. Then mark the degree that the site beneficial for CTE literacy and learning: H = high, M = Medium, L = Low.
3. Review the resources listed in the workshop handout. Complete the Media Presentations Resources template for each one.
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, search the Internet to find additional resources to add to your list.

### **MEDIA LITERACY**

#### **Group F: Visual Media for CTE Literacy and Learning Instruction**

1. Activate your prior knowledge about visual media resources that students can use to create presentations.
2. Complete the Visual Media Resources template about the purpose and benefits of each resource. Check whether the site is useful for CTE teachers or students or both. Then mark the degree that the site beneficial for CTE literacy and learning: H = high, M = Medium, L = Low.
3. Review the resources listed in the workshop handout. Complete the Visual Media Resources template for each one.
4. Write a summary statement that explains how this aspect of technology contributes to CTE literacy and learning.
5. If you finish early, search the Internet to find additional resources to add to your list.

## Information, Media, and Technology Resources for the CTE Classroom

### ONLINE READING RESOURCES FOR CTE TEACHERS AND STUDENTS\*

Organization	Web Address	Summary of contents	Useful to		Benefit to CTE		
			T teacher	S student	H high	M medium	L low
Teacher Tube	<a href="http://www.teachertube.com">www.teachertube.com</a>	The site has videos of short lessons by teachers on sentence fragments and other reading-related topics. There are also books on video that are read aloud. It's a good site for struggling readers.	H	H			
Project Gutenberg	<a href="http://www.gutenberg.org">www.gutenberg.org</a>	Can download a book for free, can search by interest. Is available in different languages. The drawback is that it doesn't have the newest books. You can highlight the text, go to Firefox/Services/Speech, and those words will be read aloud. It's good for struggling readers.	H	H			
LibriVox	<a href="http://Librivox.org">Librivox.org</a>	The site allows you to download books that will be read aloud; under "Podcast," go to "librivox books podcast," and you can subscribe and get files from iTunes. This is even better than Project Gutenberg because it has audio.	H	H			
Skowhegan school system – resources for literacy strategies	<a href="http://www.msad54.org/district/literacyspecialist/strategy.shtml">http://www.msad54.org/district/literacyspecialist/strategy.shtml</a>	Great practical literacy templates such as graphic organizers that can be downloaded and printed to use with students.	H	L			
	<a href="http://Msad50.org">Msad50.org</a>	Has links to literacy resources like reading comprehension strategies and graphic organizers.					
Skype	<a href="http://Skype.com">Skype.com</a>	Brian has students reading to other students through skype, and they can see the reader on video. Brian has two high school students reading to elementary school students, and the elementary school students also read aloud to the high school students (the same book).	H	H			
American School Directory's Challenge Zone problems	<a href="http://www.asd.com">www.asd.com</a>	This is a subscription website that costs \$36 per year, so we weren't able to investigate. The site allows you do mapping, but you could also do that on Google maps. It provides a directory to many different school systems. The site seems more valuable for teachers as a networking tool to stay connected with other school systems. It doesn't seem directly related to the topic of technology and reading.	L	L			
Framework for 21 <sup>st</sup> Century Skills	<a href="http://www.21stcenturyskills.org">www.21stcenturyskills.org</a>	This might be a good resource if you needed a lot of factual information or wanted to read articles about digital literacy. It has a lot of links. It takes a long time to find anything useful for students.	M	L			

\*Note: Links were accessed during 2008–09 school year. Users may find some of the links to be out of date or broken.

E-text database for online reading	<a href="http://del.icio.us/Supported_etext">http://del.icio.us/Supported_etext</a>	This is a social bookmarking site where anyone can contribute a website that they use with electronic text, and they're ranked by popularity. It would take a long time to look through everything, but you can start with using the sites with higher numbers (that means more people have bookmarked that site), and you can find one person's selections that you really like and look at everything that the person has posted. Students may not have the patience to click on all these links; the site isn't visually very interesting.	M	L			
E-text for teachers, parents and students	<a href="http://www.literacymatters.org">www.literacymatters.org</a>	For teachers, the site contains various reading programs that might be useful for their students, like Read 180 from Scholastic, Inc. The programs are described succinctly and clearly. However, these programs are expensive and must be bought by schools. There's a link to lesson plan websites, but it's tough to get to actual lesson plans—a lot of navigating is required, and a lot of the material doesn't seem really relevant to CTE students.	L	L			
E-text for reading comprehension	<a href="http://ncset.uoregon.edu">http://ncset.uoregon.edu</a>	Students can build their own books and share books with others. There's also a link to a tool that converts text to speech. You have to create an account—we're not sure, but it looks like you can access these sites for free. You can download books for grades 9–12 and younger.	H	H			
Digital Texts for students with print disabilities	<a href="http://www.bookshare.org/web/SupportAboutUs.html">www.bookshare.org/web/SupportAboutUs.html</a>	You have to pay \$50 per year to subscribe to this site, so we're not sure about the usefulness. It seems comprehensive, though.	L ?	L ?			
Reading environments and products to support access and comprehension	<a href="http://www.techmatrix.org">www.techmatrix.org</a>	A resource geared towards teachers rather than students. You have to subscribe. The site has abstracts and full articles on many topics.	M for prof. dev.; L for practicality	x			
	<a href="http://Learninginmotion.com">Learninginmotion.com</a>	Has products for sale to teachers, mainly math and science. Doesn't seem to be really related to reading although there is some.	L	L			
Literacy and technology Integration	<a href="http://www.literacy.uconn.edu/littech.htm">www.literacy.uconn.edu/littech.htm</a>	This website is well-organized by topic, such as "adolescent literacy" and "literacy and technology." It mostly provides teachers with an academic background on important topics in the field. There's an abundance of information—lots of links to lesson plans and other resources, but you need time to go through it. It does contain resources for Grades 9–12.	H for prof. dev.	L			

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Literacy Volunteers of America	<a href="http://www.literacyvolunteers.org">www.literacyvolunteers.org</a>	Has links to books you can buy to improve your reading and writing. Has basic facts about literacy and links to many other well-regarded literacy organizations and websites. More useful for teachers to build their background knowledge about literacy than for students. The sites tend to be geared more towards ESL and adult literacy.	M	L			
International Reading Association	<a href="http://www.reading.org">www.reading.org</a>	It's a membership organization of literacy professionals. Has literacy policy and research information.	H for keeping up in the field	L			
National Council of Teachers of English	<a href="http://www.ncte.org">www.ncte.org</a>	A professional resource for teachers with journals you can buy.	M	x			
National Center on Adult Literacy	<a href="http://www.literacyonline.org">www.literacyonline.org</a>	Oriented to adults, not high school students. Geared towards adult students rather than teachers.	L	L			
Comprehensive list of e-journals and other publications	<a href="http://library.georgetown.edu/newjour/">http://library.georgetown.edu/newjour/</a>	You just get the abstracts but have to buy the publications.	L	x			
Grade-level literacy resources for teachers and students	<a href="http://www.studyzone.org">www.studyzone.org</a>	Practice tests for math, social studies	L	L			
Some favorite sites of educators	<a href="http://www.songline.com/teachers">www.songline.com/teachers</a>	Site doesn't load	?	?			
On-line professional development community	<a href="http://cu.classroom.com">http://cu.classroom.com</a>	By subscription. Has listing of classes that might be useful for professional development. There are on-line courses to teach how to use technology in the classroom. Might be useful to show you the course options that are available.	M	x			
Internet-based question-answering service for K-12 teachers, library media specialists, and administrators	<a href="http://www.americatakingaction.com/lounge/askeric.htm">http://www.americatakingaction.com/lounge/askeric.htm</a>	Linked to the ERIC database—useful for professional development for teachers. Does offer a link to a site with many lesson plans for teachers, but that never loaded—might just require more time. Has free on-line magazines (e-zines) that students could read under the crayon "Technology." The "student reading corner" has reading geared towards younger students.	H if links worked!	M			
	<a href="http://Jimmoulton.org">Jimmoulton.org</a>	Under "resources," there are sites for educators and students, on-line writing and resources.	H	M			

\*Note: Links were accessed during 2008–09 school year. Users may find some of the links to be out of date or broken.

## Information, Media, and Technology Resources for the CTE Classroom

### ONLINE WRITING RESOURCES FOR CTE TEACHERS AND STUDENTS\*

Organization	Web Address	Summary of contents	Useful to		Benefit to CTE		
			T teacher	S student	H high	M medium	L low
University of Maine	<a href="http://quest.portaportal.com/umwrite">http://quest.portaportal.com/umwrite</a>	University of Maine site for writing center by director Rich Kent Books	x	x	x		
	Journalingprompts.com	New journal idea to write about	x	x		x	
	Books	Rich Kent: The promise of portfolio classroom, Developing Independent study projects	x		x		
	<a href="http://guest.portaportal.com/umwrite">http://guest.portaportal.com/umwrite</a>	Writing technology in teens Rich Kent	x	x		x	
	<a href="http://www.canteach.ca/elementary/prompts.html">http://www.canteach.ca/elementary/prompts.html</a>	Writing ideas for students to write about daily (journal)					
	<a href="http://bertiekingore.com/quickwrite">bertiekingore.com/quickwrite</a>	Quickwrite before, during, after, write up on lesson for the day	x	x	x		
A food program at Harvard university	<a href="http://freerice.com">freerice.com</a>	Students give definition of vocabulary words for every one they get right they feed the hungry	x			x	
UMaine	<a href="http://guest.portaportal.com/umwrite.my.hsj.org">http://guest.portaportal.com/umwrite.my.hsj.org</a>	Students write about what they are doing and write about it then enter in the website so other students or instructors can read and share	x	x	x		
Google	<a href="http://blogger.com">blogger.com</a>	Create Google account then you create your own blog so students and teachers can share discuss problem share with other tech schools	x	x		x	

\*Note: Links were accessed during 2008–09 school year. Users may find some of the links to be out of date or broken.

**Information, Media, and Technology Resources for the CTE Classroom**

**VISUAL MEDIA RESOURCES FOR CTE TEACHERS AND STUDENTS \***

Organization	Web Address	Summary of contents	Useful to		Benefit to CTE		
			T teacher	S student	H high	M medium	L low
YouTube	<a href="http://www.youtube.com">www.youtube.com</a>	videos	X	X	X- dependi ng on use		
Photo Booth			X	X			X
Photo Shop			X	X	X- dependi ng on use		
Arachnophilia	<a href="http://www.arachnoid.com/arachnophilia/">http:// www.arachnoid.com/ arachnophilia/</a>	HTML Webpage builder	X	X			X
Visual Display		Visual display of vocabulary	X	X	X- dependi ng on use		
Comic Life		Creating and building comics	X	X			X
Videos			X	X	X- dependi ng on use		
Live Demonstrations			X	X	X- dependi ng on use		
Memories on TV			X	X		X	
I Movie			X	X	X- dependi ng on use		

Power Point			X	X	X-dependi ng on use		
CaMILE	<a href="http://www.cc.gatech.edu/gvu/edtech/CaMILE.html">http:// www.cc.gatech.edu/ gvu/edtech/ CaMILE.html</a>	Out dated Moodle					
Virtual High School		High School Classes online. Unlimited capability.		X	X-dependi ng on use		
Acellus		Fundamental math skills based on mastery of skills using a video and the computer		X	X-dependi ng on use		
Smart Board, Promethean			X	X	X-dependi ng on use		
Covis	<a href="http://www.covis.northwestern.edu/">www.covis.northwestern.edu/</a>	Science based resources	X			X	
Jim's Best of the Web	<a href="http://jimmoulton.org/1.html">http://jimmoulton.org/ 1.html</a>	Resources for teachers and students on the Web..	X	X	X-dependi ng on use		
21st Century Skills	<a href="http://www.21stcenturyskills.org/">http://www. 21stcenturyskills.org/</a>	Evaluation tool for teachers resources for various educational material.	X			X	
Visual Literacy.org	<a href="http://www.visual-literacy.org">www.visual-literacy.org</a>	Programming for graphical organizers.	X	X	X-dependi ng on use		
Visio	<a href="http://office.microsoft.com/en-us/visio/FX100487861033.aspx">http:// office.microsoft.com/ en-us/visio/ FX100487861033.asp x</a>	Graphical organizers and charts	X	X	X-dependi ng on use		
AT & T Knowledge Network Explorer	<a href="http://www.kn.pacbell.com/wired/webquests.html">http:// www.kn.pacbell.com/ wired/webquests.html</a>	Free resources for educators	X			X	

Teachers Domain	<a href="http://www.teachersdomain.org">www.teachersdomain.org</a>	Free resources for educators	X			X	
International Visual Literacy	<a href="http://www.ivla.org">www.ivla.org</a>	Free resources for educators	X			X	
Teacher Tube.com	<a href="http://www.teachertube.com">www.teachertube.com</a>	Free resources for educators	X		X-dependi ng on use		
Youth Voices	<a href="http://youthvoices.net">http://youthvoices.net</a>	Student produced work	X	X	X-dependi ng on use		
Library of Congress	<a href="http://lcweb.loc.gov">http://lcweb.loc.gov</a>	Resources for teachers and students on the Web.	X	X	X-dependi ng on use		
Smithsonian	<a href="http://www.si.edu">http://www.si.edu</a>	Resources for teachers and students on the Web connected with state standards	X	X		X	
National Council of Teachers of English	<a href="http://www.ncte.org">www.ncte.org</a>	Resources for teachers with sources of visual literacy.	X			X	

## Information, Media, and Technology Resources for the CTE Classroom

### MEDIA PRESENTATION RESOURCES FOR CTE TEACHERS AND STUDENTS\*

Organization	Web Address	Summary of Contents	Useful to		Benefit to CTE		
			T teacher	S student	H high	M medium	L low
X	<a href="http://www.freetech4teachers.com">www.freetech4teachers.com</a>	Blog and fantastic resource for	X		X		
	<a href="http://www.voicethread.com">www.voicethread.com</a>	coaborative, multimedia slide show – paysite a free feature	X	X	H		
	<a href="http://www.wested.org/cswew/view/rs/609">www.wested.org/cswew/view/rs/609</a>	basically books online – a text book	x				x
	<a href="http://webquest.org">http://webquest.org</a>	constructivist lesson format – kind of cool – creating webs can get a 2yr subscription	x	x	x		
X	<a href="http://www.teach-nology.com">www.teach-nology.com</a>	teacher resource for lesson planning, rubric creating					
	<a href="http://skype.com">skype.com</a>	talk for free world wide – voip great for distance learning	x	x	x		
	<a href="http://twitter.com">twitter.com</a>	blogging using instant msging max. 140 char.	x	x		x	
	<a href="http://www.pbs.org">www.pbs.org</a>	how other students created videos and their online presentations.	x	x	x		
X	<a href="http://www.presentationhelper.co.uk">www.presentationhelper.co.uk</a>	tips on how to create presentations and blogs as well as websites.	x	x	x		

\*Note: Links were accessed during 2008–09 school year. Users may find some of the links to be out of date or broken.

**Information, Media, and Technology Resources for the CTE Classroom**

**INFORMATION, COMMUNICATIONS, AND TECHNOLOGY (ICT)  
LITERACY MAP FOR CAREER AND TECHNICAL EDUCATION**

<b>21<sup>st</sup> Century Tool</b>  <b>Accessing, Processing, Managing, Integrating, and Communicating Information</b>	<b>Sample Student Outcomes</b>	
	<b>CTE Program Area</b>	<b>Student Outcome</b>
Database and spreadsheet programs/software	Computer Tech	Use database and spreadsheet programs/software to analyze help-desk request report
Spreadsheet	Cooperative Education/School to Career	Use spreadsheet to list colleges and show information regarding cost, courses, male to female ratio, location
PowerPoint	Cooperative Education/School to Career	Create PowerPoint Presentations to describe themselves using the results from Myers-Briggs Personality Profile
Estimating software	Carpentry	Use estimating software to come up with cost estimates for a business
Spreadsheet	Culinary Arts	Generate spreadsheet to figure out cost per person for all of the ingredients of a meal
Youtube and iMovie	Computer Technology	Create Youtube videos – how to protect your computers from viruses, and save computing practices
Internet	Emergency Services	Go on-line to find an article related to topic, generate a give brief synopsis, and communicate it to group

**Information, Media, and Technology Resources for the CTE Classroom**

**INFORMATION, COMMUNICATIONS, AND TECHNOLOGY (ICT)  
LITERACY MAP FOR CAREER AND TECHNICAL EDUCATION**

<b>21<sup>st</sup> Century Tool</b>  <b>Thinking and Problem Solving Skills</b>	<b>Sample Student Outcomes</b>	
	<b>CTE Program Area</b>	<b>Student Outcome</b>
Blooms: Analysis	Computer Technology ++	Generate their own flowcharts to help analyze a problem
Blooms: Synthesis	Computer Technology Automotive Technology	Use on-line resources to determine beep codes
Blooms: Application	All	Use Wikki's, forums, and manufacturing support pages to help trouble shoot a technology issue
Blooms: Comprehension	All	Use Google docs for collaborative communication
Blooms: Analysis	All	Use blogs in order to problem solve

**Information, Media, and Technology Resources for the CTE Classroom**

**INFORMATION, COMMUNICATIONS, AND TECHNOLOGY (ICT)  
LITERACY MAP FOR CAREER AND TECHNICAL EDUCATION**

<b>21<sup>st</sup> Century Tool</b>  <b>Interpersonal and Self- Directional Skills</b>	<b>Sample Student Outcomes</b>	
	<b>CTE Program Area</b>	<b>Student Outcome</b>
ISTE Standards and Performance Indicators- # 1 Creativity and Innovation	All	Create how to videos – how to conduct yourself in an interview
ISTE Standards and Performance Indicators- # 4 Critical Thinking, Problem Solving, and Decision Making	All	Create digital and on-line portfolios (e-folios)
ISTE Standards and Performance Indicators- # 2 Communication and Collaboration	All	Generate appropriate and professional email and texting correspondence
ISTE Standards and Performance Indicators- # 3 Research and Information Fluency	All	Create flowcharts in order to determine problem/cure
ISTE Standards and Performance Indicators- # Research and Information Fluency	All	Research various career paths
ISTE Standards and Performance Indicators- # 4 Critical Thinking, Problem Solving, and Decision	All	Use Socratic of questioning to lead discussion- create a flowcharts of the discussion as a method of taking notes



## Initial Online Resources Provided to Technology Inquiry Teams\*

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### A. INFORMATION LITERACY: Strategies for Accessing and Evaluating Online Information

- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- A guide to critical thinking about what you see on the web. [www.ithaca.edu/library/training/think.html](http://www.ithaca.edu/library/training/think.html)
- Creating an effective search statement. [www.kn.pacbell.com/wired/21stcent/lesearchstate.html](http://www.kn.pacbell.com/wired/21stcent/lesearchstate.html)
- Student's guide to research with the WWW. <http://english.ttu.edu/hairos/2.2/news/youcanuse/craig/index.html>
- Presentation and resources for determining the value of information. <http://davidwarlick.com/wiki/pmwiki.php/Main/RedefiningLiteracyForThe21stCentury>
- Table for evaluating and annotating supported etext documents online. [http://cate.uoregon.edu/pdf/Resource\\_by\\_Digital\\_Text.doc](http://cate.uoregon.edu/pdf/Resource_by_Digital_Text.doc)
- Wide variety of specialized searches by category. [www.intbc.com/sleuth](http://www.intbc.com/sleuth)
- Lightning fast search engine. <http://webcrawler.com>
- Search documents, headings, links, and keywords. <http://lycos.cs.cmu.edu/>

### B. INFORMATION LITERACY: Online Reading Resources for Teachers and Students

- American School Directory's Challenge Zone problems. [www.asd.com/asd/edcionn/chzone2.htm](http://www.asd.com/asd/edcionn/chzone2.htm)
- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- E-text database for online reading. [http://del.icio.us/Supported\\_etext](http://del.icio.us/Supported_etext) (username is supported\_etext and the password is etext)
- E-text for teachers, parents and students. [www.literacymatters.org/extest/index.htm](http://www.literacymatters.org/extest/index.htm)
- E-text for reading comprehension. [http://ncset.uoregon.edu/index.php?option=com\\_contnet&task=blogcategory&id=44&Itemid=89](http://ncset.uoregon.edu/index.php?option=com_contnet&task=blogcategory&id=44&Itemid=89)
- Digital texts for students with print disabilities. [www.bookshare.org/web/SupportAboutUs.html](http://www.bookshare.org/web/SupportAboutUs.html)
- Reading environments and products to support access and comprehension. [www.techmatrix.org/matrix.aspx?s=129&ls=124,122,127,`26`,`25,123,121](http://www.techmatrix.org/matrix.aspx?s=129&ls=124,122,127,`26`,`25,123,121)
- [www.learninginmotion.com](http://www.learninginmotion.com)
- Literacy and technology integration. [www.literacy.uconn.edu/littech.htm](http://www.literacy.uconn.edu/littech.htm)

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- Reading comprehension. [www.readingonline.org/electronic/rt/2-03\\_Column/](http://www.readingonline.org/electronic/rt/2-03_Column/)
- Content area information sites. [www.sp.uconn.edu/~djleu/fourth/one.html](http://www.sp.uconn.edu/~djleu/fourth/one.html)
- Reading online. [www.readingonline.org](http://www.readingonline.org)
- International Reading Association. [www.reading.org](http://www.reading.org)
- Literacy Volunteers of America. [www.literacyvolunteers.org](http://www.literacyvolunteers.org)
- National Council of Teachers of English. [www.ncte.org](http://www.ncte.org)
- National Center on Adult Literacy. [www.literacyonline.org](http://www.literacyonline.org)
- Comprehensive list of e-journals and other publications. <http://library.georgetown.edu/newjour/>
- Electronic journals concerned with literacy. [www.readingonline.org](http://www.readingonline.org)
- Collaborative Internet projects regarding literacy and technology. [www.oswego.org/staff/cchamber/literacy/index.cfm](http://www.oswego.org/staff/cchamber/literacy/index.cfm)
- Grade-level literacy resources for teachers and students. [www.studyzone.org](http://www.studyzone.org)
- Some favorite sites of educators. [www.songline.com/teachers](http://www.songline.com/teachers)
- Online professional development community. By subscription <http://cu.classroom.com>
- Internet-based question-answering service for K-12 teachers, library media specialists, and administrators. <http://www.americatakingaction.com/lounge/askeric.htm>

### **C. INFORMATION, COMMUNICATIONS, AND TECHNOLOGY: Strategies and Resources for Writing Online**

- Blogging. [www.twitter.com](http://www.twitter.com), [www.edublogs.org](http://www.edublogs.org)
- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- Literacy and technology integration. [www.literacy.uconn.edu/littech.htm](http://www.literacy.uconn.edu/littech.htm)
- HP email mentor program. <http://mentor.external.hp.com>
- Time line project. [www.lis.uiuc.edu/~chip/projects/timeline](http://www.lis.uiuc.edu/~chip/projects/timeline)
- Collaborative Internet projects regarding literacy and technology. [www.oswego.org/staff/cchamber/literacy/index.cfm](http://www.oswego.org/staff/cchamber/literacy/index.cfm)
- Locate experts in different disciplines. [www.tapr.org/emissary/](http://www.tapr.org/emissary/)
- Participate in a variety of learning experiences that motivate students to become better learners and writers. <http://www.globalschoolnet.org/gsnabout/history/fredhistory.cfm>
- FidoNet communicates with the Internet and also reaches places the Internet does not. [www.fidonet.org](http://www.fidonet.org)

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### **D. INFORMATION, COMMUNICATIONS, AND TECHNOLOGY: ICT Literacy Maps for CTE**

- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- ISTE educational technology standards for students and NETS student skills [www.iste.org](http://www.iste.org)
- ALA Information Literacy Standards
- ICTE literacy maps for science, math, English, and geography
- Research project on teaching internet comprehension to adolescents. [www.newliliteracies.uconn.edu/ies.html](http://www.newliliteracies.uconn.edu/ies.html)
- National standards for technology in teacher preparation. [www.iste.org/standards/ncate](http://www.iste.org/standards/ncate)
- Collaborative Internet projects regarding literacy and technology. [www.oswego.org/staff/cchamber/literacy/index.cfm](http://www.oswego.org/staff/cchamber/literacy/index.cfm)
- Guidelines for new ways to look at student work. [www.lasw.org](http://www.lasw.org)

### **E. MEDIA LITERACY: Strategies and Resources for Media Presentations**

- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- <http://voicethread.com>
- Video, voice. [www.skype.com](http://www.skype.com)
- Webquests. <http://webquest.org>
- Three-part show on information superhighway. [www.pbs.org](http://www.pbs.org)
- The ins and outs of website development. <http://web66.coled.umn.edu>
- Using electronic technologies in the classroom. [www.wam.umd.edu/~mlhall/teaching.html](http://www.wam.umd.edu/~mlhall/teaching.html)
- Travel online with explorers to new lands. [http://seawifs.gsfc.nasa.gov/JASON/JASON\\_HOME.html](http://seawifs.gsfc.nasa.gov/JASON/JASON_HOME.html)
- Share in authentic interactive scientific and engineering pursuits. <http://quest.arc.nasa.gov/interactive.html>
- Project-based learning and new digital multimedia. [www.glef.org](http://www.glef.org)
- Video to show students before beginning project work. [www.wested.org/cs/wew/view/rs/609](http://www.wested.org/cs/wew/view/rs/609)
- Teachers can share project plans with one another. <http://pblmm.k12.ca.us>
- International Society for Technology in Education is dedicated to improvement of education through technology. [www.iste.org](http://www.iste.org)

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### F. MEDIA LITERACY: Visual Media for Literacy Instruction

- CaMILE Web-based collaboration tool for use by students to encourage learning. [www.cc.gatech.edu/qvu/edtech/CaMILE.html](http://www.cc.gatech.edu/qvu/edtech/CaMILE.html)
- Collaborative visualization. [www.covis.northwestern.edu/](http://www.covis.northwestern.edu/)
- Framework for 21<sup>st</sup> Century Skills. [www.21stcenturyskills.org](http://www.21stcenturyskills.org)
- [www.visual-literacy.org](http://www.visual-literacy.org)
- Images as persuasion. [www.kn.pacbell.com/wired/21stcent/Impersuasion.html](http://www.kn.pacbell.com/wired/21stcent/Impersuasion.html)
- Model-It Mac-based modeling and simulation program. [www.cogitomedia.com](http://www.cogitomedia.com)
- Photography curriculum of Maine visual arts teacher. <http://melnoact0809.wikispaces.com>, <http://y2009morapp.edublogs.org>
- PIViT project integration visualization tool, Mac-based. [www.umich.edu/~pbsgroup/psnet/](http://www.umich.edu/~pbsgroup/psnet/)
- Shared student photography and writing. <http://youthvoices.net>
- Plan a trip and learn about places to visit. [www.vtourist.com/vt/](http://www.vtourist.com/vt/)
- See the earth from a variety of perspectives. [www.fourmilab.ch/earthview/vplanet.html](http://www.fourmilab.ch/earthview/vplanet.html)
- Library of Congress. <http://lcweb.loc.gov>
- Smithsonian. <http://www.si.edu>

### Additional Technology References

- Yarmouth, Maine Web 2.0 Tools Presentation from Nov. 2008 CES Conference. <http://fallforum.wikispaces.com>. Look for conference presentation and content curriculum examples
- 21<sup>st</sup> Century Literacies resources and lessons. [www.kn.pacbell.com/wired/21stcent/](http://www.kn.pacbell.com/wired/21stcent/)
- Journal of Technology Education. \$15/year. [james.laporte@millersville.edu](mailto:james.laporte@millersville.edu)
- The Technology Teacher. 8 print issues \$80/year. Electronic \$55/year.

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