Welcome to the ODU Microcredential course on Digital Impact and Digital Citizenship

Welcome to the microcredential course on Introduction to Computer Science, Digital Impact and Digital Citizenship! We are using the abbreviation DIDC (Digital Impact, Digital Citizenship) to differentiate this course from the others, so you will see that acronym used throughout the course.

This microcredential course is formatted into three sections:

- Course Materials, comprised of Learning Modules containing content and resources for comptencies that are aligned with the Virginia Computer Science SOLs and mini-assessments to prepare you for the final course assessment
- Lesson Plan Assignment, includes resources and templates for developing your lesson plan required for the course
- Final Assessment, which - combined with the Lesson Plan you will submit - will demonstrate your mastery of the content for this course

To maximize development of your computer science pedagogical content knowledge, we recommend that you step through each module in the order presented. **Access the Course Materials, Lesson Plan Assignment, and Final Assessment sections using the menu to the left.**
Once you have completed each of the learning modules for this course, you will complete the Lesson Plan Assignment and the Final Assessment (order of completion of those is your choice).
Here is what to do:

- Click sequentially through the modules in Course Materials and view the material. It is best to complete each module (or more!) in one session.
- Complete the quiz at the end of each module to test your knowledge ahead of the final assessment.
- Complete the Final Assessment for the course.
- Upload a lesson plan to finish the microcredential.

If you need assistance at any time, please email tcep@odu.edu.

Digital Impact Digital Citizenship Modules

Digital Impact Digital Citizenship Module 1 (https://canvas.odu.edu/courses/185314/pages/didc-teacher-competencies-1-3)

When you complete this learning module, you should be able to:

- **Compare** attributes of computer science and information technology.
- **Describe** what information should be shared and not shared.
- **Describe** online behaviors that may be harmful to others.

Digital Impact Digital Citizenship Module 2 (https://canvas.odu.edu/courses/185314/pages/didc-teacher-competencies-4-7)

When you complete this learning module, you should be able to:

- **Explain** tasks that are made easier because of computing technology.
- **Explain** how culture and technology affect each other
- **Describe** problems that arise from computer use.
- **Brainstorm** solutions involving computing technology to solve a problem at your school.

Digital Impact Digital Citizenship Module 3 (https://canvas.odu.edu/courses/185314/pages/didc-teacher-competencies-8-10)

When you complete this learning module, you should be able to:

- **Identify** how the use of technology positively and negatively affects daily life.
- **Demonstrate** and understanding of and **manage** a personal digital identity.
- **Engage, identify, and advocate** in positive, safe, legal, and ethical behavior when using technology in school

DIDC Teacher Competencies 1 - 3.

Use the "Next" button below to navigate through this module.

DIDC Module 1 includes the following:

DIDC Teacher Competency 1. Compare attributes of computer science and information technology.

This competency is designed to help teachers and students understand the similarities and differences between the two fields of computer science and information technology as they are often mistaken for each other. This is an introductory topic that is not directly referenced in the SOLs, but the distinction is important.

DIDC Teacher Competency 2. Describe what information should be shared and not shared.

This teacher competency is aligned with the following Computer Science SOLs:

- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.

DIDC Teacher Competency 3. Describe online behaviors that may be harmful.

This teacher competency is aligned with the following Computer Science SOLs:

- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.

DIDC Module 1 Quiz

Computer Science: the design of hardware and software to integrate its usage

Uses mathematics and develops algorithms and programs that make computing systems perform new and existing tasks efficiently.

Common places of work for computer scientists include businesses, colleges, and video game development companies.

Computer scientists who work in software and systems engineering learn to program in multiple languages such as Java and Python.

Problem solving skills

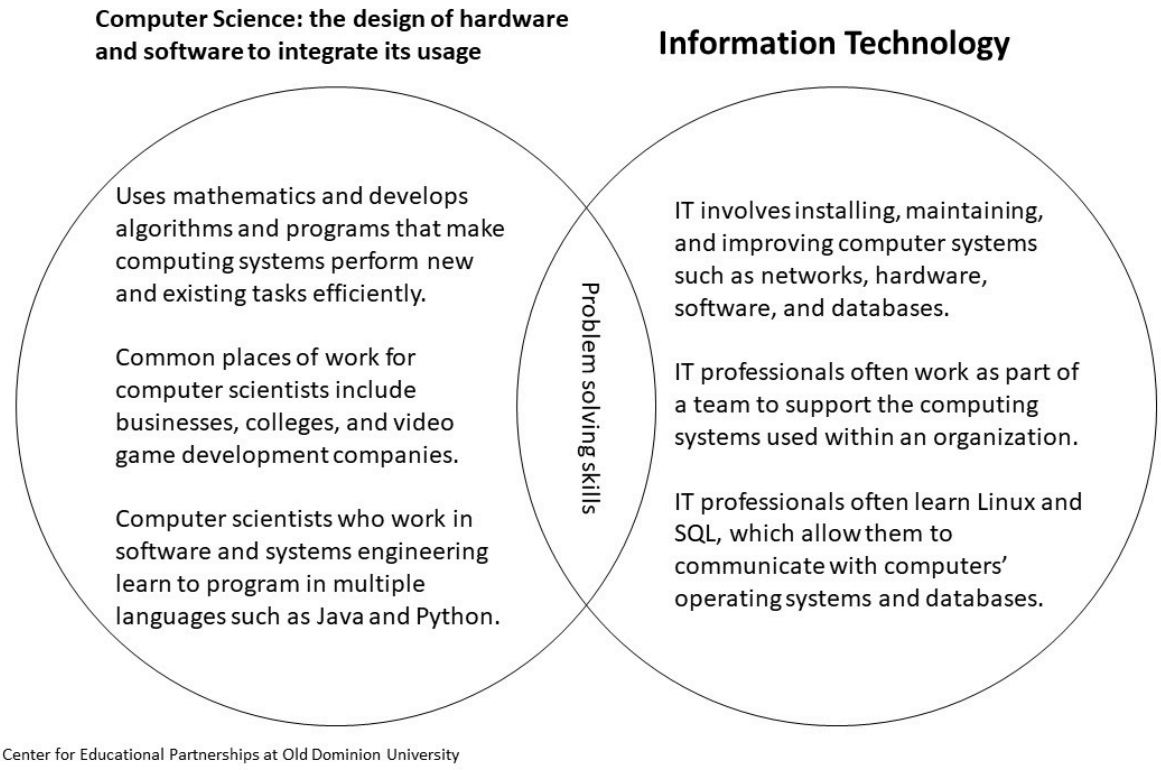
Information Technology

IT involves installing, maintaining, and improving computer systems such as networks, hardware, software, and databases.

IT professionals often work as part of a team to support the computing systems used within an organization.

IT professionals often learn Linux and SQL, which allow them to communicate with computers' operating systems and databases.

DIDC Teacher Competency 1. Compare attributes of computer science and information technology.



(PDF version of this graphic is attached below)

External resource: **Computer Science versus Information Technology (https://www.fieldengineer.com/blogs/whats-the-difference-computer-science-vs-information-technology)**

Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

DIDC1 CS vs IT Venn Diagram.pdf (https://canvas.odu.edu/courses/185314/files/44843685/download?wrap=1) (https://canvas.odu.edu/courses/185314/files/44843685/download?download_frd=1)

DIDC Teacher Competency 2. Describe what information should be shared and not shared.

This teacher competency is aligned with the following Computer Science SOLs:

- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.

To share, or not to share [online]? That is the question.

The Curriculum Framework provides the following Teacher Background on this topic:

"Using computers comes with a level of responsibility, such as not sharing login information, keeping passwords private, and loggin g off when finished. These behaviors apply regardless of whether a student is at school or on a computer at another location.

In addition to keeping information private, responsible behaviors should be exhibited when engaging in online communications. Onl ine communication facilitates positive interactions, such as sharing ideas with many people, but the public and anonymous nature o f online communication also allows intimidating and inappropriate behavior in the form of cyberbullying. Cyberbullying is a form of b ullying that occurs when online communications are sent that are intimidating or threatening in nature." (Virginia Department of Edu cation, 2018)

Watch the **"Password Retrieval" (https://app.animaker.com/video/IKERGGO0CCQD87IN)** video that follows for a brief example of information that should **not** be shared online.

***We recommend that you right-click on the link and choose "Open in New Tab" for best viewing.**

Text reads: Hey Jake! I have something important to tell you! When you post your “elf name” or your “leprechaun name” on Facebo ok…you’re giving away password retrieval hints! Scammers can use those to break into your accounts. Everything from your email to your online banking! It might seem cute, but…just don’t do it!

Below are some dos & don'ts for sharing information online.

Do	Don’t

Look for https:// to identify secure websites	Enter information into sites that may not be secure
Share personally identifiable information (e.g., address, phone #, birth date, SSN) with trusted parties using secure connections	Share personally identifiable information (or clues that can be used to find it) on public posts or in public forums
Share documents with trusted parties using secure collaboration software	Share documents publically that include your signature
Share things online that are appropriate for everyone to see	Share anything online that you would not want your family, friends, or employer to see
Check your social media privacy settings and limit shared items as needed	Use default settings on social media without checking what is shared
Search for yourself online periodically to see what comes up	Assume that the only information available about you online are things you have purposely shared

DIDC Teacher Competency 2. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The attached file illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 2 and 3.pdf (https://canvas.odu.edu/courses/185314/files/44843663?wrap=1) **(https://canvas.odu.edu/courses/185314/files/44843663/download?download_frd=1)**

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS K.10 The student will identify responsible behaviors associated with using information and technology.

- English: K.1 The student will build oral communication skills.
- Social Studies: K.10 The student will demonstrate that being a good citizen involves following rules and understanding the consequence of breaking rules; and participating successfully in group settings.

CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.

- Social Studies 1.1i The student will demonstrate skills for historical thinking, geographical analysis, economic decision making, and responsible citizenship by practicing good citizenship skills and respect for rules and laws while collaborating, compromising, and participating in classroom activities.
- Social Studies 1.10b, d The student will apply the traits of a good citizen by recognizing the purpose of rules and practicing self-control; and taking responsibility for one’s own actions.

CS 2.14 The student will identify and model responsible behaviors when using information and technology.

- Social Studies 2.11a The student will explain the responsibilities of a good citizen, with emphasis on respecting and protecting the rights and property of others.

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 2. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

Top Five Things to Not Share Online (https://news.trendmicro.com/2010/12/29/top-five-things-to-not-share-online/#:~:text=%20Here%20are%20five%20things%20that%20you%20should,will%20be%20empty%20for%20a%20week...%20More%20) (Trend Micro News, 2010)

Top 10 Things You Should not Post and Share Online via Social Media (https://securitywing.com/top-10-things-not-post-share-online-via-social-media/) (Securitywing, n.d.)

What to Share and Not Share Online (http://www.digitalresponsibility.org/what-to-share-and-not-share-online) (Digital Responsibility, 2020)

DIDC Teacher Competency 3. Describe online behaviors that may be harmful.

This teacher competency is aligned with the following Computer Science SOLs:

- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.

Online Behaviors that may be Risky

Intro course teacher competency 1.3.pdf (https://canvas.odu.edu/courses/185314/files/44843640?wrap=1)

(https://canvas.odu.edu/courses/185314/files/44843640/download?download_frd=1)

Avoiding Risky Online Behaviors

Unknown Sources
Downloading or installing apps from unknown sources can lead to malware or otherwise put your device or info at risk

Gossiping
Spreading rumors about others

Visible Exclusion
Intentionally and visibly excluding friends from events

Sharing Embarrassing Info
Posting photos or information that could embarrass someone

These behaviors may introduce risk to oneself or to others.

Risky online behavior can have very costly consequences.

Griefing
Causing intentional harm or harassing the online character of another, usually in gaming environments

Hate Speech
Abusive or threatening posts targeted at a particular member or members of a subgroup

Subtweeting
Posting something about someone, usually hurtful, without tagging that person but providing enough detail that others can determine identity of target

Fake Accounts
Creating accounts under fake names, sometimes to fool or hurt others

Additional Tips for Avoiding Risky Behavior

- **Don't share personal information online or interact with people you don't know in person**
- **Be aware of privacy settings and don't leave your online profiles public**

DIDC Teacher Competency 3. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The following PDF illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

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CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS K.10 The student will identify responsible behaviors associated with using information and technology.

- English: K.1 The student will build oral communication skills.
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CS 2.14 The student will identify and model responsible behaviors when using information and technology.

- Social Studies 2.11a The student will explain the responsibilities of a good citizen, with emphasis on respecting and protecting the rights and property of others.

Computer Science SOLs	Grade					
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Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 3. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

Helping Your Teen Avoid Risky Online Behavior (mamabearapp.com - blog) **(https://mamabearapp.com/table-talk-topic-risky-online-behavior/)**

Published | Preview | Assign To | Edit

DIDC Module 1 Quiz

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.

You can take the quiz up to three times.

Quiz Type	Graded Quiz
Points	70
Assignment Group	Imported Assignments
Shuffle Answers	No
Time Limit	No Time Limit
Multiple Attempts	Yes
Score to Keep	
Attempts	3
View Responses	Always
Show Correct Answers	Immediately
One Question at a Time	No
Require Respondus LockDown Browser	No
	No

Required to View Quiz Results

Due	For	Available from	Until
-	Everyone	-	-

Preview

DIDC Module 1 Quiz

This is a preview of the published version of the quiz

Started: Sep 16 at 11:35am

Quiz Instructions

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.

You can take the quiz up to three times.

Question 1 10 pts

Meg is studying how to use systems, especially computers and telecommunications, for storing, retrieving, and sending data. What field best describes her area of study?

- Information Technology
- Computer Science
- Computer Engineering

Question 2 10 pts

Mr. Wright's 3rd grade class is learning to use the computer to solve problems. Which of these fields best describe what field of study they are learning?

- Computer Science
- Information Technology
- Engineering Technology
- Computational Thinking

Question 3 10 pts

Which of the following pieces of information are OK to share publically online?

- [ ] Email address
- [ ] Street address
- [ ] Twitter handle
- [ ] Personal pronouns

Question 4 10 pts

Mrs. Smith's science class is using a website that requires a login. She creates a spreadsheet with each student's individual username and password and shares the spreadsheet with the students so they can look up the information later. Does Mrs. Smith act correctly here? Why or why not?

- ○ No. If a student forgets their username or password, the teacher or a school IT support person should retrieve or reset it for him/her/them.
- ○ Yes. Students should have access to each other's passwords so they can collaborate on assignments.
- ○ No. Only students can be trusted to keep track of their own username and password.
- ○ Yes. Spreadsheets are very secure and take a lot of processing power to hack.

Question 5 10 pts

Which of the following is NOT a risk posed by sharing personal private information online?

- ○ Someone could find your social media profile and contact you to do an interview for a television news segment.
- ○ Someone could use your bank account to make unauthorized purchases.
- ○ Someone could pretend to be you and post disparaging comments about your school.
- ○ Someone could get your address and use it to apply for a loan in your name.

Question 6 10 pts

Which of the following describe an appropriate use of school technology resources?

- ○ Signing out of a school desktop computer when you are finished using it.

Installing new sofware on your school laptop.

Releasing personal information about your coworkers without permission.

None of the above.

Question 7 10 pts

Which of the following is NOT an example of a potentially harmful outcome of installing software from an unknown or unverified source?

A. You could infect a device with malware and compromise personal information

B. Untrusted software always takes up more memory storage, leaving less resources for other programs

C. Obtaining illegal copies of software could result in legal action against you

A

B

C

All of these

Quiz saved at 11:36am Submit Quiz

DIDC Teacher Competencies 4 - 7.

Use the "Next" button below to navigate through this module.

This module includes the following:

DIDC Teacher Competency 4. Explain tasks that are made easier because of computing technology.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.
- CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 4.15 The student will give examples of computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

DIDC Teacher Competency 5. Explain how culture can affect technology.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 4.15 The student will give examples of computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

DIDC Teacher Competency 6. Describe problems that arise from computer use.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

DIDC Teacher Competency 7. Brainstorm solutions involving computing technology to solve a problem at your school.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

DIDC Module 2 Quiz

DIDC Teacher Competency 4. Explain tasks that are made easier because of computing technology.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.
- CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 4.15 The student will give examples of computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

What are some ways that technology has made common tasks easier?

Communication

- Video calling and email

Education

- Online learning (synchronous and asynchronous access)
- Digital library access
- Digital curricular materials (alleviates cost of expensive hard copy textbooks)

GPS Technology

- Weather forecasts (provides more precise and updated information)
- Delivery routes (allow for more efficient delivery of products and materials)
- Security features for homes and businesses

Healthcare

- Digital health records (allow for quick and easy access between providers)

Manufacturing

- Digital fabrication (allows for simple and complex items to be manufactured)

DIDC Teacher Competency 4. Curricular Alignment and Curriculum Framework

Introduction

The information in the section illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 4.pdf (https://canvas.odu.edu/courses/185314/files/44843641?wrap=1)
(https://canvas.odu.edu/courses/185314/files/44843641/download?download_frd=1)

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.

- Social Studies: 2.1f (create a flow chart to show how types of communication and transportation developed over time (e.g., the development of communication through letters, the telegraph, the telephone, the cell phone) and discuss how each invention built upon what came before)

CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.

- Science: 3.4 (analogous to adaptations and changes in populations as response to environmental changes)
- Social Studies: 3.7 (describe how ancient people adapted to their environments, focusing on technological advancements); 3.3 (Greek and Roman innovations and their influences)

CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

- Science: 5.9 (investigating technological advancement in energy)

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
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Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 4. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

https://www.lifehack.org/451123/10-ways-technology-can-make-your-life-easier-and-more-secure (https://www.lifehack.org/451123/10-ways-technology-can-make-your-life-easier-and-more-secure)

https://bizfluent.com/info-8443960-effects-globalization-technology-business.html (https://bizfluent.com/info-8443960-effects-globalization-technology-business.html)

DIDC Teacher Competency 5. Explain how culture can affect technology.

This teacher competency is aligned with the following Computer Science SOLs:

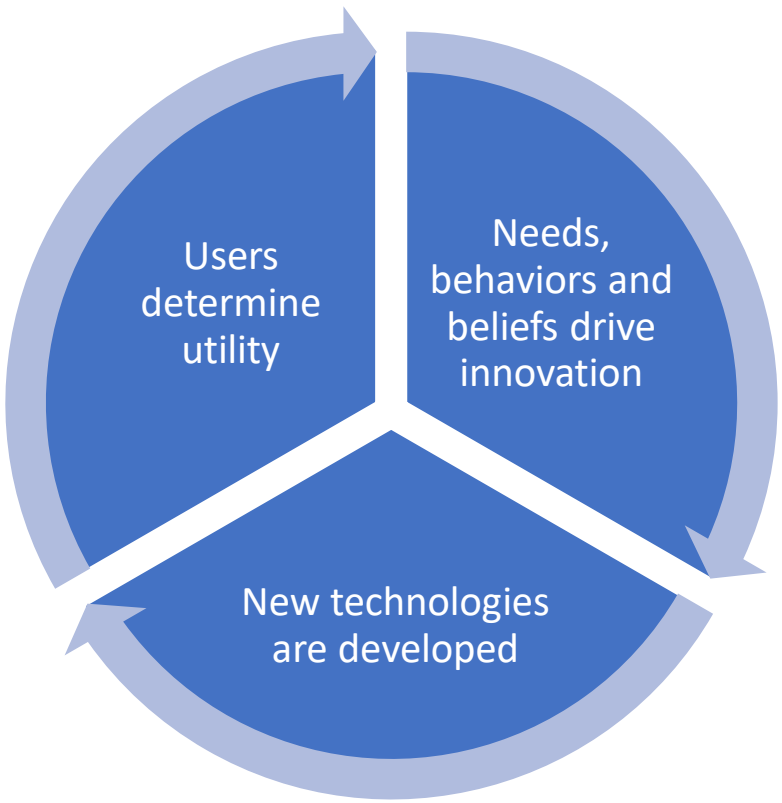
- CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 4.15 The student will give examples of computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

Intro course teacher competency 1.5.pdf (https://canvas.odu.edu/courses/185314/files/44843705?wrap=1)

(https://canvas.odu.edu/courses/185314/files/44843705/download?download_frd=1)

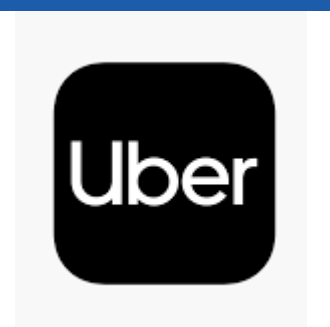
Technology drives culture, but culture also affects technology.

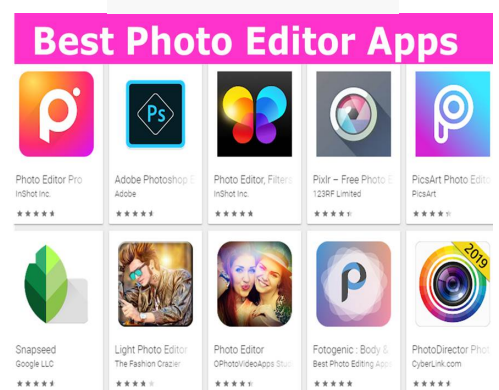
New technologies are often developed to meet needs and/or in response to behaviors and beliefs represented in current cultural trends.



For example, many technological innovations attempt to make everyday tasks easier and safer. Current examples include apps for shopping, entertainment, transportation, and even household tasks.

Communication and collaboration has also changed in recent years, where technology-based tools and applications have allowed for virtual meetings and gatherings. Use of these innovations expanded dramatically during the COVID-19 pandemic, allowing for remote working, learning, and socializing to reduce opportunities for transmission of the virus.





DIDC Teacher Competency 5. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The attached file illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 5 6 and 7.pdf (https://canvas.odu.edu/courses/185314/files/44843693?wrap=1)
(https://canvas.odu.edu/courses/185314/files/44843693/download?download_frd=1)

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS 3.14 The student will identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices.

- Science: 3.4 (analogous to adaptations and changes in populations as response to environmental changes)

- Social Studies: 3.7 (describe how ancient people adapted to their environments, focusing on technological advancements); 3.3 (Greek and Roman innovations and their influences)

CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

- Science: 5.9 (investigating technological advancement in energy)

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 5. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

8 Surprising Ways Computer Science Benefits Society | Rasmussen University (https://www.rasmussen.edu/degrees/technology/blog/ways-computer-science-benefits-society/)

Let's Look at How Computers Have Changed the World - Tech Spirited (https://techspirited.com/how-computers-changed-world)

DIDC Teacher Competency 6. Describe problems that arise from computer use.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

Problems that come from computer use

Physical Issues

Prolonged computer use can increase the risk of:

· back and neck problems
· muscle and joint injuries
· eyestrain
· sleep problems
· obesity
· headaches

Tips to Consider

Things you can consider to reduce your risks:

· ergonomically correct workstation
· take small breaks regularly
· maintain proper distance from the screen
· don't use a computer at night
· set limits on computer use and exercise

Cyberbullying

Cyberbullying is bullying that takes happens using digital technology. Cyberbullying can occur through text messages and apps, or through social media, forums, or gaming. It can include posting, sharing, or sending negative, harmful or mean content about someone. It can include sharing information about someone that can cause embarrassment or humiliation. Some cyberbullying can be considered criminal behavior.

The most common places where cyberbullying occurs are:

- Social Media, such as Facebook, Instagram, Snapchat, and Tik Tok
- Text messaging and messaging apps on mobile or tablet devices
- Instant messaging, direct messaging, and online chatting over the internet
- Online forums, chat rooms, and message boards, such as Reddit
- Email
- Online gaming communities

Identity Fraud

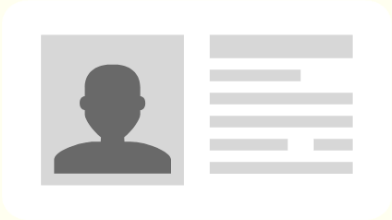
Identity theft or fraud is when someone uses pieces of personally identifiable information like your driver's license or social security numbers to impersonate you and open up new accounts. It is also when someone uses that information to gain access to existing accounts.

Types of identity thefts include:
· medical identity theft
· financial identity theft
· tax-related identity theft
· criminal identity theft
· child identity theft
· senior identity theft

Tips to Consider

Things you can consider to reduce your risks:

· destroy unsolicited credit applications
· watch out for unauthorized transactions
· avoid carrying SS cards or numbers
· avoid giving out personal information
· shred discarded financial documents



Other Aspects of Computer Use

VS

- Automation can make transactions easier and safer
- Social media allows people to connect from a distance
- Access to online content makes everyday tasks easier (shopping, locating information, paying bills, accessing entertainment)

- Automation reduces social interaction
- Social media allows for transmission of false or negative information
- Access to online content can introduce addiction and anxiety
- People become too reliant on spell check

DIDC Teacher Competency 6. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The following PDF illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 6.pdf (https://canvas.odu.edu/courses/185314/files/44843684?wrap=1)
(https://canvas.odu.edu/courses/185314/files/44843684/download?download_frd=1)

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.

- Social Studies 3.11 a, c The student will explain the responsibilities of a good citizen, with emphasis on respecting and protecting the rights and property of others; and describing actions that can improve the school and community. (role of social norms in relation to use of computing devices)

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 6. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

https://www.stopbullying.gov/cyberbullying/what-is-it (https://www.stopbullying.gov/cyberbullying/what-is-it)

Click here (https://searchsecurity.techtarget.com/definition/identity-theft)

What is Identity Theft and How to Prevent it?

This definition explains identity theft, the methods by which personal information can be stolen and misused by attackers, and the ways in which you can prevent it.

SearchSecurity

(https://searchsecurity.techtarget.com/definition/identity-theft)

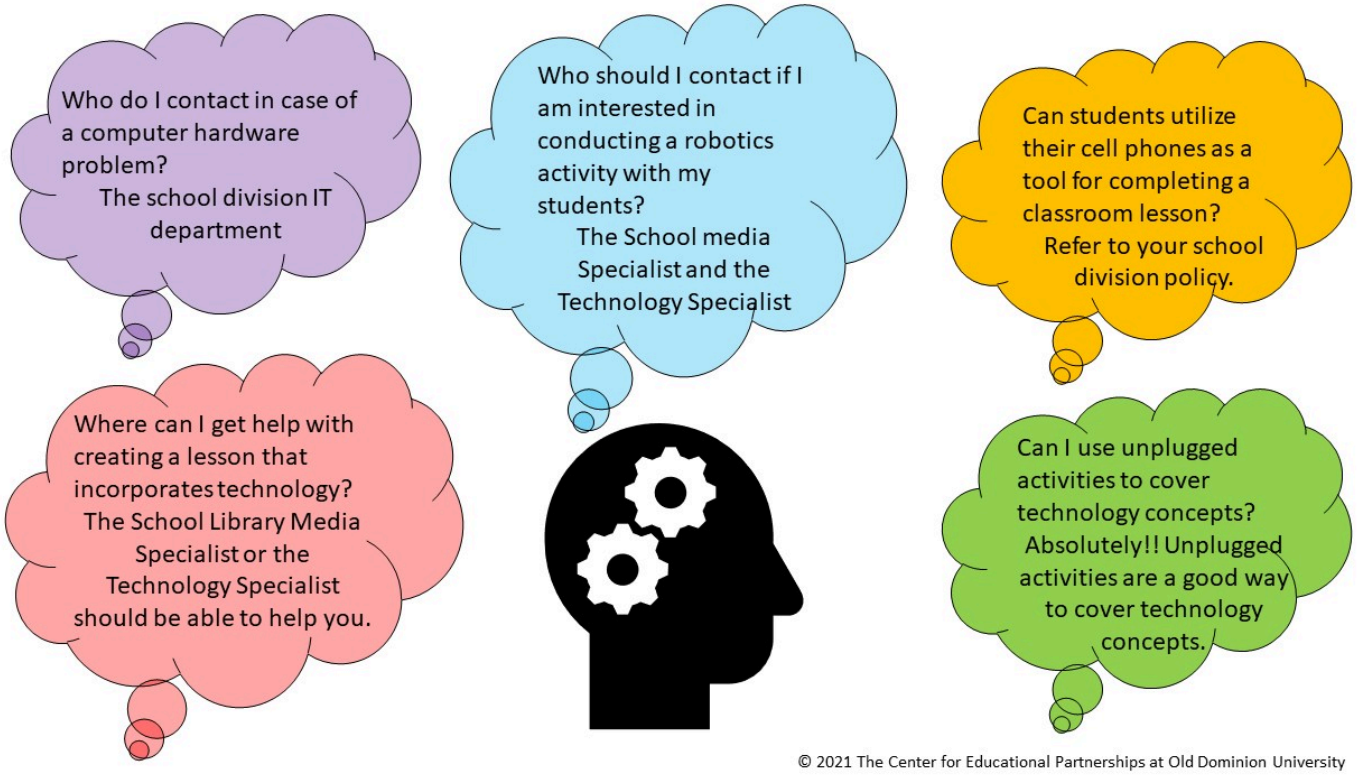
https://www.medicalnewstoday.com/articles/negative-effects-of-technology (https://www.medicalnewstoday.com/articles/negative-effects-of-technology)

https://www.microhealthllc.com/top-ten-computer-related-health-problems/ (https://www.microhealthllc.com/top-ten-computer-related-health-problems/)

DIDC Teacher Competency 7. Brainstorm solutions involving computing technology to solve a problem at your school.

This teacher competency is aligned with the following Computer Science SOLs:

- CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.
- CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).



DIDC Teacher Competency 7. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The following PDF illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 7.pdf (https://canvas.odu.edu/courses/185314/files/44843683?wrap=1) **(https://canvas.odu.edu/courses/185314/files/44843683/download?download_frd=1)**

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS 3.16 The student will identify social and ethical issues that relate to computing devices and networks.

- Social Studies 3.11 a, c The student will explain the responsibilities of a good citizen, with emphasis on respecting and protecting the rights and property of others; and describing actions that can improve the school and community. (role of social norms in relation to use of computing devices)

CS 5.14 The student will give examples and explain how computer science had changed the world and express how computing technologies influence, and are influenced by, cultural practices.

- Science: 5.9 (investigating technological advancement in energy)

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

Published | Preview | Assign To | Edit

DIDC Module 2 Quiz

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.

You can take the quiz up to three times.

Quiz Type	Graded Quiz
Points	80
Assignment Group	Imported Assignments
Shuffle Answers	No
Time Limit	No Time Limit
Multiple Attempts	Yes
Score to Keep	
Attempts	3
View Responses	Always
Show Correct Answers	Immediately
One Question at a Time	No
Require Respondus LockDown Browser	No
	No

Required to View Quiz Results

Due	For	Available from	Until
-	Everyone	-	-

Preview

DIDC Module 2 Quiz

This is a preview of the published version of the quiz

Started: Sep 16 at 12:51pm

Quiz Instructions

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.

You can take the quiz up to three times.

Question 1 10 pts

Which of the following help explain why new technology often makes common tasks easier?

- You have to understand all of the aspects of a task in order to complete it using a computer.
- It automates basic parts of a task allowing you to focus on more complex ideas.
- Some tasks can be automatically triggered and completed without you even knowing it.

Question 2 10 pts

Sarah's school limits the kind of information that students, teachers, and staff are able to access on school technology devices. This is an example of a school's _____.

- Acceptable Use Policy for Technology
- Crowdsourcing
- Code
- Digital footprint

Question 3 10 pts

Culture and technology do not influence one another.

○
True

○
False

Question 4 10 pts

Which of the following describe motives that influence the development of new technologies? Check all that apply.

☐
Make everyday tasks more convenient.

☐
Make common tasks easier and safer.

☐
Increase the use of communication and collaboration.

☐
Computerize as many tasks as possible.

Question 5 10 pts

Computers have increased our ability to communicate across large distances.

○
True

○
False

Question 6 10 pts

Which of the following scenarios describes a problem stemming from the use of computers?

A. Janet's personal information is exposed in a data breach and given to advertisers.

B. Tanya receives multiple messages and emails from work during non-working hours.

C. Bobby's laptop is infected with malware from downloading software from a non-verified source.

○
A.

○
B.

○
C.

○ All of the above.

Question 7 10 pts

Which of the following identify inappropriate technology use in schools? Check all that apply.

☐ Bypassing the school's Internet filter

☐ Deleting files or data that belong to others

☐ Using only assigned accounts

☐ Using school email account to market personal business ventures

Question 8 10 pts

Unplugged activities are not effective instructional methods for teaching technological concepts.

○ True

○ False

Not saved Submit Quiz

DIDC Teacher Competencies 8 - 10.

Use the "Next" button below to navigate through this module.

This module includes the following:

DIDC Teacher Competency 8. Identify how the use of technology positively and negatively affects daily life.

This competency is aligned with the following Computer Science SOLs:

- CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.
- CS 3.15 The student will identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

DIDC Teacher Competency 9. Demonstrate an understanding of and manage a personal identity.

This teacher competency is aligned with the following VDOE Digital Citizen (DC) standard:

- Students recognize the rights, responsibilities, and opportunities with living, learning and working in an interconnected digital world, and they act in ways that are safe, legal, and ethical.
- Learning Priority A:
  - Cultivate and manage their *digital identity* and reputation and are aware of the permanence of their actions in the digital world.
  - K-2 (e): Students practice responsible use of technology through teacher-guided online activities and interactions to understand how the *digital space* impacts their lives.
  - 3-5 (i): Students demonstrate an understanding of a *digital identity*, the role it plays in the digital world, and learn the permanence of their decisions when interacting online.

DIDC Teacher Competency 10. Engage, identify and advocate in positive, safe, legal, and ethical behavior when using technology in school.

This teacher competency is aligned with the following Computer Science SOLs:

- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

DIDC Module 3 Quiz

DIDC Teacher Competency 8. Identify how the use of technology positively and negatively affects daily life.

This competency is aligned with the following Computer Science SOLs:

- CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.
- CS 3.15 The student will identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).
- CS 5.15 The student will evaluate and describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

The Curriculum Framework provides the following Teacher Background on this topic.

"The use of technology, including computers, has allowed for global communication and has revolutionized the everyday access of information, whether for business, scientific or personal use. Although there are many positive impacts in using technology, there are also times when computer use has impacted us in undesirable ways. As computer technology continues to advance and new generations of machines grow faster and have greater capabilities, the machines become more deeply fixed in daily life, magnifying both the benefits and the downside risks. Positive impacts include easy access to information, automated machinery, and fast and accurate data processing. Negative impacts include an increase in sedentary lifestyles, family and leisure interruption, and loss of privacy." (*Virginia Department of Education, 2018).*

Here are some examples of positive and negative impacts of technology.

Positive Impacts of Technology	Negative Impacts of Technology
The internet has allowed for faster and easier access to information.	Technology allows intellectual property to be copied and distributed for free.
GPS navigation systems allow people to successfully travel to unfamiliar places.	New technology can lead to automation and lost jobs.
Automation in production has led to a decrease in the cost of everyday objects.	Hardware needs to be updated every few years.

New tools make more options of how tasks can be accomplished.	Too much screen time can disrupt sleep patterns.
Process automation allows for people to focus on larger ideas rather than small details.	Widespread access to misinformation is available through the internet.
Health monitoring applications can help people maintain their wellbeing.	Decreased physical exercise in daily life due to increased screen time as a leisure activity.
Serious games can help children and adults learn new skills.	Privacy is lost when personal data is shared or stolen.
Students can learn in an online environment if face to face schooling is not possible.	Learning new technologies can require users to troubleshoot and be time consuming.

DIDC Teacher Competency 8. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The following PDF illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

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Vertical alignment 8.pdf (https://canvas.odu.edu/courses/185314/files/44843694?wrap=1)
(https://canvas.odu.edu/courses/185314/files/44843694/download?download_frd=1)

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

CS 2.13 The student will compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact.

- Social Studies: 2.1f (create a flow chart to show how types of communication and transportation developed over time (e.g., the development of communication through letters, the telegraph, the telephone, the cell phone) and discuss how each invention built upon what came before)

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
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Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

DIDC Teacher Competency 8. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

Healthline.com (2019). **How does Technology Affect Your Health? The Good, the Bad, and Tips for Use (https://www.healthline.com/health/negative-effects-of-technology)** .

Positivenegativeimpact.com (2018). **The Positive and Negative Effects of Technology on Our Lives (?VxJw3wfC56=1646007785&Kq3cZcYS15=966c2653c06f4ea8aafdbdd43f168dd1&3cCnGYSz89=7NdCwckVoWNNOsZUOt5VT%2BsnVcnzA1NgX%2FM7yPZAm5o%3D#h_87181847355316184187764 18)** .

DIDC Teacher Competency 9. Demonstrate an understanding of and manage a personal digital identity.

This teacher competency is aligned with the following VDOE Digital Citizen (DC) standard:

- Students recognize the rights, responsibilities, and opportunities with living, learning and working in an interconnected digital world, and they act in ways that are safe, legal, and ethical.
  - Learning Priority A:
- Cultivate and manage their *digital identity* and reputation and are aware of the permanence of their actions in the digital world.
  - K-2 (e): Students practice responsible use of technology through teacher-guided online activities and interactions to understand how the *digital space* impacts their lives.
  - 3-5 (i): Students demonstrate an understanding of a *digital identity*, the role it plays in the digital world, and learn the permanence of their decisions when interacting online.

What is Digital Identity?

Digital identity is information about you, an organization, application or device, used by a computer system for transactions, interactions, and online representation.

Digital identity includes information about you that is available in public records, social media accounts, online purchases, dating apps, website visits and many other online applications.

The information contained in a digital identity allows for assessment and authentication of a user interacting with a business system on the web, without the involvement of human operators. Digital identities allow our access to computers and the services they provide to be automated and make it possible for computers to mediate relationships.


Communication
Information
Technology
Learning
BE SAFE
5
Questions to ask yourself when building a digital identity
1
What information am I sharing?
Consider what you post online. Once you share something, you have no control over where it goes and you can't take it back. Make sure to check your online profile on a regular basis and personalize your settings. Some of the information you share can be used by others to commit identity fraud.
2
How secure is it?
Make sure our passwords are strong. Don't use information available in online databases or in public records to generate passwords. Make a habit of changing your passwords on a regular basis and never allow you browser to store passwords or username. Lock your devices when you are not using them.
3
Whom am I sharing it with?
Before you share something online, imagine what it would look like on the front page of a newspaper. If you don't want to see it there, don't share it. When you share your information with others, don't assume they won't share it with someone else.
4
Whom am I sharing it with?
You should assume that your digital footprint will last forever. Make sure to regularly clear your cache. Browsers store information on your browsing history, patterns, and your personal information. Potential employers and universities often look at your social media to evaluate you.
5
What are my rights?
Know the law. The two main laws that protect students and their data are the Family Educational Rights and Privacy ACT (FERPA) and Children's Online Privacy Protection Act (COPPA). FERPA protects any information that would allow someone to directly identify a student, and COPPA prohibits website operators or other online services from collecting data directly from children under the age of 13.
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How can you help your students?

Model Behaviors

When educators model responsible online behaviors, they show students how to think critically about their online activities

Share

Talk to other educators to share what you know and seek out new learning opportunities

Discuss

Stay current with new develpments in data security and privacy and help your students ask the right questions before posting online

Integrate

By integrating new behaviors into the classroom, educators will help students build safer habits to create positive digital identities

DIDC Teacher Competency 9. Curricular Alignment and Curriculum Framework

There are no corresponding vertical alignment, cross-curricular alignment, or curriculum framework documents for this teacher competency.

DIDC Teacher Competency 9. Additional Resources

Here are some additional resources that may be of interest to you. Please note that ODU is not responsible for the content contained on external sites.

***We recommend that you right click on the links and choose "Open in New Tab" for best viewing.**

Click here (https://www.eschoolnews.com/2015/09/28/positive-online-identity-269/)

How to teach students to build a positive online identity

It is clear that students understand the power of social media. But are students making good decisions about what to post online?

eSchool News

(https://www.eschoolnews.com/2015/09/28/positive-online-identity-269/)

Building and keeping a positive digital identity.pdf

(https://canvas.odu.edu/courses/185314/files/44843706/download?wrap=1)

(https://canvas.odu.edu/courses/185314/files/44843706/download?download_frd=1)

EdTekWhitePaper

Building and Keeping a Positive Digital Identity

A Practical Approach for Educators, Students and Parents

June 2015

Overview

Students around the world are becoming increasingly connected and dependent on technology for communication, information and learning. According to FutureSource, 26.6 million mobile computers, including 11 million tablets were purchased in 2014, a 16 percent increase over 2013. This surge of mobile devices in K-12 environments means students are increasingly going online for learning, collaborating and connecting. In the digital age, myriad day-to-day activities have an online component, from how we consume information to how to motivate and monitor our physical activity.

Each and every time we connect, we engage in some way that creates our online identity, our profile, our persona. And it happens automatically and too often without a lot of forethought about the identity that will be created.

Many educators are savvy about the way they engage in a digital environment. They know not to post inappropriate content. They know that sharing passwords with friends is never a good idea. They know how to run frequent checks to ensure their identity hasn't been compromised.

However, as learning becomes more digital, educators at all levels are instrumental in building students' understanding about how technology impacts both their personal and future professional lives. Educators are also instrumental in helping students develop lifelong habits to create and maintain a positive online identity. This white paper outlines practical and easy-to-adopt behaviors all educators can incorporate into instruction.

What is expected of today's digital citizens?

Students are, for the most part, growing up in this digital world without any explicit or universally adopted rules about how to behave, and there is little guidance available to adults. As our digital connections and interactions grow, the lines between our education and personal lives, our career and private activities, become blurred.

Building and protecting your online identity is a critical first step. For teachers, this means understanding, advocating and modeling appropriate online behavior to help students effectively navigate this complicated landscape as well. Standard 4 of the ISTE Standards for Teachers describes how critical this step is.

Because adopting safe, legal and ethical behaviors is essential to living and learning online, this mindset is also featured across all five sets of the ISTE Standards, which are flexible enough to play a pivotal role in developing these new behaviors. These standards can be used to help guide educators and other stakeholders as they consider their approach to appropriate online behavior within their personal and professional lives. The guidance and approach outlined in this paper applies the ISTE Standards and provides educators with a simple yet effective way of understanding the steps for building and maintaining a positive online identity.

Essential questions when building digital identity

As technology and digital content become increasingly common in classrooms around the world, it is critical that educators take steps in their personal practice, as well as in daily classroom routines, to ensure that students build and maintain positive online identities.

There are five essential questions that provide a framework for thinking about digital identities whenever and wherever students are online. With these questions, educators can kick-start meaningful conversations about online behavior, help students understand the broader impact that online identity can have in their daily lives, and provide a foundation of understanding for adopting appropriate online practices:

1. What information am I sharing?

Consider what you post. You can't always trust others to treat your social media posts and text messages the way you want them to. When posting anything online, make sure you read it twice. If there's any question in your mind as to how this will impact yourself or others, sleep on it. While there can be exceptions, once that item is out there, you've lost any control over it and can't take it back. ISTE author Mike Ribble outlines a four-step process in his

book *Digital Citizenship in Schools*: Stop to collect your thoughts; think through the message to ensure it's accurate and truthful; empathize and imagine how the post will be interpreted; and post.

Check your online profile regularly. As the character Alastor "Mad-Eye" Moody in the Harry Potter books advised, "be ever vigilant." Set a time to check your profile online on a regular basis. Search yourself on several different sites and search engines, including Google and Bing, to get different results. The best way to protect yourself is to see how others see you.

Personalize your settings. Take time to make sure you know how to use the privacy and location settings for the various social media tools you use. Many social networking apps make it easy to find friends at the mall or movies. These same location finders reveal your location to anyone else on your network. Make sure the apps you use aren't broadcasting information you don't want shared with people you don't know.

2. How secure is it?

Make strong passwords. A good, strong password is the first and best defense to protecting your data and personal information. Come up with passwords that don't use information available in online databases or public records. Security questions like "What town did you grow up in?" or "What is your mother's maiden name?" can now be found easily in some basic searches. Identify a word/number/special character to use for these answers. Make sure it is something that you will remember and does not relate to something widely known in your life.

Change passwords regularly. Get into a habit of regularly changing passwords. Come up with a plan for which password scheme you are going to use (something that you will remember, but is not meaningful to others) and continue that process as you update your systems. Never allow your browser to store passwords or allow websites to remember your username and password.

Lock devices and close applications when they are not in use. Always close documents and applications when you are not using them. Lock your computer, tablet and smartphone when not in use.

3. Whom am I sharing it with?

The "front page" rule. When considering what information you share online, a good rule of thumb is to imagine it appearing on the front page of the newspaper or on everyone's home page. If you don't want to see it there, don't share. This rule applies to all forms of communications.

Need-to-know basis. Think before you share information with someone. Does this person(s) really need to know this? Retailers often ask for email addresses at the checkout counter. Stop to learn how your information will be used. Consider setting up a separate email that is not linked to any of your primary data for these types of activities

Consider secondary uses. When sharing your information with someone, don't assume you can trust them or that they won't share the information with others. Pause and think about how they might use your information: who will they share it with and how? You'd be surprised how far information can travel.

Open networks are not secure networks. Turn off the "automatically connect" feature on devices. When in a free Wi-Fi zone, take the extra step to obtain a password to connect over a secure network as opposed to accepting a "hot spot." If you must connect to an open network, the front-page rule especially applies here.

4. What am I leaving behind?

Assume that your digital footprint lasts forever. While the delete button does allow you to quickly correct action, even if you delete from the feed, a digital record is stored somewhere and could be uncovered by a super-savvy hacker. Nothing online is ever truly deleted, and things can surface many years later to haunt you. Not to mention others may have downloaded or saved information you had shared. For all purposes, you must assume anything you post online will remain online forever.

Clear your cache. Browsers automatically collect information like browsing history, personal information, and your habits and

The STEP Approach

ISTE author Mike Ribble outlines a simple, four-step process to building a positive digital identity in his book, *Digital Citizenship in Schools*.

STEP ONE

Stop. Take a moment; take a deep breath before posting, texting or sharing. Too often, not taking one's time to post, share or reply can get you in trouble.

STEP TWO

Think. Take time to create the post. THINK is also an acronym that seeks to determine if the information being posted is: True, Helpful, Inspires confidence, Necessary and Kind. If these are the focus points of a message, fewer issues will occur.

STEP THREE

Empathize. Are we interested in others and how they will react? Empathy has us think about the feelings of others, to "walk in another's shoes." Imagine how someone else might interpret your post, tweet or text and how you might feel to receive the message. Consider the Golden Rule– "Do unto others as you would have them do unto you" – before taking action online.

STEP FOUR

Post. If we have been honest and reflected on the other items above, then we can be happy with the post, reply or comment. If young users of social media can begin to learn these skills, they will be better prepared when moving into adulthood.

preferences. Schedule regular times to clear your cache on your devices to clear up history and the stored information. Not only will this make it difficult for anyone to retrace your online steps or access accidentally stored passwords, it will also improve the operation of your device by freeing up memory and improving speed.

5. What are my rights?

Know the law. There are two primary laws to protect students and their data: the Family Educational Rights and Privacy Act (FERPA) and Children's Online Privacy Protection Act (COPPA).

Review terms and conditions for devices and apps. Mobile apps for smartphones and tablets, as well as most software for computers, collect data about how, when and where you use the product or device. Before you install an app or software, take time to review the terms of service. Look for information about the type of personal information to be collected and how this information will be shared. Most devices and apps allow users to adjust the settings so that you can limit what data is automatically collected.

Some apps actually claim ownership for any content you produce while using them, so the developer can share or sell your property. Even if you close your account, any photos, video, animations or stories you created remain. Read the agreement carefully so you know how your content may be used.

Stay vigilant. Apps and software programs change the terms of service without notification. Stay abreast of the latest changes to privacy and security settings for apps, software and devices.

Data Privacy Policies

FERPA is a federal law enacted in 1974 intended to protect access to student education records and to guarantee parents and guardians access to the records and to have them corrected, if necessary. In particular, FERPA protects any information that would allow someone to directly identify the student, referred to as Personally Identifiable Information (PII). FERPA classifies protected information into three categories: educational information, personally identifiable information and directory information.

Although personally identifiable and directory information are often similar or related, FERPA provides different levels of protection for each. Personally identifiable information can only be disclosed if the educational institution obtains the signature of the parent or student (if over 18 years of age) on a document specifically identifying the information to be disclosed, the reason for the disclosure, and the parties to whom the disclosure will be made. Failure to comply with these requirements will result in a violation of FERPA.

On the other hand, with respect to directory information, FERPA does not bar disclosure by the educational institution. Directory information is defined as "information contained in an education record of a student that would not generally be considered harmful or an invasion of privacy if disclosed." This includes such items as a list of students' names, addresses and telephone numbers, and also includes a student ID number (which includes electronic identifiers) provided it cannot be used to gain access to education records. Directory information, however, does not include a student's social security number, nor can the social security number be used to confirm directory information. Directory information can be disclosed provided that the educational institution has given public notice of the type of information to be disclosed, the right of every student to forbid disclosure, and the time period within which the student or parent must act to forbid the disclosure. If a student decides to "opt out" of the disclosure of directory information, the "opt out" continues indefinitely. Therefore, an educational institution cannot release such information even after a student is no longer in attendance. However, the 2011 revisions to the act prohibit a student from opting out as a way to prevent schools from requiring students to wear an identification card or badge (source: https://www.naceweb.org/public/ferpa0808.htm). An important provision of FERPA is that the school must inform parents annually of their rights under the law.

COPPA is a federal law enforced by the Federal Trade Commission that went into effect in 2000 and is intended to place parents in control over information from their young children that is collected by websites, online service providers and mobile app operators. Many school districts contract with third-party website operators to offer online programs solely for the benefit of their students and for the school system – for example, homework help lines, individualized education modules, online research and organizational tools or web-based testing services. In these cases, the schools may act as the parents' agent and can consent to the collection of kids' information on the parents' behalf. However, the schools' ability to consent for the parent is limited to the educational context – where an operator collects personal information from students for the use and benefit of the school, and for no other commercial purpose.

In order for the operator to get consent from the school, the operator must provide the school with all the notices required under COPPA. In addition, the operator, upon request from the school, must provide the school a description of the types of personal information collected; an opportunity to review the child's personal information and/or have the information deleted; and the opportunity to prevent further use or online collection of a child's personal information. As long as the operator limits use of the child's information to the educational context authorized by the school, the operator can presume that the school's authorization is based on the school's having obtained the parent's consent. However, as a best practice, schools should consider making such notices available to parents, and consider the feasibility of allowing parents to review the personal information collected. Parents have the right to ask that any information that has been collected be deleted. (Source: https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions#Schools)

What educators can do to model behaviors

As described in the ISTE Standards for Teachers, Standard 4.a., it is essential that educators:

"Advocate, model and teach safe, legal and ethical use of digital information and technology, including respect for copyright, intellectual property and the appropriate documentation of sources." (ISTE, 2008)

Here's how teachers can accomplish this standard:

Model. One of the best ways to help students adopt behaviors to keep them safe when online is for the adults in their lives to model them. When adults demonstrate both the "why" and the "how," students build their knowledge about what responsible online practices look like and can take action to protect themselves, their classmates and their families. They will realize that certain practices and behaviors for engaging in online environments are as important, for example, as the rules when playing team sports, driving a car or participating in class. By repeatedly modeling the process, educators demonstrate for students how to think critically about what they are doing when they go online.

Discuss. Teachers also need to stay abreast of new developments in data security and privacy. Teachers have a responsibility to help students ask the right questions before agreeing to give up their personal information when jumping on social apps, online resources or websites. The essential questions outlined above provide educators and students with a useful foundation for meaningful discussions that can impact online living both in and out of the classroom.

Apply. Because students are growing up in a digital world, they are talented consumers of technology, but their familiarity sometimes causes them to be completely unaware of the importance of protecting their online identity and considering the implications their actions will have on their digital footprint. By integrating these new behaviors into classroom activities, daily vocabulary and expectations, teachers help students build safe habits to sustain positive digital identities.

Share. Helping students build habits to protect their identity and personal data when going online is something everyone can get behind. Parents are instrumental in supporting students of all ages to build responsible online behaviors. Teachers can also share what they know and grow within their personal and professional communities. Teachers can join a professional community to garner additional support and to expand their own learning opportunities. There are a wide range of ISTE Professional Learning Networks where educators can connect with experts from around the globe in their field to ask questions, learn from colleagues and get access to exclusive events and professional learning opportunities.

The last mile

Technology will continue to evolve and provide countless new opportunities to connect and learn. It is our responsibility to equip students with the skills they need to protect them and maintain a diligent practice of identity management to inform and facilitate greater learning. Doing so will ensure that our digital footprint is not compromised by the latest innovations.

The dangers are real, but they can be difficult to understand. Solutions require consideration and planning.

RESOURCES

Digital Citizenship in Schools, Second Edition, is an essential introduction to digital citizenship. Starting with a basic definition of the concept and an explanation of its relevance and importance, author Mike Ribble explores the nine elements of digital citizenship. He provides a useful audit and professional development activities to help educators determine how to go about integrating digital citizenship concepts into the classroom. Activity ideas and lesson plans round out this timely book.

Protecting Privacy in Connected Learning Toolkit: Consideration When Choosing an Online Service Provider for Your School System, (Version 2, September 2014). The Consortium for School Networking (CoSN) developed an excellent document that describes and recommends procedures for maintaining a secure environment while making use of networked resources.

Securing the Connected Classroom: Technology Planning to Keep Students Safe, by Abbie H. Brown and Tim D. Green (published by ISTE). Brown and Green, co-authors of this paper, are experts on classroom digital security issues. Their most recent book describes the spectrum approach to establishing school policies and procedures that work and are developed by the school community itself. The book explains in detail the steps involved in fact-finding, committee creation, developing an appropriate response, building consensus and evaluating the results of the effort.

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DIDC Teacher Competency 10. Engage, identify, and advocate in positive, safe, legal, and ethical behavior when using technology in school.

This teacher competency is aligned with the following Computer Science SOLs:

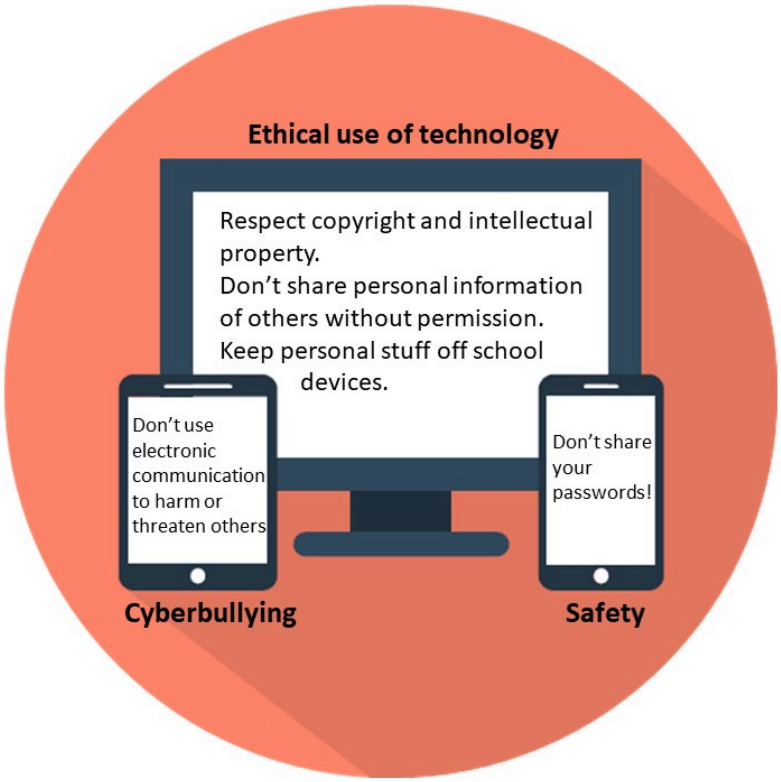
- CS K.10 The student will identify responsible behaviors associated with using information and technology.
- CS 1.12 The student will identify and explain responsible behaviors associated with using information and technology.
- CS 2.14 The student will identify and model responsible behaviors when using information and technology.
- CS 4.16 The student will describe the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing).

Ethical Use of Technology

Teacher background from the VDOE Curriculum Framework:

Using computers comes with a level of responsibility, such as not sharing login information, keeping passwords private, and logging off a computer device when finished with a task.These behaviors apply regardless of whether a student is at school or on a computer at another location.In addition to keeping information private, responsible behaviors should be exhibited when engaging in online communications.Online communication facilitates positive interactions, such as sharing ideas with many people, but the public and anonymous nature of online communication also allows for intimidating and inappropriate behavior in the form of cyberbullying. Cyberbullying is a form of bullying that occurs when online communications are sent that are intimidating or threatening in nature.

Kindergarten and first grade students are not responsible for knowing the term cyberbullying.



Safe positive ethical use.jpg (https://canvas.odu.edu/courses/185314/files/44843677/download?wrap=1) (https://canvas.odu.edu/courses/185314/files/44843677/download)

DIDC Teacher Competency 10. Curricular Alignment and Curriculum Framework

Introduction

The information in the section will help you as you begin to develop your lesson plan for this course, including the following information for this competency:

- Computer Science SOL vertical alignment (K-5)
- Cross-curricular alignment
- Background information and Essential Skills, Questions, and Vocabulary (Curriculum Framework)

CS SOL Vertical Alignment (K-5)

The following PDF illustrates the vertical alignment of this CS SOL competency across K-5 grade span. The yellow highlighted areas indicate the CS standards with which this teacher competency align. The light blue shaded areas indicate introductory level skills and the dark blue shaded areas indicate proficiency of the standards.

Please note that this vertical alignment document was developed by TCEP faculty and has not been vetted by the VDOE or CodeVA.

Vertical alignment 10.pdf (https://canvas.odu.edu/courses/185314/files/44843690?wrap=1) **(https://canvas.odu.edu/courses/185314/files/44843690/download?download_frd=1)**

CS Cross-Curricular Alignment (K-5)

Listed below are some suggested areas of integration from the VDOE, but this is not an exhaustive list. **What areas do you see for cross-curricular alignment?**

K.10 The student will identify responsible behaviors associated with using information and technology.

- English: K.1 The student will build oral communication skills.
- Social Studies: K.10 The student will demonstrate that being a good citizen involves following rules and understanding the consequence of breaking rules; and participating successfully in group settings.

1.12 The student will identify and explain responsible behaviors associated with using information and technology.

- Social Studies 1.1i The student will demonstrate skills for historical thinking, geographical analysis, economic decision making, and responsible citizenship by practicing good citizenship skills and respect for rules and laws while collaborating, compromising, and participating in classroom activities.
- Social Studies 1.10b, d The student will apply the traits of a good citizen by recognizing the purpose of rules and practicing self-control; and taking responsibility for one's own actions.

2.14 The student will identify and model responsible behaviors when using information and technology.

- Social Studies 2.11a The student will explain the responsibilities of a good citizen, with emphasis on respecting and protecting the rights and property of others.

Computer Science SOLs	Grade					
	K	1	2	3	4	5
Identify responsible behaviors associated with using information and technology. K.10, 1.12 (identify and explain responsible behaviors), 2.14 (identify and model responsible behaviors)						
Compare and contrast examples of how computing technology has changed and improved the way people live, work, and interact. 2.13						
Identify computing technologies that have changed the world and express how those technologies influence, and are influenced by, cultural practices. 3.14, 4.15 (give examples), 5.14						
Identify the positive and negative impacts of the pervasiveness of computers and computing in daily life (e.g., downloading videos and audio files, electronic appliances, wireless Internet, mobile computing devices, GPS systems, wearable computing). 3.15, 4.16 (**describe** positive and negative impacts), 5.15 (**evaluate** and describe positive and negative impacts)						
Identify social and ethical issues that relate to computing devices and networks. 3.16, 4.17 (**describe** social and ethical issues), 5.16 (**explain** social and ethical issues)						
Light blue – Introduction Dark blue - Proficient						

Lesson Planning Instructions and Resources

In addition to completing the Final Assessment for this microcredential, you also need to submit a lesson plan that incorporates the CS SOL standards covered in this course along with a self-reflection statement.

This page contains information designed to assist you in this assignment.

Instructions for the assignment:

1. Select a grade level appropriate Computer Science standard or standards associated with any of the modules contained in this microcredential and design a lesson for your students using the 5E lesson format. The lesson can include computer science standards integrated with a core content area standard or computer science standards only.
2. Use the information contained in the Curricular Alignment and Curriculum Framework sections of the modules as well as the Lesson Plan Organizer, Blooms Taxonomy chart and Lesson Plan Checklist, all included in this module, to assist you in your lesson design.
3. Design your final lesson on the Lesson Plan Template (also included in this module) and save your lesson plan as Your Name_Lesson Title.
4. Need additional help? See the two sample lesson plans in this module to get you started.
5. Complete your Self-Reflection (see instructions on the next page in this module) and save as YourName_Reflection.
6. Upload your lesson plan and self reflection using the "Lesson Plan Submission" link below.

Click here to submit your Lesson Plan Assignment (https://canvas.odu.edu/courses/185314/assignments/2703110) or navigate through this module and submit where instructed.

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DIDC Module 3 Quiz

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.
You can take the quiz up to three times.

Quiz Type	Graded Quiz
Points	80
Assignment Group	Imported Assignments
Shuffle Answers	No
Time Limit	No Time Limit
Multiple Attempts	Yes
Score to Keep	
Attempts	3
View Responses	Always
Show Correct Answers	Immediately
One Question at a Time	No
Require Respondus LockDown Browser	No
Required to View Quiz Results	No

Due	For	Available from	Until
-	Everyone	-	-

DIDC Module 3 Quiz

This is a preview of the published version of the quiz

Started: Sep 16 at 2pm

Quiz Instructions

This mini-quiz is optional but recommended as completion will help prepare you for the final assessment for this course.
You can take the quiz up to three times.

Question 1 10 pts

What is a possible negative effect of technology on daily life?

- New technology can lead to automation and lost jobs.
- New technology tools allow more options for accomplishing tasks.
- Technology generally becomes less expensive over time.
- Process automation allows people to focus on big ideas rather than small details.

Question 2 10 pts

What is an example of a positive effect that technology has had on everyday life? Check all that apply.

- [ ] The Internet has allowed for faster and easier access to information.
- [ ] GPS navigation systems allow people to successfully travel to unfamiliar places.
- [ ] Automation on production had led to a decrease in the cost of everyday objects.
- [ ] Technology allows intellectual property to be copied and distributed for free.

Question 3 10 pts

Even with developers using the best of intentions, new technologies can create problems for its users.

- True

○
False

Question 4 10 pts

Which of the following statements are true about your personal digital identity? Check all that apply.

☐
It is very difficult to remove digital information such as pictures or social media posts from the Internet.

☐
Potential employers may look at your digital identity to evaluate you as a prospective employee.

☐
Malicious actors may use elements of your digital identity to commit identity fraud.

☐
Services you use to share information will keep your identity secret and not share with external parties.

Question 5 10 pts

Which of the following actions can help you maintain and curate your personal digital identity?

○
Protecting your personal information whenever online.

○
Sharing controversial posts and pictures.

○
Using public networks whenever available.

○
Using the same password on multiple websites and apps.

Question 6 10 pts

Which of the following is an example of positive, safe, legal, AND ethical behavior while using technology?

○
After removing names and other identifying information, you share examples of high quality work from your students in a post to an online professional learning community.

○
Your colleague has a challenging day at school and makes a public social media post criticizing a coworker by name.

○
A student confides a personal problem in a Direct Message to you, and you post screenshots of the conversation online.

○
Your neighbor has a duplicated version of a pay-per-use streaming platform and gives you the code to open and use it for free on your own device.

Question 7 10 pts

Miss Boyd recreates an SOL-aligned lesson she found online and shares the lesson plan with her coworkers without mentioning the original source. How would you describe Miss Boyd's actions with regard to the safe and ethical use of technology?

- Actions were safe but not ethical.
- Actions were safe and ethical.
- Actions were ethical but not safe.
- Actions were neither safe nor ethical.

Question 8 10 pts

According to the CS SOL curriculum framework, which of the following are included in the definiiton of cyberbullying? Check all that apply.

- [ ] It is a form of bullying.
- [ ] It is intended as a joke.
- [ ] It involves online communications.
- [ ] It can include intimidation.
- [ ] It only affects children.

Not saved Submit Quiz

Lesson Plan Brainstorm

Fill in the icons with a lesson component ideas

Elaborate: What vocabulary will be introduced? How will the knowledge be applied to daily life?

Evaluate: How will students demonstrate that they have achieved the lesson objective?

ARCS Microcredential Lesson Rubric

Part A. Lesson Plan Format and Instructional Goals

Teacher competency:	**Pass**
The lesson plan follows the 5E lesson format.	All of the following are present: ☐ The lesson is organized in the 5E format. ☐ All of the E sections are present: Engage, Explore, Explain, Elaborate, and Evaluate. ☐ The topic of the lesson is evident in all of the E sections.
The lesson plan includes instructional goals and objectives, sometimes referred to as Learning Targets.	All of the following are present: ☐ Instructional goals/objectives are clearly labeled. ☐ What the learner will know and be able to do are clearly stated. ☐ The Evaluate section addresses students' acquisition of the instructional goals and objectives.

Part B. SOL Content Selection and Integration

Teacher competency:	**Pass**
The lesson is designed around a Virginia Computer Science SOL. A content area SOL is optional except in the Lesson Integration Microcredential.	All of the following are present: ☐ The grade level CS SOL is clearly identified. ☐ Key vocabulary terms are presented. ☐ The Engage or Explore portions of the lesson allow students to enact the CS Standard, Skills and Concepts.
**Lesson Integration Microcredential Lesson Plan: The lesson includes a content area SOL as well as a CS SOL.	All of the following are present: ☐ The grade level content area SOL (e.g. math, science) is clearly identified. ☐ Key vocabulary terms for the content area SOL are presented. ☐ Two or more portions of the lesson plan allow students to enact CS and content area Standards, Skills, and Concepts.

Part C. Instructional Delivery

Teacher competency:	Pass
The lesson describes grade level appropriate instructional strategies.	All of the following are present: ☐ For each of the 5E sections, an appropriate instructional strategy is described. ☐ For each of the 5E sections, the lesson plan includes information about anticipated teacher and student behavior. ☐ The instructional strategies allow for the student to demonstrate the actions listed in the SOL (e.g. create, construct).
The lesson includes appropriate materials and technology.	All of the following are present: ☐ Materials (and technology, if needed) are developmentally appropriate. ☐ All necessary materials (and technology, if needed) are clearly listed. ☐ The selected materials (and technology, if needed) enhance learning.

Part D. Teacher reflection

Teacher competency:	Pass
A statement is included in which the teacher reflects on their own areas of professional growth.	All of the following are present: ☐ Reflection offers insight into why the topic(s) and SOL(s) were chosen as the focus of the lesson. ☐ Reflection describes how the teacher drew on their content knowledge to design the lesson. ☐ Reflection describes how teacher drew on their pedagogical knowledge to design the lesson. ☐ Reflection describes how the lesson could be modified to support one or more groups of diverse learners.

ARCS Lesson Plan Template

Lesson Title:	**Duration:**
CS Standard:	**Content area standard (if applicable):**
Essential Question(s):	
Student Objectives: I can …	
Vocabulary:	
Differentiation strategies:	
Resources:	
Engage:	
Explore:	
Explain:	
Elaborate:	
Evaluate:	

Attachments (as needed)

Student materials

ARCS Microcredential Lesson Plan Self-Reflection Instructions

Please submit a statement of self-reflection for the lesson plan assignment for this course. Your self-reflection should be in narrative format and be no longer than 250 words.

There is no template for this part of the assignment, but please ensure that all of the following are present:

- Reflection offers insight into why the topic(s) and SOL(s) were chosen as the focus of the lesson.
- Reflection describes how the teacher drew on their content knowledge to design the lesson.
- Reflection describes how teacher drew on their pedagogical knowledge to design the lesson.
- Reflection describes how the lesson could be modified to support one or more groups of diverse learners.

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DIDC Final Assessment

This assessment is designed to test your content knowledge for the Introduction to Computer Science, Digital Impact and Digital Citizenship microcredential course. You must earn at least 80% to receive a passing score. You may take the test up to three times.

Quiz Type	Graded Quiz
Points	100
Assignment Group	Imported Assignments
Shuffle Answers	No
Time Limit	No Time Limit
Multiple Attempts	Yes
Score to Keep	
Attempts	3
View Responses	Always
Show Correct Answers	Immediately
One Question at a Time	No
Require Respondus LockDown Browser	No
Required to View Quiz Results	No

Due	For	Available from	Until
-	Everyone	-	-

DIDC Final Assessment

This is a preview of the published version of the quiz

Started: Sep 16 at 2:13pm

Quiz Instructions

This assessment is designed to test your content knowledge for the Introduction to Computer Science, Digital Impact and Digital Citizenship microcredential course. You must earn at least 80% to receive a passing score. You may take the test up to three times.

Question 1 4 pts

Match the following field of computer study with its definition:

Computer science [Choose]

Computer engineering [Choose]

Information technology [Choose]

Question 2 4 pts

Mrs. Powell's science class uses digital thermometers to track the temperature outside and chart it over time. This is an example of:

- Computer science
- Information technology
- Both computer science and information technology
- Neither computer science nor information technology

Question 3 4 pts

Which of the following pieces of information should you NOT share publicly online?

- Street address

Email address

Twitter handle

Personal pronouns

Question 4 4 pts

Mr. Keane's social studies class is using a website that requires a login. He creates a spreadsheet with each student's individual username and password and shares the spreadsheet with the students so they can look up their information later. Does Mr. Keane act correctly here? Why or why not?

No. Students should not have access to one another's passwords because that is sensitive information.

Yes. If a student forgets his or her password, they can either look it up or ask another student to look it up on the spreadsheet.

Yes. Sharing login information is not a security risk because the students can be trusted not to use each other's usernames and passwords.

No. Sharing the spreadsheet with students takes a lot of processing power.

Question 5 4 pts

Which of the following is NOT a risk posed by sharing personal private information?

Someone could display your social media profile on public television.

Someone could set up a new credit card account in your name to make purchases.

Someone could pretend to by you and engage in cyberbullying of other classmates.

Someone could get your address and come to physically harm you or your family.

Question 6 4 pts

Which situation describes an inappropriate behavior while using technology?

Installing new software on your personal laptop.

Releasing personal information without permission.

○ Signing out of a laptop when you are finished using it.

○ All of the above.

Question 7 4 pts

What are possible harmful outcomes of installing software from unknown or untrusted authors?

I. You could infect a device with malware and compromise personal information
II. Untrusted software always takes up more memory storage, leaving less resources for other programs
III. Obtaining illegal copies of software could result in legal action against you

○ I only

○ II only

○ III only

○ I and III only

Question 8 4 pts

Why does new technology make common tasks easier?

○ It automates basic parts of a task allowing you to focus on more complex ideas

○ You don’t need to understand all the aspects of a task in order to complete it

○ Some tasks can be automatically triggered and completed without you even knowing

○ All of the above

Question 9 4 pts

How does a school’s technology use policy affect what can be taught in a classroom? Check all that apply.

☐ The policy may limit particular devices that would be essential in the learning

- [ ] The policy could limit what information is shared between students, teachers, and parents
- [ ] The teacher may not be comfortable using the technology that is allowed within school policy
- [ ] Students' home internet access may prevent them from being able to complete a homework assignment

Question 10 4 pts

Which of the following is an example of culture affecting technology?

- ○ Facebook allows people to connect with family and friends
- ○ Ride-Sharing software causes a decrease in demand for taxi companies
- ○ Digital music tools (e.g., Ableton, FL Studio) empower anybody to create electronic music
- ○ More people sharing photos online leads Instagram to make user-friendly editing software

Question 11 4 pts

Technology and culture often have a cyclical relationship, where changes in one cause a new need in the other.

- ○ True
- ○ False

Question 12 4 pts

Which of the following is NOT a motive that drives new technological development?

- ○ Make everyday tasks more convenient and user-friendly
- ○ Decrease the risk of everyday tasks
- ○ Computerize as many tasks of daily life as possible
- ○ Increase the ease of communication and collaboration

Question 13 4 pts

What is ***not*** a problem that arises from computer use?

○
Personal information can be stolen causing financial issues

○
Students rely on auto-correcting tools instead of applying spelling and grammar rules

○
Cyberbullying among students

○
Slower access to information

Question 14 4 pts

Computers have decreased our ability to communicate over large distances.

○
True

○
False

Question 15 4 pts

Which of the following scenarios describe a problem stemming from the use of computers?

I. Michael's contact information is lost in a data breach and given to advertisers
II. Kelly receives multiple messages and emails from work during her designated family time
III. Joe uses information without verifying its authenticity and accuracy

○
I only

○
II only

○
I and II only

○
None of these

Question 16 4 pts

Who would be an appropriate person to ask if a robotics activity fits within the school division's technology policy? Check all that apply.

☐
Department Chair

- [ ] Principal
- [ ] Technology Specialist
- [ ] Curriculum Specialist

Question 17 4 pts

Unplugged activities are an effective instructional method that can cover a variety of technological concepts.

- ○ True
- ○ False

Question 18 4 pts

What is an example of a positive effect that technology has on daily life? Check all that apply.

- [ ] The Internet has allowed easier and faster access to information
- [ ] GPS navigation systems allow people to successfully travel to unfamiliar places
- [ ] Corporate databases store product information with better accessibility and organization
- [ ] Automation in production has led to a decrease in cost of everyday objects

Question 19 4 pts

What is a possible negative effect of new technology on daily life?

- ○ New tools make accomplishing tasks more tedious overall
- ○ New technology can lead to automation and lost jobs
- ○ Process automation allows for people to focus on larger ideas rather than small details
- ○ Schools and employers are implementing new policies regarding technology

Question 20 4 pts

Even though a developer has good intentions, a new technology can cause more problems than benefits.

- ○ True
- ○ False

Question 21 4 pts

Which of the following are considered part of your personal digital identity? Check all that apply.

- ☐ Social Media accounts
- ☐ Visibility settings for a social media account
- ☐ Pictures posted online
- ☐ Videos uploaded to YouTube

Question 22 4 pts

Which of the following statements is NOT true about your personal digital identity?

- ○ It is very difficult to remove digital information such as pictures or social media posts from the internet
- ○ Potential employers may look at your digital identity to evaluate you as a prospective employee
- ○ Malicious actors may use elements of your digital identity to commit identity fraud
- ○ Services you use to share information will keep your identity secret and not share with external parties.

Question 23 4 pts

Why is it important to actively maintain and curate your personal digital identity? Check all that apply.

- ☐ Posts and pictures are archived and can follow you forever
- ☐ Colleges and employers will evaluate your digital identity in considering you for admission or employment
- ☐ Important people you connect with may not recognize you from an old profile picture
- ☐ You could accidentally reveal personal information you did not mean to

Question 24 4 pts

Which of the following is an example of positive, safe, legal, AND ethical behavior while using technology?

- Your colleague has a challenging day at school and makes a public social media post criticizing students by name
- A friend confides a personal problem in Direct Message to you, and you post screenshots of the conversation online
- Your cousin has a duplicated version of a new video game, and sells it to you for much cheaper than buying a new copy
- You share examples of quality work from your students online, after removing their names

Question 25 4 pts

Mrs. Peters recreates an SOL-aligned lesson she found online and shares the lesson plan with her coworkers without mentioning the original source. How would you describe Mrs. Peters' actions with regard to the safe and ethical use of technology?

- Actions were safe and ethical
- Actions were safe but not ethical
- Actions were ethical but not safe
- Actions were neither safe nor ethical

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