

The Robert D. and Billie Ray Center



21st Century Essential Concepts and Skills: Connections to CHARACTER COUNTS!

TECHNOLOGY LITERACY



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Proud to promote

**CHARACTER
COUNTS!**

21st Century Essential Concepts and Skills: Connections to CHARACTER COUNTS!

TECHNOLOGY LITERACY

Below are listed the Six Pillars of Character and the Essential Concepts and Skills (with details and examples) of Technology Literacy Grades K-12, that connect directly to the tenets of each Pillar of Character. This list may not be all-inclusive and many concepts and skills are listed under multiple Pillars.

Trustworthiness: Grades 9-12

Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others

Appropriately contribute to project teams to produce original works or solve problems.

- Students share knowledge and skills with local or distance teams of peers, experts, or others using technological tools and resources to create collaborative works and/or innovative sustainable solutions.

Apply digital tools to gather, evaluate, and use information.

Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

- Students model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources for research, information analysis, problem solving, and decision making in content learning.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

- Students use technology efficiently and in a manner that does not harm them or others. Their choices demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. Students understand the concept of acceptable use of copyrighted materials, and how disregarding intellectual property affects others.

Trustworthiness: Grades 6-8

Collaborate with peers, experts, and others using interactive technology.

- Share knowledge and skills with local or distant teams of peers, experts, or others using technology tools and resources to create group works and/or innovative solutions.

Plan strategies utilizing digital tools to gather, evaluate, and use information.

- Locate, organize, analyze, evaluate, and synthesize information from a variety of sources and media and use this information in a legal and ethical manner.

Understand the legal and ethical issues of technology as related to individuals, cultures, and societies.

- Use technology efficiently and in a manner that does not harm them or others.
- Demonstrate awareness of legal and ethical responsibilities when using copyrighted material, and how a disregard of legal and ethical responsibilities affects others.

Trustworthiness: Grades 3-5

Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.

- Locate, organize, and ethically use information from a variety of sources and media.

Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.

- Demonstrate an understanding of what electronic theft and plagiarism are and why they are harmful.

Trustworthiness: Grades K-2

Understand and practice appropriate and safe uses of technology.

- Understand that stealing information and things others have created is the same as stealing tangible items.



Respect: Grades 9-12

Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Create original works as a means of personal or group expression.

- Students individually or collaboratively create media-rich products to be displayed, published, or performed for a variety of audiences.

Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.

Develop cultural understanding and global awareness by engaging with learners of other cultures.

- Students use a variety of existing online tools and emerging technologies for communicating with and learning about people of other cultures. Students investigate, communicate, and understand cultural norms manifested in music, literature, painting and sculpture, and theater and film, resulting in greater global awareness.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

- Students use technology efficiently and in a manner that does not harm them or others. Their choices demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. Students understand the concept of acceptable use of copyrighted materials, and how disregarding intellectual property affects others.

Respect: Grades 6-8

Demonstrate creative thinking in the design and development of innovative technology products and problem solving.

- Investigate global issues and make informed choices based on knowledge of technology systems, resources, and services.

Collaborate with peers, experts, and others using interactive technology.

- Interact and collaborate with peers, experts, and others using technology.
- Engage in learning activities with learners from other countries and/or cultures using telecommunication tools to create, produce, and share information, models, and other projects with a global or cultural focus.

Use critical thinking skills to conduct research, solve problems, and make informed decisions using appropriate technological tools and resources.

- Analyze and evaluate information from a variety of perspectives and resources in order to assess multiple solutions and investigate them from differing viewpoints.

Understand the legal and ethical issues of technology as related to individuals, cultures, and societies.

- Use technology efficiently and in a manner that does not harm them or others.

Respect: Grades 3-5

Use technology resources to create original products, identify patterns and problems, make predictions, and propose solutions.

- Work individually and collaboratively to create, display, publish, or perform media-rich products.

Use interactive technologies in a collaborative group to produce digital presentations or products in a curricular area.

- Use a variety of technology tools to work collaboratively with others inside and outside the classroom.
- Engage in learning activities with learners from other countries and/or cultures

Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.

- Locate, organize, and ethically use information from a variety of sources and media.



Use technological resources to develop and refine questions for investigation.

- Identify and explore diverse perspectives and processes to find multiple solutions to problems.

Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.

- Demonstrate an understanding of what electronic theft and plagiarism are and why they are harmful.

Respect: Grades K-2

Use a variety of technology tools and media-rich resources to work collaboratively with others.

- Participate in learning activities with or about learners from other countries and/or cultures.

Utilize predetermined digital resources and tools to answer questions or solve problems.

- Review provided resources, explain why they are or are not useful, and use information appropriately.

Use technological resources to investigate given questions or problems.

- Explore the different ways that problems may be solved.

Understand and practice appropriate and safe uses of technology.

- Understand that stealing information and things others have created is the same as stealing tangible items.
- Demonstrate to others how to use technology tools in ways that assist, rather than prevent, others from learning.

Responsibility: Grades 9-12

Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Create original works as a means of personal or group expression.

- Students individually or collaboratively create media-rich products to be displayed, published, or performed for a variety of audiences.

Identify trends and forecast possibilities.

- Students investigate complex global issues, make informed choices based on capabilities and limitations of technology systems, resources, and services, and apply this learning to personal and workplace needs.

Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others

Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.

- Using technology, students interact and collaborate with peers, experts, and others to contribute to a content-related, media-rich knowledge base by compiling, synthesizing, producing, and disseminating information, models, and other creative works.

Appropriately contribute to project teams to produce original works or solve problems.

- Students share knowledge and skills with local or distance teams of peers, experts, or others using technological tools and resources to create collaborative works and/or innovative sustainable solutions.

Apply digital tools to gather, evaluate, and use information.

Plan strategies to guide inquiry.

- Students design a process, which establishes criteria for selecting digital tools and resources to use for in-depth investigation of a real-world task and justify the selection based on efficiency and effectiveness.

Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

- Students model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources for research, information analysis, problem solving, and decision making in content learning.



Demonstrate critical thinking skills using appropriate tools and resources to plan and conduct research, manage projects, solve problems and make informed decisions.

- Plan and manage activities to develop a solution or complete a project
- Collect and analyze data to identify trends, solutions, or make informed decisions.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

- Students use technology efficiently and in a manner that does not harm them or others. Their choices demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. Students understand the concept of acceptable use of copyrighted materials, and how disregarding intellectual property affects others.

Demonstrate personal responsibility for lifelong learning.

- Students use their skills to identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. They use this knowledge to make informed choices among technology systems, resources, and services.

Exhibit leadership for digital citizenship.

- Students use their skills to identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. They use this knowledge to make informed choices among technology systems, resources, and services.

Responsibility: Grades 6-8

Demonstrate creative thinking in the design and development of innovative technology products and problem solving.

- Individually or collaboratively create media-rich products and display, publish, or perform them for a variety of audiences.
- Investigate global issues and make informed choices based on knowledge of technology systems, resources, and services.

Plan strategies utilizing digital tools to gather, evaluate, and use information.

- Create a plan for the use of digital tools and resources to investigate a real-world issue.

Use critical thinking skills to conduct research, solve problems, and make informed decisions using appropriate technological tools and resources.

- Identify real-world issues and analyze technological resources for developing and refining questions for investigation.

Understand the legal and ethical issues of technology as related to individuals, cultures, and societies.

- Use technology efficiently and in a manner that does not harm them or others.
- Use online resources to work with others to complete a task and accept responsibility for the results.

Responsibility: Grades 3-5

Use technology resources to create original products, identify patterns and problems, make predictions, and propose solutions.

- Work individually and collaboratively to create, display, publish, or perform media-rich products.
- Use models and simulations to identify problems and propose solutions.

Use interactive technologies in a collaborative group to produce digital presentations or products in a curricular area.

- Appropriately contribute to project teams to produce original works or solve problems using technology.



Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.

- Create a plan or process that utilizes digital tools and resources to investigate and answer issues, questions, or problems.
- Access information for specific purposes, and assess the validity of the information source.

Use technological resources to develop and refine questions for investigation.

- Use technological resources to conduct research and complete a project.

Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.

- Demonstrate awareness of the dangers of sharing personal information with others.
- Demonstrate an understanding of what electronic theft and plagiarism are and why they are harmful.
- Identify the positive values of using technology to accomplish tasks.

Responsibility: Grades K-2

Use technology to create projects, identify patterns, and make predictions.

- Use technology resources to identify problems, help recognize and describe patterns, make predictions and/or propose solutions.

Use a variety of technology tools and media-rich resources to work collaboratively with others.

- In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area.
- Use technology resources for communicating and sharing ideas with others.

Utilize predetermined digital resources and tools to answer questions or solve problems.

- Follow a plan of action to guide inquiry by using predetermined digital resources.
- Review provided resources, explain why they are or are not useful, and use information appropriately.

Use technological resources to investigate given questions or problems.

- Use technology to decide what information to locate and how to use that information to complete a project.
- Collect and explain data to identify commonalities or solutions to problems.

Understand and practice appropriate and safe uses of technology.

- Be aware of why it is unsafe for students to provide others with information about themselves.
- Demonstrate awareness of the importance of communicating with adults about things that might concern them.
- Demonstrate to others how to use technology tools in ways that assist, rather than prevent, others from learning.

Fairness: Grades 9-12

Apply digital tools to gather, evaluate, and use information.

Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.

- Students model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources for research, information analysis, problem solving, and decision making in content learning.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

- Students use technology efficiently and in a manner that does not harm them or others. Their choices demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. Students understand the concept of acceptable use of copyrighted materials, and how disregarding intellectual property affects others.



Fairness: Grades 6-8

Plan strategies utilizing digital tools to gather, evaluate, and use information.

- Locate, organize, analyze, evaluate, and synthesize information from a variety of sources and media and use this information in a legal and ethical manner.

Understand the legal and ethical issues of technology as related to individuals, cultures, and societies.

- Demonstrate awareness of legal and ethical responsibilities when using copyrighted material, and how a disregard of legal and ethical responsibilities affects others.

Fairness: Grades 3-5

Utilize digital tools and resources to investigate real-world issues, answer questions, or solve problems.

- Locate, organize, and ethically use information from a variety of sources and media.

Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.

- Demonstrate an understanding of what electronic theft and plagiarism are and why they are harmful.
- Show others how to use new technologies, and use technology in a way that assists, rather than prevents, others from learning.

Fairness: Grades K-2

Understand and practice appropriate and safe uses of technology.

- Demonstrate to others how to use technology tools in ways that assist, rather than prevent, others from learning.

Develop cultural understanding and global awareness by engaging with learners of other cultures.

- Students use a variety of existing online tools and emerging technologies for communicating with and learning about people of other cultures. Students investigate, communicate, and understand cultural norms manifested in music, literature, painting and sculpture, and theater and film, resulting in greater global awareness.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.

- Students willingly and routinely use online resources to meet needs for collaboration, research, publication, communication, and productivity. Evidence for a positive attitude includes a proclivity to help others with the use of technology in their learning.

Grades 6-8

Collaborate with peers, experts, and others using interactive technology.

- Share knowledge and skills with local or distant teams of peers, experts, or others using technology tools and resources to create group works and/or innovative solutions.

Understand the legal and ethical issues of technology as related to individuals, cultures, and societies.

- Use technology efficiently and in a manner that does not harm them or others.

Grades 3-5

Understand and practice appropriate, legal, and safe uses of technology for lifelong learning.

- Demonstrate an understanding of what electronic theft and plagiarism are and why they are harmful.
- Show others how to use new technologies, and use technology in a way that assists, rather than prevents, others from learning.



Caring: Grades K-2

Understand and practice appropriate and safe uses of technology.

- Understand that stealing information and things others have created is the same as stealing tangible items.
- Demonstrate to others how to use technology tools in ways that assist, rather than prevent, others from learning.

Citizenship: Grades 9-12

Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Identify trends and forecast possibilities.

- Students investigate complex global issues, make informed choices based on capabilities and limitations of technology systems, resources, and services, and apply this learning to personal and workplace needs.

Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Advocate and practice safe, legal, and responsible use of information and technology at an age-appropriate level.

- Students use technology efficiently and in a manner that does not harm them or others. Their choices demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. Students understand the concept of acceptable use of copyrighted materials, and how disregarding intellectual property affects others.

Exhibit leadership for digital citizenship.

- Students use their skills to identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. They use this knowledge to make informed choices among technology systems, resources, and services.

Citizenship: Grades 6-8

Demonstrate creative thinking in the design and development of innovative technology products and problem solving.

- Investigate global issues and make informed choices based on knowledge of technology systems, resources, and services.

Collaborate with peers, experts, and others using interactive technology.

- Engage in learning activities with learners from other countries and/or cultures using telecommunication tools to create, produce, and share information, models, and other projects with a global or cultural focus.

Citizenship: Grades 3-5

Use interactive technologies in a collaborative group to produce digital presentations or products in a curricular area.

- Use a variety of technology tools to work collaboratively with others inside and outside the classroom.
- Engage in learning activities with learners from other countries and/or cultures

Citizenship: Grades K-2

Use a variety of technology tools and media-rich resources to work collaboratively with others.

- Participate in learning activities with or about learners from other countries and/or cultures.

Understand and practice appropriate and safe uses of technology.

- Understand that stealing information and things others have created is the same as stealing tangible items.
 - Demonstrate awareness of the importance of communicating with adults about things that might concern them.
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