

Kentucky Technology

Grades 9-12

Empowered Learner **EL**

Students use technology to take an active role in their learning.

- 1 Leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. **EL1**
 - A Articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes. **EL1.A**
 - 1 Set and articulate personal learning goals and develop strategies leveraging digital tools to achieve those goals. **EL1.A.1**
 - 2 Reflect on successes, areas of improvement, and make necessary revisions to improve the learning over time and adjust for future learning. **EL1.A.2**
 - B Build networks and customize their learning environments in ways that support the learning process. **EL1.B**
 - 1 Initiate collaboration with a network of global partners ex.: students, teachers, professionals, or the global community to support and enhance the learning process. **EL1.B.1**
 - C Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways. **EL1.C**
 - 1 Seek feedback independently through the use of technology ex.: use video chat to share and reflect upon a learning process or product. **EL1.C.1**
 - 2 Use feedback to effectively demonstrate learning in a variety of ways. **EL1.C.2**
 - D Understanding the fundamental concepts of how to use technology technology operations. **EL1.D**
 - 1 Understand the fundamental use of technology tools to embrace creativity, communication, collaboration, and critical thinking. **EL1.D.1**
 - 2 Choose and effectively troubleshoot technology tools to suit purpose. **EL1.D.2**
 - 3 Transfer and extend the knowledge of existing technology to explore new technologies. **EL1.D.3**
- 2 Apply the fundamental concepts of technology operations and demonstrate the ability to choose, use, and/or troubleshoot current technologies. **EL2**
 - A Demonstrate learning with the use of technology. **EL2.A**
 - 1 Select appropriate digital resources to develop, implement and/or evaluate communication with an authentic audience. **EL2.A.1**
 - B Apply functions and concepts of technology operations; demonstrate the ability to choose, use and troubleshoot current technologies. **EL2.B**
 - 1 Choose efficient functions and concepts appropriate to their task and purpose. 2. Apply an understanding of devices to troubleshoot current technology and adjust for future events. **EL2.B.1**
 - C Transfer knowledge to emerging technology. **EL2.C**

- 1 Apply and adapt knowledge of existing technology to the innovative redefinition-based use of new technologies. [EL2.C.1](#)
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Students manage their digital identity in a safe, positive, and proactive way.

- 1 Recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world; act and model in ways that are safe, legal and ethical. DC1
 - A Cultivate and manage your digital identity and reputation, and be aware of the permanence of your actions in the digital world. DC1.A
 - 1 Actively develop and maintain a positive, authentic digital identity and presence. DC1.A.1
 - 2 Comprehend the permanence of actions in the digital world and their potential visibility to future employers, colleagues and social relations. DC1.A.2
 - B Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices. DC1.B
 - 1 Make responsible decisions based on ethical standards, positive social behavior and the safety of oneself and others when interacting and collaborating in a digital world. DC1.B.1
 - 2 Understand the mental and legal ramifications of cyber bullying and harassment; employ strategies to avoid and/or combat cyberbullying and harassment. DC1.B.2
 - C Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online. DC1.C
 - 1 Think critically about the information shared in an online environment in order to keep sensitive personal information safe and secure. DC1.C.1
 - 2 Comprehend the presence and ramifications of online data collection and how it is used to track online navigation and influence consumer decisions. DC1.C.2
- 2 Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property. DC2
 - A Use information, media and digital resources in a responsible manner. DC2.A
 - 1 Understand the need for, and comply with, acceptable user policies and agreements. DC2.A.1
 - 2 Make responsible decisions in the use of information, media, social media and other digital resources in accordance with acceptable user policies and agreements. DC2.A.2
 - B Respect intellectual property rights. DC2.B
 - 1 Respect the importance of intellectual property in encouraging thought, design, innovation and/or creation. DC2.B.1
 - 2 Use, share and/or interact with intellectual property in accordance with the rights given by the owner of the intellectual property. DC2.B.2
 - C Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property. DC2.C

- 1 Apply understanding of "fair use" and copyright laws when sharing the intellectual property of others, as well as, when producing new intellectual property. **DC2.C.1**
 - 2 Seek permission and properly cite the usage of the intellectual property of others. **DC2.C.2**
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**Knowledge
Constructor** **KC**

Students use various digital tools to find information and make meaning.

- 1 Students critically curate a variety of resources using digital tools to construct knowledge. **KC1**
 - A Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits. **KC1.A**
 - 1 Utilize a variety of digital resources effectively and safely by applying a variety of search strategies ex.: filtering searches, advanced settings/tools, file types, database/source selection . **KC1.A.1**
 - 2 Plan and use multiple research strategies to locate information from digital resources for a variety of purposes. **KC1.A.2**
 - B Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources. **KC1.B**
 - 1 Evaluate digital sources for accuracy of information; compare and consider the perspectives of the sources; determine usefulness, and assess the credibility of the sources. **KC1.B.1**
 - C Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions. **KC1.C**
 - 1 Use multiple digital tools to select, organize, and communicate information from digital sources. **KC1.C.1**
 - 2 Utilize digital tools to communicate information in real world applications, to address or solve a problem, or to make meaningful connections. **KC1.C.2**
 - 2 Produce creative artifacts and make meaningful learning experiences from curated knowledge for themselves and others. **KC2**
 - A Produce creative artifacts. **KC2.A**
 - 1 Choose and use digital tools to create products that exhibit choice and creativity. **KC2.A.1**
 - 2 Create products independently and collaboratively that incorporate creative elements, and communicate to multiple audiences. **KC2.A.2**
 - B Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions. **KC2.B**
 - 1 Select and use digital tools to create products that demonstrate meaningful connections or conclusions. **KC2.B.1**
 - 2 Create products independently and collaboratively that explore real-world issues and problems and engage in discussion around current issues. **KC2.B.2**
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Students use a variety of technologies to design and create.

- 1 Use a variety of technologies to identify and solve authentic real-world problems. ID1
 - A Find authentic real-world problems in local and global contexts. ID1.A
 - 1 Use a variety of technologies to independently identify real-world problems in the local and global community. ID1.A.1
 - B Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. ID1.B
 - 1 Use a variety of technologies to independently demonstrate perseverance when dealing with ambiguous and open-ended problems. ID1.B.1
 - 2 Use a variety of technologies within a design process to create new, useful and imaginative solutions. ID2
 - A Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems. ID2.A
 - 1 Self-select and use a variety of digital tools within a deliberate process for generating ideas, researching, and testing ideas for solving problems or creating original products that demonstrate understanding. ID2.A.1
 - B Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks. ID2.B
 - 1 Self-select and use appropriate digital tools to manage work and create original products that take into consideration project constraints, obstacles and outcomes. ID2.B.1
 - C Develop, test and refine prototypes as part of a cyclical design process. ID2.C
 - 1 Select and use a variety of digital tools to aid in working collaboratively or independently to create, test and refine prototypes, drafts and concepts based on self-initiated feedback and reflection in design cycles. ID2.C.1
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Computational Thinker CT

Students understand sequences and use them to develop solutions to problems.

- 1 Develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. **CT1**
 - A Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions. **CT1.A**
 - 1 Precisely define a problem and develop a solution using digital tools, conducting data analysis, abstract models, and algorithmic thinking. **CT1.A.1**
 - B Collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making. **CT1.B**
 - 1 Use digital tools to effectively collect, organize, and manipulate data to test, verify, and present possible solutions to a problem. **CT1.B.1**
 - C Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving. **CT1.C**
 - 1 Evaluate the problem-solving process to deconstruct data and information to develop effective solutions to real-world problems. **CT1.C.1**
 - D Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions. **CT1.D**
 - 1 Demonstrate their understanding of automation and logic to develop a process to create and verify automated solutions. **CT1.D.1**
 - 2 Apply strategies for understanding and solving problems by using technological methods to develop and test solutions. **CT2**
 - A Use resources to collect, analyze, and represent data. **CT2.A**
 - 1 Use digital tools to collect relevant data, conduct analysis, and prepare data for presentation to facilitate problem-solving and decision-making. **CT2.A.1**
 - B Deconstruct components to understand systems and facilitate problem-solving. **CT2.B**
 - 1 Use technology-assisted methods to more easily identify key information by breaking down data to facilitate problem-solving. **CT2.B.1**
 - C Create and test automated solutions. **CT2.C**
 - 1 Use digital tools and algorithmic thinking to develop automated systems to test solutions. **CT2.C.1**
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Creative Communicator CC

Students communicate clearly and express themselves with a variety of digital tools.

- 1 Communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals, audience and task. **CC1**
 - A Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication. **CC1.A**
 - 1 Evaluate and determine appropriate platforms and digital tools to create or share digital content with an authentic audience for a desired purpose. **CC1.A.1**
 - B Create original works or responsibly repurpose and/or remix digital resources into new creations. **CC1.B**
 - 1 Create work for an authentic audience and desired purpose that reflects a responsible repurposing of digital media or resources. **CC1.B.1**
 - C Communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations. **CC1.C**
 - 1 Analyze and communicate complex ideas, data, or solutions to an authentic audience for a desired purpose using digital tools. **CC1.C.1**
 - 2 Publish and present content customized for their audience s , purpose, and task. **CC2**
 - A Publish and present content that customizes the message and medium for their intended audiences. **CC2.A**
 - 1 Present an idea or creative work that expresses ideas or content that is published for a range of authentic audiences outside of the classroom. **CC2.A.1**
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Students use digital tools to connect with learners inside and outside of their classroom.

- 1 Use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. GC1
 - A Use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning. GC1.A
 - 1 Evaluate and use digital collaboration tools to connect with others from a variety of local and global backgrounds/cultures in order to exchange ideas, develop an understanding of diverse perspectives and encourage learning. GC1.A.1
 - B Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal. GC1.B
 - 1 Use digital tools to contribute to a project team, determine their role and responsibility within the group and work toward a common goal or a solution to a problem. GC1.B.1
 - C Contribute to the exchange of ideas within and beyond the learning community. GC1.C
 - 1 Select digital tools to share and exchange interests, ideas and experiences with others from within and beyond the local learning community. GC1.C.1
- 2 Use digital tools to connect with a global network of learners and engage with issues that impact local and global communities. GC2
 - A Use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints. GC2.A
 - 1 Use collaborative technologies to work with others peers, experts, community members to gain knowledge about issues through various perspectives and opinions and to find solutions for social change. GC2.A.1
 - B Explore local and global issues and use collaborative technologies to work with others to investigate solutions. GC2.B
 - 1 Explore and analyze local and global issues and use collaborative digital tools to investigate, develop a plan and recommend solutions. GC2.B.1