

Kentucky Technology

# Grades K-2

## 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 personal learning goals and use digital tools to achieve those goals, with guidance and support ex.: increase reading fluency by recording and reflecting upon student reading. **EL1.A.1**
    - 2 Reflect on the learning process to improve learning over time, with guidance and support ex.: using digital writing portfolio and reflection log/journal. **EL1.A.2**
  - B Build networks and customize their learning environments in ways that support the learning process. **EL1.B**
    - 1 Participate in teacher-led explorations utilizing digital tools to expand learning spaces beyond the classroom ex.: expert video channels, video conferencing with professionals, authors blogs. **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 Recognize and use technology to seek feedback as a valued component of the learning process. **EL1.C.1**
    - 2 Use feedback to improve the demonstration of learning ex.: student uses interactive software with immediate feedback to guide their performance. **EL1.C.2**
  - D Understanding the fundamental concepts of how to use technology technology operations. **EL1.D**
    - 1 Explore a variety of digital tools and discover how they work based on fundamental concepts of technology operations ex.: a student learns how to turn the audio up/down, how to open, save, close files. **EL1.D.1**
    - 2 Transfer conceptual knowledge of technology operations in multiple contexts, with guidance and support ex.: A student has learned to use a smartphone, and they use what they know about smartphones to use a different device. **EL1.D.2**
- 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 Use age-appropriate digital resources to produce and publish information. 2. Demonstrate basic ability to communicate a message with digital input strategies ex.: typing/keyboarding, voice to text, video or audio, images. **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 technology appropriate to task and purpose, with guidance and support. **EL2.B.1**
  - C Transfer knowledge to emerging technology. **EL2.C**
    - 1 Apply and adapt knowledge of existing technology to the substitution-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 Understand what it means to be a positive influence offline and how that could relate to being positive online. DC1.A.1
      - 2 Show awareness that when something is put on the internet websites, social media, apps it can leave a trail online digital footprint . 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 Choose appropriate websites, and understand to seek help from a trusted adult when faced with problems online related to safety. DC1.B.1
      - 2 Understand that what is online has positive and negative consequences, and relate the understanding to behaviors offline. 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 Understand usernames and passwords, and understand why these are not shared with others. DC1.C.1
      - 2 Navigate to trusted websites and know how to search for websites in a safe manner with awareness that not all websites are safe. 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 Identify acceptable use of the internet and other digital resources. DC2.A.1
    - B Respect intellectual property rights. DC2.B
      - 1 Recognize that everyone has different ideas in creating their own work intellectual property . DC2.B.1
      - 2 Show respect for others intellectual property with positive words. DC2.B.2
      - 3 Understand not to copy someone else s work intellectual property . DC2.B.3
      - 4 Understand that someone else s creations found on the internet or shared in person, cannot be used without permission, and the creator should be given credit. DC2.B.
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**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 Use basic keyword searches to locate information to build deeper understanding of a subject. **KC1.A.1**
      - 2 Apply print reference knowledge and strategies to find and locate information in digital resources. **KC1.A.2**
      - 3 Satisfy curiosity by exploring answers to questions with digital resources. **KC1.A.3**
    - B Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources. **KC1.B**
      - 1 Classify websites into general categories to guide relevance of search results ex.: entertainment/games, reference, learning . **KC1.B.1**
      - 2 Compare information on the same topic across multiple digital resources. **KC1.B.2**
    - 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 digital organizers to create collections of artifacts ex.: bookmarks, hyperlinks, sites . **KC1.C.1**
      - 2 Organize gathered artifacts into general themed collections ex.: Famous African-Americans, favorite cartoon characters, pictures of bridges . **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 Use digital tools to create artifacts from information found in various digital resources. **KC2.A.1**
    - B Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions. **KC2.B**
      - 1 Use a variety of digital resources ex.: website, video clip, photos to explore and report on real world issues. **KC2.B.1**
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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 technology to identify a problem in the school or home environment with guidance and support. **ID1.A.1**
      - 2 Describe the problem, using technology, and explain why it is problematic. **ID1.A.2**
    - B Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. **ID1.B**
      - 1 Demonstrate perseverance when working to complete a challenging task. **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 Use a design process ex.: creative thinking spiral to ask questions, suggest solutions, test ideas to solve problems, and share their learning, with guidance and support. **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 Use a variety of age-appropriate digital tools to design something, with guidance and support. **ID2.B.1**
    - C Develop, test and refine prototypes as part of a cyclical design process. **ID2.C**
      - 1 Use a design process to develop ideas or creations, test their design, and redesign if necessary **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 Identify a problem and choose the appropriate digital tools to explore and find solutions to the problem through the use of a step-by-step plan, with guidance and support. **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 Utilize an age-appropriate digital tool to collect, organize, and represent data ex.: online surveys, spreadsheets, graphs, charts, etc ; students will use this data to look for similarities and identify patterns and categories within the data set ex.: simple data mining , with guidance and support. **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 Break a problem into smaller parts, identify key information, and use age-appropriate digital tools to help with problem solving ex.: online whiteboard, online mind-mapping tools, digital outline , with guidance and support. **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 Define and give examples of automation ex.: thermostat controls temperature, buttons pressed on toys make various sounds . **CT1.D.1**
      - 2 Complete a simple coding task with at least 3-5 coded actions ex.: html, block-based coding, python , with guidance and support. **CT1.D.2**
  - 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 ask questions and digitally collect data, with guidance and support. **CT2.A.1**
    - B Deconstruct components to understand systems and facilitate problem-solving. **CT2.B**
      - 1 Use digital tools to identify patterns in order to solve problems, with guidance and support. **CT2.B.1**
    - C Create and test automated solutions. **CT2.C**
      - 1 Use digital tools to identify and create algorithms, with guidance and support. **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** Introduce and use age appropriate digital tools ex.: art creation programs, video production, photography, presentations, video media, green screen, stop motion animation for producing new creations or published communications using appropriate digital etiquette with guidance and support. **CC1.A.1**
    - B** Create original works or responsibly repurpose and/or remix digital resources into new creations. **CC1.B**
      - 1** Use age appropriate digital tools to create original and remixed work, with respect to intellectual property with guidance and support. **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** Observe and participate in the communication of ideas using a variety of digital tools ex.: video reflections, interactive notebooks, audio recording, as well as visual representation with guidance and support. **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** Explore a variety of digital tools ex.: drawing/ art programs, video production, green screen, digital art . to create and communicate an idea to a variety of audiences with guidance and support. **CC2.A.1**
      - 2** Discuss different audiences and how presentations can change based on audience. **CC2.A.2**
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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 Use digital tools and resources ex.: digital resources, virtual field trips, virtual reality, video media, and social media , to understand the similarities and differences of others in school, community, and beyond with guidance and support. 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 collaborate with team members in a digital workspace with guidance and support. GC1.B.1
  - C Contribute to the exchange of ideas within and beyond the learning community. GC1.C
    - 1 Respect the interest of others by collaborating to share ideas, experiences, and opinions ex.: virtual collaboration, presentation, and discussion boards with guidance and support. 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 digital tools to collaborate with others to examine problems from school, community, and beyond with guidance and support. GC2.A.1
  - B Explore local and global issues and use collaborative technologies to work with others to investigate solutions. GC2.B
    - 1 Use digital tools to collaborate with school, community, and beyond to solve problems with guidance and support. GC2.B.1