Organization of the Standards
Standards Structure and Identifiers

The Kentucky Academic Standards for Technology follow a specific structure.

- **Standard Identifier**: reflects consistent coding for the identification of a standard representing the grade (or grade band), the concept area and the numerated standard number per concept.
- **Grade Band**: identifies the grade band associated with the standard.
- **Concept**: categorizes the standards into seven concepts.
- **Standard**: outlines what students are expected to know or be able to do.
- **Learning Priority**: breaks down the standard into manageable learning pieces.
- **Grade-by-Grade Performance Indicators**: provide a comprehensive picture of performance expectations for each standard and include thorough descriptions of exemplary practices and processes.
Kentucky Academic Standards (KAS) for Technology

High (9-12) Technology Standards (H)

**Concept: Empowered Learner (EL)**

**Standard:**
EL1: Leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

**Learning Priority:**
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.

**Indicator(s) for grades 9-12:**
1. Set personal learning goals and self-select digital tools to that will best support individualized learning. (ex. Use collaborative documents to revise and reflect on the writing process.)
2. Reflect on the learning process (ex. using digital writing portfolio and reflection log/journal) to improve learning over time.

**Learning Priority:**
B. Build networks and customize their learning environments in ways that support the learning process.

**Indicator(s) for grades 9-12:**
1. Initiate collaboration with a network of global partners (ex. students, teachers, professionals, and the global community) to support and enhance the learning process.

**Learning Priority:**
C. Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

**Indicator(s) for grades 9-12:**
1. Seek feedback independently through the use of technology (ex. use video chat to share and reflect upon a learning process or product).
2. Use feedback to effectively demonstrate learning in a variety of ways.

**Learning Priority:**
D. Understand the fundamental concepts of how to use technology (technology operations)

**Indicator(s) for grades 9-12:**
1. Understand the fundamental use of technology tools to think embrace creativity, communication, collaboration, and critical thinking.
2. Choose and effectively troubleshoot technology tools to suit purpose.
3. Transfer and extend the knowledge of existing technology to explore new technologies.

**Standard:**
EL2. Apply the fundamental concepts of technology operations and demonstrate the ability to choose, use, troubleshoot current technologies.

**Learning Priority:**
A. Demonstrate learning

**Indicator(s) for grades 9-12:**
1. Select appropriate digital resources to develop, implement and evaluate communication an authentic audience.

**Learning Priority:**
B. Apply functions and concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies

**Indicator(s) for grades 9-12:**
1. Effectively use technology to communicate, collaborate, think critically, and create products.
2. Student choice of technology shows innovation in relation to task and purpose.

**Learning Priority:**
C. Transfer knowledge to emerging technology

**Indicator(s) for grades 9-12:**
1. Apply and adapt knowledge of existing technology to the innovative redefinition-based use of new technologies.
Kentucky Academic Standards (KAS) for Technology

High (9-12) Technology Standards (H)

Concept: Digital Citizen (DC)

Standard:
DC1. Recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world and they act and model 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.

Indicator(s) for grades 9-12:
1. Actively develop and maintain a positive, authentic digital identity and presence.
2. Comprehend the permanence of actions in the digital world and that these actions are potentially visible to future employers, colleagues and social relations.

Learning Priority:
B. Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Indicator(s) for grades 9-12:
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.
2. Understand the mental and legal ramifications of cyber bullying and harassment; employ strategies to avoid and/or combat cyberbullying and harassment.

Learning Priority:
C. Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

Indicator(s) for grades 9-12:
1. Think critically about the information shared in an online environment in order to keep sensitive personal information safe and secure.
2. Comprehend the presence and ramifications of online data collection and how it is used to track online navigation and influence consumer decisions.

Standard:
DC2. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

Learning Priority:
A. Use information, media and digital resources in a responsible manner.

Indicator(s) for grades 9-12:
1. Understand the need for and comply with acceptable user policies and agreements.
2. Make responsible decisions in the use of information, media, social media and other digital resources in accordance with acceptable user policies and agreements.
B. Respect intellectual property rights.

**Indicator(s) for grades 9-12:**
1. Value the importance of intellectual property in encouraging thought, design, innovation and creation.
2. Use, share and interact with intellectual property in accordance with the rights given by the owner of the intellectual property.

**Learning Priority:**
C. Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

**Indicator(s) for grades 9-12:**
1. Apply understanding of “fair use” and copyright laws when sharing the intellectual property of others as well as when producing new intellectual property.
2. Seek permission and properly cite the usage of the intellectual property of others.
## Kentucky Academic Standards (KAS) for Technology

### High (9-12) Technology Standards (H)

#### Concept: Knowledge Constructor (KC)

#### Standard:

**KC1.** Leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

#### Learning Priority:

**A.** Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

**Indicator(s) for grades 9-12:**

1. Utilize a variety of digital resources effectively and safely by applying a variety of search strategies (e.g.: filtering searches, advanced settings/tools, file types, database/source selection).
2. Plan and use multiple research strategies to locate information from digital resources for a variety of purposes.

**B.** Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

**Indicator(s) for grades 9-12:**

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.

**C.** Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

**Indicator(s) for grades 9-12:**

1. Use multiple digital tools to select, organize, and communicate information from digital sources.
2. Utilize digital tools to communicate information in real world applications, to address or solve a problem, or to make meaningful connections.

#### Standard:

**KC2.** Produce creative artifacts and make meaningful learning experiences from curated knowledge for themselves and others

#### Learning Priority:

**A.** Produce creative artifacts

**Indicator(s) for grades 9-12:**

1. Choose and use digital tools to create products that exhibit student choice and creativity.
2. Create products independently and collaboratively that incorporate creative elements, and communicate to multiple audiences.
B. Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

**Indicator(s) for grades 9-12:**

1. Select and use digital tools to create products that demonstrate meaningful connections or conclusions.
2. Create products independently and collaboratively that explore real-world issues and problems and engage in discussion around current issues.
# Kentucky Academic Standards (KAS) for Technology

## High (9-12) Technology Standards (H)

### Concept: Innovative Designer (ID)

#### Standard:

**ID1.** Use a variety of technologies to identify and solve authentic real-world problems.

<table>
<thead>
<tr>
<th>Learning Priority</th>
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<th>Learning Priority</th>
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<tbody>
<tr>
<td>A. Find authentic real-world problems in local and global contexts</td>
<td>B. Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.</td>
<td>C. Develop, test and refine prototypes as part of a cyclical design process.</td>
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</table>

**Indicator(s) for grades 9-12:**

1. Use a variety of technologies to independently identify real-world problems in the local and global community.

2. Use a variety of technologies to independently demonstrate perseverance when dealing with ambiguous and open-ended problems.

3. 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.

4. Self-select and use appropriate digital tools to manage work and create original products that take into consideration project constraints, obstacles, and outcomes.

#### Standard:

**ID2.** Use a variety of technologies within a design process to create new, useful and imaginative solutions.

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<tr>
<th>Learning Priority</th>
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<tbody>
<tr>
<td>A. Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.</td>
<td>B. Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.</td>
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</tbody>
</table>

**Indicator(s) for grades 9-12:**

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.

2. Self-select and use appropriate digital tools to manage work and create original products that take into consideration project constraints, obstacles, and outcomes.
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.
Kentucky Academic Standards (KAS) for Technology

High (9-12) Technology Standards (H)

<table>
<thead>
<tr>
<th>Concept: Computational Thinker (CT)</th>
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<tbody>
<tr>
<td><strong>Standard:</strong></td>
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<tr>
<td>CT1. Develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.</td>
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<thead>
<tr>
<th>Learning Priority:</th>
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<tbody>
<tr>
<td>A. Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.</td>
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<thead>
<tr>
<th>Indicator(s) for grades 9-12:</th>
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<tbody>
<tr>
<td>1. Precisely and thoroughly define a problem and develop a possible solution through the use of digital tools, conducting data analysis, abstract models, and algorithmic thinking to investigate and present proposed solutions.</td>
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<thead>
<tr>
<th>Learning Priority:</th>
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<tbody>
<tr>
<td>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.</td>
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<thead>
<tr>
<th>Indicator(s) for grades 9-12:</th>
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</thead>
<tbody>
<tr>
<td>1. Use digital tool(s) to effectively collect, organize, and manipulate data to test, verify, and present possible solutions to a problem.</td>
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<tr>
<th>Learning Priority:</th>
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<tr>
<td>C. Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.</td>
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<tr>
<th>Indicator(s) for grades 9-12:</th>
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<tbody>
<tr>
<td>1. Evaluate the problem-solving process to deconstruct data and information to develop effective solutions to real-world problems.</td>
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<tr>
<th>Learning Priority:</th>
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<tbody>
<tr>
<td>D. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.</td>
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<tr>
<th>Indicator(s) for grades 9-12:</th>
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<tbody>
<tr>
<td>1. Demonstrate their understanding of automation and logic to develop a process to create and verify automated solutions.</td>
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</tbody>
</table>
Kentucky Academic Standards (KAS) for Technology

High (9-12) Technology Standards (H)

Concept: Creative Communicator (CC)

Standard:
CC1. 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.

Learning Priority:
A. Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

Indicator(s) for grades 9-12:
1. Evaluate and determine appropriate platforms and digital tools to create or share digital content with an authentic audience for a desired purpose.

Learning Priority:
B. Create original works or responsibly repurpose and/or remix digital resources into new creations.

Indicator(s) for grades 9-12:
1. Create work for an authentic audience and desired purpose that reflects a responsible repurposing of digital media or resources.

Learning Priority:
C. Communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

Indicator(s) for grades 9-12:
1. Analyze and communicate complex ideas, data, or solutions to an authentic audience for a desired purpose using digital tools

Standard:
CC2. Publish and present content customized for their audience(s), purpose, and task.

Learning Priority:
A. Publish and present content that customizes the message and medium for their intended audiences.

Indicator(s) for grades 9-12:
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.
## Kentucky Academic Standards (KAS) for Technology

### High (9-12) Technology Standards (H)

#### Concept: Global Collaborator (GC)

#### Standard:
GC1. Use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

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<tr>
<th>Learning Priority:</th>
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<tbody>
<tr>
<td>A. Use digital tools to connect with learners from a variety of backgrounds and</td>
<td>A. Use digital tools to connect with learners from a variety of</td>
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<tr>
<td>cultures, engaging with them in ways that broaden mutual understanding and</td>
<td>backgrounds and cultures, engaging with them in ways that</td>
</tr>
<tr>
<td>learning.</td>
<td>broaden mutual understanding and learning.</td>
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**Indicator(s) for grades 9-12:**
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.

<table>
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<tr>
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<tbody>
<tr>
<td>B. Contribute constructively to project teams, assuming various roles and</td>
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<tr>
<td>responsibilities to work effectively toward a common goal.</td>
<td>roles and responsibilities to work effectively toward a common</td>
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<tr>
<td>goal.</td>
<td>goal.</td>
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</table>

**Indicator(s) for grades 9-12:**
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.                                                                       |

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<thead>
<tr>
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<tbody>
<tr>
<td>C. Contribute to the exchange of ideas within and beyond the learning community.</td>
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<td></td>
<td>learning community.</td>
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</table>

**Indicator(s) for grades 9-12:**
1. Select digital tools to share and exchange interests, ideas and experiences with   |
| others from within and beyond the local learning community.                         |

#### Standard:
GC2. Use digital tools to connect with a global network of learners and engage with     |
| issues that impact local and global communities.                                   |

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<tbody>
<tr>
<td>A. Use collaborative technologies to work with others, including peers, experts</td>
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<td>or community members, to examine issues and problems from multiple viewpoints.</td>
<td>peers, experts or community members, to examine issues and</td>
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<tr>
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<td>problems from multiple viewpoints.</td>
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**Indicator(s) for grades 9-12:**
1. Use collaborative technologies to work with others (peers, experts, community     |
| members) in order to gain knowledge about issues through various perspectives and   |
| opinions.                                                                       |

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<tr>
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<tbody>
<tr>
<td>B. Explore local and global issues and use collaborative technologies to work with</td>
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<tr>
<td>others to investigate solutions.</td>
<td>technologies to work with others to investigate solutions.</td>
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</tbody>
</table>
Indicator(s) for grades 9-12:

1. Explore and analyze local and global issues and use collaborative digital tools to investigate, develop a plan and recommend solutions.