

**Grade K-2 - ISTE (International Society for Technology in Edu)
K-2 ISTE-Technology in the Classroom (2018-19) (170 - 180 Days)
Aug - May**

Last Updated: 6/5/2018

Overview

What transformative learning is possible in a digital world?

The ISTE Standards for students emphasize the skills and qualities we want for our students, enabling them to engage and thrive in a connected, digital world.

Students are inspired to amplify learning with technology and are challenged to be agents of their own learning.

Preparing our students for an unknown future, technology is a critical tool to bringing the 2020 vision to life in our classrooms.

Standards:

- Standard 1: Empowered Learner
 - GLE 1: Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.
 - EO a: With guidance from an educator, students consider and set personal learning goals and utilize appropriate technologies that will demonstrate knowledge and reflection of the process.
 - EO b: With guidance from an educator, students learn about various technologies that can be used to connect to others or make their learning environments personal and select resources from those available to enhance their learning.
 - EO c: With guidance from an educator, students recognize performance feedback from digital tools, make adjustments based on that feedback and use age-appropriate technology to share learning.
 - EO d: With guidance from an educator, students explore a variety of technologies that will help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools.
- Standard 2: Digital Citizen
 - GLE 1: Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act in ways that are safe, legal and ethical.
 - EO a: Students practice responsible use of technology through teacher-guided online activities and interactions to understand how the digital space impacts their life.
 - EO b: With guidance from an educator, students understand how to be careful when using devices and how to be safe online, follow safety rules when using the internet and collaborate with others.
 - EO c: With guidance from an educator, students learn about ownership and sharing of information, and how to respect the work of others.
 - EO d: With guidance from an educator, students demonstrate an understanding that technology is all around them and the importance of keeping their information private.
- Standard 3: Knowledge Constructor
 - GLE 1: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
 - EO a: With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.
 - EO b: With guidance from an educator, students become familiar with age-appropriate criteria for evaluating digital content.
 - EO c: With guidance from an educator, students explore a variety of teacher-selected tools to organize information and make connections to their learning.
 - EO d: With guidance from an educator, students explore real-world issues and problems and share their ideas about them with others.
- Standard 4: Innovative Designer
 - GLE 1: Students use a variety of technologies within a design process to solve problems by creating new, useful or imaginative solutions.
 - EO a: With guidance from an educator, students ask questions, suggest solutions, test ideas to solve problems and share their learning.
 - EO b: Students use age-appropriate digital and non-digital tools to design something and are aware of the step-by-step process of designing.
 - EO c: Students use a design process to develop ideas or creations, and they test their design and redesign if necessary.
 - EO d: Students demonstrate perseverance when working to complete a challenging task.
- Standard 5: Computational Thinker
 - GLE 1: Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.
 - EO a: With guidance from an educator, students identify a problem and select appropriate technology tools to explore and find solutions.
 - EO b: With guidance from an educator, students analyze age-appropriate data and look for similarities in order to identify patterns and categories
 - EO c: With guidance from an educator, students break a problem into parts and identify ways to solve the problem
 - EO d: Students understand how technology is used to make a task easier or repeatable and can identify real-world examples.
- Standard 6: Creative Communicator
 - GLE 1: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
 - EO a: With guidance from an educator, students choose different tools for creating something new or for communicating with others.
 - EO b: Students use digital tools to create original works.
 - EO c: With guidance from an educator, students share ideas in multiple ways—visual, audio, etc.
 - EO d: With guidance from an educator, students select technology to share their ideas with different people.
- Standard 7: Global Collaborator
 - GLE 1: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.
 - EO a: With guidance from an educator, students use technology tools to work with friends and with people outside their neighborhood, city and beyond.
 - EO b: With guidance from an educator, students use technology to communicate with others and to look at problems from different perspectives.
 - EO c: With guidance from an educator, students take on different team roles and use age-appropriate technologies to complete projects.
 - EO d: With guidance from an educator, students use age-appropriate technologies to work together to understand problems and suggest solutions.

District Unit of Study Updates:

Date

Comments

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This Unit of Study has been updated to reflect the changes to the 2016 ISTE Student Standards. Revisions were made to: Grade Level Expectations Overarching Understandings Overarching Essential Questions Big Ideas Organizing Concepts Essential Questions KUD's Resources

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Added Unit Overview

Desired Results

Big Ideas:

- Empowered Learner, Digital Citizen, Knowledge Constructor, Innovative Designer, Computational Thinker, Creative Communicator, Global Collaborator,

Overarching Understandings:

- Learners are empowered to build collections of tools and resources which help them learn.
- Citizens participate productively in physical and digital societies.
- Research demands curating information in order to come to meaningful conclusions.
- Innovative thinking develops solutions around changing needs.
- The art of blending human ideas and digital tools gives us the power to solve real-world problems.
- Complex ideas can be shared through creative design and clear communication.
- Collaboration expands thinking by enabling us to consider diverse perspectives.

Overarching Essential Questions:

- How do people harness the power of technology to take ownership of their learning?
- What are the rights and responsibilities of being a digital citizen?
- How do I actively pursue constructing knowledge versus passively ingesting information?
- How does the design process support problem-solving?
- How can we solve human problems with computer enabled solutions?
- How can I impact the ways in which a message is received by the audience?
- How might technology connect me to people to broaden my perspective?

Organizing Concepts

Empowered Learner

Students will understand that...

- Technology tools help keep track of progress and learning. (1a)
- Reflection is an important part of monitoring learning.(1a)
- Technology connects me with people and resources that help me learn. (1b)
- Some tools display student performance in a variety of ways. (1c)
- There are a variety of digital tools that may be used, but it's important to choose one that will be the most productive. (1d)
- Background knowledge of digital tools will help learn new ones. (1d)
- Technology problems have solutions.(1d)

Students will know...

- Purpose of goals (1a)
- Teacher selected tools for goal completion & progress monitoring (eg practice apps, videos to learn from others, educational software) (1a)
- Basic reflection strategies (1a)
- Where to go to get district approved tools (1b)
- Curation methods of tools which meet their needs (1b)
- Strategies for identifying feedback within a tool (stars, graphs, fractional data, sounds, words, colors) (1c)
- Appropriate responses based on feedback (1c)
- Basic tool operations/functions (toolbars, shortcuts, icons, gestures) (1d)
- Basic troubleshooting strategies (1d)

Essential Questions

- How does technology help me know when I've met my goals? (1a)
- How is my learning experience different than my peers? (1b)
- What should I do differently in order to improve? (1c)
- Why is it important to use prior knowledge when exploring a new digital tool? (1d)

Students will be able to...

- 1A With guidance from an educator, students consider and set personal learning goals and utilize appropriate technologies that will demonstrate knowledge and reflection of the process.
- 1B With guidance from an educator, students learn about various technologies that can be used to connect to others or make their learning environments personal and select resources from those available to enhance their learning.
- 1C With guidance from an educator, students recognize performance feedback from digital tools, make adjustments based on that feedback and use age-appropriate technology to share learning.
- 1D With guidance from an educator, students explore a variety of technologies that will help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools.

Digital Citizen

Students will understand that...

- Technology is a valuable tool when used correctly. (2a)
- A digital footprint tells an online story of a person. (2a)
- Words and actions online have the same effect offline. (2a)
- Safety is important. (2b)
- Adults help find and select safe digital spaces. (2b)
- Online interactions should occur with individuals identified as safe by an adult. (2b)
- Other people's ideas/words/pictures require respect and credit. (2c)
- Login credentials help protect privacy. (2d)
- Trusted adults should know my login credentials. (2d)

Students will know...

- Jeffco's Acceptable Use Policy- JS (2a, 2b)
- Acceptable and unacceptable uses of technology at home and school (2a, 2b, 2d)
- District approved and teacher selected digital spaces (2a)
- Basic information to cite a source (2c)
- Strategies to summarize or use their own words (2c)
- Safe logins/usernames and passwords (2d)
- Personal and private information (2d)
- Vocabulary: digital footprint (2a), Digital safety (2b), responsibility (2d)

Essential Questions

- How do you know if someone is responsible online? (2a)
- How can I keep myself and others safe when using technology? (2b, 2d)
- How and why do I need to give credit to others for their work? (2c)
- Why should some things be kept private? (2d)

Students will be able to...

- 2A Practice responsible use of technology through teacher-guided online activities and interactions to understand how the digital space impacts their life.
- 2B With guidance from an educator, students understand how to be careful when using devices and how to be safe online, as well as how to follow safety rules when using the internet.
- 2C With guidance from an educator, students learn about ownership and sharing of information, and how to respect the work of others.
- 2D With guidance from an educator, students demonstrate an understanding that technology is all around them and the importance of keeping their information private.

Knowledge Constructor

Students will understand that...

- Resources help find answers to questions. (3a)
- There is a difference between self-generated ideas and ideas from outside sources. (3b)
- Multiple sources may provide varying answers to the same question. (3b)
- Information can be organized and connected to other learning. (3c)
- Visually organizing information supports deeper understanding. (3c)
- There is value in sharing ideas with an authentic audience. (3d)

Students will know...

- Teacher-selected tools for research, organization, and/or sharing ideas (3a-3d)
- Inquiry/research process (3a-3d)
- Resources that can be used to answer questions of interest/real world problems (print and nonprint sources) (3a, 3d)
- Digital text features to locate, interpret and use information. (3a)
- Fact versus fiction/opinion (3b)
- Teacher-selected tools that support the organization of student thinking (e.g. Thinking maps, graphic organizers) (3c)
- Strategies to generate questions to guide problem solving (3d)
- Vocabulary: keywords, search terms, URL (3a)

Essential Questions

- What interests and/or problems do I want to learn more about? (3a, 3d)
- Where do I look for answers to my questions? (3a)
- How does this source help me answer my question?(3b)
- How can I make sense of the information that I have gathered? (3c)
- How can we share our discoveries and conclusions with others? (3d)

Students will be able to...

- 3A With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.
- 3B With guidance from an educator, students become familiar with age-appropriate criteria for evaluating digital content.
- 3C With guidance from an educator, students explore a variety of teacher-selected tools to organize information and make connections to their learning.
- 3D With guidance from an educator, students explore real-world issues and problems and share their ideas about them with others.

Innovative Designer

Students will understand that...

- Asking questions is an important step in understanding problems and finding solutions. (4a)
- Using technology helps support creativity and the sharing of ideas. (4b)
- The design process is ongoing. (4c)
- Sometimes we need to “try, try again.” (4d)

Students will know...

- A design process (4a)
- Age-appropriate reasoning skills and logic to develop a solution (4a)
- Brainstorming strategies (4a)
- A variety of age-appropriate digital tools (4b)
- Solutions derived from trial and error (4c)
- Strategies for working through challenges (4d)
- Vocabulary: prototype (4c)

Essential Questions

- What information do I need to solve a problem? (4a)
- What is a good tool for “the job” or my purpose? (4b)
- What do I do when my idea or project doesn’t work the first time? (4c)
- What strategies can I use when I meet obstacles? (4d)

Students will be able to...

- 4A With guidance from an educator, students ask questions, suggest solutions, test ideas to solve problems and share their learning.
- 4B Use age-appropriate digital and non-digital tools to design something and are aware of the step-by-step process of designing.
- 4C Use a design process to develop ideas or creations, and they test their design and redesign if necessary.
- 4D Demonstrate perseverance when working to complete a challenging task.

Computational Thinker

Students will understand that...

- Computers assist human problem-solving. (5a)
- Data is the collection of information/facts for analysis. (5b)
- Problems can be broken into manageable parts. (5c)
- Humans program computers (code) to make a task repeatable and/or easier. (5d)
- Sequences are series of steps towards achieving a goal. (5d)
- Human life has changed because of technology. (healthcare, supply chains, shelters) (5d)

Students will know...

- Abroad definition of computers/technology (e.g. smart watches, smart phones, cars, laptops, tablets, robots) (5a)
- Teacher modeled/selected tools (5a-d)
- Examples of real world problems with technological solutions (sprinkler systems, alarms...) (5a)
- Skills to describe, measure, and compare data attributes (5b)
- Strategies to identify patterns in the natural and designed world (e.g. life cycles, weather patterns, art, poetry) (5b)
- Solution-based brainstorming strategies (5a,5c)
- Real-world examples of automation (e.g. library barcodes, grocery scanners, delivery drones, bank tellers, robots on production lines) (5d)
- Strategies to build sequences and patterns with or without a computing device (5d)
- Vocabulary: code (5d)

Essential Questions

- How do tools help me solve problems? (5a)
- How do I find patterns in information? (5b)
- Where can I start to solve this problem? (5c)
- How do people benefit from the help of computers? (5d)

Students will be able to...

- 5A With guidance from an educator, students identify a problem and select appropriate technology tools to explore and find solutions.
- 5B With guidance from an educator, students analyze age-appropriate data and look for similarities in order to identify patterns and categories.
- 5C With guidance from an educator, students break a problem into parts and identify ways to solve the problem.
- 5D Understand how technology is used to make a task easier or repeatable and can identify real-world examples.

Creative Communicator

Students will understand that...

- Digital tools can be used in a variety of ways to create and share ideas. (6a)
- Creating original products is a way to express one's thinking. (6b)
- Using technology helps support creativity and the sharing of ideas. (6b, 6c, 6d)
- Using technology allows for communication with others both locally and globally. (6d)

Students will know...

- A variety of teacher selected tools to develop and express ideas (6a-d)
- Basic tool and application functions for digital creation (6b,6c)
- A variety of multimedia formats to express ideas (6c)
- Sharing functionalities of digital tools (6d)
- Teacher supported audiences and platforms for sharing (6d)

Essential Questions

- How might this tool help me explain my thinking and communicate with others? (6a)
- What can I create to share my ideas? (6b)
- What is a good tool for "the job" or my purpose? (6c)
- How can technology help me share my learning? (6c, 6d)

Students will be able to...

- 6A With guidance from an educator, students choose different tools for creating something new or for communicating with others.
- 6B Use digital tools to create original works.
- 6C With guidance from an educator, students share ideas in multiple ways—visual, audio, etc.
- 6D With guidance from an educator, students select technology to share their ideas with different people.

Global Collaborator

Students will understand that...

- Using technology allows communication and collaboration with others in the community. (7a)
- People have a variety of ideas and opinions. (7a, 7b)
- Teamwork helps complete tasks. (7c)
- People can solve the same problem in multiple ways. (7d)

Students will know...

- Teacher selected tools which enhance collaboration (7a,7b, 7c)
- Respectful interaction strategies (7a)
- Identification skills of safe online community members (7a, 7b)
- Strategies to compare and contrast ideas (7b)
- Roles within a group (7c)
- Strategies for working collaboratively (7c)
- Strategies for identifying problems and their solutions (7d)

Essential Questions

- How do I use technology to work with others? (7a)
- What do others think about the problem? (7b)
- How can I work together with others? (7c)
- How can we solve problems as a community? (7d)

Students will be able to...

- 7A With guidance from an educator, students use technology tools to work with friends and with people outside their neighborhood, city and beyond.
- 7B With guidance from an educator, students use technology to communicate with others and to look at problems from different perspectives.
- 7C With guidance from an educator, students take on different team roles and use age-appropriate technologies to complete projects.
- 7D With guidance from an educator, students use age-appropriate technologies to work together to understand problems and suggest solutions.