TECHNOLOGY APPLICATIONS COURSE I AND II
2018-2019
GRADES 6- 8 TEACHER: ALISHA RADER

ISTE STANDARDS FOR STUDENTS

The courses will be taught with an emphasis on the International Society for Technology in Education Standards for Students, also referred to as ISTE. These standards are most relevant with current trends in technology and focus on transformative learning utilizing technology as opposed to learning to use technology or using technology to learn. ISTE is sponsored by Microsoft, SMART, Lego, and Cisco, and as a result of the Tennessee State Standards for Technology receiving a much needed update for the 2019-2020 school year, I chose to focus on ISTE as my reputable source. While the emphasis focuses on the ISTE Standards, I have also incorporated the Tennessee State Standards, but omitted a few standards that are outdated. In the future, this syllabus will be updated to reflect the new standards for next year once those standards are released to teachers; however, the focus will remain on the ISTE Standards.

- View the ISTE standards here: https://drive.google.com/file/d/1uO7_nknXIkPY9SAmt-9Tmxn0lZRzG2lI/view?usp=sharing
- Visit the ISTE Site: https://www.iste.org/standards/for-students

Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.
Students:
   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.
   b. build networks and customize their learning environments in ways that support the learning process.
   c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
   d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Digital Citizen
Students 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. Students:
   a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

Knowledge Constructor

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. Students:

a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

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

d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

Innovative Designer
Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c. develop, test and refine prototypes as part of a cyclical design process.

d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

Computational Thinker
Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.

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.

    c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

    d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Creative Communicator

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. Students:

    a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

    b. create original works or responsibly repurpose or remix digital resources into new creations.

    c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.

    d. publish or present content that customizes the message and medium for their intended audiences.

Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. Students:

    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.

    b. use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.

    c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

    d. explore local and global issues and use collaborative technologies to work with others to investigate solutions.

Keyboarding

Technology Applications Courses utilize Typing Jungle from the Typing Club website for keyboarding instruction. Utilizing the teacher-created course, student will access their individualized lessons through a custom student login. Students progress through videos, student-paced practice, and a variety of lesson types at their own pace to improve their typing skills. The teacher will monitor their progress through teacher interaction, observation, and reports generated by Typing Club. Pertinent information regarding lesson correlations and speed goals are included below as listed in the the Typing Jungle Handbook.

View the complete Typing Jungle Handbook Here: https://s3.amazonaws.com/edcustom/print/typing-jungle-handbook.pdf

Keyboarding Lesson Correlation

Lesson #	Goal WPM	Focus
1-23	10	Home Row
24-51	10	Top Row
52-87	10	Bottom Row
88-124	10-20	Basic Level 1
125-134	20	Tricky Words 1
135-187	10-20	Shift Key
188-197	20	Common Patterns 1
198-227	21-30	Basic Level 2
228-237	25	Tricky Words 2

Lesson #	Goal WPM	Focus
238-267	10-25	Numbers
268-277	29	Common Patterns 2
278-307	31-40	Basic Level 3
308-337	10-25	Symbols
338-347	30	Common Patterns 3
348-377	41-45	Advanced Level 1
378-407	10-20	More Symbols
408-417	30	Tricky Words 3
418-663	46-75	Advanced Levels 2-9

ALL COURSES
- Students should be able to effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.
- Students will use the right search terms to develop a query that facilitates a collection of sources.
- Students will be able to demonstrate knowledge of a real world problem using digital tools.
- Students should be able to synthesize and publish information about a local or global issue or event (ex: telecollaborative project, blog, school web).
- Use digital technologies communication/networking tools, and social networks appropriately to access, manage, integrate, evaluate, and create information successfully.
- Become effective communicators of ideas and knowledge.

GRADE 6

- 6th grade: 25-30 wpm
- Create folders, move files in folders, and rename files
- Save and access files in multiple locations
- Access a password protected account o
- Sign out of the account at end of session
- Understand and use a list of common technology terms
- Review and understand the Tullahoma City Schools Acceptable Use Policy
- Develop strategies to properly deal with cyber security issues
- Understand potential consequences of on-line posting
- Implement security and protections while online
- Recognize and avoid online "traps" which may compromise student safety and personal information
- Communicate safely using proactive techniques while online or while using social media
- Use appropriate copyright citations to digital contents
- Identify steps to evaluate a website and various extensions
- How to conduct effective searches online
- Use data to make in informed decision about a global issue
- Problem solve through exposure to a simple programming language to create an interactive product
- Be able to correctly set up a document in MLA format

Microsoft Word/Google Docs

- Format paragraphs and characters in a document
- Insert and format a picture in a document
- Enhance the page with borders, watermarks, and spacing
- Change the document properties
- Create a title page, headers, and footers
- Create, edit, and format a table
- Work with formats, styles, and bulleted lists
- Navigate the Home ribbon.

- Navigate the Insert ribbon.
- Navigate the Page Layout ribbon.
- Navigate the View ribbon.

Microsoft Excel/Google Spreadsheets
- Basic cell formatting
- Insert and delete cell contents, rows, and columns
- Create basic formulas: add, subtract, multiply, divide,
- Use basic functions: Sum
- Change column widths & row heights
- Create basic graphs

Microsoft PowerPoint/Google Presentation
- Format text and characters in a slide
- Insert and format a picture in a document
- Enhance the slides through use of themes (Design Ribbon)
- Change the slide properties
- Create headers and footers
- Work with formats, styles, and bulleted lists
- Navigate the Home ribbon.
- Navigate the Insert ribbon.
- Navigate the Design ribbon.
- Navigate the View ribbon

GRADE SEVEN
7th grade: 30-35 wpm

- Create folders, move files in folders, and rename files Save and access files in multiple locations
- Access a password protected account
- Sign out of the account at end of session

- Understand and use a list of common technology terms
- Review and understand the Tullahoma City Schools Acceptable Use Policy Develop strategies to properly deal with cyber bullying issues
- Understand the positive and negative consequences of posting to social media Implement security and protections while online
- Recognize and avoid online "traps" which may compromise student safety and personal information Communicate safely using proactive techniques while online or while using social media
- Use appropriate copyright citations to digital contents
- Identify steps to evaluate a website using different search strategies How to conduct effective searches online from multiple perspectives
- Use data to make an informed decision about a global issue after looking at multiple perspectives. Problem solve through use of a simple programming language to create an interactive product

Microsoft Word/Google Docs
- Review previously learned material
- Work with formats, styles, and bulleted lists
- Navigate reference ribbon
- Table of contents
- Citations & bibliography
- Captions
- Navigate review ribbon
- Research (search within Word)
- Thesaurus o Translate (made aware)
- Word count
- Comments
- Tracking

Microsoft Excel/Google Spreadsheets
- Filtering
- Use basic functions: Average, Median, Mode
- Create advanced graphs

Microsoft PowerPoint/Google Presentation

- Work with the slide master (View Ribbon) in addition to formats, styles, and bulleted lists
- Create, edit, and format a table (connect to Excel)
- Use and create hyperlink action buttons
- Navigate review ribbon (transfer knowledge from one application to another) o Research (search within Word)

GRADE EIGHT
Technology I
- I CAN key at a rate of at least 30 words per minute using the proper touchkeying techniques Students should type at least an hour per week in order to improve their typing skills.
- A goal of 30 WPM will ensure that students are adequately prepared to produce their computer-based work in timely manner appropriate for their age.
- Students should understand and model appropriate online behaviors related to cyber safety, cyber security, and cyber ethics including appropriate use of social media.

Technology II
- I CAN key at a rate of at least 30 words per minute using the proper touchkeying techniques Students should type at least an hour per week in order to improve their typing skills.
- A goal of 30 WPM will ensure that students are adequately prepared to produce their computer-based work in timely manner appropriate for their age.
- Students should understand and model appropriate online behaviors related to cyber safety, cyber security, and cyber ethics including appropriate use of social media.

COURSE RESOURCES
- This course does not use a textbook. https://support.google.com/docs#topic=1382883 (Google Support Site for GAFE) https://ems-tech.typingclub.com/ (Typing Club)
- http://tntel.tnsos.org/ (TN Electronic Library) http://galesupport.com/telGeo/telGeoLink.php?loc=tel_s_tsla&db=MSIC (Research in Context Database from TEL) https://www.worldbookonline.com/wbdiscover/citation?id=2 (World Book Citation Builder) https://tcsedu.schoology.com/home (Schoology)
- https://launchpad.classlink.com/#myapps (Classlink)

APPENDIX I: Teacher Survey Results

View complete survey results here:
https://docs.google.com/forms/d/e/1FAIpQLSfO_0lunwHTb3jqiy6YkPQOSPfU0apnNhYYZq5EEwaXfwi2rg/viewanalytics

9 teachers completed the survey: Gray, Locklear, Black, Ray, Koster, Hazelwood, Hayes, Campbell, and Eavey
- 100% of teachers surveyed listed Google Slides as a utilized GAFE in their classroom.
- Sixth Grade listed basic functions with images while seventh and eighth grade listed all functions.

% of surveyed teachers listed Google Docs as part of their classroom instructions.
- 2 teachers in sixth, 3 teachers in seventh, and 3 teachers in eighth
- Sixth grade listed basic functions, inserting pictures, MLA formatting, bibliographies, and Table of Contents
- Seventh Grade listed the same functions but added tables.
- Eighth Grade listed all functions except Google Drawings

77.8% of surveyed teachers (9 teachers) responded as using Google Sheets.
- Sixth Grade does not use Google Sheets.
- Seventh Grade was the most extensive listing all skills except for conditional formatting.
- Eighth Grade focused on tables, charts, and inserting, hiding, and deleting cells, columns, and rows.

77.8% of teachers use Google Drive in their classroom with the vast majority using all of the skills. One teacher did not answer which specific skills were used.
- 3 teachers, one sixth grade teacher and two seventh, listed that they have a Google site that students are expected to navigate; however, no teacher reported that they expect students to create a site as part of their curriculum.