BYTE
Cards

Build Your Technology Experience

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Powered by the ISTE Standards for Students
1. 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.
1a. Personalized Learning Goals

How might students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes?

1b. Customizable Learning

How might students build networks and customize their learning environments in ways that support the learning process?
1a. Students might learn:
- How to use management tools (eg task trackers, calendars).
- How to use reflection tools (eg digital journals, blogs, discussion boards).
- Foundational knowledge and skills (eg goal-setting strategies; analyzing the learning process).

Seesaw
Weebly for Education
Google Calendar
Google Keep
PlayPosit

1b. Students might learn:
- How to use networking tools (eg video conferencing, social media).
- How to use assistive tools or customize features of generic tools to promote learning.
- Related foundational skills (eg customizing a process for improved efficiency, ways to accommodate their learning).

Zoom or Skype
Dictation tools
Study Blue
Study Stack
Crash Course
Read Write Think
1c. Supporting Growth

How might students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways?

1d. Empowered Device Students

How might students 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?
1c. Students might learn:
- How to use communication and authoring tools such as email, bulletin boards, blogs and collaborative cloud documents.
- Related foundational skills (eg how to incorporate feedback, various ways to demonstrate learning).

Quizlet
Study Stack
FlipGrid
Kahoot
PlayPosit

1d. Students might learn:
- Fundamental technological concepts.
- How to use troubleshooting tools or generic tool features.
- How to use any emerging technology.
- Related foundational skills (eg troubleshooting strategies, transfer strategies).

Quizlet
Study Stack
FlipGridLynda.com
AtomicLearning.com
Netsmartz.com
Commonsensemedia.org
2. 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.
2a. Identity in a Digital World

How might students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world?

2b. Engage in a Digital World

How might students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices?
2a. Students might learn:
- How to use features of devices that protect and control how information is shared or stored.
- How to use features of one or more social media and web 2.0 tools.
- How to create profiles or personal blogs.

Seesaw
Edmodo
Google Classroom
LMS Discussion Tools
Microsoft Sway

2b. Students might learn:
- How to use security and privacy features of networked devices, personal computing devices and platforms.
- How to use security and malware tools.
- Behavioral guidelines for various social networking sites and applications.

Seesaw
Edmodo
Google Classroom
LMS Discussion Tools
Microsoft Sway
2c. Building Respect

How might students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property?

2d. Managing Privacy

How might students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online?
2c. Students might learn:
- How to find information about legal and ethical requirements of using online materials.
- How to properly cite sources, web references and owners of digital content.

EasyBib
BibMe
Citation Machine
Noodle Tools

2d. Students might learn:
- How to use features of devices that protect and control the way information is shared or stored (eg passwords).
- How to locate and examine browser history, knowledge of their own IP address and what it reveals to online connections.

uBlock Origin
Privacy Badger
DuckDuckGo
StartPage
Disconnect.me
3.

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.
3a. Supporting Inquiry

How might students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits?

3b. Discerning Learners

How might students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources?
3a. Students might learn:
- How to use research tools (e.g., search engines, information databases, digital archives and collections).
- Strategies for finding information online (e.g., Boolean searches).

Kiddle
Instagrok
Biblionasium
Symbaloo

3b. Students might learn:
- Strategies for evaluating websites and other digital information.
- How to identify website information, such as author, date of publication, registrant organizations, etc.

EasyBib Website Evaluator
Kathy Schrock’s Critical Evaluation Guides
3c. Meaningful Connections

How might students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions?

3d. Problem Solvers

How might students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions?
3c. Students might learn how to use organization and curation tools (eg database software, indexing tools, graphic mapping tools, multimedia presentation tools, website construction tools).

Instagrok
Connected Mind
Popplet
Kidspiration
Notability
Evernote
Diigo
Pinterest

3d. Students might learn how to use research and knowledge-building tools (eg search engines, concept-mapping tools, laboratory simulation tools, modeling tools).

Padlet
Post-it Plus
Paper 53
Sketch Up
Coggle
Popplet
4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
4a. Designer’s Mindset

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

4b. Design Management

How might students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
4a. Students might learn:
- How to use brainstorming tools (eg concept mapping and flowcharting software).
- How to use one or more design tools (eg image manipulation tools; modeling, simulation and programming tools).

   Padlet
   Post-it Plus
   Paper 53
   Sketch Up
   Coggle
   Popplet

4b. Students might learn:
- How to use brainstorming tools (eg graphic organizers, sketching tools and collaborative idea boards).
- How to use tools that facilitate project management (eg online workspaces, priority task lists, timelines).

   Pearltrees
   Trello
   Padlet
   Livebinder
4c. Launch to Learn

How might students develop, test and refine prototypes as part of a cyclical design process?

4d. Building Resiliency

How might students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
4c. Students might learn:
- How to use prototyping tools (eg 3D printers or programs).
- How to use data collection tools (eg online surveys).
- About strategies for collecting feedback (eg online surveys, questionnaires, pilot testing).

   Google Forms
   Poll Everywhere
   Twitter
   Sketch Up

4d. Students might learn various problem-solving strategies.

   Tiggly
   Osmo
5. 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.
5a. Solution Finders

How might students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions?

5b. Discerning Thinkers

How might students 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?
5a. Students might learn:
  • How to define problems.
  • How technology can be used to solve certain problems.

Scratch
Tinkercad
BreakOut EDU
Tiggly
Osmo

5b. Students might learn:
  • How to use data collection and analysis tools (eg spreadsheets, databases, probes).
  • How to use data representation tools (eg real and abstract models, simulations, programming platforms).

Google Sheets/Forms
Canva
Piktochart
Visual.ly
Google Maps
5c. Depth & Complexity

How might students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving?

5d. Automated Solutions

How might students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions?
5c. Students might learn:
- How to break down problems.
- How to use various tools that map the different elements of a problem (i.e., outlining tools, concept maps, etc).

Timeline JS
Prezi
Popplet
Coggle

5d. Students might learn:
- About automation.
- About sequencing.
- How to use networking tools (e.g., video conferencing, social media).

Code.org
Scratch
SketchUp Make
Tinkercad
Zoom
Skype
Twitter
6. 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.
6a. Selecting the right medium

How might students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication?

6b. Digital Creators

How might students create original works or responsibly repurpose or remix digital resources into new creations?
6a. Students might learn how to use one or more authoring or presentation tool, such as slide decks, multimedia boards, blogs, digital storytelling or screencasting.

Edu.Bouncee
Sock Puppet
Comic Life
Book Creator
Weebly for Education
Canva
Lego Movie Maker
iMovie
Camtasia
Screencastify

6b. Students might learn how to use one or more authoring or presentation tool, such as slide decks, multimedia boards, blogs, digital storytelling or screencasting.

Edu.Bouncee
Sock Puppet
Comic Life
Book Creator
Weebly for Education
Canva
Lego Movie Maker
iMovie
Camtasia
Screencastify
6c. Effective Communicators

How might students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations?

6d. Intentional Publishing

How might students publish or present content that customizes the message and medium for their intended audiences?
6c. Students might learn:
- How to use simulations and models that interactively represent and explain various concepts/content.
- How to use one or more tool that represents data in various forms, such as charts, graphs, pictographs, etc.
- How to use one or more model or simulation building tool.

Venngage
Easel.ly
Canva
ThingLink
Layar

6d. Students might learn how to use one or more authoring or presentation tool, such as slide decks, multimedia boards, blogs, digital storytelling or screencasting.

Edu.Bouncee
Sock Puppet
Comic Life
Book Creator
Weebly for Education
Canva
Lego Movie Maker
iMovie
Camtasia
Screencastify
7. 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.
7a. Mutual Understanding

How might students publish or present content that customizes the message and medium for their intended audiences?

7b. Multiple Perspectives

How might students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints?
7a.
Students might learn:
- How to use asynchronous communication tools such as email, discussion boards and safe networking sites.
- How to use synchronous communication tools, such as video conferencing, interactive television and VoIP.

Zoom
Skype
Google Hangouts
VoiceThread
FlipGrid

7b.
Students might learn:
- How to use asynchronous communication tools such as email, discussion boards and safe networking sites.
- How to use synchronous communication tools, such as video conferencing, interactive television and VoIP.

Zoom
Skype
Google Hangouts
VoiceThread
FlipGrid
7c. Effective Contributors

How might students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal?

7d. Local/Global Investigators

How might students explore local and global issues and use collaborative technologies to work with others to investigate solutions?
7c. Students might learn:
- How to use project management tools.
- How to use collaborative tools.
  
  Slack
  Trello
  Padlet
  LiveBinder
  Pearltrees

7d. Students might learn:
- How to use presentation tools, such as video editing and multimedia project boards.
- How to use generic creation, editing and presentation software.
- How to use social media tools and website/blog creation tools.
  
  iMovie
  Camtasia
  Google Slides
  Prezi
  Pear Deck
  Blogger
  Edublogs