

VSTE21

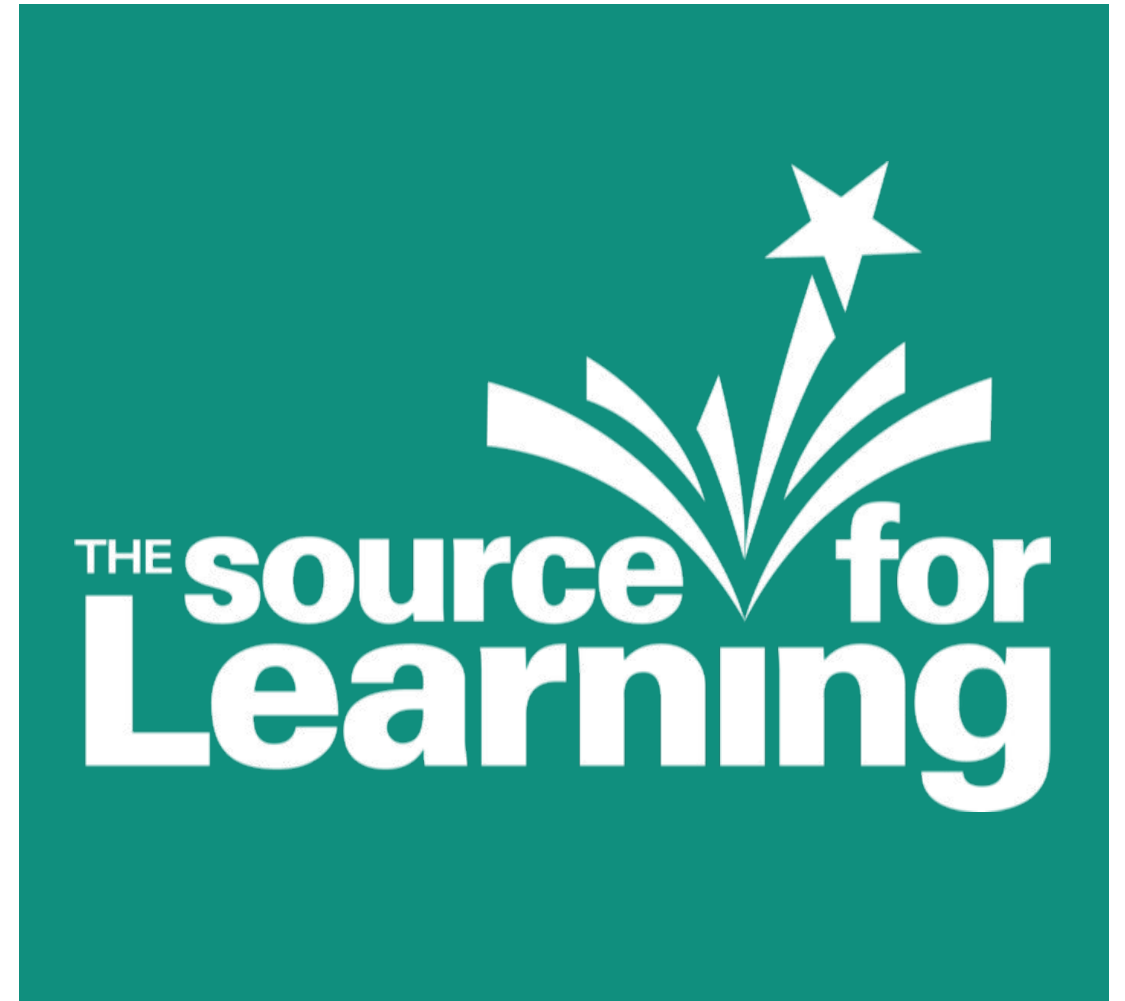


Integrating Technology with the ISTE Standards for Students

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Karen Streeter

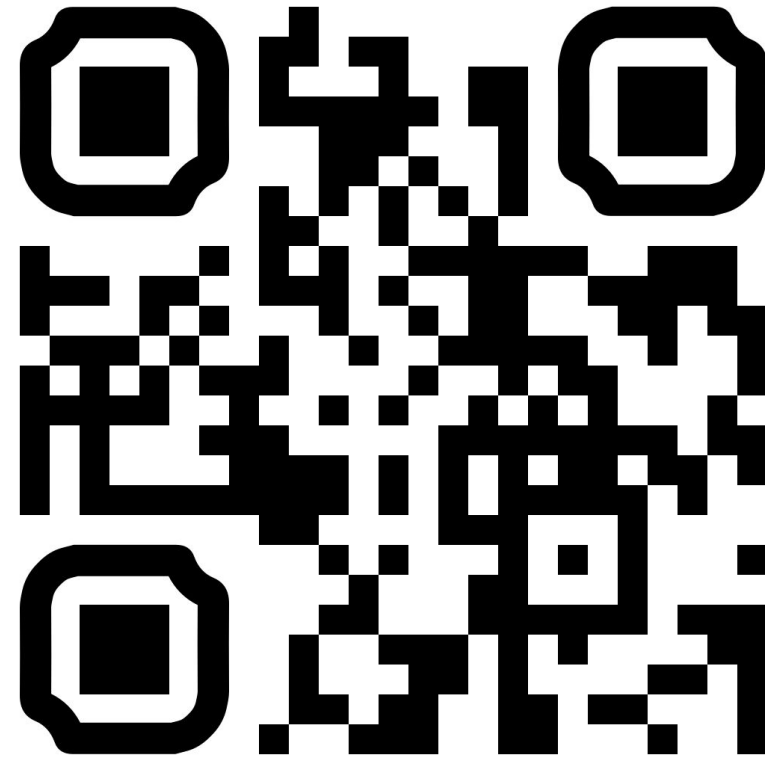
December 5, 2021

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Resources for Today's Session

Complete the form with your name & email for access to the slide deck and a few extras that we'd love to share with you.

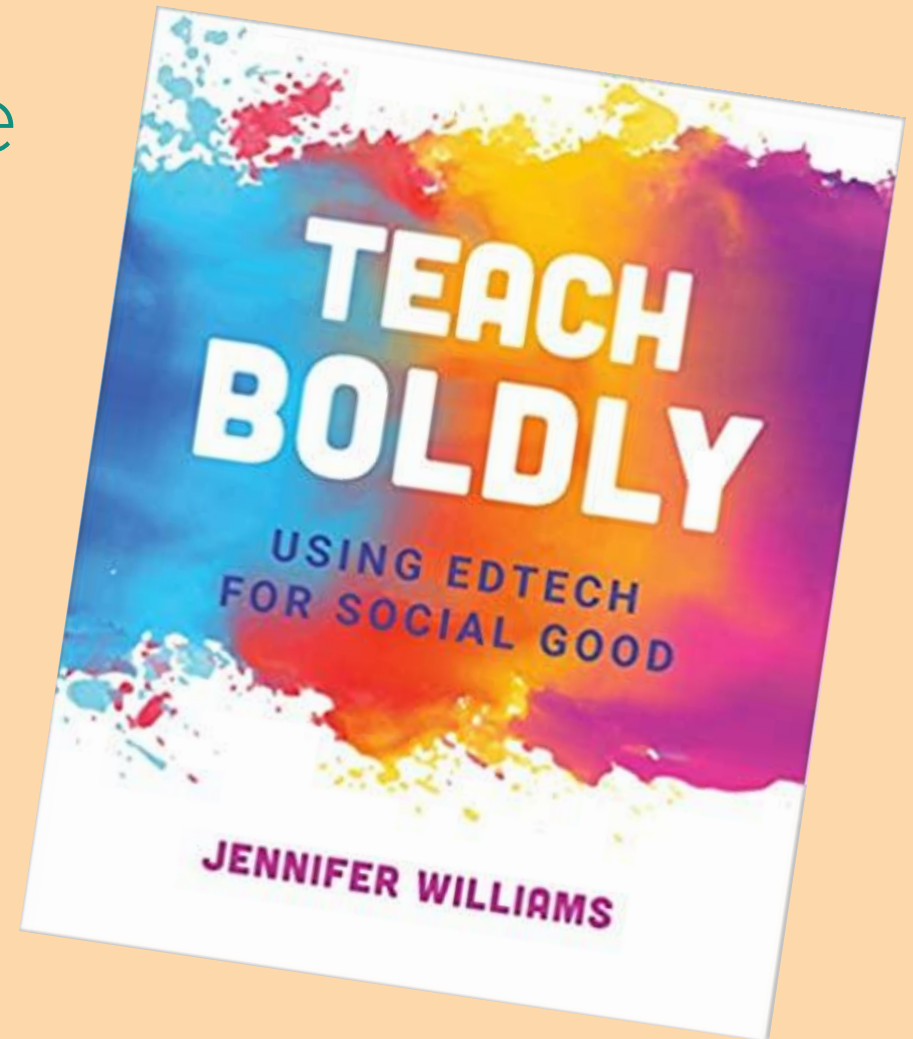


<https://bit.ly/3lxbSDV>

Book Raffle at our Booth (#204 & 206)

Stop by and put your name in the raffle for one of 4 copies of **TEACH BOLDLY**.

This is the book we will be using for our Winter 2022 Book Study beginning in January.





Chrome File Edit View History Bookmarks People Window Help
www.iste.org/standards/standards/for-educators

The ISTE Standards for Educators are your road map to helping students become empowered learners. These standards will deepen your practice, promote collaboration with peers, challenge you to rethink traditional approaches and prepare students to drive their own learning. Connect with other educators in the ISTE Standards Community and learn how to use the standards in the classroom with the ISTE Standards for Students ebook.

THE ISTE STANDARDS FOR EDUCATORS

- 1 Learner**
Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators:
- 2 Leader**
Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators:
- 3 Citizen**
Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators:
- 4 Collaborator**
Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators:

The ISTE Standards are a framework.

Each Set has a Purpose

- **STUDENTS:** knowledge and skills needed to contribute
- **EDUCATORS:** digital skills and pedagogical insights needed to teach, work and learn
- **LEADERS:** support for digital age learning
- **COACHES:** skills and knowledge to support peers



Standards Used For



JOB ROLES

In a growing number of districts, the ISTE Standards are used to define how teachers should use and interact with technology, demonstrate expectations of administrators and shape the role of technology integrators.



TEACHER PREP

Many teacher preparation (and continuing education) programs use the standards as high level outlines for course expectations. Some universities map out the technology coursework to cover the standards through degree completion.



TECH ADOPTION

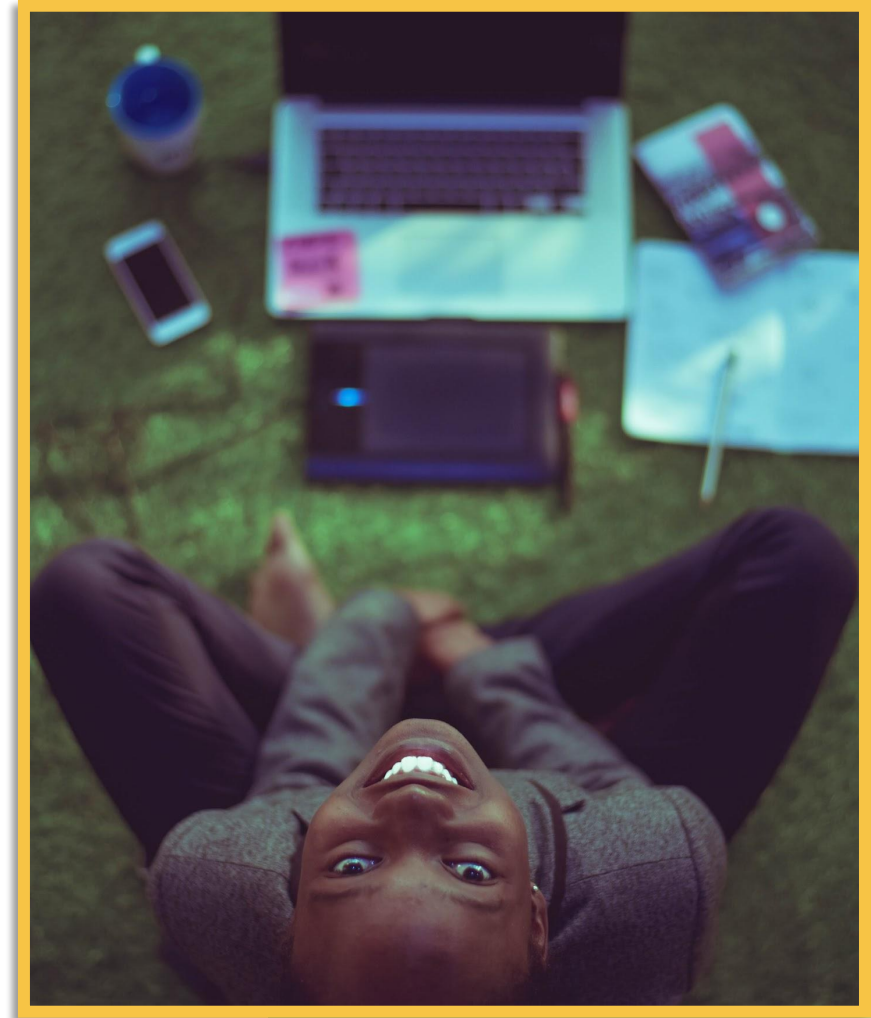
As districts adopt various technologies, some consider how the tools can be used to achieve the standards when laying out the blueprint for adoption and implementation.

Standards as Profiles



1.1 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.



- **Trello** to organize their projects
- Searches **YouTube** for tips on how to use various technologies
- Self selects **simulations** for practice and feedback



Empowered Learner

1

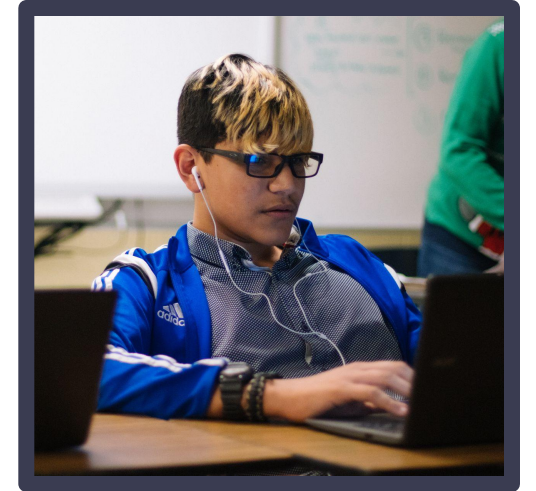
Middle school student learning about the constitutional amendments

2

Received handouts from the teacher but doesn't learn best from reading

3

Wants to maintain above average grades



Scenario 1.1 Empowered Learner



Empowered Learner



Edge Browser

Student recognizes that the browser can be used as a tool to support his/her needs for learning (Immersive Reader, Annotation, Translation, Screenshots).

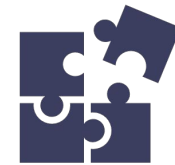
[Microsoft Edge Browser](#)



iCivics

Student selects tools that provide additional instruction to assist in meeting his/her personal learning goals.

[iCivics -- Do I have a right?](#)
[TeachersFirst Review](#)



Matching Game

Student uses resources to seek feedback to inform his/her practice -- review games help gauge understanding.

[Texas Law-Related Games](#)
[TeachersFirst Review](#)



1.2 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**.



- Thinks before posting
- Upstander: calls out bad online behavior
- Includes attribution as appropriate



Digital Citizen

1

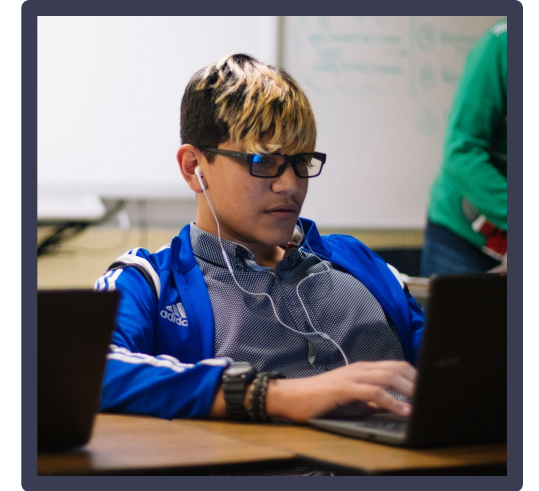
High School student creating a photo essay about themes in English class

2

Wants to add the project to his senior portfolio which is online and accessible to college admissions officers

3

Needs media (photos and sounds)



Scenario 1.2 Digital Citizen



Digital Citizen



CC0 Images

Images downloaded from trusted sites ensures they are legally obtained and rights reported are correct

[Pixabay](#) - [TeachersFirst Review](#)
[Unsplash](#) - [TeachersFirst Review](#)



Adobe Spark

Provides CC0 media and includes attribution to prompt student to add their own attribution for media added

[URL to tool](#)
[TeachersFirst Review](#)



Site123

Makes a quick and easy site where you can embed media and have password protected pages

[URL to tool](#)
[TeachersFirst Review](#)

1.3 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.



- Reads through Google search results
- Compiles a list of sites to investigate
- Uses CRAAP to evaluate sites



1

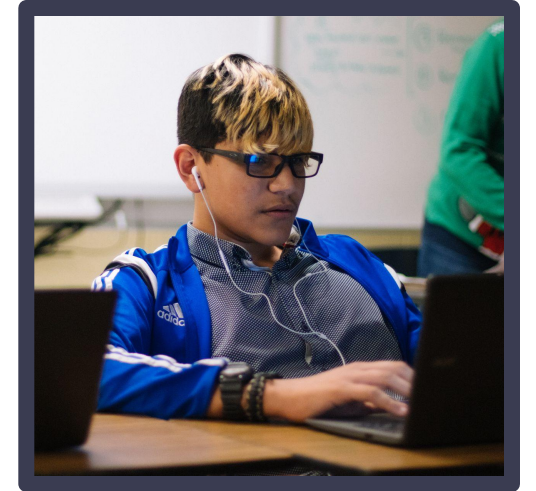
Intermediate student working on a project on getting access to better food for community members

2

Decides to look into community gardens and learn how to start and sustain one

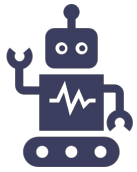
3

Will need to disseminate project findings



Scenario 1.3 Knowledge Constructor

Knowledge Constructor



Kid-Friendly Search Engines

To make the process of researching more user-friendly.

[SweetSearch](#)

[TeachersFirst Review](#)

[Kiddle](#)

[TeachersFirst Review](#)



Deceptive Detective

Students need a model to guide them in evaluating the accuracy, perspective, credibility & relevance of information, media, data or other resources.

[Deceptive Detective](#)

[TeachersFirst Review](#)



Wakelet

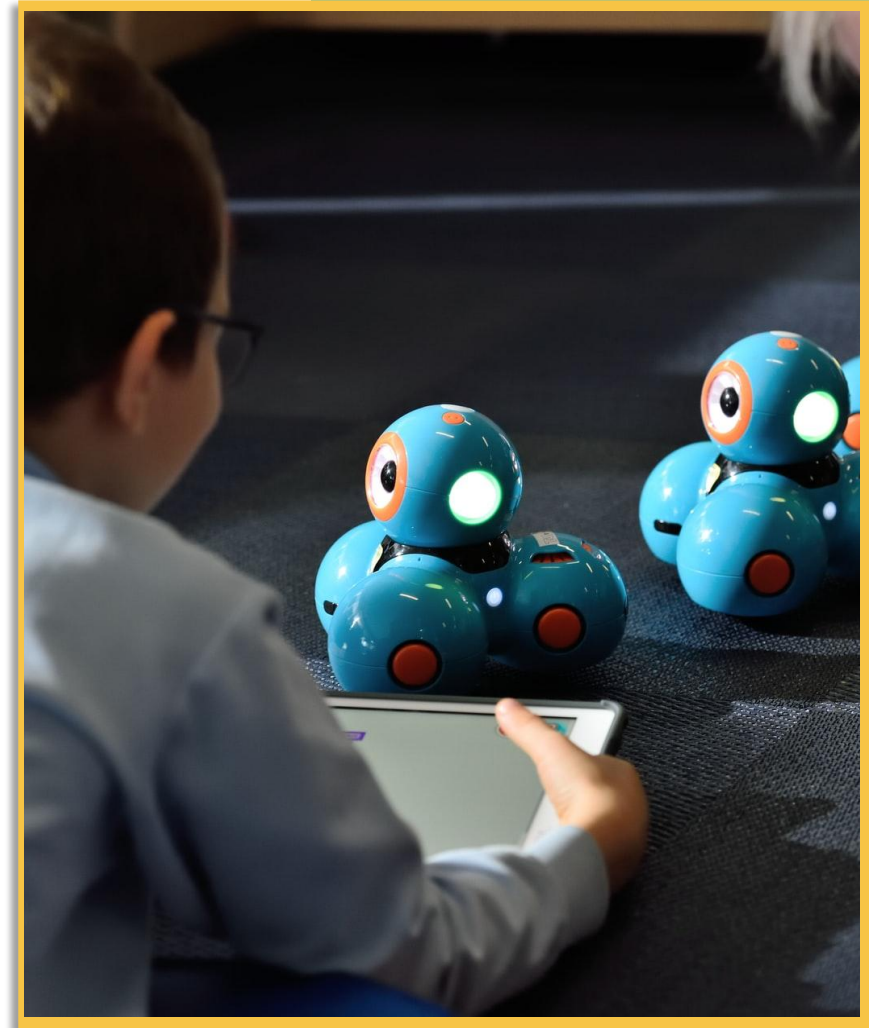
Create, curate, and share content--articles, documents, PDFs, Tweets, web links, photos, videos, and more into collections that can be individual or collaborative.

[Wakelet](#)

[TeachersFirst Review](#)

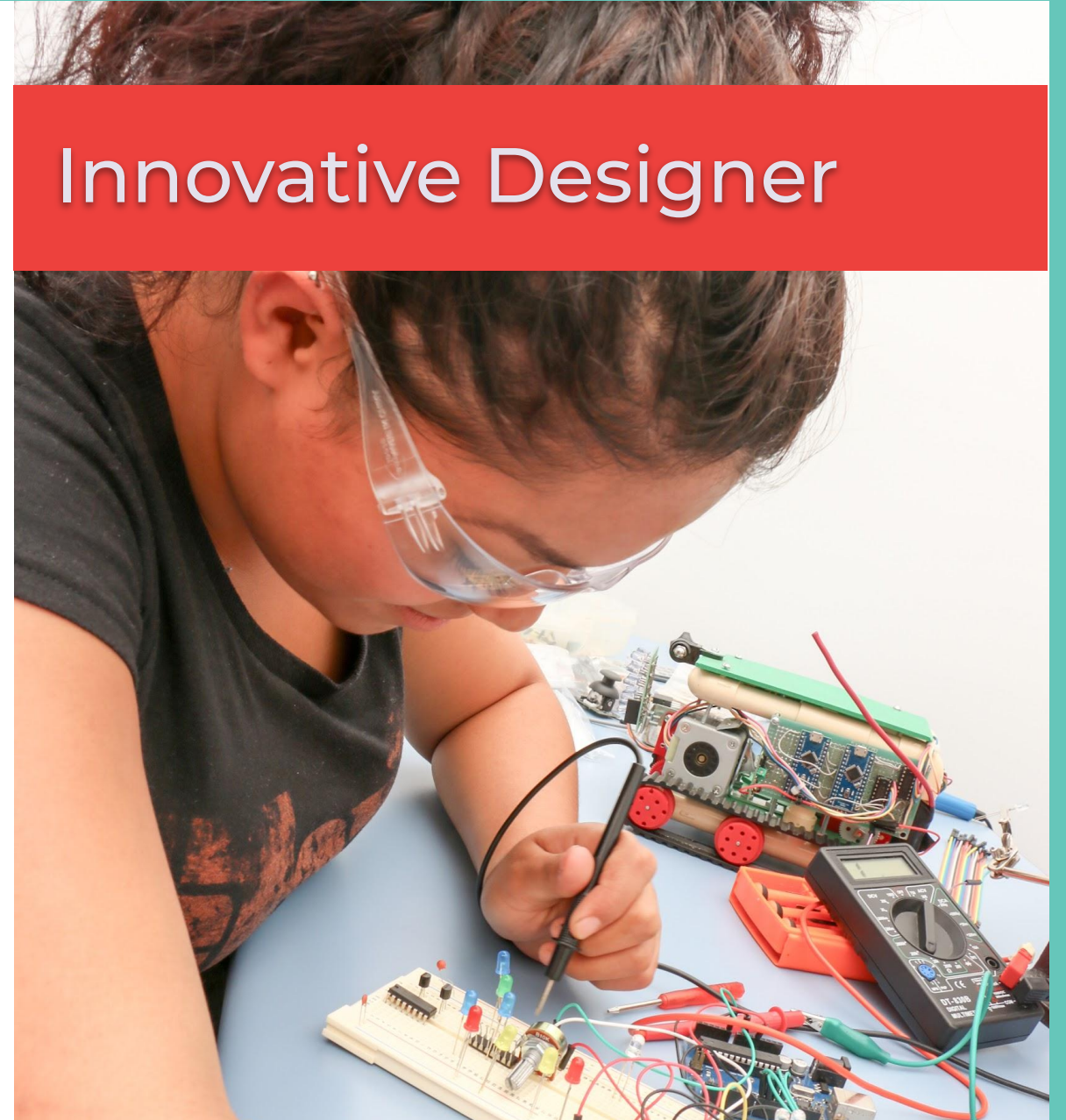
1.4 Innovative Designer

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



- Uses the ask, think, design, build, test, and improve design process
- Uses brainstorming, note-taking and other tools to manage the process
- Understands that not all problems have a single solution

Innovative Designer



1

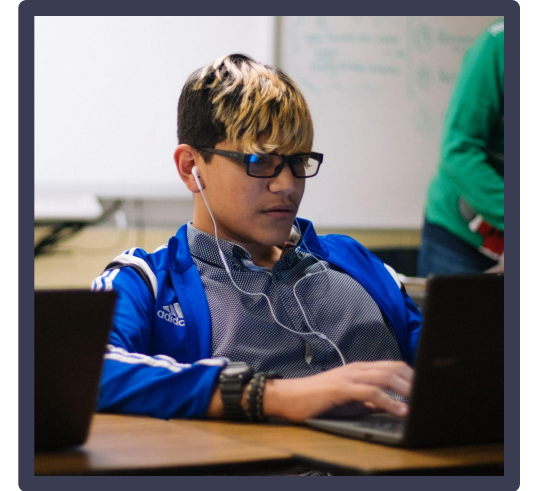
A group of second graders have been challenged to build the tallest structure they can using 100 - 16 oz cups.

2

Students are given the cups, a tablet, 10 minutes to brainstorm/plan and 20 minutes to build.

3

All cups have to be used and cannot be stacked inside each other.



Scenario 1.4 Innovative Designer

Innovative Designer



Online Drawing or Whiteboard App

Students use tech tool as part of the imagining and planning process.

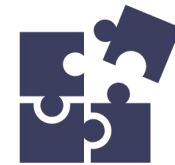
[Draw.Chat](#)
[TeachersFirst Review](#)



Engineering Design Process

Provide resources for students to understand the design process.

[The Engineering Design Process](#)
[TeachersFirst Review](#)



Debrief/Improve

Students can use technology as part of their debrief -- what will they do differently next time? Do they understand that we should be in a continuous state of improvement. -- always working to improve things?

[Flipgrid](#)
[TeachersFirst Review](#)

1.5 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.



- Breaks problems into component parts
- Collects and graphs data using a form
- Uses a sequence of steps to test solutions



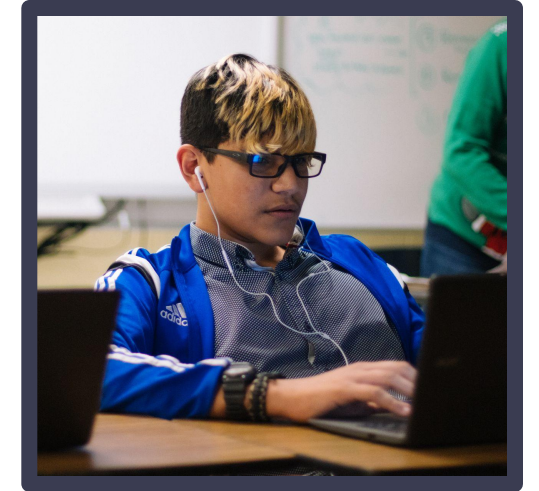
Computational Thinker

1

A group of first graders are working on word ladders in language arts class.

2

After solving the ladder for the day, they are challenged to code a robot to make the changes necessary.



Scenario 1.5

Computational Thinker



Computational Thinker



SplashLearn

Rhyming games on the site help students to understand how to break apart words and sounds as necessary for the task

[URL to tool](#)
[TeachersFirst Review](#)



Letter Tiles

Independent practice allows students to break apart the components of the task before approaching the coding task

[URL to tool](#)
[TeachersFirst Review](#)



Bee-Bot Online

Using the simulator can be a great workstation activity for a small group to work out the “kinks” in their coding efforts before using the actual device (if you have it)...

[URL to tool](#)
[TeachersFirst Review](#)

1.6

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.



- Creates versions of an original visual essay using their favorite video creation tool
- Customizes the message and call to action
- Synthesizes information and clearly conveys ideas using a variety of media



Creative Communicator

1

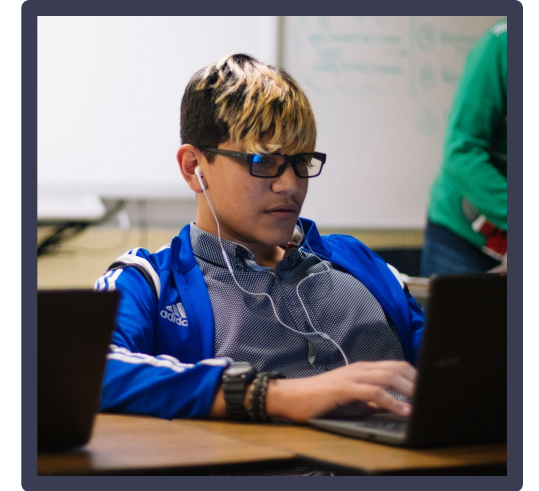
A middle school student has to create the multimedia lab report for his group's experiment

2

The report must include the snapshots and video he took while the group was working.

3

The teacher is requiring the students to make the report easy to read.



Scenario 1.6

Creative Communicator

Creative Communicator



Forms

Forms make data collection in trials easier. Both Microsoft and Google have great form applications.

[Microsoft Forms](#)
[TeachersFirst Review](#)



Animoto

Animoto for education allows students to upload their own media to create videos with support for the “flashy” stuff.

[Animoto](#)
[TeachersFirst Review](#)



Wakelet

Create, curate, and share content--articles, documents, PDFs, Tweets, web links, photos, videos, and more into collections that can be individual or collaborative

[Wakelet](#)
[TeachersFirst Review](#)

1.7

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**.



- Co-writes a book with a student from another class about sustainable development goals using Elementari



Global Collaborator

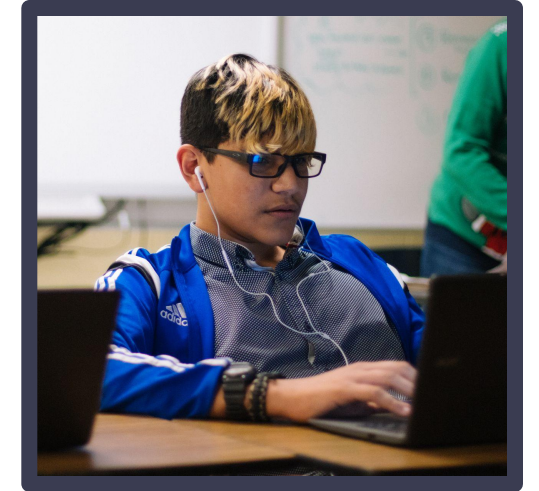
1

High school student in a media arts class are to create PSAs about food as it relates to climate change.

2

In order to understand multiple perspectives of the problem, they are matched with students in a class in another country.

3



Scenario 1.7 Global Collaborator

Global Collaborator



Video Conference Software

Use a video discussion tool to chat with students in another country about food as it relates to climate change (production, consumption, waste).

Zoom, Microsoft Teams, Google Meet



Voices for Change

Interactive designed for students to learn about the SDGs from people around the globe.

[Voices for Change](#)

[EPA's Climate Change Resources \(Teachers & Students\)](#)

[UN's 17 SDGs](#)



Canva

Students will collaboratively create a PSA (print, video, infographic) in Canva.

[Canva for Education TeachersFirst Review](#)

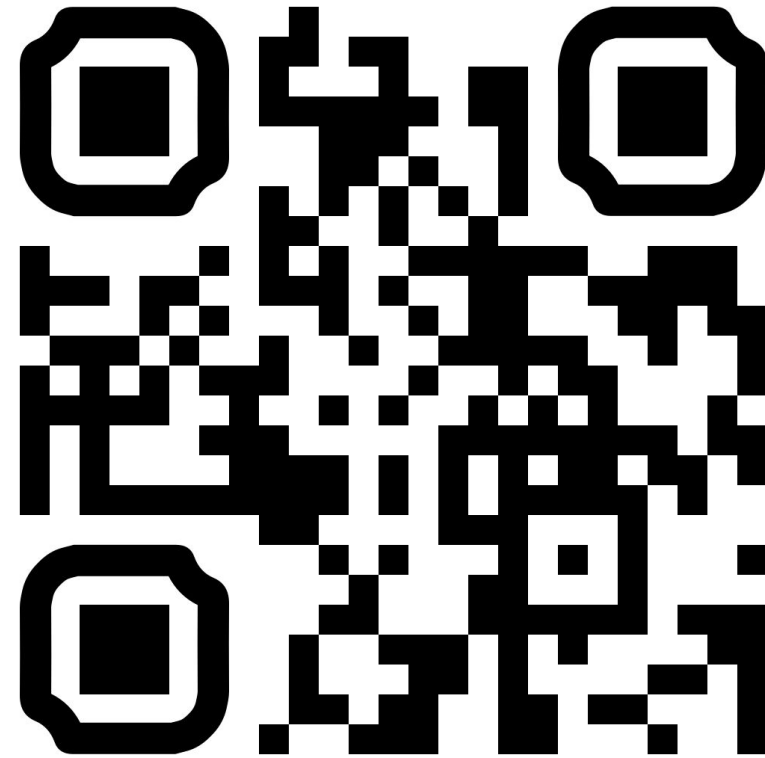


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Empowered Learner

1.1.a 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.

1.1.b Students build networks and customize their learning environments in ways that support the learning process.

1.1.c Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways..

1.1.d 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.

Digital Citizen

- 1.2.a** Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
- 1.2.b** Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- 1.2.c** Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
- 1.2.d** Students 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

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

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

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

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

Innovative Designer

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

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

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

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

Computational Thinker

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

1.5.b 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.

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

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

Creative Communicator

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

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

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

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

Global Collaborator

1.7.a Students 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.

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

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

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