

International Technology Standards for Students

# An overview for low-resourced contexts

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# ISTE Standards for Students: A New Lens

## Background:

The International Society for Technology in Education (ISTE) is a nonprofit organization that focuses on accelerating innovation in education through the use of digital technologies in education. ISTE was founded in 1979 by educators who were interested in exploring how technology could empower learners and educators.

## The ISTE Standards:

The ISTE Standards are a framework for implementing digital strategies in education to positively impact learning, teaching and leading. Originally developed as the National Educational Technology Standards in 1998 and they were focused on different types of technology (spreadsheets, presentation software, work processing, etc.). These were revised a few times, and today they are known as the learning with technology standards, as technology expands how we can teach and learn.

The ISTE Standards for Students 2016 is the latest articulation of the international technology standards for students.

*The ISTE Standards for Students include characteristics that are malleable at the individual level and can be impacted through learning experiences that embed technology in ways where students are not just using technology for rote learning, but also leveraging technology to create, produce and solve complex problems. In 2016 the ISTE Standards for Students were approved. Today these standards have been adopted in all 50 U.S. states and many countries. These standards are aligned with UNESCO's Sustainable Development Goals.*

The ISTE Standards for Students include seven key facets:

1. Empowered Learner
2. Knowledge Constructor
3. Digital Citizen
4. Innovative Designer
5. Computational Thinker
6. Creative Communicator
7. Global Collaborator

## Relevance to the Team4Tech Community

Team4Tech currently serves education-focused nonprofit organizations leveraging technology to provide quality learning opportunities through their global programs operating in under-resourced communities. In our most recent data collection less than 2% of our online community or practice (which brings together stakeholders from more than 35 countries) were aware of the ISTE Standards.

To help develop a knowledge base around the ISTE Standards Team4Tech held an online event where the ISTE Standards Team was able to connect directly with members in our online community of practice, introduce ISTE, and introduce the standards.

The 2022 event acted as a starting point for our use of ISTE collateral to support the nonprofit organizations with whom Team4Tech works. In addition, Team4Tech worked with the ISTE Standards Team to focus the student standards as they exist into learner level statements that help focus the use of technologies on learning outcomes that can be achieved with varying levels of access to technology, internet, and relevant tools that can inspire rich, authentic learning experiences.

The following provides each of the ISTE Standards for Students with a summary statement of what a student who is achieving these standards looks like in under-resourced communities. The intent is to wipe away language that may make the standards seem unattainable without high access, high tech environments readily available to learners.

The descriptions for each standard are a combination of materials from the ISTE Standards ebook, the ISTE Standards Team, and our technology leadership at Team4Tech.

While not exhaustive in outcomes, descriptions, or implementation guides at this point. We do anticipate that additional materials will be collaboratively developed and deployed for the Team4Tech global network of engaged, edtech leaders in under-resourced communities.

## Empowered Learner

This standard is core to the others on the list—without addressing this standard your students will have a difficult time addressing the others. The empowered learner is one

who takes an active role in his/her learning through being able to use technology to create, document, connect, communicate, and seek feedback from others.

Students who are empowered learners have enough experience with technology to make decisions about what tools they use and when, and have the ability to learn how to use new technologies with some ease.

*In under-resourced areas, the empowered learner is one who can solve problems, reach out when he/she needs help, and has personal goals for learning.*

## Knowledge Constructor

Students are knowledge constructors when they are able to curate resources from multiple sources and identify quality resources that support their learning. They are addressing real-world issues that are locally relevant in their learning.

*In under-resourced areas, the knowledge constructor has the ability to recognize fake news, use strategies to validate information, and can consume information while building one's own knowledge, forming one's own opinions, and backing those opinions up with quality data and information.*

## Digital Citizen

Students who are digital citizens know how to use digital tools in safe, ethical, and meaningful ways. They are aware of their digital footprint and know how to develop their profiles in ways that can support their long-term success. They cite resources, give credit where credit is due, and help others to access the resources that have informed their own learning.

*In under-resourced areas, the digital citizen learns how to keep themselves safe and protect their privacy in online spaces, learns how to use technology in ways that can connect one safely and purposefully with others, has been introduced to the ethical considerations of using technology, and understands how to protect one's own work and cite the work of others as he/she creates and produce digital content.*

## Computational Thinker

Students who are computational thinkers have the mindset to think critically about data, processes, and modeling to solve problems that matter to them. They can use different tools to analyze data and visualize that data in ways that tell a story. They see the benefit in creating models and sequences to solve problems.

*In under-resourced areas, the computational thinker has experience in problem-solving strategies that include data analysis and visualization tools and coding or other sequenced-based strategies.*

## Creative Communicator

Students who are creative communicators can use tools effectively to creatively tell stories, demonstrate knowledge, and document achievement of their goals. They can use a variety of tools and can select the best tool to help them achieve their goal. They can graphically communicate ideas, connections, and relationships, and know how to customize their creations for different audiences and purposes. They know how to remix digital content in ways that support other creators, giving credit where credit is due.

*In under-resourced areas, creative communicators understand the basics of design, have experience with different design tools, and understand how they can use Creative Commons licensing to share and protect their work.*

## Global Collaborator

Students who are global collaborators have experiences that enable them to work with others, locally and globally. They know how to use collaboration and communication tools in ways that support their goals. They are focused on solving real-world problems and doing so through engaging with others.

*In under-resourced areas, students who are global collaborators can see the value in their lived experiences and can share those experiences in ways that support the growth and education of others. They have been able to interact with peers locally and globally and have a solid understanding of how to be an effective team member.*

## Innovative Designer

Students who are innovative designers have experience in using design-thinking skills to consider, design, and implement solutions. They think about problems as design challenges and can use tools to map out thinking, questions, possible answers, and possible solutions. They are okay with not having all of the answers, deconstructing problems, and identifying novel solutions.

*In under-resourced areas, students who are innovative designers have a foundational knowledge of design thinking, understand the concept of “big messy problems,” and know what tolerance for ambiguity is and how it can help them be innovative, entrepreneurial thinkers.*

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The standards provide our partners working in under-resourced areas with a framework to grow the capacity of their staff and learners. These standards help to shift our thinking from “*technology is the answer*” into thinking “*quality learning is the answer and it can happen even more equitably when technology is used in ways that engage and empower learners.*”

## Download the Standards in Multiple Languages

ISTE has made the standards available in multiple languages. You can download these directly at <https://www.iste.org/standards/standards-in-action/global-reach>.

## Download the ISTE Standards Poster in Multiple Languages

ISTE has created a poster highlighting the standards in multiple languages. You can download the poster online at

<https://info.iste.org/iste-student-standards-transform-the-classroom-poster>

## Articles for Further Reading

Teach Students to Communicate Effectively in the Innovation Age

<https://www.eschoolnews.com/2016/01/25/teach-students-to-communicate-effectively-in-the-innovation-age/>

Getting at the Heart of the Empowered Learner

<https://www.iste.org/explore/ISTE-blog/Getting-at-the-heart-of-the-empowered-learner>

Four Myths and Four Truths about the Empowered Learner

<https://www.iste.org/explore/ISTE-Standards-in-Action/4-myths-%28and-4-truths%29-about-empowered-learners>

Create Meaningful Learning Experiences Using the ISTE Standards

<https://www.iste.org/explore/iste-standards/create-meaningful-learning-experiences-using-iste-standards>