
# TO MEET COMMON CORE & ISTE STANDARDS

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EDUCATION

# Contents

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INTRODUCTION

# Integrating Technology in Every Classroom

There is no question that students need to learn to adapt to new technologies for their future success. If students don't practice using technology in math classes, or science classes, where will they learn these skills? We cannot just assume that other teachers are responsible for teaching technology skills. Even if there is an actual technology class at your school, students will forget those skills if they are not practicing them regularly in other classes.

Not everyone is comfortable with using technology. I get that, but with the amount of resources out there, there is no reason you cannot learn how to use at least one new technology tool.

I'm not going to lie—it's been easier for me to learn new technologies because I had a computer-savvy father growing up. From an early age, I had experience using computers, even if it was just to play black-and-white games. Students often think they are technology experts because they have had similar experiences, though perhaps with color computer games. The difference is that our students are using more smart phones and tablets; for better or worse, these devices do not exactly encourage professional writing. Neither do Facebook, Instagram, and Twitter, and there is no reason to believe that newer technologies will suddenly push users to be better readers, writers, and critical thinkers.

## Why Technology Is Your Responsibility

It is the responsibility of all educators to make sure students learn to use technology with a critical eye, whether it's computers, tablets, smart phones, or

Chromebooks. Students must learn to take time to read thoughtfully and write precisely in the digital world, especially because things don't just disappear when we say something offensive or just plain stupid online. Plus, students often trust everything they read digitally without question! It may seem silly to adults, but our youth need guidance in learning to look at digital media with a discerning eye, before they learn this lesson the hard way.

## Comparing the CCSS and ISTE Standards

The Common Core State Standards (CCSS) and International Society for Technology in Education (ISTE) Standards are nice complements to one another. The CCSS do well to define the reading and writing skills students should be learning in every content area. Sadly, they address very few technology skills. Most of the CCSS technology standards revolve around research, publishing work online, and collaborating with others. These are all incredibly important skills, but there is much more to technology than just those aspects.

This is where the ISTE Standards (formerly the NETS) step in. They lay out the framework for technology learning across content areas. Some of the ISTE Standards do touch on the same concepts the CCSS bring up: collaboration, research, and digital publishing. But the ISTE Standards go beyond these areas to shine on and highlight digital creativity, problem solving, digital citizenship, and actual technology operations. I think we can all agree on how important these areas are to a student's general education. Students need to be able to act professionally online as citizens of a larger, digital world. If students are to meet the challenges in the modern working world, they must be able to solve problems and create innovative solutions. If students don't understand how basic technologies work, or how to transfer and adapt their skills to new technologies, it will incrementally narrow their job options when they enter the workforce.




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The ISTE Standards and CCSS are truly two separate parts of the whole of what we should be teaching students. Yes, students need to be strong, evidence-based writers. Yes, they should be able to read critically and thoughtfully. Students certainly need the speaking, listening, and language skills addressed in the CCSS as well. The ISTE Standards provide the missing piece: technology skills, broken down into six key areas. All of the ISTE Standards carry weight, just as the CCSS do. Both must be integrated into the curriculum of all classes if we are to properly prepare our students for life.

## Your Access to Technology

Most schools now have some laptop and desktop computers. More schools are buying up tablets and Chromebooks. No matter the technology your school has, you can start implementing tech projects tomorrow. If you have no funding for apps and paid websites, don't fret! There are plenty of free options. You'll find both paid and free resources in each chapter. This is especially important if you work in a low-income area. It's terribly sad to teach students to use amazing tools they can't afford to purchase and use outside of school or when they go off to college. For this reason, I'm a huge fan of Google's suite of free tools. You'll see they pop up quite often in the chapters.

Aside from a lack of money, there are two other primary issues teachers run into when it comes to technology: how many devices their school has, and the district's web filter. Some schools can only accommodate teachers using a lab or laptop/tablet cart a few times per semester. If this is the case, choose a short technology project you can complete in two classes. Even if you can't get technology into your class every day, it is still worthwhile to bring technology in at least once per semester or quarter. If there aren't enough devices for each individual student, select a project that students can work on collaboratively with a team or partner. The other option is to have stations students can rotate through; one station can include the digital devices, while other stations can be quieter, self-directed activities.

Now for the issue everyone has dealt with at some point: the web filter. First off, if YouTube is blocked (it is one of the most frequently blocked sites in school districts), you have some options. If you need a place to upload videos to, try TeacherTube. If you need to play videos on YouTube for your class, download them ahead of time. The easiest way to do this is through the website ClipConverter.cc—just copy and paste the YouTube video's URL (while at home) and select the type of file you want to save it as. Of the choices listed, MP4 is the best option for saving videos.

If Google Drive or Gmail is blocked in your district, this will create a challenge you may wish to address. You'll have to deal with district IT, so come prepared. Send your IT folks to google.com/edu—there are many resources there regarding which tools are great for school, along with the strongest argument: Google is free. For other websites that may be blocked, like Facebook or Twitter, try taking screenshots of what you need. Windows computers have the Snipping Tool to easily take screenshots. On a Mac, just press Command-Shift-4. I frequently need to do this, especially when I am teaching my students about digital safety on social networks (as in many districts, most social networks are blocked).

If you're stuck on a technology issue not listed here, Google it. It always amazes me to search for a solution and find that another educator has already come up with a work-around. The ed tech community is a friendly, helpful one. Take advantage of the educators in the web who are ready to support other educators in trying out new technologies.

## Tips for Beginners

First of all, I'm proud of you for looking at this book. It's not easy to push ourselves to try new things, especially when our classes are working just fine the way they are. I recommend trying one digital project to start with. Don't try to implement every project! Take a look through this book and see which projects sound fun. Having fun is crucial to our own happiness and excitement




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as lifelong learners. We teachers must model a love of learning for students, though students will probably benefit and retain the most from participating in instruction that is simultaneously informative and fun.

To help you get started, I highly recommend this website: gcflearnfree.org/topics. It's full of detailed tutorials, all free. The lessons (currently numbering more than a thousand!) include short readings, screenshots, and videos. There are even a few quizzes thrown in to keep things interesting! Topics range from basic skills, such as how to use email, internet browsers, and operating systems like Windows and Mac OS X, to internet safety. There are also sections on how to use different tablets and smartphones, social media skills from Instagram to Twitter, Microsoft Office (organized by version), and even Google Docs & Sheets. I frequently pull videos from the website to share with my students; it truly is one of the best technology learning resources out there. Thanks, Goodwill Community Foundation!

Personally, I've also worked to set up my own ed tech resources online. If you visit this page, you'll see the ed tech courses I've started building. Basically, I've collected some of the best videos and examples to share in mini-courses: bit.ly/mscoxpd. I also have a YouTube channel where I'm constantly adding screencasts and other videos. Feel free to use whatever helps you: youtube.com/user/mscoxtech.

## How to Start Integrating Technology

The trick to any technology project is not to add loads of additional content to your curriculum. Instead, use a technology project as a replacement for a different formative or summative assessment. That's where you start. Select a somewhat formal formative assessment or a larger summative assessment, and swap it for a technology project. This way you're not adding on another chunk of work to grade. It's a good principle: when you add technology, always take something away as well—don't just pile more onto your workload. I believe this is the reason many people are so hesitant to use technology more in their

classes: *I just don't have time!* Well, remember what someone wise probably once told you: teach smarter, not harder!

Technology can allow us to do just that. Save time making fewer copies. Post directions digitally (perhaps even in the form of a video), instead of continually having to repeat yourself. See bigger payoffs as you have more time to spend working individually with students who need the most help. Technology, when used well, can take some of your grading off your back and even save your voice!

## Using This Book

Feel free to go through this book in any order you wish. I suggest looking at the project titles and start with whichever one sounds the most interesting. Each chapter includes a breakdown of the potential ISTE and CCSS standards you can address through the project. It also provides directions on how to actually implement the project, as well as project ideas for different subject areas. The research and presentation chapters will probably be the most familiar, while chapters such as screencasting and digital storytelling may be completely foreign. Start with whatever is fun; I'm a strong believer in fun. School should be fun! Life should be fun! Teaching should be fun! If I've learned anything being a technology teacher, it's that most of all, technology can and should be loads of fun!




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