



33 K-5

COMMON CORE
LESSON PLANS

by Jacqui Murray and Ask a Tech Teacher

33 (Easy) K-5 Common Core Lesson Plans

By Jacqui Murray and Ask a Tech Teacher

Second Edition 2020

*Part of the Structured Learning Technology for the Classroom series
Visit the companion website at Ask a Tech Teacher for more resources to teach
technology to K-12*



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ISBN 978-1-942101-54-3

Introduction

In June 2010, the National Governors Association and the Council of Chief State School Officers (CCSSO) released a set of state-led education standards, the Common Core State Standards (CCSS). They spell out what students are expected to learn so teachers and parents know what they need to do to help. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that young people need for success in college and careers.

Developed in collaboration with content experts, states, teachers, school administrators and parents, their focus is the core subject areas of English-language arts (reading, writing, speaking, listening) and mathematics for grades K-12, establishing clear and consistent goals for learning that all stakeholders agreed would prepare America's children for success in life. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.



Why a new set of educational standards when each state already has its own?

That's why. Fifty different educational guidelines means what students are expected to learn varies state to state. Common Core State Standards (CCSS) respond to the need for consistency in educational excellence, no matter where students live and educators practice.

If your state is one of those that has adopted CCSS, you know the Standards consider technology not as a separate curriculum but as a tool to assist English language and math standards. This means if you are the technology teacher, integration specialist, or IT coordinator, you not only need to teach computer skills (like keyboarding, mouse use, software, and digital citizenship) but must blend technology into classroom instruction via a combination of technological, pedagogical and content knowledge.

What motivated the integration of technology into the CCSS framework? After twenty years of using computers to move educational goals forward, experts realize technology aids students to:



- *Demonstrate independence in academic pursuits*
- *Build strong content knowledge across the curriculum*
- *Respond to varying demands of audience, task, purpose, and discipline in unique ways*
- *Comprehend information as well as critiquing it, individually and collaboratively*
- *Use educational tools strategically and capably*
- *Understand other perspectives and cultures*

Four goals of CCSS are uniquely suited to technology integration. Students are expected to:

- *Produce and publish documents*
- *Interact and collaborate*
- *Communicate using web tools*
- *Evaluate information presented in different media formats*

Before we dig into this book's collection of grade-level projects, let's talk about core literacies, what works well for teachers with Common Core, how Common Core uses technology as a tool (not a crutch), the keyboarding requirement, and the importance of sharing and publishing work within Common Core standards. Here are five articles you'll enjoy:

- *7 Ways Common Core Will Change Your Class*
- *11 Things I Love About Common Core*
- *Common Core and Technology*
- *Common Core and Keyboarding*
- *Common Core and Publishing*

7 Ways Common Core Will Change Your Class

The biggest pedagogic change to American education since the arrival of John Dewey is happening right now. It's called Common Core State Standards (CCSS). Its goal: to prepare the nation's tens of thousands of students for college and/or career. If you are involved in any part of teaching, administrating, or planning, you are holding your breath, downing an aspirin, and crossing your fingers, knowing a storm has hit.

Besides turning your curriculum upside down, there are philosophic changes you as a teacher must buy into to fit the mold that is Common Core:



1. **Depth not width**—Dig into ideas. Make them clearer, more robust. Teachers will cover fewer topics in a year, but with greater detail. Trust that the breadth of learning will come from that deeper understanding. The accepted pedagogy that similar topics be introduced every year, each with more detail, is no longer. Now, students will cover new topics at each grade level—fewer but fuller.
2. **Nonfiction, not fiction**—Literacy and reading is likely to be comprehensive narratives rather than inference from stories. Why? Post-high school reading in both college and career is more often expository than fiction as high school grads study for college courses or receive specific training on a job. Students need to know how to perform the critical reading necessary to pick through the staggering amount of print and digital information required to thrive at the game called life.
3. **Evidence is required**—It will be paramount that students logically and dispassionately prove their claims with organic conversations and authentic, well-understood evidence. Statements must have supporting facts that stand up under cerebral scrutiny. A claim of acceptability because it is 'their interpretation' will not be sufficient in a CCSS classroom.

4. **Speaking and listening**—Anyone who thrives in the adult world knows the importance of these two skills. Now, they will be taught in the K-12 curriculum. The youngest learners will have guidelines for how to carry on a conversation—*come to a discussion prepared, listen respectfully to others, take turns speaking, build on each other's conversations, ask clarifying questions*. As they advance grade levels, so too will the requirements.
5. **Technology is part of most/all standards**—Not overtly, but teachers will find a fundamental understanding of how technology scaffolds learning essential in delivering Standards. Many times, standards expect knowledge be 'collaborated on, published and shared'. This is done through technology—pdfs, digital files, LMSs. Students and teachers will use the internet, online tools, software, tech devices as vehicles for achieving education goals. No longer will they be tools employed in the computer lab or to fill time. Now, they will be integral to the curriculum. This means teachers must be comfortable with iPads, online widgets, Google Apps, and all those geeky tools that they admired from afar when colleagues used them, promising they would try them 'one day'. That day has arrived.
6. **Life skills are emphasized across subject areas**. It's not good enough students can write in literacy classes. CCSS expects them to communicate just as effectively in every subject. And, where critical thinking has always been fundamental to math and science, that now expands to all classes. Students must understand cause and effect, transfer knowledge from one subject area to another throughout their educational day. That means, math teachers must pay attention to writing and literature teachers to cognitive processes.
7. **An increase in rigor**—Accountability will be expected of students and teachers. Too often, passing a test was all the assessment that was expected. CCSS will look for more—transfer of knowledge, evidence of learning, student as risk-taker, authenticity of lessons, vertical planning, learning with increasingly less scaffolding and prompting, and differentiated instruction so all learners get it.



11 Things I Love About Common Core

America's first public school opened in the mid-1600's to only a handful of cerebrally hungry students. Most colonists agreed education should be done at home, not in a one-size-fits-all schoolhouse. Even in the late 1700's after John Adams famously pronounced, "There should not be a district ... without a school in it, not founded by a charitable individual, but maintained at the public expense ...", it took until 1918 before all children were mandated to attend public schools.

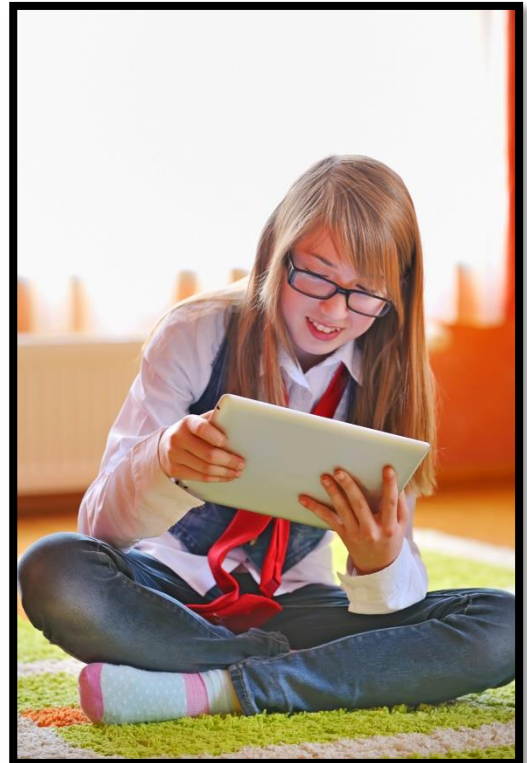
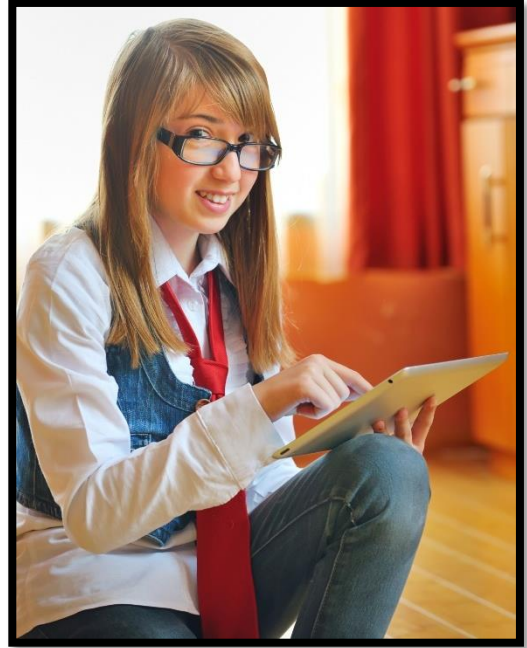
Even though no one agreed on what students would be taught, a condition that continues to this very day. To misquote William Butler Yeats, *often it was more about filling the pail than lighting the candle*.

Today, over 3 million teachers and about 99,000 public schools educate the almost 57 million schoolage American children at a cost to the taxpayer of over \$705 billion—but here's the kicker: lessons are delivered

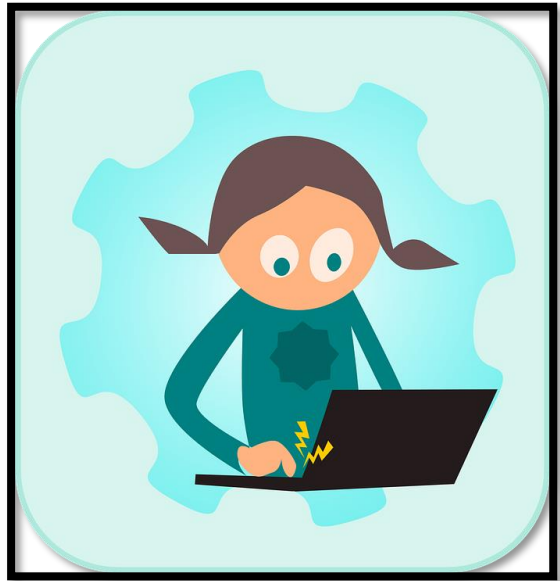
in accordance with 50 separate state education standards. No wonder we struggle to be even 'average' on the world academic stage.

The National Board of Governors changed all that when a group of states supported the Common Core State Standards. Adopted in 2010, it immediately found a busload of detractors, engendered fierce arguments, but perseveres in its effort to reform how America prepares its children for college and career. I'm not going to debate these guidelines today. Instead, here's why I love the new Standards:

1. They teach **speaking and listening**. Of all the skills that make a difference in a child's future, their ability to speak and listen to others tops that list. How have we not included this in the past? I have no idea and truly don't care. I'm happy it's part of the plan now.
2. They **differentiate between fact and fiction**. Too often, Hollywood movies that fictionalize history is taken as fact by viewers. Teachers show the movies as though this is what really happened. The ability to compare two presentations of events and determine truth from Other is a mature concept which appear in the 8th grade Reading-Literature (#7) and Reading-Informational (#9) standards, but the requirement of educated minds to question the world, seek out authentic information, evaluate what they hear/read/see/taste is a common strand throughout the Standards.
3. They make tech **part of a learner's life**. Oh that makes me happy. Considering children love iPads and their parents' smartphones, it makes sense to scaffold on that appeal to educate them
4. **They spiral**. Learning scaffolds year to year. If a student struggles, it is easy to spiral down a level, shore up that knowledge to bring the student up to grade level. Or, conversely, if a student excels in an area, teachers can spiral upward to the next level of learning. Differentiation has never been so clear.
5. The anchor standards are **highly flexible** in how teachers achieve them. They encourage 'flexible learning paths'. Teachers understand the broad strokes and are expected to fill in the picture. For example, I can use games (that's right—visual) to achieve the goals of reading (literature and informational—not foundational or Language) to accomplish goals like *Explain the relationships or interactions between two or more individuals, events, ideas, or concepts (from Common Core)*.



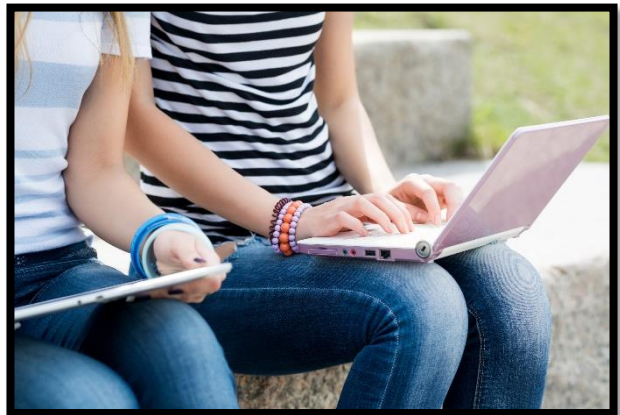
6. **It isn't a curriculum—it's a guideline.** That bears repeating: It isn't more material to stuff into already over-packed teaching days. It's a framework to organize thoughts, goals, ideas. A school adopts a curriculum and uses Common Core to implement, focus, and highlight.
7. It gets teachers thinking '**outside the-way-its-always-been-done box**'. There's a lot to accomplish, none of it prescribed. It uses words like *collaborate*, *publish and share*, *domain-specific language*, *high-level text-based discussions*, *process not content*, *audience-task-purpose-discipline*, *independence*, *strong content knowledge*, leaving the who-what-when-where-why-how in the teacher's competent hands.
8. It concentrates on **a way of thinking**, asking students to create thought habits, be problem solvers, approach life as critical thinkers. It expects students to integrate and evaluate, interpret, make strategic use of [technology tools], understand other perspectives and cultures, value evidence, comprehend as well as critique. The teacher decides how best to accomplish these goals.
9. It focuses on **not just college, but career**. Some students aren't interested in college and that's OK. Bill Gates wasn't.
10. It gives teachers permission (and a nudge) to teach more traditional literature. Yes, there's good new literature, but there's so much great older literature.
11. It is a **return to non-fiction**. For those of us who believe 'history repeats itself', that students must understand the world around them to fix its problems, this is brilliant.



Common Core and Technology

As you read the 100+ pages of ELA and Math standards, you realized technology is woven throughout to prepare students for college and career. It is mentioned at least a dozen times (I've truncated the bullet list but the gist is the same)—

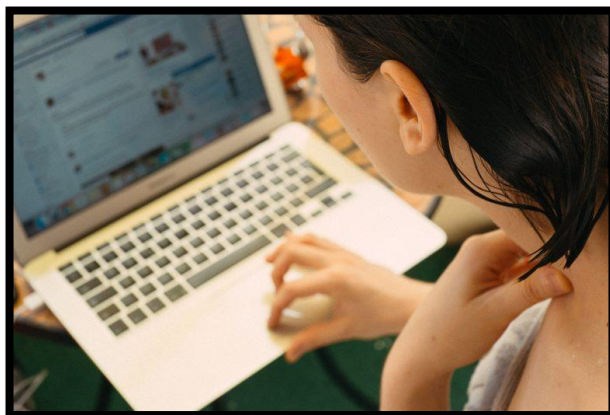
- *Expect students to demonstrate sufficient command of **keyboarding** to type a minimum of one page [two by fifth grade, three by sixth] in a single sitting*
- *Expect students to **evaluate different media** (e.g., print or digital ...)*
- *Expect students to **gather information** from print and digital sources*
- *Expect students to integrate and evaluate **information presented in diverse media***
- *Expect students to **interpret information** presented visually, orally, or quantitatively*



- *Expect students to make **strategic use of digital media***
- *Expect students to use **glossaries or dictionaries, both print and digital ...***
- *Expect students to use information from **illustrations and words in print or digital text***
- *Expect students to use a **variety of media** in communicating ideas*
- *Expect students to **use technology** and digital media strategically and capably*
- *Expect students to **use text features and search tools** to locate information*

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts continually update content.

The first bullet—*Expect students to demonstrate sufficient command of **keyboarding** to type a minimum of one page [two by fifth grade, three by sixth] in a single sitting*—quantifies keyboarding skill, something not done in the ISTE national standards or many of the disparate state standards.



Common Core and Keyboarding

Here are the relevant Common Core standards for keyboarding:

- *Keyboarding is addressed tangentially—saying students must type *** pages in a sitting. This starts in 4th grade and continues through 6th.*
- *By 3rd grade, Common Core discusses keyboarding to **produce** work, i.e., those standards that specifically mention 'use technology to produce and publish writing (using keyboarding skills)'*
- *The keyboarding requirement that is giving teachers across the continent heartburn is that keyboarding is required to take Common Core Standards.*

It's worth noting CCSS are progressive—students learn material, transfer that knowledge to the next grade level where they show evidence of having learned it by using it and building on it. Therefore, the notation to 'produce and publish writing using keyboarding skills' in 3rd grade carries into all successive grade.

Common Core and Publishing

There are a variety of overarching themes in Common Core like 'integrate technology into classroom inquiry', 'encourage collaboration and sharing in student work', and 'use technology to prepare students for college and career'. Each could take weeks to wrap into classwork but there's one organic tool that accomplishes all three while fulfilling a fourth recurring Common Core standard: Publish student work:

- *Kindergarten: CCSS.ELA-Literacy.W.K.6 With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.*
- *First grade: CCSS.ELA-Literacy.W.1.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.*

- *Second grade: CCSS.ELA-Literacy.W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.*
- *Third grade: CCSS.ELA-Literacy.W.3.6 With guidance and support from adults, use technology to produce and publish, collaborate with others.*
- *Fourth grade: CCSS.ELA-Literacy.W.4.6 With some guidance and support from adults, use technology, including the Internet, to produce and publish writing*
- *Fifth grade: CCSS.ELA-Literacy.W.5.6 With some guidance and support from adults, use technology ... to produce and publish writing*
- *Sixth grade: CCSS.ELA-Literacy.W.6.6 Use technology ... to produce and publish writing*
- *Seventh grade: CCSS.ELA-Literacy.W.7.6 Use technology ... to produce and publish writing*
- *Eighth grade: CCSS.ELA-Literacy.W.8.6 Use technology ... to produce and publish writing*



What may not be obvious is that accomplishing these goals often requires little beyond what is already done, just tweaked in a different way. Let's use 'publishing' as an example. Instead of creating a printed word processed document, Common Core asks students to use presentations that share student work with a wider audience, enabling everyone to learn from everyone else. Yes, teachers must master these new tools, but once learned, they're applied at all levels. Projects take no longer to produce than traditional projects yet fulfill a handful of Common Core standards including publishing, collaborative work, feedback among classmates, sharing, keyboarding practice.

Here are exemplars that can be used across grade levels:

- *Create a story in an online story maker. This accomplishes the same Common Core writing standards pen-and-paper would while fulfilling the 'publish' mandate, reaching a greater audience, and sharing student knowledge.*
- *Share slideshows into a blog, wiki, or class website.*
- *Create posters in Glogster or Prezi. These include all project elements, can be self-taught (encouraging students to take responsibility for their own learning), and take no more time than a traditional approach.*
- *Record the student play and upload to a video website. Share with family, friends, even other schools researching the same topic.*
- *Students collaborate in the creation of an online avatar to discuss characters in a book, a moment in history, or a tricky mathematical concept. Then, publish by uploading to blogs or websites.*



- Create an Infographic to show student understanding of Common Core standards related to research, reading, writing. This can replace the typical class research paper that's read by the teacher, no one else, and then stuck on a shelf.



Overall, anything online encourages student collaboration and feedback. Many sites will store student work on their server and provide the opportunity for students to comment on the creations of classmates. That's hard to match in a physical, pencil-and-paper world.

How to Use This Book

Each lesson in this book is color coded for easy recognition of the CCSS standard being met, as follows:

Yellow: Math

Red: Writing

Blue: Reading—Literature

Pink: Speaking/Listening

Green: Reading—Informational

Blue: Language

Purple: Reading—Foundational

Orange: Anchor Standard

Organization of each lesson is as follows:

The screenshot shows a lesson page titled "Visualize, Verify". It is divided into three main sections:

- Overview:** Contains a lesson summary and an Essential Question: "How can I figure out math problems faster?".
- Objectives and Step:** Contains pedagogical discussions, organic discussions, practical strategies, and tech steps.
- Mathematics—Introduction: Standards for Mathematical Practice:** Lists the CCSS standards that the lesson aligns with.

1. Overview: the lesson summary including the Essential Question
2. Objectives and Steps: step-by-step directions including important information
3. Common Core Standards: those that are addressed in the lesson

We've included blank lines in front of each concept so you can check it off when completed. It's useful to track where you ended so you can pick up at that stopping point when you're ready to continue.

A note: Projects are generic in nature. If you have a different operating system or webtool, adapt instructions as needed.

About the Authors

Ask a Tech Teacher is an award-winning resource blog run by a group of technology teachers offering resources, advice, lesson plans, pedagogical conversation, website reviews, newsletters, and more. It's a favorite of teachers looking to maneuver the minefields of tech in education.

Jacqui Murray has been teaching K-18 technology for 30 years. She is the editor/author of over a hundred tech ed resources including a K-12 technology curriculum, K-8 keyboard curriculum, K-8 Digital Citizenship curriculum. She is an adjunct professor in tech ed, Master Teacher, webmaster for four blogs, an Amazon Vine Voice, freelance journalist on tech ed topics, and contributor to NEA Today. You can find her resources at Structured Learning.

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1st Grade

1. *Reading: Explore the World with Media*
2. *Math: Parts of a Whole*
3. *Writing: Write and Publish a Story*
4. *Reading: Craft and Structure*
5. *Math: Write, Say and Solve Math Problems*

2nd Grade

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Kindergarten

#1: Shapes Are Everywhere

Overview

How do shapes relate to the real world?

Students take a 'shapes stroll' around school to discover the shapes they have discussed in class in their physical world.

Objectives and Steps

____ Discuss shapes. What do students know about these from class conversations? Remind students of agreed upon discussion rules such as listening to others.

____ This lesson has five activities. Do all, or the one that suits your unique student group:

- *shapes template*
- *drawing shapes*
- *drawing letters with shapes*
- *shapes around the classroom*
- *shapes around campus*

Geometry

K.G.A1-3—Identify and describe shapes

Shapes template

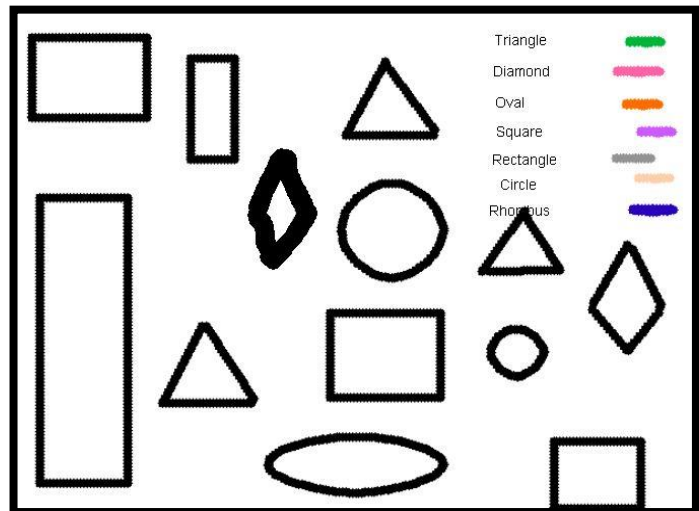
____ Open drawing program you use in your school like Paint, KidPix, or TuxPaint.

____ If you use Chromebooks, try (search for the website address or visit Ask a Tech Teacher's resource pages>Art):

- *Sketchpad*
- *ABCYa Paint*

____ If you're an iPad school, try:

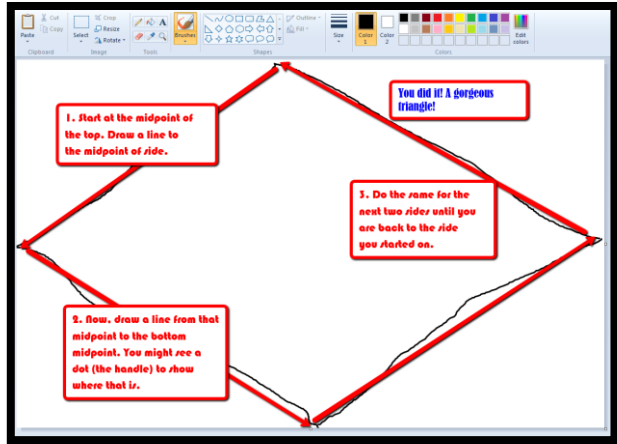
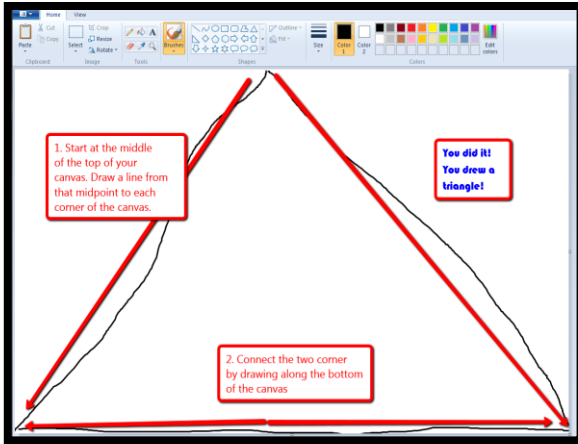
- *Doodle Buddy*
- *Drawp*



____ Help students download the 'Shapes Template' to their digital device from the common files folder—wherever you collect files that students can access.

Drawing Shapes

____ It's often difficult for students to draw a triangle or diamond. Using the figures below, demonstrate and then let students try. Help them understand 'middle', 'side', 'straight line', and 'corner'.



Using the drawing program, have students practice this skill.
 Ask if these shapes are two-dimensional or three.

Shapes in Letters

Now that students can draw shapes, use them to create the letters they are studying in class. First, visit letter websites like the following (search for the website address or visit Ask a Tech Teacher's resource pages>Letters):

- *Alphabetimals*
- *Alpha Pig*
- *Starfall Letters*
- *Find letter—3 difficulty levels*

If you're an iPad school, try these:

- *Fischer Price Learning Letters* —
- *Learn Letters*

Have student write their name using shapes.

- *First: Show the shapes*
- *Next: Show how they create letters*

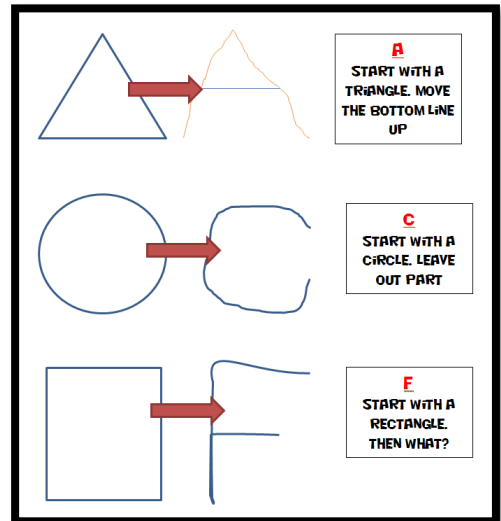
Publish/share/print as is the custom in your classroom.

Shapes around the classroom

Students take an *in situ* 'shape stroll' to discover shapes discussed in class.

Point to something in the classroom (such as a poster). What shape would create it? How about a ball?

Do students see shapes talked about in class around them? Point to an object in the classroom. Ask for a volunteer to explain how s/he would you use shapes to create it? The figure below is an example of using an oval and a rectangle to create the chair back.





Shapes around Campus

___ Take a 'shape stroll' around school to discover shapes discussed in class.



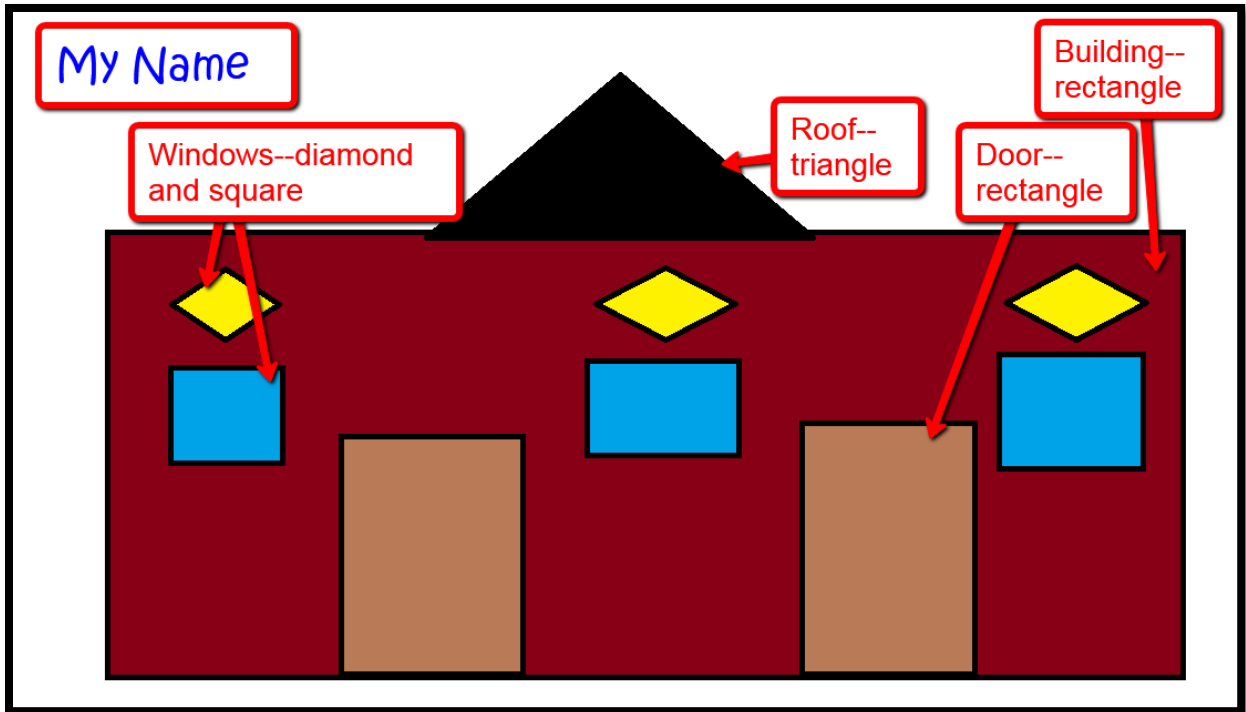
___ For this activity, enlist the help of several parents to supervise students as they walk around the campus. Make this activity as inquiry-based as possible. Remind parents they are guides, helping students to discover shapes, not point them out.

___ As students point out squares, rectangles, circles, diamonds, cubes, pyramids and other shapes discussed in class, write them down in your iPad or tablet PC. When possible, ask students to describe the relative positions of these objects using terms such as:

- *above*
- *before*
- *behind*
- *below*

- *beside*
- *in back of*
- *in front of*
- *next to*

- ___ Let parent helpers know they should also ask this question of students during their discovery.
- ___ Return to the classroom and write the shapes discovered by students on the class screen. Ask students where they saw them—front of building, beside athletic field, on the playground, on top of tower, etc.
- ___ Using shapes, draw one item—building, play structure, window, etc.
- ___ Have students use shapes to draw something they found around campus.



Notes

33 (Easy) Common Core Projects

Pages intentionally skipped

THIRD GRADE

#1: Domain-specific Vocabulary

Overview

Why is appropriate vocabulary essential to academic success?

Students teach each other domain-specific words through presentations. This reinforces vocabulary, as well as presentation skills.

Objectives and Steps

Do students understand domain-specific vocabulary in the inset:

- *Mouse*
- *Right mouse button*
- *Mouse wheel*
- *Button*

What problems develop if student doesn't know the right words for circumstances? Why is it important to be comfortable with, say, tech terms? Help students come up with examples like to:

- *troubleshoot a tech problem*
- *publish/share a project*
- *become more proficient readers*
- *teach themselves to use a program /widget/online tool*

Discuss Keith Pruitt's words:

The direct teaching of vocabulary is essential to academic success

This project explores domain-specific words for a topic of your choice through a student-directed research. We use tech terms as an example but use domain-specific vocabulary relevant to your class (i.e., math terms).

Collect these words in several ways:

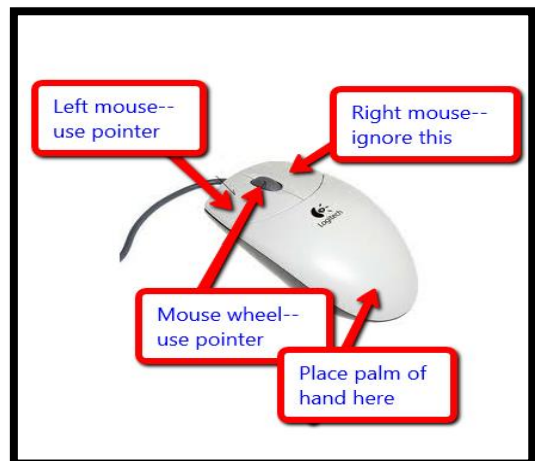
- *From last year's class*
- *From students—authentic words they don't understand. Use a virtual wall like Padlet or Linoit where students post unfamiliar tech*

Reading: Foundational Skills—Craft and Structure

CCSS.ELA-LITERACY.RI.3.4
Determine the meaning of academic and domain-specific words in a text relevant to a grade 3 topic.

Speaking and Listening: Presentation of Knowledge

CCSS.ELA-LITERACY.SL.3.4
Report on a topic with appropriate facts, speaking clearly at an understandable pace.



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words. Or, use a physical Vocabulary Wall (i.e., a bulletin board) Do this for, say, three weeks prior to start of project.

- From grade-level teachers, words students don't understand (like Cloud, server)

Here's how it works:

- Post sign-up sheets in online locations like SignUp Genius, Google Forms, or appointment slots in Google Calendar.
- Student signs up for a word and date to present.
- Student selects a word to teach classmates.
- Student gets definitions from family, friends, or even teacher as a last resort.
- During presentation, student defines the word, uses it in a sentence, and takes questions.
- The entire presentation takes about three minutes.



Student may sign up in groups, as long as there is one word per group member.

The sentence must show they understand the meaning (i.e., *I like formatting* is not good; *I format a letter by adding borders* is).

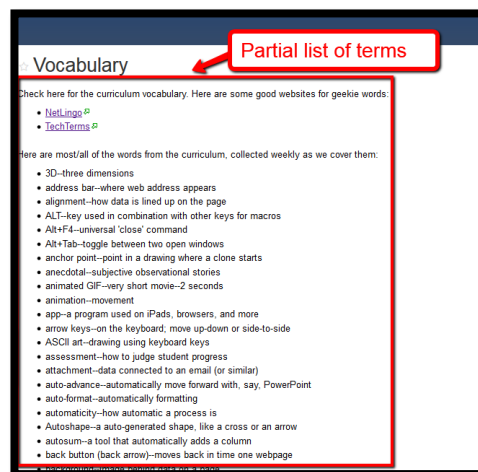
Student and audience follow agreed-upon speaking/listening rules such as those in Common Core.

Be sure presentation:

- Demonstrates command of grammar.
- Defines unknown words in context.
- Makes definition clear.
- Avoids nervous movements (i.e., stuttering, giggling, playing with hair).
- Avoids wasted words like 'umm', 'you know'.
- Avoids slang.

Extension ideas:

- This is a great way to start class (ala Responsive Classroom). Students enter, settle in, participate as good listeners/speakers. It's over in about five minutes.
- Show how to use Google's **define:[the word]** to determine definition, but caution students not to use terminology they don't understand.
- Focus on specialized language of mathematics. Students pick words that address mathematics associated with grade-level standards. These words relate to argument, problem solving, and mathematical explanation.
- Use this project to support vocabulary needs of students with gaps in their verbal and written understanding. Select words that fulfill that need.
- Have students add their word and definition to a class Dictionary on class website, blog or wiki. Create a page for that purpose, students add their information.
- For students nervous to speak in front of people, differentiate—they can make a video or audio tool rather than personally present.



Pages intentionally skipped

FIFTH GRADE

#1: Excel and Arrays

Overview

How can I draw a picture of numbers?

Use a spreadsheet to visually represent arrays

Objectives and Steps

_____ An array is a rectangular display of objects. In math, that means a grid-like arrangement of rows and columns enabling the visualization of a math problem. This is helpful to students who comprehend math best as an image rather than numbers.

_____ I started using these when I realized all students didn't understand what I considered simple—the multiplication of two numbers. Why did they find it difficult? Because it didn't make sense to them—that was enough. I went looking for an alternate approach to modeling multiplication problems. I discovered arrays—a visual representation of the computation process. When students saw the rows down and columns across and all the tiny cells in between, they came to understand the logic behind the problem and soon could get the answer without laying out the array.

_____ To teach arrays, start with a review of spreadsheet conventions—columns, rows, cells, inputting data, etc.

_____ Postulate a problem, say three times five. In array syntax, this means a matrix 'three rows of five' with the delineated number of squares the answer to the function.

_____ For simplicity, use the same workbook for all projects in fifth grade. This is easy because of the multitude of worksheets. In this case, rename the worksheet tab you'll be programming 'Arrays'.

_____ Set column width so the sheet looks like graph paper

_____ Add column titles 'Problem' and 'Array'.

_____ Have students come up with three problems everyone in the class will answer, in this case: 3×5 , 5×3 , 7×9 .

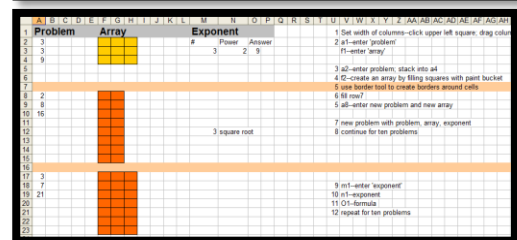
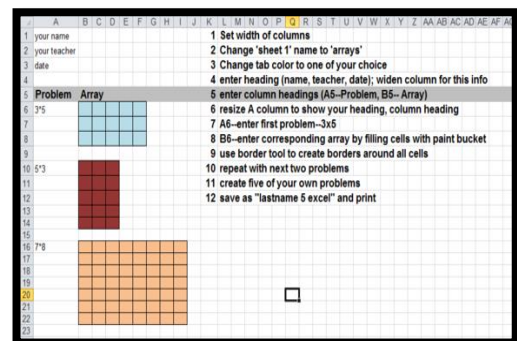
_____ Color the arrays with the paint bucket. Add borders so each data cell is clear (see inset)

_____ With a partner, answer the following questions:

- *What counting pattern is shown by your array? Why does this pattern find the total number of items in your array?*
- *What objects in the classroom or school are arranged as an array?*
- *Write a multiplication sentence to go with the array. Describe how columns and rows are used to find the parts of a multiplication sentence.*

Math: Standards for Mathematical Practice

5. Mathematically proficient students consider the available tools when solving a mathematical problem. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions,



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