The Key to Aligning

YOUR THIRD GRADE CLASS

with Common Core State Standards

5 Projects that Integrate Technology into Core Lesson Plans

ASK A TECH TEACHER

The Key to Aligning Your Third Grade Class with Common Core State Standards

5 Projects that integrate technology into Core lesson plans

By the Structured Learning IT Team

And

Ask a Tech Teacher

First Edition 2012
Part of the Structured Learning Technology for the Classroom series
Visit the companion website at http://askatechteacher.com for more resources to teach technology to Kindergarten-Eighth Grade

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Introduction

In June of 2010, the National Governors Association Center for Best Practices (NGA Center) 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-two different educational guidelines means what students are expected to learn varies state to state. Common Core standards respond to the need for consistency in educational excellence, no matter where students live and educators practice.

If your state is one of the forty-six that have adopted CCSS, you know technology is considered not as a separate curriculum, but as a tool to assist English language and math meet their 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, 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 have realized that facility with technology aids students in:

- *Demonstrating independence in academic pursuits*
- *Building strong content knowledge across the curriculum*

- *Responding to varying demands of audience, task, purpose, and discipline in unique ways*
- *Comprehending information as well as critiquing it, individually and collaboratively*
- *Using educational tools strategically and capably*
- *Understanding other perspectives and cultures*

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

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

This is the **Third Grade Bundle**, **one of six that make up the full complement of K-5 Common Core State Standards** lesson plan bundles (see other PDF digital booklets for kindergarten, first grade, second grade, fourth grade, and fifth grade bundles). They will become key to your classroom goal of achieving CCSS goals. All lesson plans have been tested by the Ask a Tech Teacher teachers. All are supported by the Ask a Tech Teacher help team on the website.

How to Use This Book

Before you start, scan the Common Core State Standards website and the overview provided in the Appendix. The language is easy to understand with helpful tie-ins to grade-level specifics and overarching Anchor Standards

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

Yellow **Math**

Blue **Reading—Literature**

Green **Reading—Informational Text**

Purple **Reading—Foundational Skills**

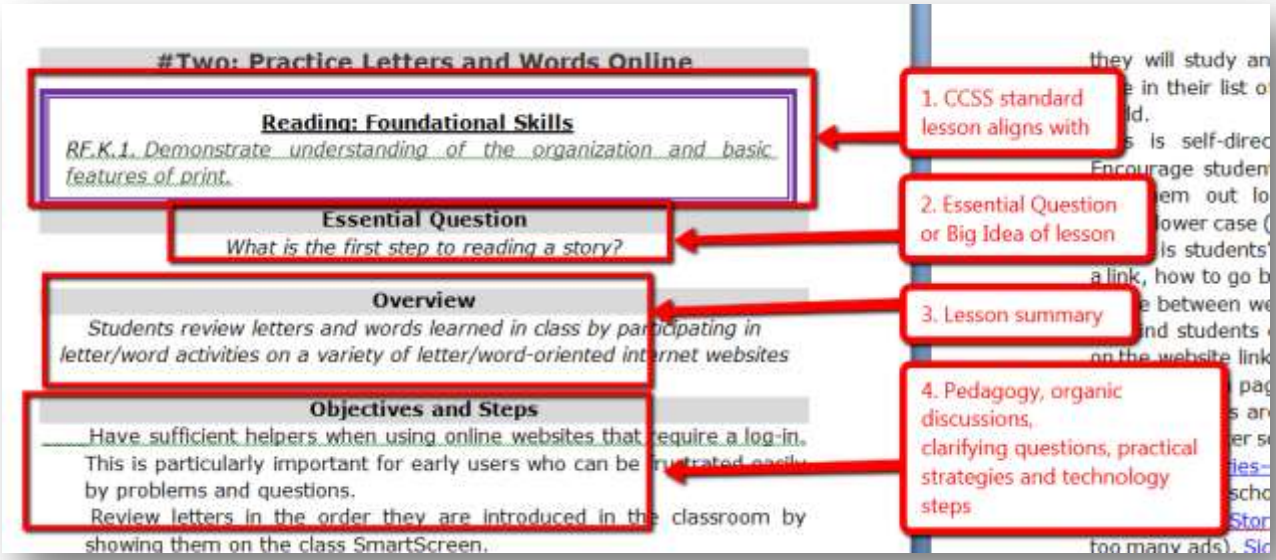
Red **Writing**

Pink **Speaking and Listening**

Blue **Language**

Orange **Anchor Standards**

Organization of each lesson is as follows:



Where for-fee software and products are used in lessons, an effort has been made to cross-reference free products that will accomplish the same goals where possible. There will be some adaptation required to make them work, but we've purposely selected those that are most compatible.

We've included blank lines in front of each concept so you can check it off when completed. We've heard from many users of our K-6 Curriculum and Toolkits that the nature of technology in the classroom often precludes completing an activity in one sitting. 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: When using installed software, projects are designed for a Windows-based PC. If you have a different operating system (say, Linux or Mac), you'll need to adapt the instructions.

Additional note: Embedded links are active only in the PDF/digital version of book. Contact the publisher to find out how to get a discounted PDF with your Proof of Purchase.

About the Authors

Structured Learning IT Team provides classroom teachers with practical knowledge, pedagogical articles and materials, how-to books, tips and tricks, and the tools required to fulfill the technology goals of the 21st century classroom. All textbooks, workbooks, and tools are classroom-tested, teacher-approved with easy-to-understand materials supported by online materials, websites, blogs, and wikis. Whether you are a new teacher wanting to do it right or a veteran educator looking for updated materials, Structured Learning and its team of technology teachers is there to assist you.

Ask a Tech Teacher is a well-regarded resource blog run by a group of technology teachers. It offers oodles of free lesson plans, advice, pedagogical conversation, website reviews and more. Its newsletters and website articles are read by thousands every day, including teachers, homeschoolers, and anyone serious about finding the best way to maneuver the minefields of technology in education.

Jacqui Murray is the editor of a technology curriculum for K-sixth grade, creator of two technology training books for middle school, and three ebooks on technology in education. She is the author of **Building a Midshipman**, the story of her daughter's journey from high school to United States Naval Academy. She is webmaster for six blogs, an Amazon Vine Voice book reviewer, a columnist for Examiner.com, Editorial Review Board member for Journal for Computing Teachers, Cisco guest blogger, IMS tech expert, and a weekly contributor to Write Anything. Her popular technology blog Ask a Tech Teacher is visited by more than 60,000 people every month and her technology articles have appeared in hundreds of online newspapers and magazines.

THIRD GRADE

#One: Estimate, Visualize, Verify

Mathematics—Introduction: Standards for Mathematical Practice

Students can detect possible errors by using estimation and other mathematical knowledge. When making mathematical models, technology can enable them to visualize results of varying assumptions, explore consequences, and compare predictions with data.

Essential Question

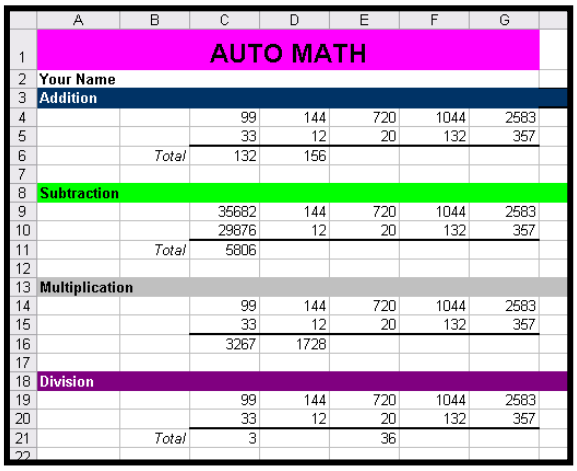
How can I figure out math problems faster?

Overview

Students calculate math problems the traditional manner (pencil and paper), mentally, and using Excel formulas to check answers and Excel graphs to show how data can be visually displayed.

Objectives and Step

_____Math phobia scares off many future mathematicians. As teachers, we need to exorcise this fear and add the clarity. This lesson will show you how.



	A	B	C	D	E	F	G
1	AUTO MATH						
2	Your Name						
3	Addition						
4			99	144	720	1044	2583
5			33	12	20	132	357
6		Total	132	156			
7							
8	Subtraction						
9			35682	144	720	1044	2583
10			29876	12	20	132	357
11		Total	5806				
12							
13	Multiplication						
14			99	144	720	1044	2583
15			33	12	20	132	357
16			3267	1728			
17							
18	Division						
19			99	144	720	1044	2583
20			33	12	20	132	357
21		Total	3		36		
22							

_____Discuss the importance of numbers, data, graphs in many parts of life (GPA, sports scores, etc) and as authentic approaches to scaffolding comprehension of complicated ideas.

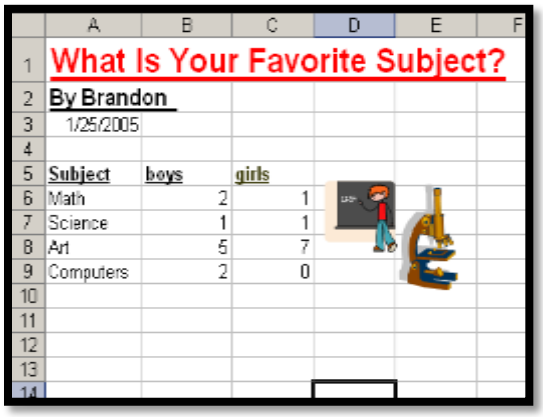
_____This exercise has two parts. Both use Excel. If this is the first time students have used this software, introduce page layout, ribbons, tools and toolbars (their similarity to other MS Office programs), and worksheets.

_____**Part I:** Using a math worksheet from the classroom, have students add, subtract, multiply (divide if appropriate), using taught skills, mental math and estimation to find answers.

_____Review estimated answers as a class. Can they detect possible errors? What mental math tricks did they use to come up with answers?

_____Enter same problems into Excel. Teach students how to use formulas for add, subtract, multiply (and divide if appropriate) to determine answers (see inset, first page). How close were students to mental math results? Discuss outcome.

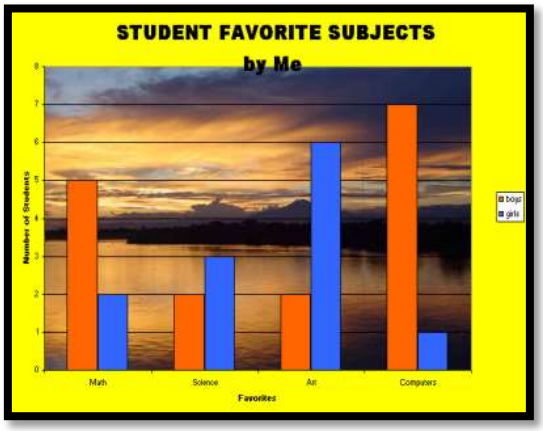
_____**Part II:** Set math problems aside and create a new worksheet in Excel (use 'Sheet Two' in the current workbook).



	A	B	C	D	E	F
1	What Is Your Favorite Subject?					
2	By Brandon					
3	1/25/2005					
4						
5	Subject	boys	girls			
6	Math	2	1			
7	Science	1	1			
8	Art	5	7			
9	Computers	2	0			
10						
11						
12						
13						
14						

_____Use data developed from a unit of inquiry or collect data during class time (see inset—data on *Favorite Subjects*). I do this as part of the class; it takes only minutes.

_____Working in pairs, students enter data into correct cells, organized by type and category. Remind students all labels must be words, all data numbers.



_____Ask students to draw conclusions based on these numbers (top inset). Discuss predictions. How easy/difficult is it to visualize results from numbers? How effective a method is a table for interpreting data?

_____Now turn the data into a chart by highlighting and pushing F11 (include labels in highlight). What conclusions can be drawn from this presentation of data (lower inset)? Are they different/the same from conclusions drawn from the table?

_____Compare predictions from these two methods of analyzing data. Discuss how one leaves the work of drawing conclusions to each student while the other spoon feeds the answers. What are the consequences of each? Which is more abstract, which more quantitative? When might the raw data from the table be a more appropriate tool for analyzing information and when might the graph be better?

Appropriate for grades 3-5

More Common Core help from Structured Learning and Ask a Tech Teacher:

- **The Key to Aligning Your K-5 Class with Common Core State Standards: *30 Projects that integrate technology into Core lesson plans***
- **The Key to Aligning Your Kindergarten Class with Common Core State Standards: *5 Projects that integrate technology into Core lesson plans***
- **The Key to Aligning Your 1st Grade Class with Common Core State Standards: *5 Projects that integrate technology into Core lesson plans***
- **The Key to Aligning Your 2nd Grade Class with Common Core State Standards: *5 Projects that integrate technology into Core lesson plans***
- **The Key to Aligning Your 3rd Grade Class with Common Core State Standards: *5 Projects that integrate technology into Core lesson plans***
- **The Key to Aligning Your 4th Grade Class with Common Core State Standards: *5 Projects that integrate technology into Core lesson plans***
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