Teacher Manual

Kindergarten

Technology

32-LESSON COMPREHENSIVE CURRICULUM

SIXTH EDITION

by Ask a Tech Teacher

KINDERGARTEN TECHNOLOGY

A 32-LESSON COMPREHENSIVE CURRICULUM

SIXTH EDITION

Part One of Nine in the SL Technology Curriculum

Introduction

The educational paradigm has changed—again. Technology has become granular to learning, blended into educational standards from Kindergarten on, like these rephrased from Common Core:

- *Expect students to demonstrate sufficient command of **keyboarding** to type a minimum of one page [three by sixth grade] in a single sitting*
- *Expect students to **evaluate different media** [print or digital]*
- *Expect students to **gather relevant information** from print and digital sources*
- *Expect students to integrate and evaluate **information presented in diverse media** and formats*
- *Expect students to **interpret information** presented visually, orally, or quantitatively [such as interactive Web pages]*
- *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 communicate with a **variety of media***
- *Expect students to **use text features and search tools** (e.g., key words, sidebars, **hyperlinks**) to locate information*

But how is this taught?

With the **Structured Learning Technology Curriculum**. Aligned with [Common Core State Standards*](#) and [National Educational Technology Standards,](#) and using a time-proven method honed in classrooms, students learn the technology that promotes literacy, critical thinking, problem-solving, and decision-making through project-based work. The purpose is not to teach step-by-step tech skills (like adding borders, formatting a document, and creating a blog). There are many fine books for that. What this curriculum does is guide you in providing the **right information at the right time**.

Just as most children can't learn to read at two, or write at four, they shouldn't be required to place hands on home row in kindergarten or use the internet before they understand the digital risks and responsibilities. The Structured Learning curriculum makes sure students get what they need at the right age with proper scaffolding. The end result is a phenomenal amount of learning in a short period of time.

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"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 confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio."
—*CCSS*

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"Use of technology differentiates for student learning styles by providing an alternative method of achieving conceptual understanding, procedural skill and fluency, and applying this knowledge to authentic circumstances."
—*CCSS*

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If there are skills you don't know, visit our Help blog (AskATechTeacher.com) or join the companion wikis:

- *K-3rd grade — http://k-3tech.wikispaces.com/*
- *4th grade — http://fourthgradetech.wikispaces.com/*
- *5th grade — http://5thgradetechclass.wikispaces.com/*

They're free and staffed by teachers who use the curriculum.

What's in the SL Technology Curriculum?

The SL Curriculum is project-based and collaborative, with wide-ranging opportunities for students to show their knowledge in the manner that fits their communication and learning style. Each grade level in the curriculum includes five topics that should be woven into 'most' 21st-century lesson plans:

- *keyboarding—more than typing*
- *digital citizenship—critical with the influx of Chromebooks and iPads*
- *problem-solving—to encourage independence, critical thinking*
- *vocabulary—decode unknown words in any subject quickly with technology*
- *publishing-sharing—to promote collaborative learning*

In most grade-level curricula, you will find full lessons devoted to keyboarding, digital citizenship, and problem solving.

Here's a quick overview of what is included in the curriculum:

- *curated list of assessments and images*
- *articles that address tech pedagogy*
- *Certificate of Completion for students*
- *curriculum map of skills taught*

- *monthly homework (3rd-8th only)*
- *posters to visually represent topics*
- *Scope and Sequence of skills taught*
- *step-by-step weekly lessons*

Each weekly lesson includes:

- *assessment strategies*
- *class exit ticket*
- *class warm-up*
- *Common Core Standards*
- *differentiation strategies*
- *educational applications*
- *essential question and big idea*
- *examples, rubrics, images, printables*
- *ISTE Standards*
- *materials required*
- *pedagogic articles (if any)*

- *problem solving for lesson*
- *skills—new and scaffolded*
- *steps to accomplish goals*
- *suggestions to unpack*
- *suggestions based on digital device*
- *supporting links*
- *teacher preparation required*
- *time required to complete*
- *vocabulary used*
- *weekly how-to video (online)*
- *weekly real-time online question sessions*

Throughout the text are links to extend lessons, add enrichment, and/or provide flexibility in your teaching. No PDF? Usually the link is spelled out. If not, Google the name or contact our help site.

Programs Used

Programs used in this curriculum focus on skills that serve the fullness of a student's educational career. Free alternatives are noted where available:

General		2-8	
Web tools	Drawing program	Word processing tools	Desktop publisher
Google Earth	Image editor	Spreadsheet tools	Presentation tools
	Keyboarding tool	Email program	

What's New in the Sixth Edition?

A good tech curriculum is aligned with best practices in technology and education. That means it must be updated every few years. Consider the changes to technology in education since SL's Fifth Edition published in 2013:

- *Windows updated its platform—twice.*
- *IPads have been joined by Chromebooks as a common classroom digital device.*
- *There is greater reliance in the classroom on internet-based tools than software. This underscores the importance of teaching digital citizenship to even the youngest learners.*
- *Student work is often collaborative and shared.*
- *Student work is done anywhere, not just the classroom and home, meaning it must be synced and available across multiple platforms, multiple devices.*
- *Keyboarding skills are often critical, especially to summative year-end testing.*
- *Technology in the classroom is the norm, but teacher training isn't.*
- *Education is focused on college and career with tech an organic, transformative tool.*
- *Teachers have moved from 'sage on the stage' to 'guide on the side'.*
- *Students have been raised on digital devices. They want to use them as learning tools.*
- *Using technology is no longer what 'geeky' students do. It's what all students want to do.*
- *Printing is being replaced with sharing and publishing.*
- *More teachers are willing to try technology when used authentically.*

In response, here are changes you'll find in the Sixth Edition:

- *The lesson audience is now as likely to be the **grade-level teacher as the tech teacher**. You'll learn how to unpack the lesson regardless of which hat you wear.*
- *Ideas are provided to deliver lessons on all **popular digital devices** including desktop computers, Chromebooks, and iPads.*
- *The importance of **higher order thinking**— analysis, evaluation and synthesis—is called out.*
- *The importance of '**habits of mind'—**critical to college and career goals—is included.*
- *It's easy to recognize which **skills are scaffolded** from earlier lessons and which are new.*
- *Each lesson points out **academic applications** of technology.*
- *Students learn to **understand the process**, not just replicate a skill.*
- ***Collaboration and sharing** is often required.*

- *Differentiation is encouraged. Teachers learn strategies to meet students where they learn.*
- *Each lesson includes a **warm-up and exit ticket**, to assess and reinforce student learning.*
- *A **Table of Images** and a **Table of Assessments** are included for easy reference.*
- *Updated **Scope and Sequence** includes more references to Common Core.*
- ***Curriculum Maps** shows which month topics are covered as well as which grade.*
- *Each grade-level curriculum includes **student workbooks** (sold separately).*
- *Each grade level has a **lesson on coding**. These are free-standing and can be moved to any spot in the curriculum—like December for Hour of Code.*

Who Needs This Book

You are the Tech Specialist, Coordinator for Instructional Technology, IT Coordinator, Technology Facilitator or Director, Curriculum Specialist, or tech teacher—tasked with finding the right project for a classroom. You have a limited budget, less software, and the drive to do it right no matter roadblocks.

Figure 1—Tomorrow's student
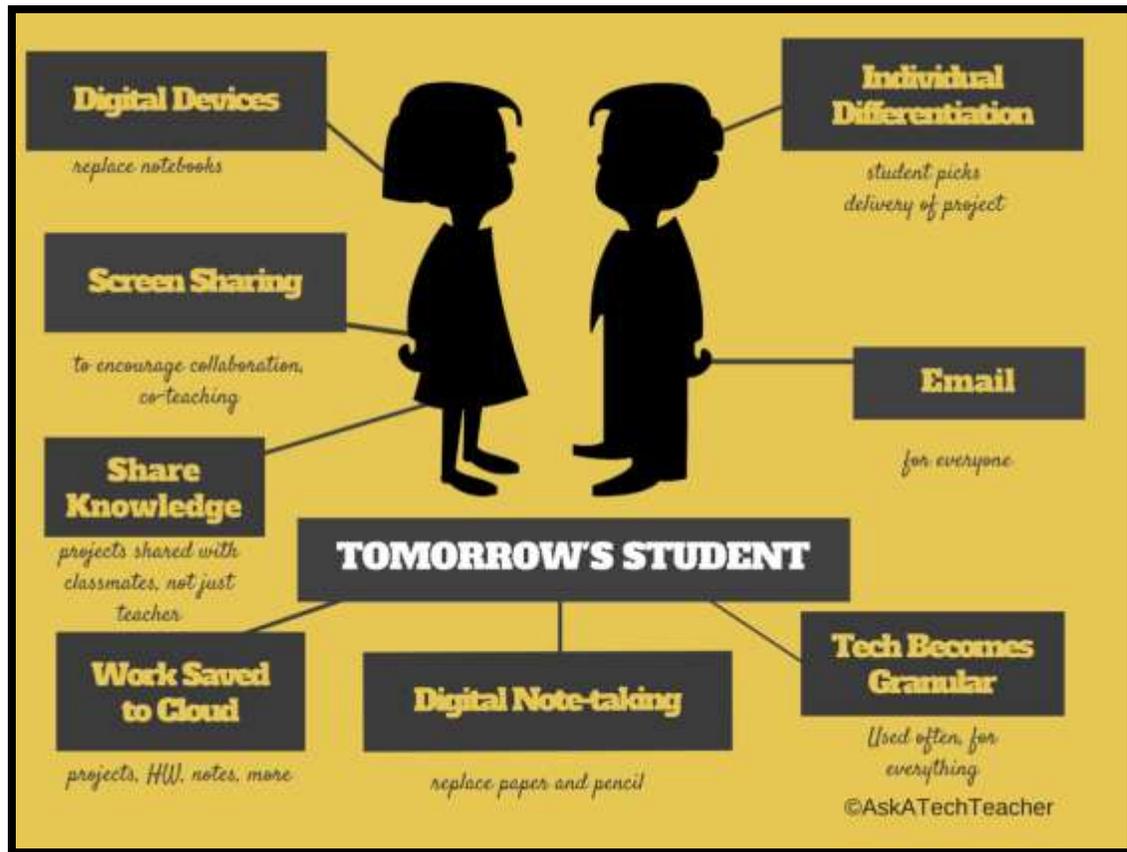
Or you are the classroom teacher, a tech enthusiast with a goal this year—and this time you mean it— to integrate the wonders of technology into lessons. You've seen it work. Others in your PLN are doing it. And significantly, you want to comply with Common Core State Standards, ISTE, your state requirements, and/or IB guidelines that weave technology into the fabric of inquiry.

You are a homeschooler. Even though you're not comfortable with technology, you know your children must be. You are committed to providing the tools s/he needs to succeed. Just as important: Your child WANTS to learn with these tools!

How do you reach your goal? With this curriculum. Teaching children to strategically and safely use technology is a vital part of being a functional member of society—and should be part of every school's curriculum. If not you (the teacher), who will do this? To build Tomorrow's Student (*Figure 1)* requires integration of technology and learning. We show you how.

How to Use This Book

Figure 2a shows what's at the beginning of each lesson. *Figure 2b* shows what you'll find at the end:

Figure 2a-b—What's in each lesson?
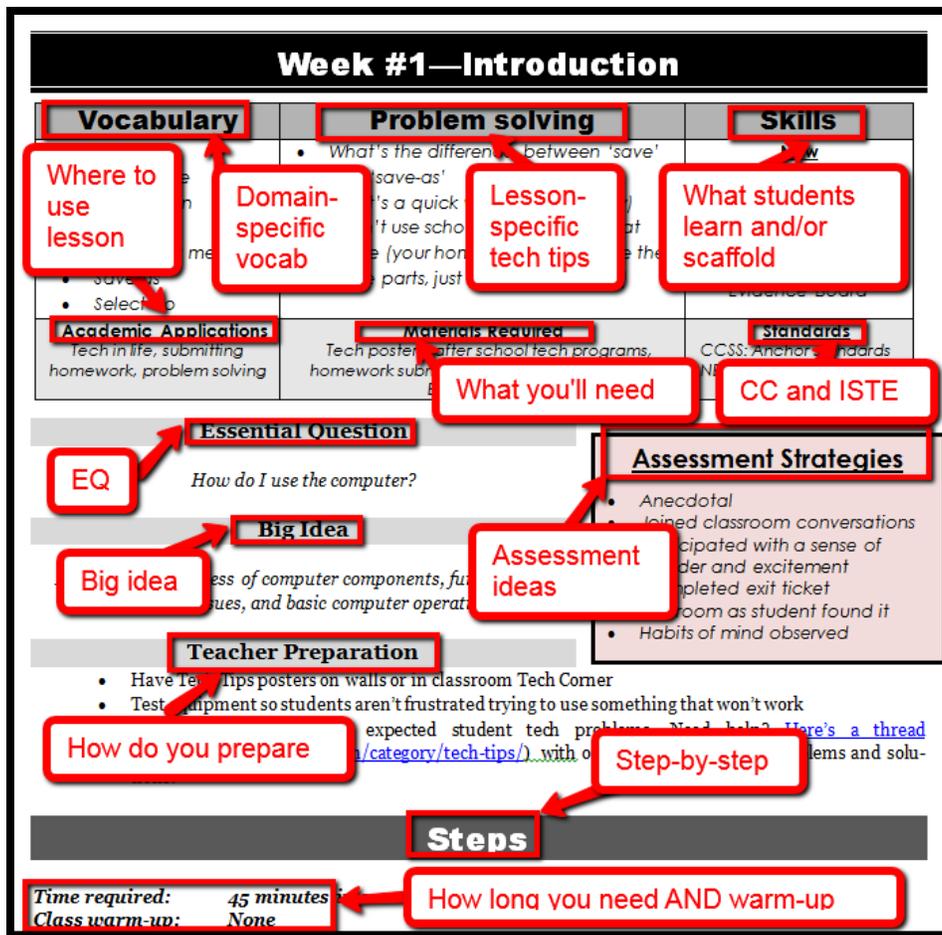
- *Academic Applications*
- *Assessment Strategies*
- *Big Idea*
- *Class Warm-up*
- *Essential Question*

- *Material Required*
- *Problem solving*
- *Skills*
- *Standards*
- *Steps*

- *Teacher Prep*
- *Time Required*
- *Vocabulary*
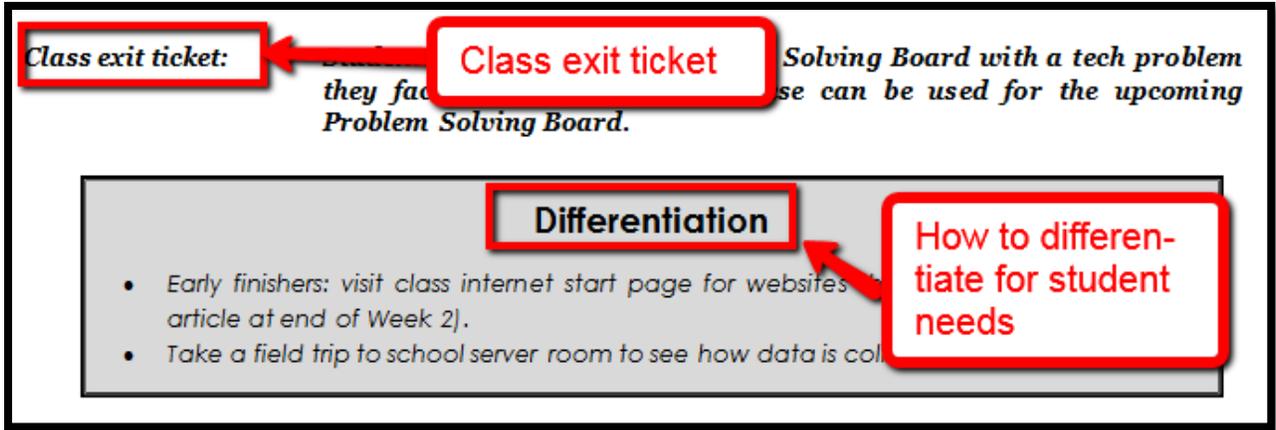
- *Class differentiation strategies*
- *Class exit ticket*

The curriculum map in *Figure 3* shows what's covered in which grade. Where units are taught multiple years, teaching reflects increasingly less scaffolding and more student direction.

Figure 3—Curriculum Map—K-8

	Mouse Skills	Vocabulary - Hardware	Problem-solving	Platform	Keyboard	WP	Slide-shows	DTP	Spread-sheet	Google Earth	Search/ Research	Graphics/	Co-ding	WWW	Games	Dig Cit
K	☺	☺	☺	☺	☺					☺		☺	☺	☺		☺
1	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	☺		☺
2		☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	☺		☺
3		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
4		☺	☺		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
5		☺	☺		☺	☺		☺	☺	☺	☺	☺	☺	☺		☺
6		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
7		☺	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺
8		☺	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺

If you're the grade-level teacher, here's how to use the map:

- Determine what skills were covered earlier years. Expect students to transfer that knowledge to this new school year.
- Review the topics and skills, but don't expect to teach.

- If there are skills listed as covered prior years, confirm that was done. If they weren't (for whatever reason), when you reach lessons that require the skills, plan extra time.

Figure 4 is a month-by-month curriculum map for this grade level. In the student workbook, students complete this themselves or as a group when they finish each lesson.

*Figure 4—Curriculum Map—Kindergarten, month-to-month*

	Sept Wk1-4	**Oct** Wk5-8	**Nov** Wk9-12	**Dec** Wk13-16	**Jan** Wk17-20	**Feb** Wk21-24	**March** Wk25-28	**April** Wk29-32
Blogs								
Class mgmt tools	X	X						X
Coding/Programming			X					
Communication			X	X	X	X		
Computer etiquette	X							
Critical thinking		X	X	X				
DTP								
Digital Citizenship	X		X	X		X	X	
Google Earth					X			
Graphics				X		X	X	X
Hardware/Software	X					X		
Internet		X	X					
Internet privacy			X				X	
(Pre)Keyboarding	X	X	X	X	X	X	X	X
Problem solving	X	X	X	X	X	X	X	X
Publishing/sharing					X	X	X	X
Research					X			
Slideshows							X	X
Speaking and Listening							X	X
Spreadsheets								
Visual learning			X	X			X	
Vocabulary	X	X	X	X	X	X	X	X
Webtools	X	X	X		X		X	X
Word Processing					X	X	X	X

Some topics are covered every month. The strategy: spiral and scaffold learning until it's habit.
Here are hints on using this curriculum:

- Join the free grade-level companion wiki (websites listed earlier in this Introduction—grades K-5 only). Difficulty? Email askatechteacher@gmail.com for a Join Code. Here, you get weekly videos on how to teach the lessons and free mentoring via our Office Hours Google Hangouts.

- Invest in student digital workbooks (sold separately — http://bit.ly/1FVU6Sm), a student-centric companion to the teacher guide. Here are suggestions on use:

    o *Full-color projects are at student fingertips complete with examples and directions (licensing varies depending upon the plan).*
    o *Embedded links enable students to click and go—no searching for the site, typing in addresses, or suffering through spelling errors.*
    o *Workbooks can be viewed and annotated through a reader.*
    o *Students can work at their own pace.*

- If you want to use student workbooks in your class, here's how:

    o *buy a multi-user license (room, school, or district) to install eworkbooks on multiple devices (even at student's home with some licenses)*
    o *provide a weekly preview by reviewing the lesson on the class screen*

Figure 5--Student workbook

- Teach lessons in the order presented in the book (grades K-5). Lessons introduce, reinforce, and circle back on skills and concepts. Certain skills scaffold others so you want them solid before moving on. Resist the urge to mix up lessons, even if your perfect time for a particular project comes earlier/later than placement in the book. **One exception: Coding/Programming**. Unpack this lesson when it works best for you.

- Don't expect to get through all of these lessons the first time you teach the curriculum. Lessons rely on scaffolded knowledge from prior years. Until students have built that foundation, they will move more slowly through assigned activities. Adapt each lesson for the skill level of your student group. As they become more accomplished, expect more out of them.

- Personalize the skills taught in each lesson to your needs with 'Academic Applications'. These are suggestions for blending learning into your school curriculum.

- Each lesson starts with a warm-up to get students back into tech and give you time to finish up a previous class. This is especially useful to the tech teacher and the LMS.

- Each class includes an Exit Ticket to wrap up learning.

- 'Teacher Preparation' often includes chatting with the grade-level team. Why?

    o *tie tech into their inquiry*
    o *offer websites for early-finishers that address their topics*

- Check off completed items on the line preceding the activity so you know what to get back to when you have time. If you have the ebook, use iAnnotate, Goodreader, Subtext, Notable (Google for websites), or another annotation tool that works for your devices.

- Some lessons are to be taught throughout the year, circling back often on content. These include keyboarding, digital citizenship, and problem solving.
- Some lessons offer several activities that will meet the lesson goals outlined in the Essential Question and the Big Idea. Pick the activity (or activities) that work well for your student group. Alternatively, you can let students pick the one they like best.
- Lessons expect students to develop 'habits of mind'. You can read more about Art Costa and Bena Kallick's discussion of these principles at http://habitsofmind.org, in *Figure* 6, and in the article at the end of Lesson #1. In a sentence: Habits of Mind ask students to engage in their learning, not simply memorize.

Figure 6—Habits of Mind
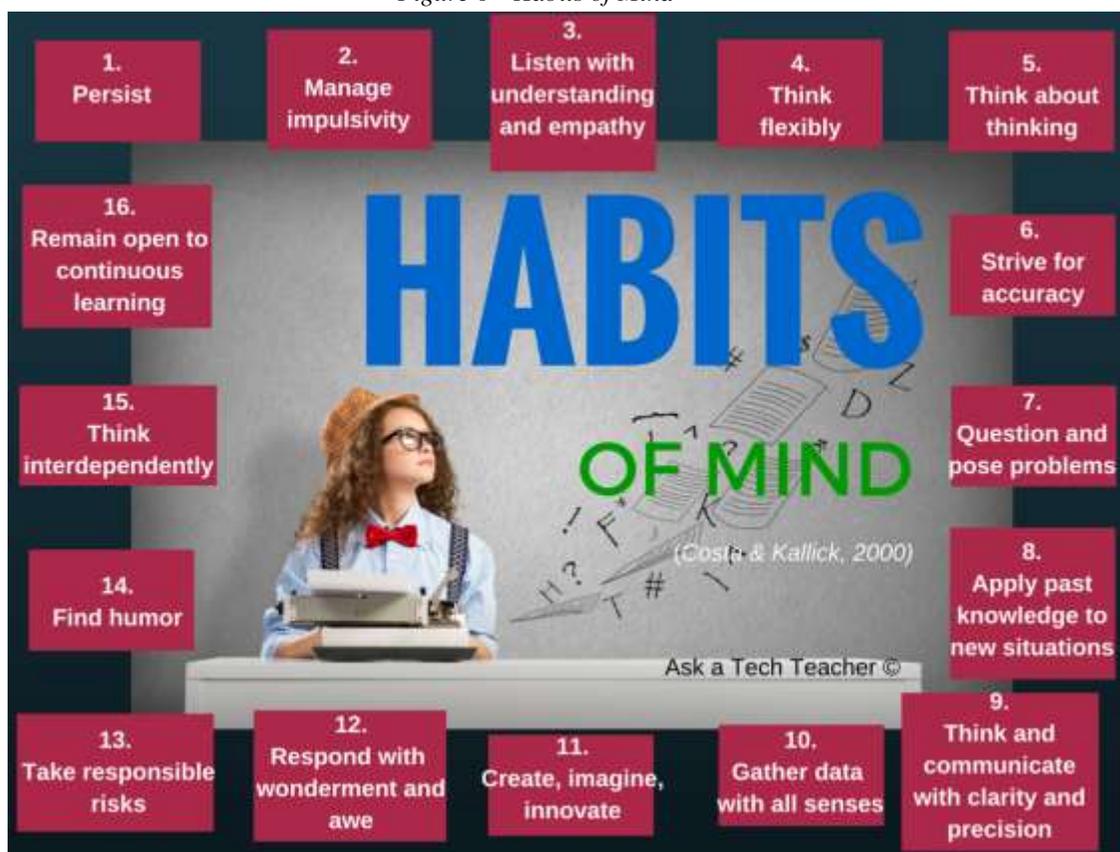
- Sometimes the class is too excited about what they're learning to move on. Take an extra week. Most schools run 35-40 weeks. This book includes 32 lessons.
- If a link doesn't work, copy-paste the address into your internet browser. **A note: Links die.** If a link doesn't work even after copy-pasting, email us. We may have a work-around.
- If there is no link, this means it was already provided or shows up readily in a Google search.
- Consider expecting students to back up their work—as a life habit. This can be onto a flash drive, by emailing the document to themselves, or saving to a secondary location.
- Expect students to be risk takers. Don't rush to solve their problems. Ask them to think how it was done in the past. Focus on problems listed in the lesson, but embrace all that come your way. These are important scaffolding for student critical thinking and tech troubleshooting when you won't be there to help.

- Expect students to direct their own learning. You are a 'guide on the side', a facilitator not lecturer. Learning is accomplished by both success and failure. Don't expect free time while students work. Move among them to provide assistance, and observations on their keyboarding, problem-solving, and vocabulary decoding skills.
- Encourage student-directed differentiation. If the Big Idea and Essential Question can be accommodated in other ways, embrace those.
- Always use lesson vocabulary. Students gain authentic understanding of word use by your example. A complete glossary of lesson vocabulary can be found in the Companion Wiki. Here, you'll find several hundred easy-to-understand definitions of domain-specific tech words.
- If you need resources on specific topics, click for websites (http://askatechteacher.com/great-kids-websites/) or apps (http://askatechteacher.com/great-apps/).
- If the poster you want is not in the Appendix, there are free printable copies of many here (http://askatechteacher.com/getting-started/free-posters/).

- *indicates video*

- *indicates work with a partner*

- *indicates an article*

- *indicates a topical poster (in the Appendix)*

- *indicates annotatable material available in student workbooks (like rubrics)*

- Use as much technology as possible in your classroom—authentically and agilely. Make it adaptive and native. Encourage students to do the same whether it's a smartphone timing a quiz, a video of activities posted to the class website, or an audio file with student input. If you treat tech as a tool in daily activities, so will students.
- If you have the digital book, zoom in on posters, rubrics, lessons to enlarge as needed.
- Every effort has been made to accommodate most digital devices. You will often see examples in multiple platforms. If the activity is impossible in a particular digital device (i.e., iPads don't have mouses; software doesn't run in Chromebooks), focus on the **Big Idea and**

Essential Question—the skill taught and its application to inquiry. Adapt instructions to the tool you use as you work through the steps.

Figure 7—Compatible digital devices

A desktop PC, iMac, laptop, MacBook, Chromebook, iPad, or smartphone

- Throughout the year, circle back on concepts. It takes five times to get a skill (*Figure 8*)—

  - o **First**:   *They barely hear you*
  - o **Second**: *They try it*
  - o **Third**:   *They remember it*

  - o **Fourth**: *They use it outside of class*
  - o **Fifth**:   *They tell a friend*

- **Need more help?** Go to Ask a Tech Teacher© (http://askatechteacher.com) run by teachers using the curriculum or the discussion board on the grade-level companion wiki. Leave a comment or question. You can also email admin@structuredlearning.net or askatechteacher@gmail.com.

Typical Lesson

Each lesson requires about 45 minutes a week, either in one sitting or spread throughout the week, and can be unpacked:

- *In the grade-level classroom*
- *In the school's tech lab*

Both are covered in each lesson. In general terms, here's how to run a lesson in **the tech lab**:

- Post a **simple written schedule** for the day on the class screen:

  - o *Warm up*
  - o *Main activity*
  - o *Exit ticket*

  This gives students a visual guideline. Add it to your class blog or website to serve those students who aren't present. Expect students to start with the warm-up when they arrive to class.
- **Warm up about 10 minutes,** often with typing practice.

Figure 8--It takes 5 times...

It takes 5 times to get buy-in:
you hope it'll go away
you try it
you remember it
you use it ouside of class
you teach a friend

- Complete student **Board presentations** (grades 3-8).
- If it's the end of a grading period, review skills accomplished with **Scope and Sequence**.
- If starting a **new project, review it**. If in the middle of one, use the balance of class to work towards completion. Monitor, answer questions, and help as needed.
- As often as possible, give **younger students two weeks** to finish a project—one to practice, one to save/export/share/print. This redundancy reinforces new skills and mitigates stress. If it's week two, start with the project and finish with typing so students have ample time to work.
- List age-appropriate websites on class internet start page that **tie into inquiry** for students who complete the current project. Students know these websites can be used during free time.
- **Class exit ticket** might include lining up in arrays, answering a poll posted on the class screen, or simply have classmates verify that neighbors left their stations as they found it.
- **Use tech wherever possible.** Model what you ask of them.

Here's how to run the lesson in **the grade-level classroom**:

- Take the lesson pieces mentioned above and scatter them throughout the week. For example:

    o *3-10 minutes for the class warm-up—at the start of the week*
    o *10-15 minutes keyboarding practice—any day*
    o *10-15 minutes Board presentations—any day*
    o *15-35 minutes for the project—any day*
    o *2-3 minutes for class exit ticket—to reinforce learning*

- **Check off accomplished activities** so you know what remains each week.
- In every class, **use tech wherever possible.**

Here are useful pieces to extend this curriculum:

- *Teacher manual—the roadmap. That's this book.*
- *Student workbooks (http://bit.ly/1FVU6Sm)—allow students to be self-paced*
- *Companion videos—preview before lesson. Free with K-5 books*
- *Digital Citizenship curriculum (http://bit.ly/1JgKioZ)— if this is a focus of your school*
- *Keyboarding Curriculum (http://bit.ly/1JgKy7t)— if this is a focus of your school*
- *Class internet start page—provides a class agenda, themed links, and more. Created in Protopage (Figure 9a), LiveBinders (Figure 9b), Symbaloo (Figure 9c) or another option.*

Figure 9a—Start page using Protopage; 9b—LiveBinders; 9c—Symbaloo

Avoid printing and/or registering for online tools when possible. A useful work-around is a screenshot:

- **Windows**: *Snipping Tool*
- **Chromebook:** *hold down control key and press window switcher key*
- **Mac**: *Command Shift 3 for a full screenshot; Command Shift 4 for a partial screenshot*
- **Surface tablet**: *hold down volume and Windows button*
- **iPad**: *hold Home button and power button at same time*
- **Online**: *a screenshot tool like Jing, Nimbus, or Snagit*

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About the Authors

Ask a Tech Teacher *is a group of technology teachers who run an award-winning resource* [blog](#)*. Here they provide free materials, advice, lesson plans, pedagogical conversation, website reviews, and more to all who drop by. The free newsletters and articles help thousands of teachers, homeschoolers, and those serious about finding the best way to maneuver the minefields of technology in education.*

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K-6 TECHNOLOGY SCOPE AND SEQUENCE©

Aligned with ISTE Standards

Check each skill off with I/W/M/C under ''ISTE' as students accomplish it
('ISTE' refers to the ISTE Standard addressed by the skill)

Intentionally deleted

Lesson #1 Introduction

Vocabulary	Problem solving	Skills
• *Delete* • *Digital citizen* • *Digital student* • *Double-click* • *Habits of Mind* • *Internet start page* • *Save early save often* • *Select-do* • *Tower* • *Website*	• *What if double-click doesn't work (push enter)* • *Why can't I drink water at my computer—I can at home?* • *Why can't I touch neighbor's computer?* • *Why can't I blame the computer if it's at fault?* • *I got off of website (use back arrow on browser)*	**New** *Class start page* *Digital citizenship* *Digital tools* *Shortkeys* *Tech rules* *Visiting websites* **Scaffolded**
Academic Applications *General overview*	**Materials Required** *Class rules, computer basics websites*	**Standards** *CCSS: Anchor Standards* *NETS: 5a, 6a*

Essential Question

How do I use technology?

Big Idea

Students develop an awareness of computer components, fundamental hardware issues, and basic computer operations

Teacher Preparation

- Have computer basics websites on class internet start page.
- Talk with the grade level team so you tie into their conversations.
- Have a list of class rules that worked in past years. Have a marker to add student suggestions to list.
- Test equipment to be sure everything works.
- Have several parent helpers (if possible) on early tech lessons.
- Integrate domain-specific tech vocabulary into the lesson.
- Know whether you need extra time to complete this lesson.

Assessment Strategies

- *Anecdotal observation*
- *Joined class conversations*
- *Decisions followed class rules*
- *Left room as s/he found it*
- *Higher order thinking: analysis, evaluation, synthesis*
- *Habits of mind observed*

Steps

Time required: **45 minutes in one sitting or spread throughout the week**
Class warm-up: **None**

_____Start class by explaining your expectations for student time with you. Keep in mind framework discussed in the ***21st Century Tech-infused Lesson Plan*** and ***Habits of Mind*** (articles at the end of the lesson)—that you expect persistence, thoughtful work, independence and more.

_____Discuss student tech goals in terms of how tech supports student education and life goals. What are those? Help students phrase goals as authentic tasks:

Not: *I want to learn to draw online.*
Rather: *I want to communicate better with tech tools.*

_____Clarify technology in student lives by drawing a silhouette of a student on the class screen and ask students what they use technology for in their lives. As they mention activities, add them to your drawing. It may look like the digital student in *Figure 10:*

Figure 10—Digital student
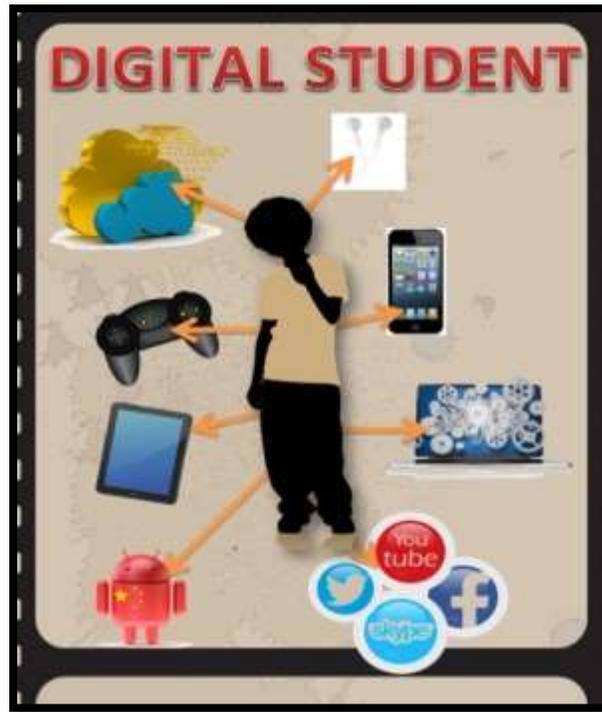
_____Tour classroom. Show students where everything is. Review important posters, i.e., the difference between 'save' and 'save-as' (*Figure 11a*), the difference between 'backspace' and 'delete' (*Figure 11b*), and portrait/landscape orientation of documents (*Figures 11c* and *11d*). Full-size posters for *Figures 11a-d* and *Figures 12a-c* are in Appendix.

Figure 11a-d—Wall posters

_____Point out the Undo shortkey (*Figure 12a*).
_____What does 'save early save often' (*Figure 12b*) mean? Why is it a good idea? More on that later.
_____What does 'Select-Do' (*Figure 12c)* mean? (Hint: You must select something before you can do to it).

Figure 12a-c—More wall posters

_____As these topics come up organically in lessons, point out the posters as reference.
_____Collect rules from students to guide classroom actions, including:

- *no excuses; don't blame others; don't blame the digital device*
- *save early, save often—about every ten minutes*
- *no food or drink around digital devices*
- *respect the work of others and yourself*
- *keep hands to yourself. Help neighbors, but with words only.*
- *listen politely to classmates*
- *don't interrupt classmates*
- *arrive to class prepared for activities*
- *take turns while speaking*

_____You may start with a list like *Figure 13* from the prior year:

Figure 13—Class tech rules
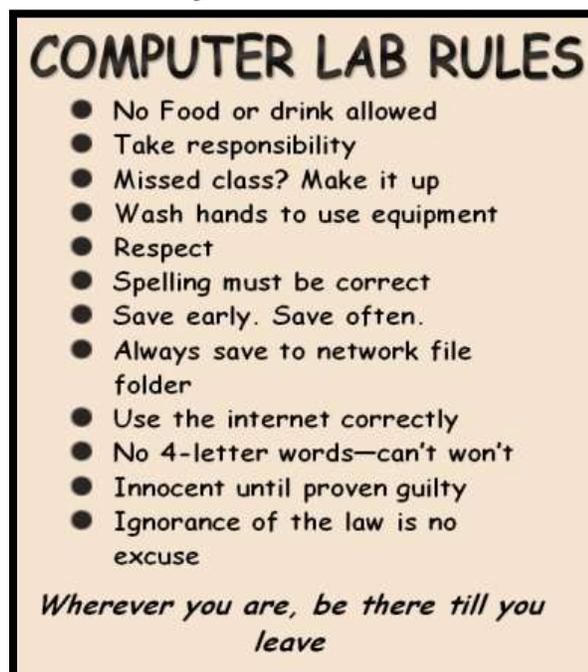
_____Discuss **digital citizenship**. You'll cover it in depth later this year and discuss it every time students use the internet. If you want more, see K-8 Digital Citizenship curriculum (http://bit.ly/1JgKioZ), a companion to this curriculum. Remind students any time they visit the internet, they do so safely and legally.

_____Have students sit at their stations ready to use the computer. Review posture and position (*Figure 14a* and *Figure 14b*):

Figure 14a—Computer posture; 14b—Position
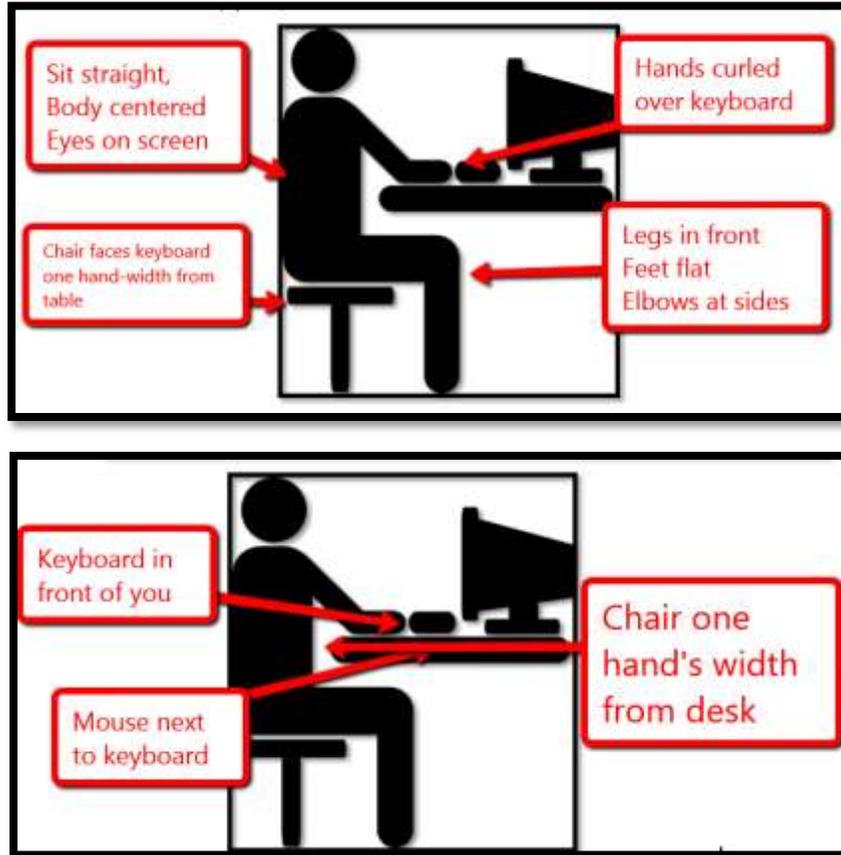
_____Open the class internet start page on the class screen (read ***Which Class Internet Start Page is Best*** at the end of the lesson). This is where students find websites to be used during the current week, bundles of themed websites, and more.

_____With whatever time is left, have students visit these websites on computer basics:

- *Computer basics (http://www.abcya.com/input_output.htm)*
- *Computer Insides (http://bit.ly/1I2HDxU)*
- *Computer puzzle (http://bit.ly/1D3jTgg)*
- *Find the Technology (http://bit.ly/1gXaw7V)*

_____For more on teaching tech, see the articles at the end of the lesson, ***6 Tech Best Practices for New Teachers*** and ***Do You Make These 9 Mistakes?***

_____Continually throughout class, check for understanding.

Class exit ticket: ***Load a poll on the class screen where students click their answer to 'How I used tech this summer' as they leave class. You can use PollDaddy (http://polldaddy.com) or Google Forms.***

Differentiation

- *Add a field trip to the server room. Open up the ceiling and track all the cables from various classrooms back to the switches and servers, and then to the modem.*
- *We often suggest discussing issues with students. This is part of an inquiry-based classroom. For more on that, check "**10 Ways to be an Inquiry-based Teacher**" at the end of this lesson.*
- *Consider parents full-fledged stakeholders in Kindergartners' tech education. For more on that, read "**What Parents Should Know About Computers and the Internet**" at the end of this lesson. Read "**How to Use Web-based Tools to Communicate with Parents**" for ideas.*
- *Anytime you can inject tech into the class, do it! Students love seeing gadgets in action. For example—take a video of students working at their computers and upload to class website/blog/wiki.*

Computing—the art of calculating how much time you wasted and money you spent in a doomed attempt to master a machine with a mind of its own.

NOTES:

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21ˢᵗ Century Lesson Plan

Technology and the connected world put a fork in the old model of teaching—teacher in front of the class, sage on the stage, students madly taking notes, textbooks opened to a particular chapter being reviewed, homework as worksheets based on the text, tests regurgitating important facts. Did I miss anything? This model is outdated **not because it didn't work** (many statistics show students ranked higher on global testing years ago than they do now), **but because the environment changed.** Our classrooms are more diverse. Students are digital natives, already in the habit of learning via technology. The 'college and career' students are preparing for is different so the education model must be different.

Preparing for this new environment requires radical changes in teacher lesson plans. Here are seventeen concepts you'll want to include in your preparation:

1. Students are graduating from high school unable to work in the jobs that are available. It's the teacher's responsibility to insure students **learn over-arching concepts** such as how to speak to a group, how to listen effectively, how to think critically, and how to solve problems. The vehicle for teaching these ideas is history, science, literature, but they aren't the goal.
2. To focus on the over-arching concepts above, make earning **platform-neutral**. For example, when teaching spreadsheets, make the software or online tools a vehicle for practicing critical thinking, data analysis, and evidence-based learning, not for learning one brand of software or a particular spreadsheet tool. Besides, what you use at school may not be what students have at home. You don't want students to conflate your lessons with 'something done at school'. You want them to apply them to their life.
3. **Morph the purpose from 'knowing' to 'understanding'**. Teach the process, not a skill. Students should understand why they select a particular tool, not just how to use it. Why use a slideshow instead of a word processing program? Or a spreadsheet instead of a slideshow? Expect students to be critical thinkers, not passive learners.
4. **Transfer of knowledge is critical.** What students learn in one class is applied to all classes (where relevant). For example, *word study* is no longer about memorizing vocabulary, but knowing how to decode unknown academic and domain-specific words using affixes, roots, and context.
5. **Collaboration and sharing** is part of what students learn. They help each other by reviewing and commenting on projects before submittal to the teacher (GAFE makes that easy). The definition of 'project' itself has changed from 'shiny perfect student work' to *review-edit-rewrite-submit*. You grade them on all four steps, not just the last one. This makes a lot of sense—who gets it right the first time? I rewrote this article at least three times before submitting. Why expect differently from students? **Plus:** No longer do students submit a project that only the teacher sees (and then a few are posted on classroom bulletin boards). Now, it is shared with all classmates, so all benefit from every student's work.
6. **Self-help methods** are provided and you expect students to use them. This includes online dictionaries and thesauruses, how-to videos, and access to teacher assistance outside of class. These are available

24/7 for students, not just during classroom hours. This happens via online videos, taped class sessions, the class website, and downloadable materials so students don't worry that they 'left it in their desk'.

7. **Teachers are transparent** with parents. You let them know what's going on in the classroom, welcome their questions and visits, communicate often via email or blogs when it's convenient for them. That doesn't mean you're on duty around the clock. It means you differentiate for the needs of your parents. Your Admin understands that change by providing extended lunch hours, compensatory time off, or subs when you're fulfilling this responsibility.

8. **Failure is a learning tool.** Assessments aren't about 'getting everything right' but about making progress toward the goal of preparing for life

9. **Differentiation is the norm.** You allow different approaches as long as students achieve the Big Idea or answer the Essential Question. You aren't the only one to come up with these varied approaches—students know what works best for their learning and present it to you as an option.

10. The **textbook is a resource**, supplemented by a panoply of books, primary documents, online sites, experts, Skype chats, and anything else that supports the topic. This information doesn't always agree on a conclusion. Students use habits of mind like critical thinking, deep learning, and evidence-based decisions to decide on the right answers.

11. The **lesson plan changes from the first day to the last**—and that's OK. It is adapted to student needs, interests, and hurdles that arise as it unfolds, while staying true to its essential question and big idea.

12. **Assessment** includes a quiz or test, but it also judges the student's transfer of knowledge from other classes, their tenacity in digging into the topic, their participation in classroom discussions, and more.

13. **Vocabulary is integrated into lessons,** not a stand-alone topic. Students are expected to decode words in class materials that they don't understand by using quickly-accessed online vocabulary tools, or deriving meaning from affixes, roots, and context.

14. **Problem solving is integral** to learning, not a stressful event. It's viewed as a life skill. Who doesn't have problems every day that must be solved? Students are expected to attempt a solution using tools at their disposal (such as prior knowledge, classmates, and classroom resources) before asking for help.

15. **Digital citizenship is taught,** modeled and enforced in every lesson, every day, and every classroom. It's no longer something covered in the 'tech lab' because every class has as much potential for working online as offline. Every time the lesson plan calls for an online tool or research using a search engine or a YouTube video, teachers review/remind/teach how to visit the online neighborhood safely. It's frightening how students blithely follow weblinks to places most parents wouldn't allow their child to visit in their neighborhood. Just as students have learned how to survive in a physical community of strangers, they must learn to do the same in a digital neighborhood.

16. **Keyboarding skills are granular.** They aren't used only in the computer lab, but in every class students take. If students are using iPads, Chromebooks, laptops, or desktops for learning, they are using keyboarding—which means they must know how to do so efficiently, quickly, and stresslessly. Since keyboarding benefits all classes, all teachers–including the librarian–become partners in this effort. I go into classrooms and show students the broad strokes; the teacher reinforces it every time the student sits down at the computer.

17. **Play is the new teaching.** It is a well-accepted concept for preschoolers and has made a successful leap to the classroom, relabeled as 'gamification'. Use the power of games to draw students into learning and encourage them to build on their own interests. Popular games in the classroom include Minecraft, Mission US, Scratch, and others on this list. If your school is new to this concept, clear it with admin first and be prepared to support your case.

Habits of Mind vs. Common Core vs. IB

Pedagogic experts have spent an enormous amount of time attempting to unravel the definition of 'educated'. It used to be the 3 R's—reading, writing, and 'rithmetic. The problem with that metric is that, in the fullness of time, those who excelled in the three areas weren't necessarily the ones who succeeded. As long ago as the early 1900's, Teddy Roosevelt warned:

> *"C students rule the world."*

It's the kids without their nose in a book that notice the world around them, make connections, and learn natively. They excel at activities that aren't the result of a GPA and an Ivy League college. Their motivation is often failure, and taking the wrong path again and again. As Thomas Edison said:

> *"I have not failed. I've just found 10,000 ways that won't work."*

Microsoft founder, Bill Gates, and Albert Einstein are poster children for that approach. Both became change agents in their fields despite following a non-traditional path.

In the face of mounting evidence, education experts accepted a prescriptive fact: student success is not measured by milestones like 'took a foreign language in fifth grade' or 'passed Algebra in high school' but by how s/he thinks. One curated list of cerebral skills that has become an education buzz word is Arthur L. Costa and Bena Kallick's list of sixteen what they call Habits of Mind (Copyright ©2000):

1. *Persisting*
2. *Managing impulsivity*
3. *Listening with Understanding and Empathy*
4. *Thinking Flexibly*
5. *Thinking about Thinking*
6. *Striving for Accuracy*
7. *Questioning and Posing Problems*
8. *Applying Past Knowledge to New Situations*
9. *Thinking and Communicating with Clarity and Precision*
10. *Gathering Data through All Senses*
11. *Creating, Imagining, Innovating*
12. *Responding with Wonderment and Awe*
13. *Taking Responsible Risks*
14. *Finding Humor*
15. *Thinking Interdependently*
16. *Remaining Open to Continuous Learning*

Together, these promote strategic reasoning, insightfulness, perseverance, creativity and craftsmanship.

But they're not new. They share the same goals with at least three other widely-used education systems: 1) Common Core (as close as America gets to national standards), 2) the International Baccalaureate (IB) program (a well-regarded international curriculum, much more popular outside the
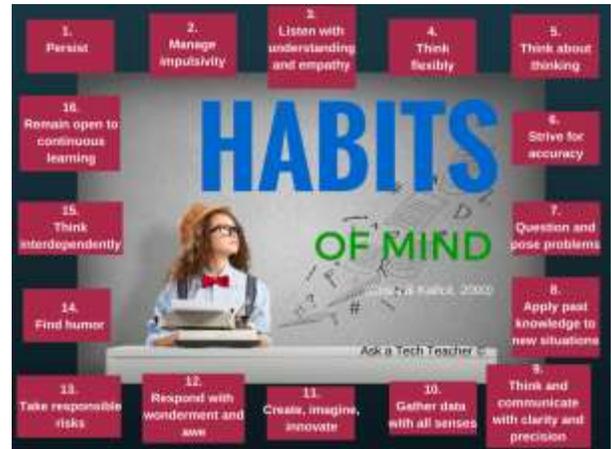
US than within), and 3) good ol' common sense. Below, I've listed each Habit of Mind with a brief explanation of what that means (in italics). I then point out connections to Common Core, the IB Program, and the common sense your grandma shared with you. The result is a compelling argument that education is less a data download and more a fitness program for our brains.

Persisting

Stick with a problem, even when it's difficult and seems hopeless.

Winston Churchill said, "Never, never, in nothing great or small, large or petty, never give in..." The same decade, Albert Einstein said:

> *"It's not that I'm so smart, it's just that I stay with problems longer."*

The Common Core is not a curriculum, rather a collection of forty-one overarching Standards in reading, writing, language, math, and speaking/listening that shape a student's quest for college and career. Sprinkled throughout are fundamental traits that go beyond the 3R's and delve deeply into the ability of a student to think. The math standards require students learn to 'persevere in solving problems*'.*

The IB Program has twelve attitudes that are fundamental to every learner: *appreciation, empathy, commitment, enthusiasm, confidence, independence, cooperation, integrity, creativity, respect, curiosity, and tolerance.* Students exhibiting the attitude of commitment persist in their own learning, persevere no matter the difficulties.

Managing Impulsivity

Consider options. Think before speaking.

Among his endless words of wisdom, Benjamin Franklin said:

> *"It is easier to suppress the first desire than to satisfy all that follow it."*

Common Core Standards tell us to *'*Use appropriate tools strategically'.

Besides the twelve attitudes listed above, the IB Program names ten traits that profile a learner: *inquirer, knowledgeable, thinker, communicator, principle, open-minded, caring, a risk-taker, balanced, and reflective.* Students who are reflective give thoughtful consideration before acting.

For the rest of the article, click http://wp.me/pZUgb-coJ
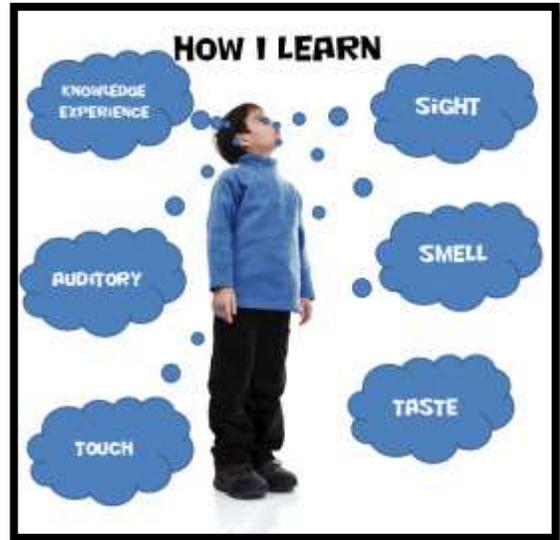
Which Class Internet Start Page is Best?

The internet is unavoidable in education. Students go there to research, access homework, check grades, and a whole lot more. As a teacher, you do your best to make it a friendly, intuitive, and safe place to visit, but it's challenging. Students arrive there by iPads, smartphones, links from classroom teachers, suggestions from friends—the routes are endless. The best way to keep the internet experience safe is to catch users right at the front door, on that first click.

How do you do that? By creating a **class internet start page**. Clicking the internet icon opens the World Wide Web to a default page. Never take your device's default because there's no guarantee it's G-rated enough for a typical classroom environment. Through the 'settings' function on your browser, enter the address of a page you've designed as a portal to all school internet activity, called an 'internet start page'. Sure, this takes some time to set-up and maintain, but it saves more than that in student frustration, lesson prep time, and the angst parents feel about their children entering the virtual world by themselves. They aren't. You're there, through this page. Parents can save the link to their home digital device and let students access any resources on it, with the confidence of knowing you've curated everything.

In searching for the perfect internet start page, I wanted one that:

- *quickly differentiates for different grades*
- *is intuitive for even the youngest to find their page*
- *is customizable across tabbed pages to satisfy changing needs*
- *presents a visual and playful interface to make students want to go there rather than find work-arounds (a favorite hobby of older students)*
- *includes an immediately visible calendar of events*
- *hosts videos of class events*
- *provides collaborative walls like Padlet*
- *includes other interactive widgets to excite students about technology*

Here are four I looked at:

Symbaloo

A logo-based website curation tool with surprising flexibility in how links are collected and displayed. It's hugely popular with educators because collections are highly-visual and easy to access and use. Plus, Symbaloo collections made by one teacher can be shared with the community, making link collections that much easier to curate.

The downside: Links are about all you can collect on Symbaloo.

Only2Clicks

Great for youngers with their big bold buttons, colorful interface.
The downside: Too often, I have technical glitches as I try to set up collections. Maybe it's just me.
Another downside: Like Symbaloo, Only2Clicks is focused mostly on link curation. If I want to add widgets, I have to select from their list. With kids, no matter how comprehensive the list, it misses the one I really really need.

Ustart

Offers a good collection of useful webtools for students including links, news, calendar, notes, even weather. It provides tabs for arranging themed collections (like classes) and is intuitive to set up and use. It even includes options for embeddable widgets like Padlet. This is the closest to what I needed of all three.
Overall: This is a good alternative to the one I selected.

Protopage

Protopage did everything on my list. It's flexible, customizable, intuitive, and quick to use with a scalable interface that can be adjusted to my needs (2-5 columns, resize boxes, drag widgets between tabs—that sort). I set up a separate tab for each grade (or you can set up tabs for subjects). The amount of tabs is limited only by space on the top toolbar. Resources included on each tab can be curated exactly as you need. Mine includes:

- *oft-used websites*
- *themed collections of websites*
- *a To Do list*
- *an interactive map*
- *a calculator*
- *a calendar of events*

- *edit-in-place sticky notes*
- *pictures of interest*
- *rss feeds of interest*
- *weather*
- *news*
- *widget for polling the class (Padlet)*

In addition, the Protopage folks are helpful. Whenever I have a problem (which is rare), they fix it quickly. If you're looking for more details on how to set up a Protopage start page, here's a longish video with lots of details on setting up your Protopage internet start page (https://youtu.be/h5GQeva4zGU).

6 Tech Best Practices for New Teachers

A study released last year by the National Council on Teacher Quality found that nearly half of the nation's teacher training programs failed to insure that their candidates were STEM-capable. That means new teachers must learn how to teach science, technology, engineering and math on-the-job. Knowing that, there are six Best Practices teachers in the trenches suggest for integrating technology into classroom instruction:

Digital Citizenship

Many schools now provide digital devices for students, often a Chromebook or an iPad. Both are great devices, but represent a sea change from the Macs and PCs that have traditionally been the device-of-choice in education. While I could spend this entire article on that topic, one seminal difference stands out: Where PCs and Macs could be used as a closed system via software, materials saved to the local drive, and native tools, Chromebooks and iPads access the internet for everything (with a few exceptions) be it learning, publishing, sharing, collaborating, or grading. There's no longer an option to hide students from the online world, what is considered by many parents a dangerous place their children should avoid. In cyberspace, students are confronted often—if not daily—with questions regarding cyberbullying, digital privacy, digital footprints, plagiarism, and more.

The question is: **Who's teaching students how to thrive in this brave new world?** Before you move on to the next paragraph, think about that in your circumstance. Can you point to the person responsible for turning your students into good digital citizens? When second grade students use the internet to research a topic, do they know how to do that safely and legally?

When asked, most educators shrug and point at someone else. But it turns out too often, no one is tasked with providing that knowledge.

The answer to *who's responsible*: Everyone's responsible, starting with you, the New Teacher. Adopt this topic as your own, blend it into your teaching. Don't assume students know until they provide evidence of that.

Problem Solving

Lots of new teachers are intimidated by technology in their classrooms. Besides so many digital tools—how does anyone stay up to date on them—there's a worse problem: What happens when something doesn't work? Waiting for the school's IT folks can quickly derail a tech-infused lesson.

New teachers need to learn rudimentary tech troubleshooting like these 25 common problems, and then teach them to students. It shouldn't be a stand-alone lesson, rather teach it organically as it arises in class. When a student's headphones don't work, figure out how to solve it as a class. When a website freezes, show how to unfreeze and then move on with the lesson. Once a problem is solved, ask students to retain that knowledge,

transfer it to other classes, and teach their friends. Surprisingly quickly, students will no longer be slowed down by tech problems. Sure, they'll happen, but everyone will know the solution.

Keyboarding

PARCC and SBAC may have convinced many educators that keyboarding is a critical, granular skill, but it can't be taught by a once-a-week tech lab session of 10-15 minutes. Think how often keyboarding is part of student work—entering website addresses, adding comments to blogs, typing docs into GAFE, and taking online assessments. All of these require keyboarding skills, yet no one is responsible for teaching them.

Students who can keyboard well blossom. Those who can't—well, you know. Teaching keyboarding requires two steps: 1) an overarching curriculum map of what to teach when, and 2) reinforcement every time students sit at the computer. No matter the class, that teacher—be s/he history, literacy, social studies, math, reading, writing, or tech—reminds students of the right way to keyboard. It adds minutes to her teaching and saves students hours as practice and skill eventually (by about 4th grade) allows their typing fingers to keep pace with their thinking brain.

As the New Teacher, set the example. Blend keyboarding training into your lesson plans.

Vocabulary

An important part of succeeding in core classes is understanding the language. Current best practices embrace students **learning by using**. This isn't accomplished with memorized word lists. Instead, when students uncover unknown words, they decode them and then use them throughout the lesson. This is accomplished by addressing basic and academic vocabulary across all subjects, whether students are in history, science, math, or reading. Every digital device should be preloaded with instantly-available age-appropriate dictionaries that allow students to quickly research a word almost without leaving the academic topic.

Tenacity

Try, fail, try again. A lot of learning is accomplished by failure. Make this a strategy in the classroom. No longer have students submit a final project and get a grade. Instead, recognize Common Core's plan-revise-edit-rewrite as a flexible learning path that is both practical and transformative. This isn't just for writing, though. Use it for all projects—a science poster, a history magazine, and math homework. Always give students the opportunity to edit and resubmit work that's granular to their learning.

Student Choice

You teach the Big Idea; let students pick how they share their learning. You make an effort to teach using as many of the multiple intelligences as possible—audio, visual, tactile, kinesthetic, logical, or linguistic. Let students pick which approach best serves them in conveying what they've learned. They might write a report, share a movie, add music and color, draw a picture, or build an infographic. Introduce this wide variety of options early in the school year and make them available for as many assessments as possible.

These six topics integrate technology—a tool students want to use—into everything, making your teaching authentic, scalable, motivating, and rigorous.

<u>10 Ways to be an Inquiry-based Teacher</u>

It's hard to run an inquiry-based classroom. Don't go into this teaching style thinking all you do is ask questions and observe answers. You have to listen with all of your senses, pause and respond to what you heard (not what you wanted to hear), keep your eye on the Big Ideas as you facilitate learning, value everyone's contribution, be aware of the energy of the class and step in when needed, step aside when required. You aren't a Teacher, rather a guide. You and the class move from question to knowledge together.

Because everyone learns differently.

Where your teacher credential classes taught you to use a textbook, now it's one of many resources. Sure, it nicely organizes knowledge week-by-week, but in an inquiry-based classroom, you may know where you're going, but not quite how you'll get there—and that's a good thing. You are no longer your mother's teacher who stood in front of rows of students and pointed to the blackboard. You operate well outside your teaching comfort zone as you try out a flipped classroom and the gamification of education and are thrilled with the results.

And then there's the issue of assessment. What students accomplish can no longer neatly be summed up by a multiple choice test. When you review what you thought would assess learning (back when you designed the unit), none measure the organic conversations the class had about deep subjects, the risk-taking they engaged in to arrive at answers, the authentic knowledge transfer that popped up independently of your class time. You realize you must open your mind to learning that occurred that you never taught—never saw coming in the weeks you stood amongst your students guiding their education.

Let me digress. I visited the Soviet Union (back when it was one nation) and dropped in on a classroom where students were inculcated with how things must be done. It was a polite, respectful, ordered experience, but without cerebral energy, replete of enthusiasm for the joy of learning, and lacking the wow factor of students independently figuring out how to do something. Seeing the end of that powerful nation, I arrived at different conclusions than the politicians and the economists. I saw a nation starved to death for creativity. Without that ethereal trait, learning didn't transfer. Without transfer, life required increasingly more scaffolding and prompting until it collapsed in on itself like a hollowed out orange.

So how do you create the inquiry-based classroom? Here's advice from a few of my efriend teachers:

1. *ask open-ended questions and be open-minded about conclusions*
2. *provide hands-on experiences*
3. *use groups to foster learning*
4. *encourage self-paced learning. Be open to the student who learns less but deeper as much as the student who learns a wider breadth*
5. *differentiate instruction. Everyone learns in their own way*
6. *look for evidence of learning in unusual places. It may be from the child with his/her hand up, but it may also be from the learner who teaches mom how to use email*
7. *understand 'assessment' comes in many shapes. It may be a summative quiz, a formative simulation, a rubric, or a game that requires knowledge to succeed. It may be anecdotal or peer-to-peer. Whatever approach shows students are transferring knowledge from your classroom to life is a legitimate assessment*
8. *be flexible. Class won't always (probably never) go as your mind's eye saw it. That's OK. Learn with students. Observe their progress and adapt to their path.*
9. *give up the idea that teaching requires control. Refer to #8—Be flexible*
10. *facilitate student learning in a way that works for them. Trust that they will come up with the questions required to reach the Big Ideas*

In the end, know that inquiry-based teaching is not about learning for the moment. You're creating life-long learners, the individuals who will solve the world's problems in ten years. Your job is to ensure they are ready.

Article 6: What Parents Should Know About Computers and Internet

What Parents Should Know About Computers and Internet

After fifteen years teaching tech in a classroom and online, I can tell you without a doubt that educating your child can be done more efficiently and with better results by **using technology to extend their scholastic reach**. Why?

- *Research is more productive. Students find information they want from home or the library on the topic being covered.*
- *Communication is easier using collaborative tools like wikis, Google Tools. Multiple students can work on a project at once, and then embed the result into a digital portfolio.*
- *Web tools like Twitter can teach writing skills in ways kids will hear.*

So how do you make sure your child's internet experience is positive? Here are a few simple rules to help you maneuver that minefield:

- Youngsters should go on the internet only around you until they're mature enough to understand the concept of pulsing, sparkly ads. That's fifth grade, maybe Middle School. When they get distracted, be there to rein them in. Explain what happened and how to not let it repeat in the future. Show them the Back button that will return them to the screen they came from. Show them what ads look like on their favorite pages so they know what to avoid.
- Have a collection of ad-free child-friendly websites like Starfall for reading, and Zoopz and Game Goo for logical thinking. I try to offer only ad-free sites in the classroom, but they're hard to find. These three are exceptional.
- Filter internet sites. I never recommend unlimited internet access for any age.
- If your child has been online without you (because you considered them mature enough), don't be afraid to check history to see where they went. You're not spying; you're making sure everything is OK.
- Don't worry that your child will physically break the computer or delete an important program. It's harder than you think to mess up a computer. I have twenty-six in my lab and it's rare that students have forced me to reformat a drive (what you must do if the computer gets really messed up).
- As you see which sites your child likes to visit, put them on Favorites or an internet start page. At some point, you can allow them to access any websites on either. They'll appreciate knowing these websites are safe. Do continue to supervise. They still could have pop-ups or links to dangerous locations.

Do You Make These 9 Mistakes?

...with your students/child's computer education?

1. Show how to do something rather than allowing her/him to discover
2. Do for them rather than let them do it
3. Say 'no' too often (or the other enthusiasm-killer, *Don't touch!)*
4. Don't take them seriously
5. Take technology too seriously. It's a tool, meant to make life easier. Nothing more.
6. Underestimate their abilities
7. Over-estimate their abilities
8. Give up too quickly
9. Think there's only one way to do stuff on the computer

I promise—none of these are necessary to thrive in technology. Children walk in the classroom loving learning. They can't break most computer parts. They *want* to try things out and do it themselves.

Let them. They may discover a Better Mousetrap.

After fifteen years, I still learn from my students. Children are serious about having fun. It's one of their jobs. Technology is how they do this. Feel free to join them. You'll be surprised how much they know.

But, sometimes, they need help. Offer it with a guiding hand.

Article 8 "How to use web-based tools to communicate with parents"

How to Use Web-based Tools to Communicate with Parents

I've been teaching for over twenty years in different schools, different communities, but one factor transcends grades, classes, and culture: Parents want to be involved with their child's school. Parent-teacher communication is vital and in my experience, the number one predictor of success for a student. But parents can't always get to the classroom to see what's written on the bulletin boards. It's not lack of interest. More likely, they're doing that 8-5 thing that insures the future of their families.
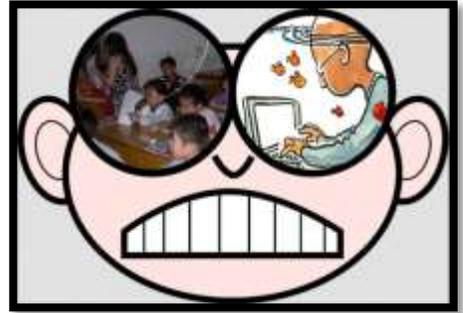
Knowing the importance of parent involvement, I feel my job as a teacher includes not just lessons I share with students, but keeping my parents informed on classroom happenings. I need to be as transparent as possible, get information out to parents in a manner they understand and a format they can access. If I could tape my classes and post them on YouTube or offer a live class feed, I would. But I can't, so I try other creative ideas.

Class website
This is gives me a chance to communicate class activities, pictures, homework, and extra credit opportunities––all the details that go into class––with parents. This is a parent's first stop to understanding what's going on in class.

Class wiki
This is student-directed, student-centered. Students post summaries of their tech class, examples of work, projects they've completed. Parents see the class through the students' eyes, as do I, which assures me that what I think happened, did.

Twitter
I love tweets because they're quick, 140 character summaries of activities, announcements, events. They take no time to read and are current.

Emails
I send lots of these out with reminders, updates, FAQs, discussions of issues that could be confusing to parents. I often ask if I'm sending too many, but my parents insist they love them.

Open door
I'm available every day after school, without an appointment. Because I have so many other ways to stay in touch, my classroom rarely gets so crowded that I can't deal with everyone who stops by.

Lesson #5 Tools, Toolbars, and Symbols

Vocabulary	Problem solving	Skills
• *Caps lock* • *Drag and drop* • *headphones* • *Icon* • *Monitor* • *Nested* • *Network* • *Num lock* • *Screenshot* • *Symbol* • *Taskbar* • *Toolbars* • *Tools* • *Web-based*	• *How do I open a program (double click the desktop icon)* • *How do I close a program (file-exit; x)* • *Monitor doesn't work (check power)* • *Volume doesn't work (are headphones plugged in? Do you have the right headphones?)* • *Why are there icons for some programs and not others?* • *Drawing program won't allow saving? Take a screenshot and save that (using Jing, Snippet, or similar).* • *I can't find tool (look on toolbars to left and bottom)*	**New** *Symbols* *Tools, toolbars* *Digital citizenship* *Icons* *Drawing program* *Taskbar* *Letter websites* **Scaffolded** *Mouse skills* *Care of digital devices* *Hardware problems* *Log-in*
Academic Applications *Problem solving, art, drawing, speaking-listening*	**Materials Required** *Internet, keyboarding program, drawing program, mouse websites, student workbooks (if using)*	**Standards** *CCSS. Math.Practice.MP8* *NETS: 4a, 6a*

Essential Question

How can the program layout help me communicate my message?

Big Idea

Computer programs have similar tools and toolbars. This makes technology easier to use

Teacher Preparation

- Have drawing program on class internet start page
- Talk with grade level team to tie drawing into inquiry
- Have parent helpers (if possible) on early tech lessons
- Know which letters students are covering in class.
- Know whether you need extra time to complete lesson.
- Integrate domain-specific tech vocabulary into lesson.
- Know which tasks weren't completed last week and whether they are necessary to move forward.

Assessment Strategies

- *Anecdotal observation*
- *Understood symbolic nature of tools, toolbars*
- *Completed project*
- *Annotated workbooks (if using)*
- *Completed warm-up, exit ticket*
- *Joined class conversations*
- *[tried to] solve own problems*
- *Decisions followed class rules*
- *Left room as s/he found it*
- *Higher order thinking: analysis, evaluation, synthesis*
- *Habits of mind observed*

Steps

Time required: **45 minutes in one sitting or spread throughout the week**
Class warm-up: **Show neighbor proper mouse hold, posture and position when sitting at a digital device. Check each other five minutes later.**

_____Review proper care and feeding of computer:

- *No food or drink around the computer.*
- *No banging on the keyboard.*
- *Never touch a neighbor's station.*

_____Review hardware problems that arise daily when using digital devices and how to solve them:

- *Volume doesn't work—are headphones plugged in? Is volume on? Is student using correct headphones?*
- *Monitor doesn't work—is power on?*
- *Computer doesn't work—is power on? Is monitor on?*
- *Mouse doesn't work—is there a light showing it's plugged in? Is student holding it correctly?*
- *Keyboard doesn't work—push Num Lock. If that light works, keyboard works*

Figure 15--Hardware problems and solutions
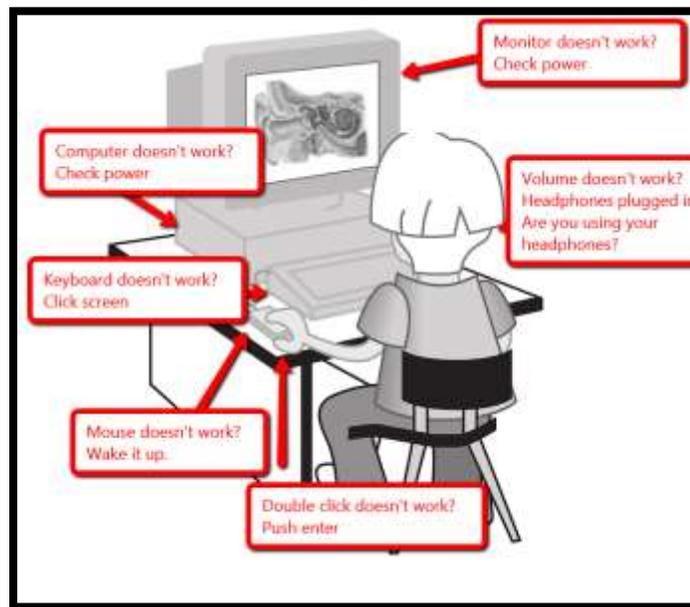
_____These hardware problems will be revisited in the lesson on *Problem Solving*.
_____Tools and toolbars are essential to understanding how to use computer programs. But before we discuss them, let's talk about what they are built from: symbols. Little pictures that visually represent an action.

Symbols

_____Discuss the meaning of 'a picture is worth a thousand words'. Is a picture a symbol of words and thoughts?
_____As students share their thoughts, remember agreed-upon rules for discussions (such as listening to others and taking turns speaking).
_____What are symbols familiar to students?
_____What do the pictures in *Figures 31a-c* symbolize? Meaning: What do students think of when you see these pictures?

Figure 16a-c--Pictures as symbols

_____Discuss math symbols (*Figures 32a-c*). How do these represent actions, thoughts, or ideas?

Figure 17a-c--Math symbols
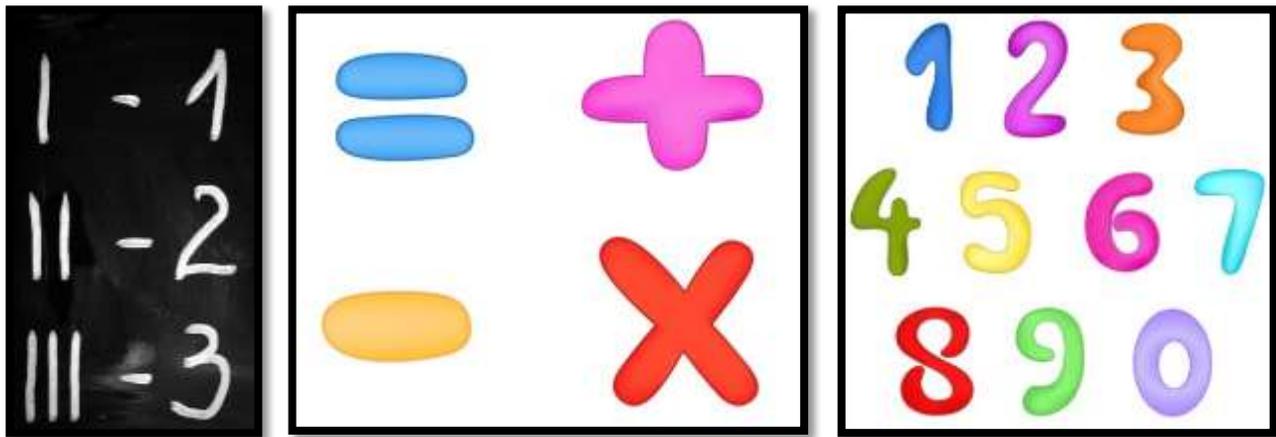
Toolbars

_____Discuss symbols students have already seen while using their digital devices:

- *Desktop icons (Figure 33a)*
- *Tools on program toolbars (Figure 33b)*
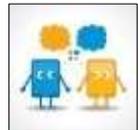
Figure 18a--Desktop icons; 33b--tools and toolbars
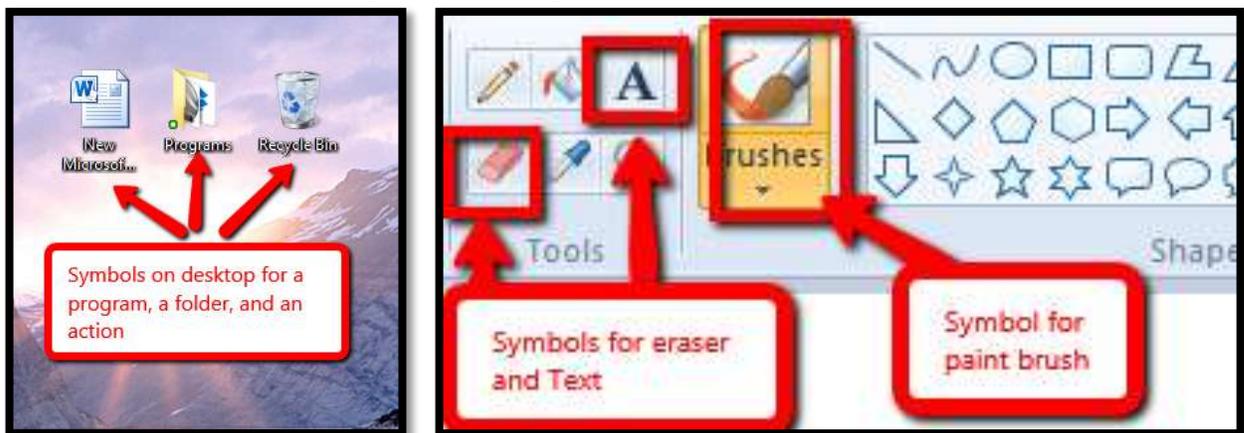
_____Discuss how symbols make technology clearer and easier to use.

_____If computers aren't logged in, help students do this. Discuss username and password.

_____Think about the Common Core Standards for Mathematical Practice. How do tools and toolbars relate to the expectation that students look for regularity in repeated reasoning?
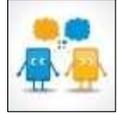
_____Open a drawing program used in your classroom (KidPix, Pixie, Paint, TuxPaint or similar). IPad classes can use KidPix Deluxe (for a fee— http://apple.co/1LecACE) or ScreenChomp (http://apple.co/1kX7eAH). For Chromebooks, try an internet-based drawing program like ABCYaPaint (http://www.abcya.com/abcya_paint.htm) or SumoPaint (http://bit.ly/1sBSAPE). If using software, show students where the icon is on the desktop or start button. Explain what that means.

_____Note: Any time you use the internet in your class (say, for digital tools), remind students how to do that safely and privately. More on this in Lesson on *Digital Citizenship*.

_____Discuss program tools and toolbars—they are symbols used to make technology easier. Some tools are 'nested' beneath other tools. Explain how to find 'nested' tools.

_____If students have workbooks, have them open them to this lesson's toolbars. If not, show *Figure 34a* (from Paint), *Figure 34b* (from ABCYa Paint, and *Figure 34c* (from KidPix) on the class screen. Ask students to point out the tools and toolbars.

Figure 19a-c--Tools and toolbars from programs
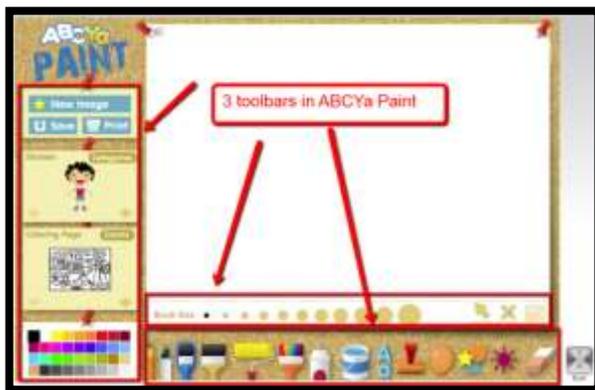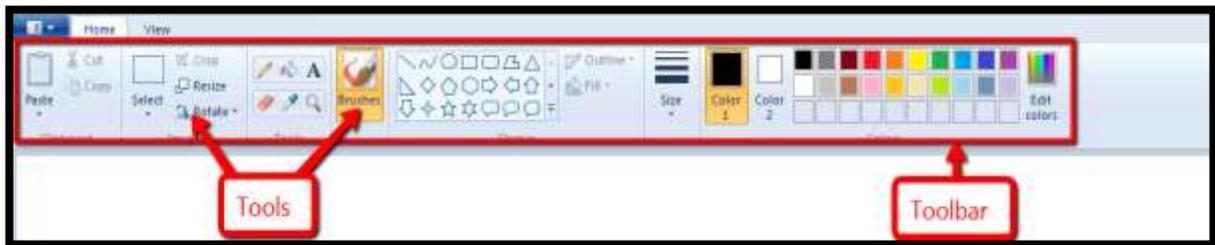
_____If there's a taskbar on the digital device being used, how is that like a 'toolbar' (*Figure 35*)?

Figure 20--Taskbar

_____Every time during this year that a new toolbar shows up in a program students use, take a moment to compare it to tools and toolbars familiar to your students.

_____Continually throughout class, check for understanding.

_____When finished, if there's time: Go to 'letter' websites to reinforce grade-level discussions on this topic. Here are several suggestions:

- *Starfall Letters (http://bit.ly/1bRoKUb)*
- *Bembo's Zoo (http://www.bemboszoo.com/Bembo.swf)*

Class exit ticket: **Have student show neighbor five tools from a toolbar used in class (they can open it on their computer or use a replica from their student workbook if you use those) and explain what they represent.**

Differentiation

- *If there's time, have students use the class drawing tool to review tools, toolbars, and mouse skills by drawing a symbol they believe represents an idea. If your class drawing tool is online, review how to use the internet safely before starting.*
- *Anytime you can inject tech into the class, do it! Students love seeing gadgets in action. For example—take a video of students working at their computers and upload to class website/blog/wiki.*
- *Follow keyboard lessons in K-8 Keyboard Curriculum (http://ow.ly/j6GH8)*
- *If this lesson doesn't work for students, use one from How to Jumpstart the Inquiry-based Classroom. It has 5 projects aligned with curriculum.*

Computer User's Haiku

Chaos reigns within.
Reflect, repent, and reboot.
Order shall return.

Lesson #11 Graphic Organizers and Reading

Vocabulary	Problem solving	Skills
• *Back button* • *Brainstorm* • *Character* • *Compare/contrast* • *Graphic organizer* • *Major events* • *Mind map* • *Setting* • *Visual organizer*	• *Program froze (is dialogue box open? Is it blinking on the taskbar?)* • *Double-click doesn't work (push enter)* • *Computer doesn't work (power on?)* • *My group won't let me talk (are you following class rules for discussion?)* • *I don't agree with my group (think of class rules for speaking/listening; what should you do?)*	**New** *Graphic organizers* *Brainstorming* *Mindmapping* **Scaffolded** *Pre-keyboarding* *Digital citizenship* *Online reading*
Academic Applications *Literacy, analysis, problem solving*	**Materials Required** *reading websites, images, graphic organizer, keyboarding program*	**Standards** *CCSS: RL.K.9* *NETS: 2b, 3b*

Essential Question

How can I compare and contrast setting, characters and major events (or character experiences) in a story?

Big Idea

Stories have characters, settings, and major events (or character experiences) that are similar and different

Teacher Preparation

- Have generic images available for 'character', 'setting', 'plot' to use in graphic organizer.
- Talk with grade level team to tie websites into inquiry.
- Integrate domain-specific tech vocabulary into lesson.
- Have a graphic organizer to compare/contrast characters, plot, and setting.
- If you can get parent helpers, this is a good lesson to use them.
- Know which tasks weren't completed last week and whether they are necessary to move forward.
- Know whether you need extra time to complete this lesson with your student group.

Assessment Strategies

- *Anecdotal observation*
- *Annotated workbooks (if using)*
- *Identified key story parts*
- *Completed warm-up, exit ticket*
- *Joined class conversations*
- *[tried to] solve own problems*
- *Decisions followed class rules*
- *Left room as s/he found it*
- *Higher order thinking: analysis, evaluation, synthesis*
- *Habits of mind observed*

Steps

Time required: **45 minutes in one sitting or spread throughout the week**
Class warm-up: **Keyboard with a website that focuses on key placement**

_____Open internet to class start page. Have online stories that connect with classroom discussion. Here are suggestions:

- *iPads (http://bit.ly/1M0BMQb) – scroll to 'Stories'*
- *web-based (http://bit.ly/1ItpQiL) – scroll to 'Stories'*

_____Divide class into groups and assign each a story to read. Give them five-ten minutes to read to themselves. Ask them to pay attention to characters, setting, and experiences (or three topics of your choice).

_____Select either of the two following activities to complete with students. If you have time, do both of them at different times during the school year:

- *graphic organizers*
- *brainstorming*

Graphic Organizers

_____Every year, from kindergarten through Middle School, if you're using this K-8 Technology Curriculum (from Structured Learning), students complete a graphic organizer in large groups, small groups, or individually. Each year it will be more sophisticated, scaffolding student skills for visually sharing and communicating knowledge. With this first one, expect students to gain an authentic understanding of 'graphic organizers' and how they communicate ideas and share information visually.

_____Explain the purpose of the graphic organizer—it organizes like elements and points out those that are different. What do students think of this? Can students share examples with classmates from their lives?

- *Figure 56a*—class seating chart
- *Figure 56b*—to do list
- *Figure 56c*—family tree

_____Give students a few minutes to observe these three familiar organizers. What do they have in common?

- Information is shared visually.
- Communication includes items that are easily understood by the audience.
- Images included communicate the idea without reading any text.

Figure 21a-c--Everyday graphic organizers
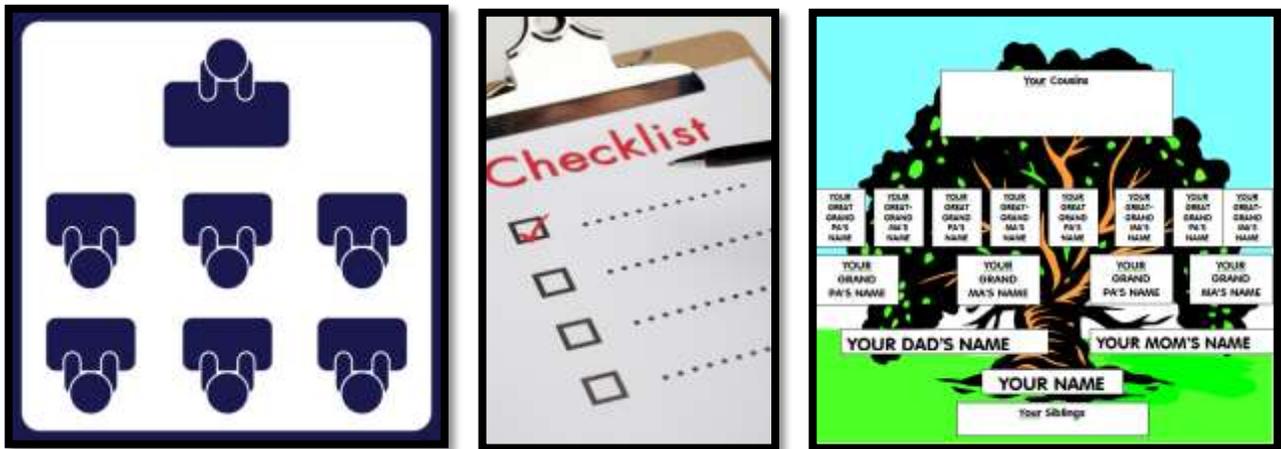
_____How are *Figures 57a* and *57b*--two common graphic organizers—the same? (Hint: They visually organize information so it's easier to understand):

Figure 22a-b--More common visual organizers

_____Break students into small groups and have them read an online story from a list you provide. See the lists above for suggestions.

_____While students are reading in their small groups, open a graphic organizer for each group on the class screen. They may look like *Figures 58a* and *58b*. Here are suggestions for free online sources:

- *Graphic Organizers—for reading — http://bit.ly/1IgR0eJ*
- *Graphic organizers II — http://bit.ly/1VRCFNW*
- *Graphic Organizers III — http://bit.ly/1CkVAKC*
- *Graphic Organizers IV (inc. iPads) — http://www.vrml.k12.la.us/graphorgan/*
- *Graphic organizers—Enchanted Learning — http://bit.ly/1DWc6vT*

_____Add pictures of story parts or do this with students:

Figure 23a-b--Reading graphic organizers
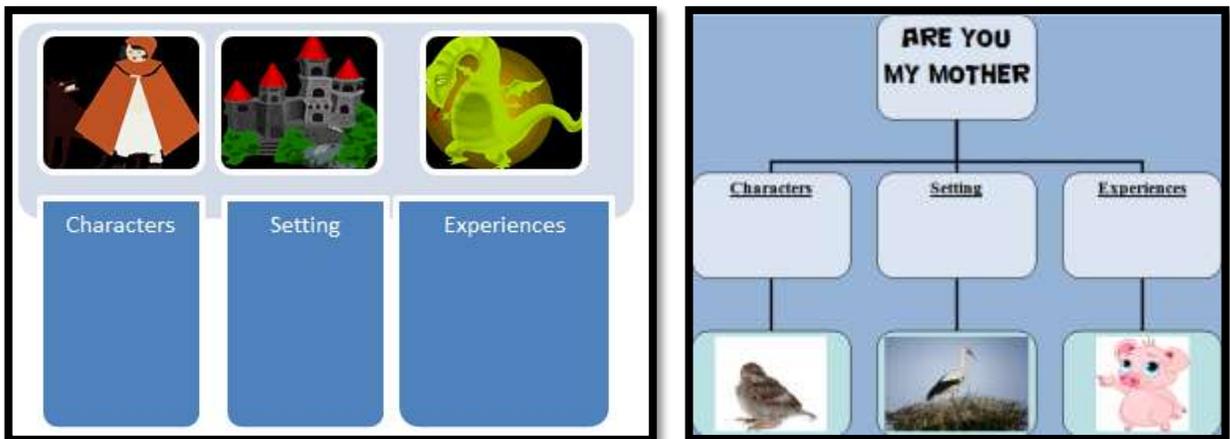
_____When students have finished reading their stories, their small group will select individuals to present ideas to the class.

_____If students have workbooks, encourage them to use the included graphic organizers to take notes about characters, setting, and experiences.

_____Now, one group at a time, shares thoughts with class on their story. As they share, add details to the graphic organizer you have up on the class screen.

_____When all groups are done, discuss as a class what is alike and different about elements across all groups' graphic organizers. Did all students see characters as similar? With similar experiences? How did most students think the characters reacted to experiences? How did 'setting' contribute to experiences?

Brainstorming — Mindmaps

_____Introduce concept of 'brainstorming, also called 'mindmapping'—a collaborative visual approach to thinking through and presenting ideas. Brainstorming is a great way for students to tackle prewriting. It enables them to come up with many ideas about a topic without worrying about too much structure.

_____For a teacher, brainstorming provides information on what students may or may not know.

_____Here are basic rules for brainstorming in the classroom:

- *there are no wrong answers*
- *get as many ideas as possible*
- *do not judge ideas presented*
- *quantity is as important as quality*

_____General steps for brainstorming:

- *Sit in a comfortable group.*
- *Add central idea. Include image if possible for visual learners.*
- *Add big ideas that support theme. Don't worry if contributions don't seem 'big'—they'll find a home later as a sub-idea, connected to another.*
- *Add ideas as they come to students.*
- *All ideas down? Now drag them around to connect topics that relate.*
- *Evaluate placement of ideas to determine if like ideas are grouped appropriately.*
- *If possible, edit connectors to be fatter for main ideas and thinner for sub ideas. This enables the mind to subconsciously categorize ideas.*
- *Add emphasis where needed with color, images, fonts (if available).*

_____Open program on class screen. Select the option best-suited to your student group:

- *Bubbl.us—simple to use, no log-in, free (http://bubbl.us) – Figure 59a*
- *Kidspiration— (http://inspiration.com)*
- *MindMeister—free trial for education (http://bit.ly/1KwbfbQ)*
- *Spicy Nodes (http://www.spicynodes.org/)*
- *SpiderScribe—add text, pictures, files (http://www.spiderscribe.net/) –Figure 59b*

_____If you use iPads, try these brainstorming apps:

- *IdeaSketch—(http://apple.co/1hpWPyf)*

- *Kidspiration—(http://inspiration.com)*
- *Popplet—(http://popplet.com/) – Figure 59c*

_____For a specific topic, say 'Fairy Tales', here's how the lesson might go:

- Type central idea in middle bubble—in this case, 'fairy tales'. Ask students to collaboratively name fairy tales read as a class. Add an arm for each tale (in this case, *Cinderella, Mr. Ginger, Three Little Pigs,* and *Thumbelina*). Have students pick colors and suggest arrangement of child bubbles so they are easily viewed on screen.
- Ask group to supply information about each story. Add those as 'child bubbles'. Discuss concepts like 'main character', 'setting', 'plot', and 'crisis'.
- Continue until all details covered. Use colors, arms and bubbles to make data clear.
- Leave mind map on the class screen while students read additional fairy tales. Ask them to think about details mapped for previous stories. Give students 10-15 minutes.
- Now ask a volunteer to share details of their story with class. Map it to original document as they talk. If you have a class screen, have students draw 'child bubbles' themselves.

Figure 24a-c--Mind maps and brainstorming

_____If there's time, have students read more stories, thinking about the conversations just shared.
_____Continually throughout class, check for understanding.
_____When finished: Keyboard with Brown Bear (http://www.bigbrownbear.co.uk/keyboard/).

Class exit ticket: *Show classmate how to use the vocabulary tool to decode a word in the story.*

Differentiation

- *Have groups read story aloud to each other rather than to themselves.*
- *Anytime you can inject tech into the class, do it! Students love seeing gadgets in action. For example—take a video of students working at their digital device and upload to class website/blog/wiki.*
- *If this lesson doesn't work for students, use one from How to Jumpstart the Inquiry-based Classroom. It has 5 projects aligned with curriculum.*

"Error, no keyboard — press F1 to continue."

CLASSROOM POSTERS

1. 10 Steps to Become a Better Geek
2. 15 Ways to Get Your Geek On
3. Assume the Position
4. Backspace-Delete
5. Digital neighborhood
6. Digital online image law (reworded)
7. Here's what we've done
8. How to solve a problem
9. How to use an iPad
10. I can't find my file
11. Important keys
12. It takes 5 times…
13. K-5 Keyboarding Stages
14. Keyboarding Hints
15. Landscape
16. Mouse Control
17. Netiquette rules
18. Portrait
19. Save and save-as
20. Save early, save often
21. Select-Do
22. Undo is your friend
23. Use keyboard shortcuts

Which book?	Price
K-8 Tech Textbook (each grade level—print, digital, or both)	*$32.99/25.99//53.08 + p&h*
K-8 Student tech workbooks (with video, teacher manual)	*$199 per grade level*
35 More Projects for K-6 (aligned w curriculum—digital only)	*$31.99/25.99/52.18 + p&h*
55 Tech Projects—Volume I, II, or both (digital only)	*$18.99/$32.49 + p&h*
K-8 Keyboard Curriculum (print, digital, or both)	*$25.99-$64*
K-8 Student keyboarding wkbks (with video, teacher manual)	*$199 per grade level*
K-8 Digital Citizenship Curriculum	*$29.95/25.99/50.38 + p&h*
K-8 Common Core Lessons	*FREE-$48.55 + p&h*
Pedagogic Articles	*$6.99 (digital only)*
K-8 Tech Scope and Sequences (Word doc)	*$9.99 each (digital only)*
Posters for the Tech Lab	*$2.99 each (digital only)*
16 Holiday Projects	*$4.99 (digital only)*
98 Tech Tips From Classroom	*$9.99 (digital only)*
Classes (certificate and college credit)	*$260-$450*
Project-based learning (lesson plans)	*$1.99 each on varied topics*
New Teacher Survival Kit (K-5)	*$360 and up (+ p&h)*
New Teacher Survival Kit (K-6)	*$380 and up (+ p&h)*
New Teacher Survival Kit (6-8)	*$330 and up (+ p&h)*
Homeschool Tech Survival Kit	*Starts at $99.00*
Bundles of lesson plans	*$7.99 and up*
Mentoring (1 hr. at a time)	*$50/hour and up*
Year-long tech curriculum help (via wiki)	*$145*
Consulting/seminars/webinars	*Call or email for prices*
Total	

Fill out this form (prices subject to change).
Email Zeke.rowe@structuredlearning.net.
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Questions? Contact Zeke Rowe

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