

# Teacher Manual



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## 6th Grade Technology

.....

***A COMPREHENSIVE CURRICULUM***

***SIXTH EDITION***

**by Ask a Tech Teacher**

# **SIXTH GRADE TECHNOLOGY**

**A COMPREHENSIVE CURRICULUM**

*Part Seven of the SL Technology Curriculum*

Version 6.5 2020

Visit the companion website *Ask a Tech Teacher* for more resources to teach technology

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## Introduction

The educational paradigm has changed—again. Technology has become granular to learning, blended into educational standards from Kindergarten on, like these that expect students to:

- demonstrate sufficient command of **keyboarding** to type at least three pages in a single sitting
- **evaluate different media** [print or digital]
- **gather information** from print/digital sources
- integrate and evaluate **information presented in diverse media** and formats
- **interpret information** presented visually, orally, or quantitatively [such as interactive Web pages]
- make **strategic use of digital media**
- use **print/digital glossaries/dictionaries** ...
- use information from **images and words in print/digital** text
- communicate with a **variety of media**
- **use text features and search tools** (e.g., key words, sidebars, **hyperlinks**) to locate information

But how is this taught?

With the nine-volume **Structured Learning Technology Curriculum**. Aligned with Common Core 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 skills 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.

For skills you don't know, visit our Help blog, AskATechTeacher. There's always someone there who can help.

● ● ●  
“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

● ● ●  
● ● ●  
“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



### What's New in the Sixth Edition?

A good tech curriculum is aligned with best practices, which means frequent updates. Consider 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 available across multiple platforms, multiple devices.*
- *Keyboarding skills are critical, especially to 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:

- *Lessons are now as likely to be used by any member of the **grade-level team**. You'll learn how to unpack the lesson regardless of which hat you wear.*
- *Ideas are provided to deliver lessons on all **popular digital**.*
- *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.*
- *Each lesson points out **academic applications** of technology.*
- ***Collaboration and sharing** is 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.*





## 6th Grade Technology Curriculum: Teacher Manual

- A **Table of Images** and a **Table of Assessments** are included for easy reference.
- Each grade-level curriculum includes **student workbooks** (sold separately).

### Programs Used

Programs used in this curriculum are dictated by the skill taught. Check each lesson to be sure you have the appropriate tools available in your classroom (Under 'Teacher Prep' and 'Materials Required'). Mostly, we recommend third party free apps and webtools with a few exceptions.

### 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 includes topics to be woven into 'most' 21<sup>st</sup>-century lesson plans:

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



For more on this, see the article **“4 Things Every Teacher Must Teach and How”** at the end of Lesson 1.

Besides these four topics, 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 (3<sup>rd</sup>-8<sup>th</sup> only)*
- *posters to visually represent topics*
- *Scope and Sequence of skills taught*
- *step-by-step weekly lessons*

Each weekly lesson includes:

- *assessment strategies*
- *class warm-up and exit ticket*
- *Common Core and ISTE Standards*
- *differentiation strategies*
- *educational applications*
- *essential question and big idea*
- *examples, rubrics, images, printables*
- *homework (for students)*
- *materials/preparation required*
- *problem solving for lesson*
- *steps to accomplish goals*
- *time required to complete*
- *vocabulary used*

Figure 1a-b shows what's at the beginning and end of each lesson:

Figure 1a-b--What's included in each lesson

**Week #1—Introduction**

Vocabulary	Problem solving	Skills
<p><b>Where to use lesson</b></p> <p>• Select</p>	<p><b>Domain-specific vocab</b></p> <p>• What's the difference between 'save' and 'save-as'?</p> <p>• 'save-as' is a quick way to save a file without overwriting the original file.</p> <p>• If you use school computers, you should save your homework files in a folder on the school server.</p>	<p><b>Lesson-specific tech tips</b></p> <p>• Use the Evidence Board</p>
<p><b>Academic Applications</b></p> <p>Tech in life, submitting homework, problem solving</p>	<p><b>Materials required</b></p> <p>Tech poster, after school tech programs, homework submission</p>	<p><b>Standards</b></p> <p>CCSS: Anchor Standards</p>
<p><b>Essential Question</b></p> <p>EQ: How do I use the computer?</p>	<p><b>What you'll need</b></p> <p>• Anecdotal</p> <p>• Planned classroom conversations</p> <p>• Participated with a sense of wonder and excitement</p> <p>• Completed exit ticket</p> <p>• Classroom as student found it</p> <p>• Habits of mind observed</p>	<p><b>Assessment Strategies</b></p>
<p><b>Big idea</b></p> <p>• Process of computer components, functions, and basic computer operation</p>	<p><b>Assessment ideas</b></p>	<p><b>Teacher Preparation</b></p> <p>• Have Tech Tips posters on walls or in classroom Tech Corner</p> <p>• Test equipment so students aren't frustrated trying to use something that won't work</p> <p>• Expected student tech problems: Need help? Here's a thread: <a href="#">/category/tech-tips/</a>...with o... items and solu-</p>
<p><b>How do you prepare</b></p>	<p><b>Step-by-step</b></p>	<p><b>Steps</b></p>
<p><b>Time required:</b> 45 minutes</p> <p><b>Class warm-up:</b> None</p>	<p><b>How long you need AND warm-up</b></p>	

<p><b>Class exit ticket:</b></p>	<p><b>Class exit ticket</b></p> <p>Solving Board with a tech problem they face. How can it be used for the upcoming Problem Solving Board.</p>
<p><b>Differentiation</b></p> <p>• Early finishers: visit class internet start page for websites (article at end of Week 2).</p> <p>• Take a field trip to school server room to see how data is collected.</p>	<p><b>How to differentiate for student needs</b></p>

## Who Needs This Book

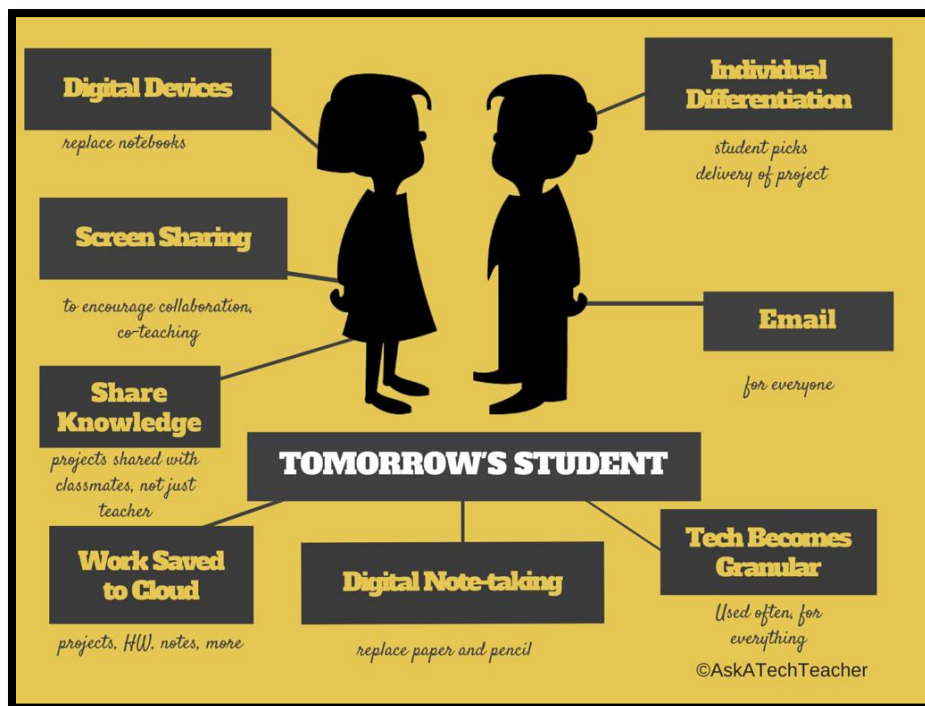
You are the Tech Specialist, Coordinator for Instructional Technology, IT Coordinator, Technology Facilitator or Director, Curriculum Specialist, or tech teacher—tasked with finding the right project for a classroom. You have a limited budget, less software, and the drive to do it right no matter roadblocks.

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.

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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!

Figure 2—Tomorrow's student

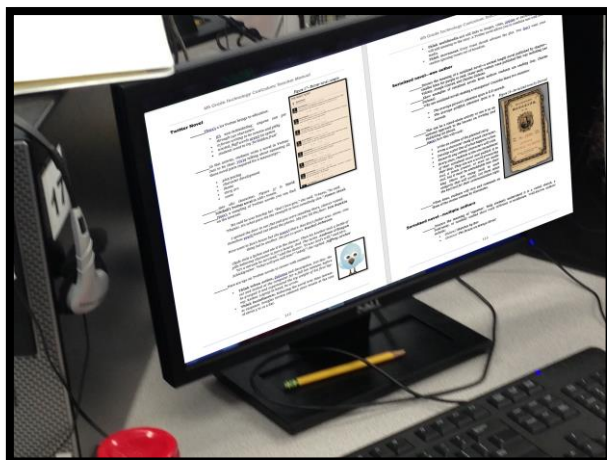


How do you reach your goal? With this curriculum. Teaching children to strategically and safely use technology is a vital part of being a functional member of society—and should be part of every school's curriculum. If not you (the teacher), who will do this? To build **Tomorrow's Student** (Figure 2) requires integration of technology and learning. We show you how.

### How to Use This Book

You can use this curriculum on its own—as a teacher's manual—or in conjunction with the companion student workbooks (sold separately). Once you've selected the program, contact Zeke Rowe at Structured Learning for free start-up training.

If there is a skill students don't get, circle back on it, especially when you see it come up a second or third time through the course of the K-8 curricula. By the end of 8<sup>th</sup> grade, students have a well-rounded tech toolkit that serves their learning needs and prepares them for college and/or career.





## 6th Grade Technology Curriculum: Teacher Manual

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. Here's how to use it:

*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
<b>K</b>	☺	☺	☺	☺	☺					☺		☺	☺	☺		☺
<b>1</b>	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	☺		☺
<b>2</b>		☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	☺		☺
<b>3</b>		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
<b>4</b>		☺	☺		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
<b>5</b>		☺	☺		☺	☺		☺	☺	☺	☺	☺	☺	☺		☺
<b>6</b>		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺		☺
<b>7</b>		☺	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺
<b>8</b>		☺	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺

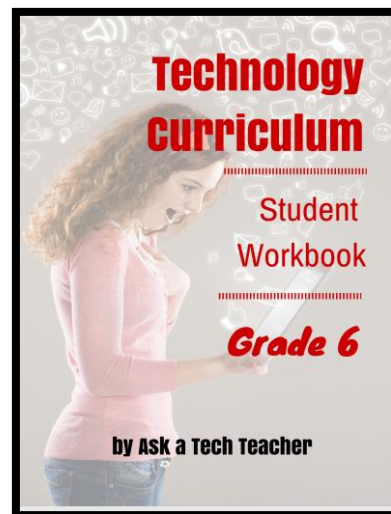
- Determine what skills were covered earlier years. Expect students to transfer that knowledge to this new school year. Review the topics and skills, but don't expect to teach.
- If there are skills listed as covered prior years, confirm that was done. If they weren't (for whatever reason), when you reach lessons that require the skills, plan extra time.

Here are hints on using this curriculum:

- Don't be alarmed by the amount of material. There are 32 lessons—some take several weeks to complete--and 6 themes. Most lessons are stand-alones. Feel free to mix and match, pick what you want to cover. Lessons we highly recommend completing yearly are:
  - #1 *Introduction*
  - #2 *Digital Tools*
  - #3 *Digital Citizenship*
  - #4 *Keyboarding*
  - #5 *Problem Solving*
  - #6 *Screencasts and Screenshots*
  - #14 *Internet Search*
  - #23 *Web-based Tools*
- A number of Lessons should be mixed throughout the year:
  - #3 *Digital Citizenship*
  - #4 *Keyboarding*
  - #5 *Problem Solving*
  - #26 *Khan Academy*
- Personalize skills taught in each lesson to your needs with 'Academic Applications'. These are suggestions for blending learning into your curriculum.
- Invest in student digital workbooks (sold separately), a student-centric companion to the teacher guide. Why? Here are four reasons:

- Full-color projects are at student fingertips, complete with examples and directions (licensing varies based on plan).
  - Links enable students to click and go—no searching for the site or typing in addresses. Be aware: Links die so help students understand what to do if a link they've selected doesn't work.
  - Workbooks can be annotated.
  - Students can work at their own pace.
- If you need specific resources, check resources on the Ask a Tech Teacher website under the topic you're interested in.
  - Most lessons start with a warm-up to get students into tech and allow you to finish a prior class.
  - Some lessons offer several activities that meet goals in the Essential Question and Big Idea. Pick the one(s) that work for your student group. Alternatively, you can let students pick.
  - Check off completed items on the line preceding the step so you know what to get back to when you have time. If you have the ebook, use iAnnotate, Kami, Lumis, Notable (Google for websites), or another annotation tool that works for your devices.

Fig. 1--Student workbook

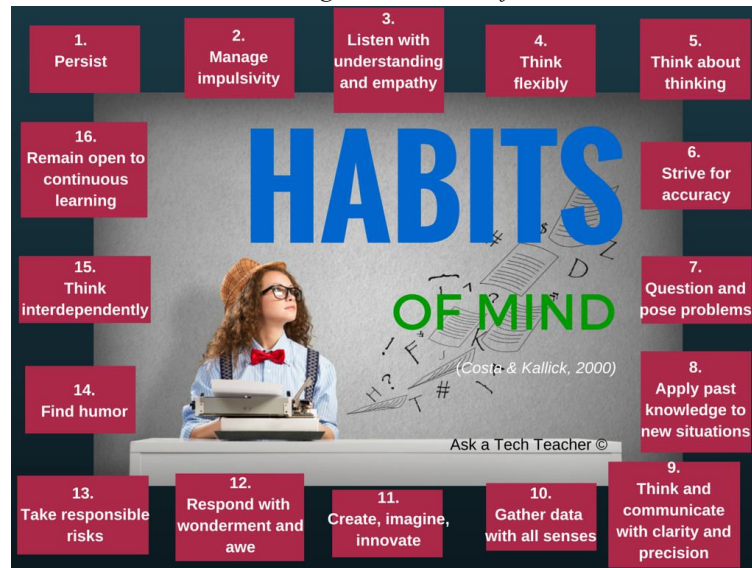


-  video
-  work with a partner
-  an article
-  a poster (in Appendix)
-  workbook material

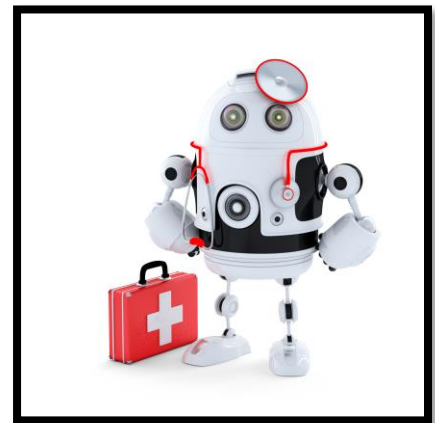
- Use as much technology as possible in your classroom—authentically and agilely. Make it adaptive and native. Encourage students to do the same whether it's a smartphone timing a quiz, a video of activities posted to the class website, or an audio file with student input. If you treat tech as a tool in daily activities, so will students.
- Always use lesson vocabulary. Students gain authentic understanding by your example.
- Expect students to direct their learning. You are a facilitator not lecturer. Learning looks like success and failure.
- 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. **This scaffolds critical thinking and troubleshooting when you won't be there to help.**
- Lessons expect students to develop 'habits of mind'. You can read more about Art Costa and Bena Kallick's discussion of these principles at their website, Habits of Mind, in *Figure 5*,

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 5—Habits of Mind



- 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.
- When students are working, move among them to assist, observe 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.
- If you have the digital book, zoom in on posters, rubrics, lessons to enlarge as needed.
- Every effort has been made to accommodate 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 mice; software doesn't run in Chromebooks), focus on the **Big Idea and Essential Question**—the skill taught and its application to inquiry. Adapt instructions as you follow steps.
- **Need help?** Go to Ask a Tech Teacher© run by teachers using the curriculum or email us.



Here are useful pieces to extend this curriculum:

- *Teacher manual—the roadmap. That's this book.*
- *Student workbooks—allow students to be self-paced (sold separately)*
- *Digital Citizenship curriculum— if this is a school focus (sold separately)*
- *Keyboarding Curriculum— if this is a school focus (sold separately)*

### Companion Website

Take advantage of the companion website—Ask a Tech Teacher—that is staffed by teachers using Structured Learning materials and ready to answer your questions on lesson plans, tools, strategies, and pedagogy. Drop by for a visit and find:

- *free lesson plans*
- *targeted websites*
- *free tech tips and weekly newsletters*
- *teacher resources*
- *free training videos on tools used in lesson plans*
- *great apps to include on iPads, digital devices*



And more.

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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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| 5. Problem Solving                    | 21. Image Editing I                |
| 6. Screenshots, Screencasts, Videos   | 22. Image Editing II               |
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## Arranged by theme

### Year-round

- |     |                                |
|-----|--------------------------------|
| #2  | Digital Tools in the Classroom |
| #3  | Digital Citizenship            |
| #4  | Keyboarding                    |
| #5  | Problem Solving                |
| #26 | Khan Academy                   |

### Productivity

- |        |                                    |
|--------|------------------------------------|
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**Pages skipped on purpose**

**GRADE 6-8 TECH SCOPE AND SEQUENCE©**

*Aligned with ISTE (International Society for Technology in Education) and Common Core State Standards  
Check each skill off with I (Introduced), W (Working on), or M (Mastered)  
Organized by ISTE Standards 1-7*

**Pages skipped on purpose**

## Lesson #2—Digital Tools in the Classroom

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> <li>• Annotation</li> <li>• App</li> <li>• Backchannel</li> <li>• Benchmark</li> <li>• Blog</li> <li>• Cloud</li> <li>• Digital citizen</li> <li>• Digital portfolio</li> <li>• Digital tools</li> <li>• Domain-specific</li> <li>• Hashtag</li> <li>• Linkback</li> <li>• Plagiarism</li> <li>• Portal</li> <li>• Template</li> </ul>	<ul style="list-style-type: none"> <li>▪ I'm too young for Twitter (use class account)</li> <li>▪ Can't get avatar on my LMS page (ask a neighbor how they did it)</li> <li>▪ My work disappeared! (find auto-save)</li> <li>▪ Teacher isn't around and I need help (ask for peer support, or use student forum online)</li> <li>▪ Just give me a handout (Sorry, we learn through experience and collaboration)</li> <li>▪ Can't find Evernote (use 'search' tool)</li> <li>▪ I'm not fast enough decoding vocabulary (keep at it—it gets easier)</li> <li>▪ I forgot my Evidence (you have a chance every month)</li> </ul>	<p><b>New</b></p> <p>Blogging, journaling Backchannel device Student websites Digital notetaking</p> <p><b>Scaffolded</b></p> <p>Annotating PDFs Hardware parts Avatars, Blogs Internet start page Digital portfolios Email Evidence Board Decoding vocab</p>
<p><b>Academic Applications</b></p> <p>Writing, research, collaboration, sharing, publishing, online safety</p>	<p><b>Materials Required</b></p> <p>Back channel, hardware assessments, Student accounts, Evidence badges for Evidence board, links to training videos, student workbooks (if using)</p>	<p><b>Standards</b></p> <p>CCSS: WHST.6-8.7-9 NETS: 1b, 4b</p>

### Essential Question

*How do I use technology to pursue my education?*

### Big Idea

*Students become aware of how tech enhances education goals*

### Teacher Preparation

- Have copies of blogging agreement (if necessary).
- Have student hardware assessments (if needed).
- Integrate domain-specific tech vocabulary into lesson.
- Know whether you need extra time to complete lesson.
- Activate all student accounts for digital tools.
- Something happen you weren't prepared for? Show students how you fix the emergency without a meltdown and with a positive attitude.

### Assessment Strategies

- Annotated workbook (if using)
- Completed warm-up, exit ticket
- Joined classroom 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:** 90 minutes  
**Class warm-up:** Test student digital tool accounts



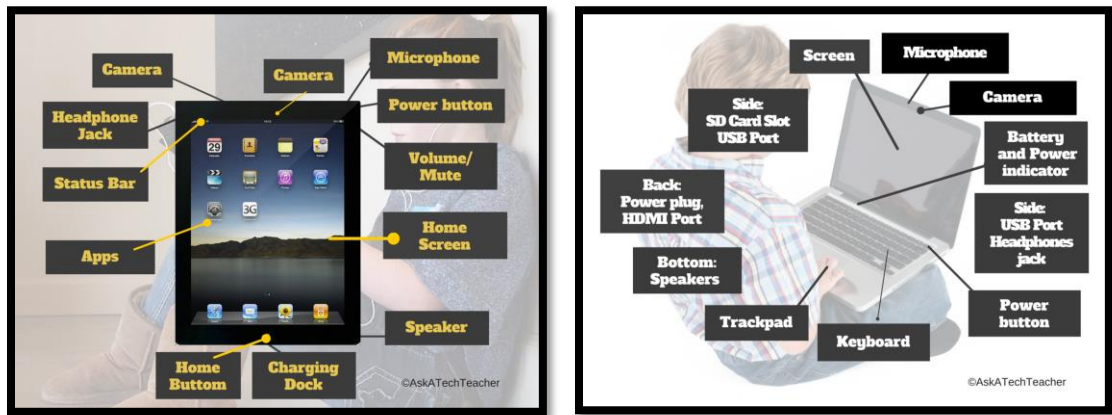
\_\_\_\_\_ Review digital device hardware used in your school. Students should know whether they're input or output. Assessments are at the end of this Lesson. These can be filled out in student workbooks (if you use these) or as formative assessments during classtime.

Figure 7a-d--Digital devices and their parts



\_\_\_\_\_ If necessary, review with students. For example, if you use iPads, ask where the headphones are on this device? Or the mouse? How about the USB Port? Ask students where the iPad microphone is on, say, the PC or Chromebook. How about the charging dock?

Figure 8a—Parts of iPad; 8b—Chromebook



\_\_\_\_\_ Discuss how understanding hardware helps to solve tech problems.  
 \_\_\_\_\_ Have neighbors check each other's mouse hold (see Figure 9):

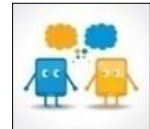
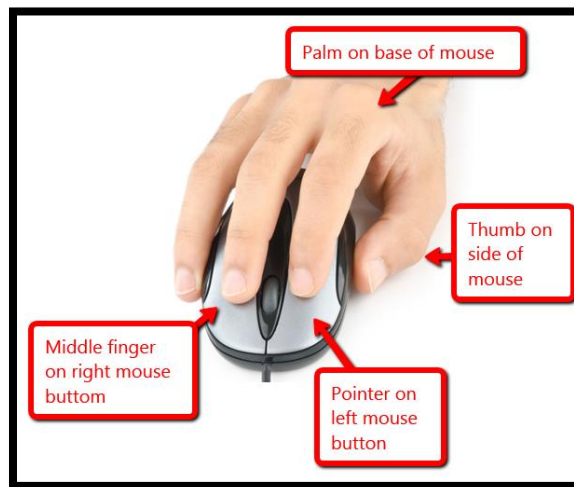


Figure 9--How to hold a mouse





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The following tools are discussed in this Lesson. Pick those that your students use and add others you have that aren't mentioned:

- *annotation tool*
- *avatars*
- *backchannel devices*
- *blogs*
- *class calendar*
- *class Internet start page*
- *class website*
- *digital notetaking*
- *digital portfolios*
- *drop box*
- *email*
- *Evidence Board*
- *Google Apps*
- *journaling*
- *student websites*
- *student workbooks*
- *vocabulary decoding tools*

Adapt them to your digital devices (Chromebooks, PCs, iMac, iPads, or other).

### Student workbooks

If using the PDF student workbooks that go along with this tech curriculum, introduce them to students now. Show how to open them from their digital device, access links, find rubrics and project samples, and take notes using the annotation tool. Students can access links from within the PDF, see full-color images, circle back to review concepts or forward to preview upcoming lessons.

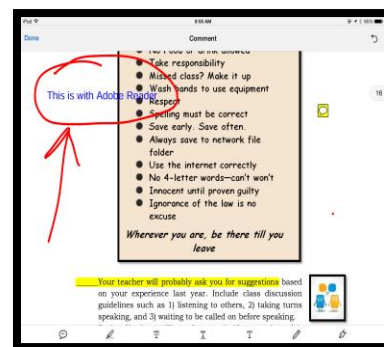
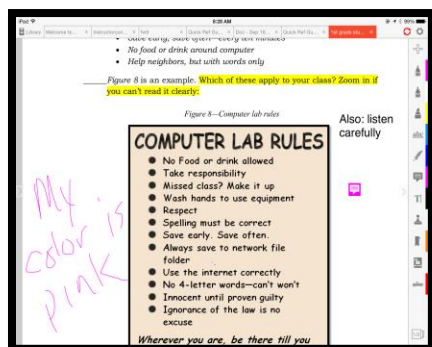


### Annotation Tool

If using student workbooks, show students how to annotate their copy with the notetaking tool used in your school such as iAnnotate (Figure 10a), Notability (Figure 10b), or Adobe Acrobat (free—Figure 10c).



Figure 10a—iAnnotate; 10b—Notability; 10c—Adobe Acrobat



If students share the PDF with other students (for example, it's loaded on a class digital device in the lab), show how to select a color different from other students.

Include a discussion of screenshots with this tool. Often, students will annotate a page (say, a rubric) in their workbook, then save a screenshot of it to their digital portfolio. Depending upon your digital device, you'll use a screenshot tool like one of these:

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

## Avatars

Students can create a profile picture with an avatar creator. If you don't have a favorite, visit Ask a Tech Teacher's resource pages under Avatars):

Figure 11a-d--Avatars



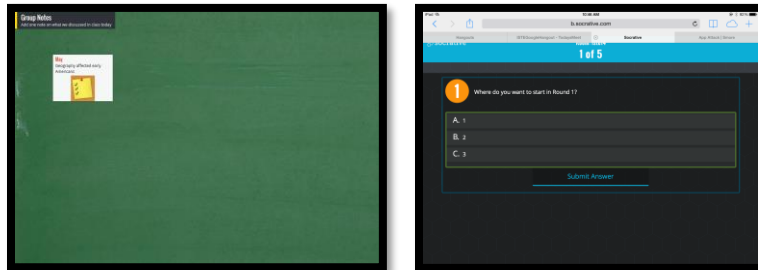
These can be used in student websites or any other digital platform that requires a profile picture. Use them to reinforce a discussion of digital privacy and safety.

## Backchannel Devices

The 'backchannel' is classroom communication that isn't from the presenter. 'Backchannel devices' encourage students to share their thoughts and ideas, even questions, while a lesson is going on. Typically, the comments show up on the class screen, shared with all classmates, likely anonymously. Students read and respond. Teacher uses them to notice when students get/don't get a topic s/he is covering.

Popular backchannel options are Padlet, Socrative, and Twitter. If you'd like more options, visit Ask a Tech Teacher's resource pages under *backchannel*.

Figure 12a-b--Backchannel devices



\_\_\_\_\_ Why use backchannels? Here are a few reasons:

- *know what engages students and extend those ideas*
- *hear from shy students who need a classroom voice*
- *allow gregarious students to talk without dominating the class*

\_\_\_\_\_ Introduce to students, demo, and test on this lesson. Student feedback will inform whether you teach all or some of the digital tools.

### Blogs

\_\_\_\_\_ Blogs are short online articles with the express purpose of sharing ideas and garnering feedback. In the case of 6<sup>th</sup> graders, you are particularly interested in their facility to:

- *engage effectively in collaborative discussions with diverse partners*
- *build on others' ideas*
- *express their own ideas clearly*

\_\_\_\_\_ Review the article at lesson end on ***“13 Ways Blogs Teach Common Core”***.  
\_\_\_\_\_ *Figures 13a-c* are examples of student blogs. Notice how they incorporate text and screenshots to discuss a topic:



Figure 13a-c--Student blogs



\_\_\_\_\_ Student blogs teach writing skills, how to use evidence in arguments (in both posts and comments), and perspective-taking. They are student-directed, but you approve all posts and comments until students get used to the rules that apply to online conversations.

\_\_\_\_\_ Blogs reflect student personalities with colors, fonts, widgets. What students include will help you better understand their interests, how they learn, and how to reach them academically.

\_\_\_\_\_ In general, student blogs require:

- *titles that pull reader in*
- *tone/voice that fits this type of writing and intended audience*
- *working linkback(s) to evidence that supports statements*
- *at least one media to support each article (picture, video, sound)*
- *understanding of target audience*
- *understanding of purpose--how is it different from tweets? Essays? Poetry?*

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- citations—authors name, permission, linkbacks, copyright where required
- occasional teamwork

Before beginning, students sign an agreement similar to *Sixth Grade Blogging Rules* (Figure 14a—full size at end of lesson). Ask them to discuss the agreement with parents and bring it to school before the next class. If you're using workbooks, students can sign the copy in there, take a screenshot, and email that to you.



Figure 14a--Blogging rules; 14b--rubric

**Sixth Grade Blogging Rules**  
(adapted from [Academy of Discovery wiki](#))

1. I will not give out any information more personal than my first name
2. I will not plagiarize; instead I will expand on others' ideas and give credit where it is due.
3. I will use language appropriate for school.
4. I will always respect my fellow students and their writing.
5. I will only post pieces that I am comfortable with everyone seeing.
6. I will use constructive/productive/purposeful criticism, supporting any idea, comment, or critique I have with evidence.
7. I will take blogging seriously, posting only comments and ideas that are meaningful and that contribute to the overall conversation.
8. I will take my time when I write, using formal language (not text lingo), and I will try to spell everything correctly.
9. I will not bully others in my blog posts or in my comments.
10. I will only post comments on posts that I have fully read, rather than just skimmed.
11. I will not reveal anyone else's identity in my comments or posts.

Any infraction of the Fifth Grade Blogging Rules may result in loss of blogging privileges and an alternative assignment will be required.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

CRITERIA	Exemplary	Proficient	Partially	Incomplete	POINTS
<b>Relevance of Content to Students and Parents</b>	<b>2 points</b> • Content has useful information • Content is clear, concise; points readers to up to date resources. • Blog is updated frequently	<b>4 points</b> • Content points readers to quality resources, is informative • Resources are clearly described so readers can navigate easily	<b>3 points</b> • Content points to unrelated information • Resources are not clearly described so readers cannot navigate easily.	<b>0 points</b> • Resources pointed to are inaccurate, misleading or inappropriate • Annotations are missing, do not describe what is found	
<b>Use of Media</b>	<b>4 points</b> • Media enhance content and interest • Creativity enhances content	<b>4 points</b> • Most media enhance content. • Most files show creativity	<b>2 points</b> • Some media don't enhance content. • Some use of creativity is evident to enhance content.	<b>0 points</b> • Media are inappropriate or detract from content.	
<b>Fair Use Guidelines</b>	<b>4 points</b> Fair use guidelines are followed with proper citations.	<b>4 points</b> Fair use guidelines are frequently followed; most material is cited.	<b>2 points</b> Sometimes fair use guidelines are followed with some citations.	<b>0 points</b> Fair use guidelines are not followed. Material is improperly cited.	
<b>Links</b>	<b>3 points</b> All links are active and functioning.	<b>2 points</b> Most links are active	<b>1 point</b> Some links are not active.	<b>0 points</b> Many links are not active.	
<b>Layout and Text Elements</b>	<b>3 points</b> • Fonts are easy-to-read • Use of bullets, italics, bold, enhances readability. • Consistent format throughout	<b>2 points</b> • Sometimes fonts, size, bullets, italics, bold, detract from readability. • Minor formatting inconsistencies exist	<b>1 point</b> • Text is difficult to read due to formatting	<b>0 points</b> • Text is difficult to read with misuse of fonts, size, bullets, italics, bold • Many formatting tools are misused	
<b>Writing Mechanics</b>	<b>3 points</b> No grammar, capitalization, punctuation, spelling errors	<b>2 points</b> Few grammar, capitalization, punctuation, and spelling errors	<b>1 point</b> 4+ errors in grammar, capitalization, punctuation, and spelling	<b>0 points</b> More than 4 grammar/spelling/punctuation errors.	
<b>TOTAL POINTS</b>					<b>6/36</b>

Students can create blogs in Edublogs, Blogger, or another platform (Google for addresses; Blogger comes with Google Apps). It can be public or private, the latter providing a safe, closed

Discuss blogging netiquette—like email etiquette:

- be polite
- use good grammar and spelling
- don't write anything everyone shouldn't read (school blogs are private, but get students used to the oxymoron of privacy and the Internet)

Remind students to practice good keyboarding as they type the entry.

Once a month, have students post an article that discusses an inquiry topic. Additionally, students should visit and comment on five classmate blogs.

Student comments aren't always appropriate? Set account so you approve comments before they go live. And chat with students about how supportive comments contribute to the conversation.

Occasionally throughout the year, use the Student Blogs Rubric (Figure 14b—full size assessment at end of lesson) to assess student progress.

## Class Calendar

Class calendars can be a Google App or another tool that works for your student group. Show students how to access it and how it's updated to reflect class activities.

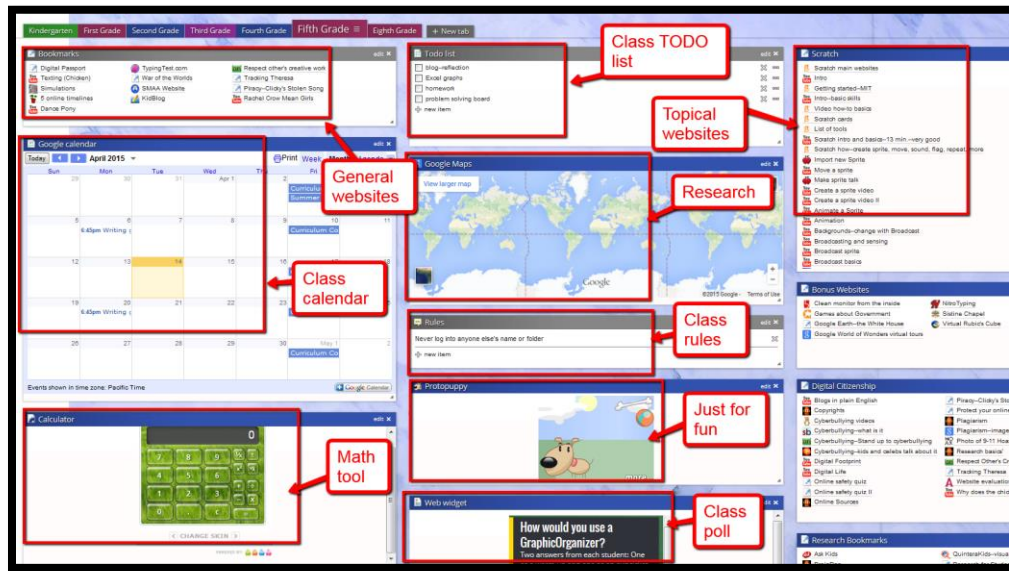
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- \_\_\_\_\_ If students will be editing, demonstrate how to do this by adding upcoming homework.
- \_\_\_\_\_ Encourage students to contribute responsibly to class calendar.
- \_\_\_\_\_ If using Google Apps, students can embed calendar into their blogs, websites.
- \_\_\_\_\_ For Google Calendar training, visit Google’s comprehensive calendar training.

### Class Internet Start Page

- \_\_\_\_\_ A class Internet start page is a website that comes up when the student opens the Internet. It organizes critical content in a single location and curates links students will use.

Figure 15—Class Internet start page



- \_\_\_\_\_ Include what students visit daily (i.e., guidelines, calendar, ‘to do’ list, typing websites, research locations, sponge sites, calculator) as well as info specific to current project.
- \_\_\_\_\_ Mine also includes pictures of interest, rss feeds, weather, a graffiti wall, and class pet. Yours will be different.
- \_\_\_\_\_ You can use a platform like Protopage (Figure 15), Ighome, LiveBinders (Figure 16c), a collection site like Symbaloo (Figure 16a), or another of your choice (Google for address).

Figure 16a—Class start page in Symbaloo; 16b—Portaportal; 16c—LiveBinders



- \_\_\_\_\_ Remind students that any time they visit the Internet, they must do so safely and legally. If you didn’t discuss digital citizenship in K-5, take time right now to review it.



**Class website**

- \_\_\_\_\_ Class websites serve as a general resource collection locations for class information.
- \_\_\_\_\_ Create this using the same tool that students will use for their student blog or website.

**Digital Notetaking**

\_\_\_\_\_ Why take notes (from Common Core):

- *determine central ideas*
- *provide accurate summary*
- *identify key steps*
- *cite text evidence to support analysis*
- *analyze structure used to organize text*
- *analyze author's purpose*

\_\_\_\_\_ Here are digital notetaking methods that might work for your students:

- *Word processing program (for any digital device) – Figure 17a*
- *Notability (for iPads) – Figure 17b*

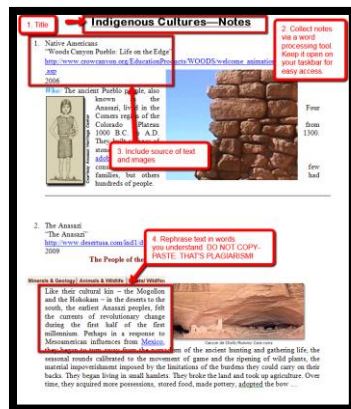
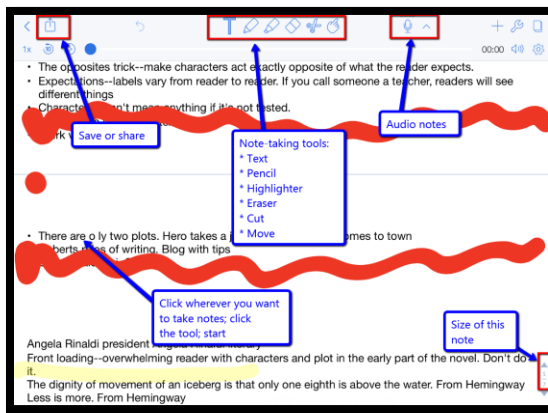
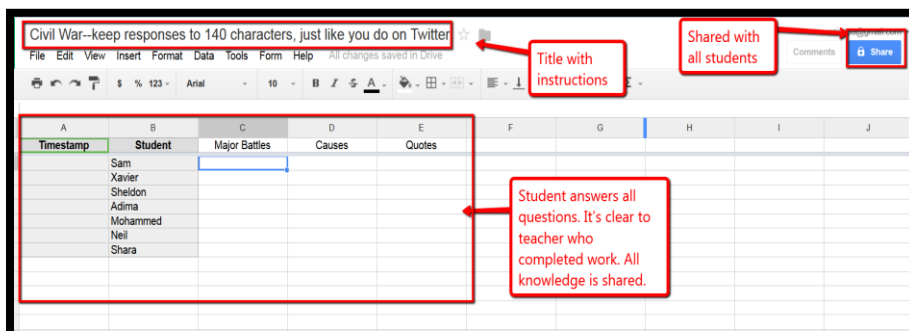


Figure 17a-b--Notetaking tools



- *Google Apps – (for any digital device) -- Figure 18*

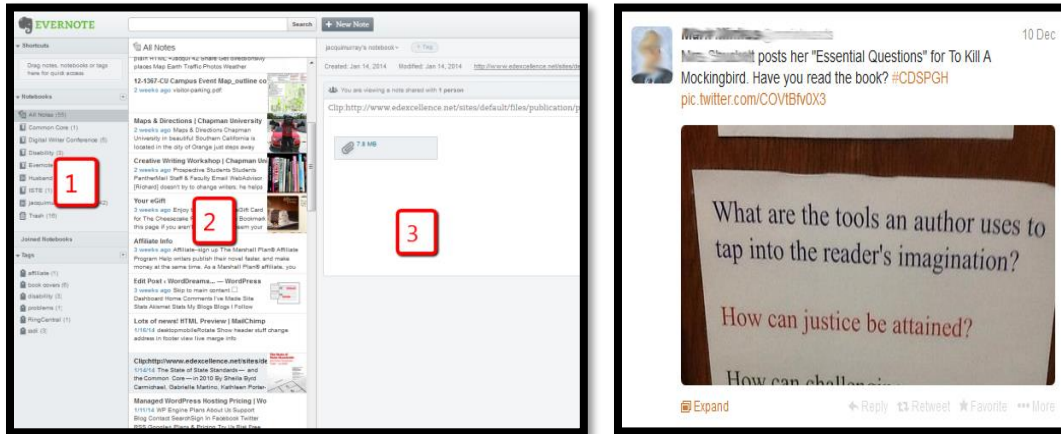
Figure 18--Collaborative notes in Google Spreadsheets



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- Evernote/OneNote (for most digital devices) -- Figure 19a
- Twitter (for most digital devices) -- Figure 19b

Figure 19a--Evernote; 19b--Twitter



## Digital portfolios

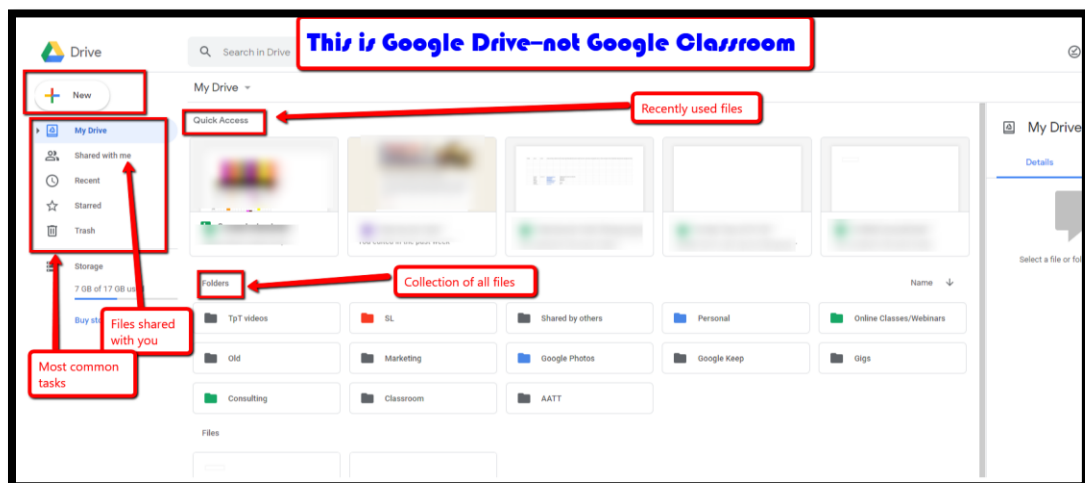
Discuss how students use Digital Portfolios (also known as digital lockers or digital binders):

- store work (in Cloud) required in other classes or at home
- interact, collaborate, and publish with peers, experts, or others
- edit or review work in multiple locations
- submit class assignments

There are a variety of approaches to digital portfolios that satisfy some or all of the above uses: 1) folders on the school network, 2) cloud-based storage like Dropbox or Google Apps (Figure 20b), 3) an LMS like Google Classroom, and 4) online collaborative sites.

Occasionally, use Assessment at end of this lesson to review student progress.

Figure 20--Google Drive (not Google Classroom)



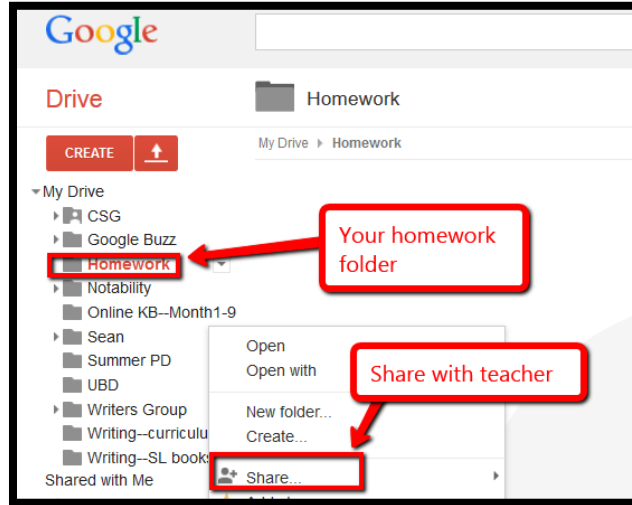
**Drop-box**

\_\_\_\_\_ An assignment drop box can be created through the school Learning Management System (LMS), Google Apps (through ‘share’ function), Google Classroom, or other options.

\_\_\_\_\_ If you are going to use Google Apps, create a Homework drop box like *Figure 21*:

- *Each student creates a folder called ‘Homework’ that is shared with you.*
- *To submit work to you, copy it to that folder so you can view and comment.*

Figure 21—Homework dropbox



**Email**

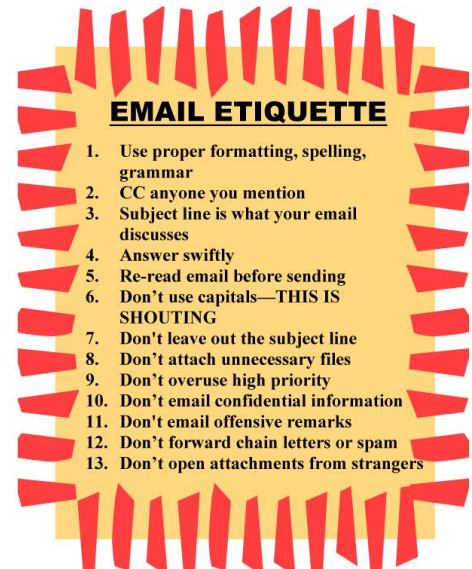
\_\_\_\_\_ Use web-based account such as Gmail (comes with GAFE and Google Classrooms).

\_\_\_\_\_ Review **email** etiquette (*Figure 22*—full-size poster in Appendix):



- *Use proper writing conventions.*
- *CC anyone mentioned.*
- *Make ‘Subject line’ topic of email.*
- *Answer swiftly.*
- *Re-read before sending.*
- *Don’t use all caps—THIS IS SHOUTING.*
- *Don’t attach unnecessary files.*
- *Don’t overuse high priority.*
- *Don’t email confidential information.*
- *Don’t email offensive remarks.*
- *Don’t forward chain letters or spam.*
- *Don’t open attachments from strangers.*

Figure 4--Email Etiquette



\_\_\_\_\_ Clarify ‘high priority’, ‘chain letters’, ‘CC’.

\_\_\_\_\_ If you have Google Classroom (with Gmail activated), review email. Show how to control spam.

\_\_\_\_\_ Let students (and parents) know that the email pro-

gram they use at home may not match the instructions you've just provided. Ask parents to show students how to use the home-based email accounts.

\_\_\_\_\_ Why is correct grammar/spelling important in email and not so much with texting? Hint: Consider Common Core: *Produce clear and coherent writing in which development, organization, and style are appropriate to **task and audience**.*

\_\_\_\_\_ Email addresses are often required for online tools.

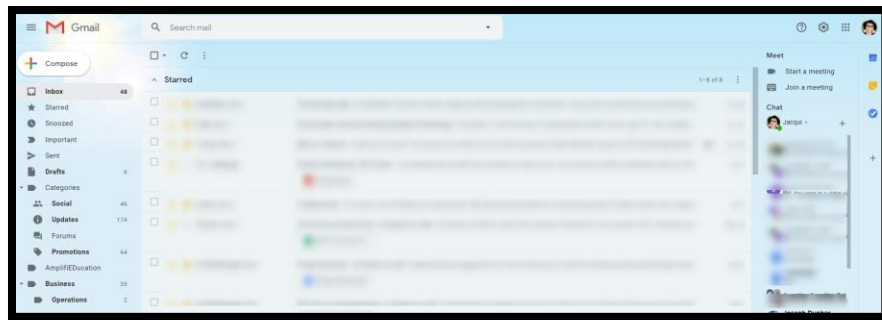
\_\_\_\_\_ Discuss 'spam'. What is it? Why is it sent? What should students do when spam shows up in their email?

\_\_\_\_\_ Discuss how email can be used to back-up important documents (by emailing a copy to themselves or creating a draft email with doc attached and stored in 'Draft' file).

\_\_\_\_\_ When students get an email, follow this checklist:

- Do you know sender?
- Is email legitimate? For example, does the 'voice' sound like sender?
- Is sender asking for personal information? Legitimate sources never do.
- Is there an attachment? If so, don't open it.

Figure 23--Gmail sample



## Evidence Board

\_\_\_\_\_ The Evidence Board (*Figure 24a*) is a bulletin board that celebrates student transfer of knowledge from tech class to home, friends, or other educational endeavors.

Figure 24a—Evidence Board; 24b—Badge



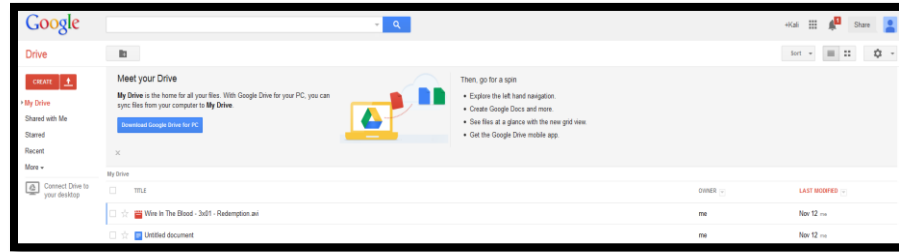
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About once a month, students share how they use tech skills outside of your class. They will make a ten-second presentation to class, fill out a badge (like *Figure 24b*), and post it on the Evidence Board by their class. By year end, you want this collection to encircle the classroom.

### Google Apps

To access Google Apps requires a Google account and starts at Google Drive. *Figure 25* is an example of what the Google Drive might look like:

Figure 25--Google Apps



There are many resources available for teaching how to use Google Apps. If you have trouble finding one, check Ask a Tech Teacher's resource lists.

Give students time to explore Google Drive before moving on.

The most popular apps—and the ones students will use the most—in Google Drive are Docs, Slides, and Sheets.

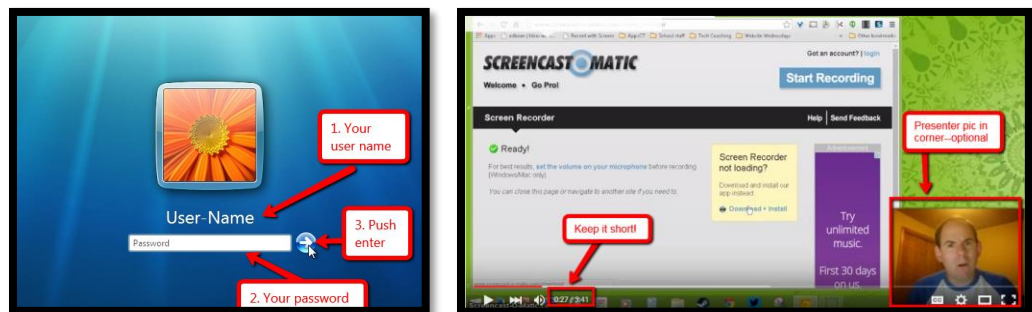
### Journaling

If students will journal, introduce them to that online tool (such as Penzu, a word processing program, Blog entries, or another option). Show where it can be found and provide a quick run-through. Expect students to experiment and figure this tool out by using it.

### Screenshots and Screencasts

Students will use screenshot (still images) tools, apps, or add-ons (depending upon your digital device), as well as screencasts (videos) to record information from their screen. More on this in the lesson on *Screenshots and Screencasts*.

Figure 26a--Screenshot; 26b--screencast





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### Student website

\_\_\_\_\_ Most teachers will select either blogs or websites for students, depending upon their goal:

- *Blogs are more interactive and time-sensitive.*
- *Websites more fully cover a topic and new posts don't push older out of the way.*

\_\_\_\_\_ Like blogs, websites are a great way to encourage reflection, organization, logical thinking, and are a perfect place to embed sharable projects, i.e., Tagxedos and Animotos.

\_\_\_\_\_ Websites are available with Google Apps. If your school doesn't have Google Apps, free websites can be created at websites such as Weebly, Wix, or blog accounts like WordPress (Google for addresses).

\_\_\_\_\_ Websites should reflect student personalities with colors, fonts, and layout. Encourage creativity.

\_\_\_\_\_ Occasionally (several times a grading period), assess websites based on the criteria in *Figure 27* (full size assessment at end of lesson):

*Figure 27--Student website rubric*

<u>Evaluation scale:</u>					
Exemplary:		32-36 points			
Proficient:		28-31 points			
Partially Proficient or Incomplete:		< 28 points (resubmit)			
CRITERIA	Exemplary	Proficient	Partially	Incomplete	POINTS
<b>Relevance of Content to Students and Parents</b>	<p><u>9 points</u></p> <ul style="list-style-type: none"> <li>• Content has useful information</li> <li>• Content is clear, concise; points readers to up to date resources.</li> <li>• Content is updated frequently</li> </ul>	<p><u>6 points</u></p> <ul style="list-style-type: none"> <li>• Content points readers to quality resources, is informative</li> <li>• Resources are clearly described so readers can navigate easily</li> </ul>	<p><u>3 points</u></p> <ul style="list-style-type: none"> <li>• Content points to unrelated information.</li> <li>• Resources are not clearly described so readers cannot navigate easily.</li> </ul>	<p><u>0 points</u></p> <ul style="list-style-type: none"> <li>• Resources pointed to are inaccurate, misleading or inappropriate</li> <li>• Annotations are missing, do not describe what is found</li> </ul>	
<b>Use of Media</b>	<p><u>6 points</u></p> <ul style="list-style-type: none"> <li>• Media enhance content and interest.</li> <li>• Creativity enhances content</li> </ul>	<p><u>4 points</u></p> <ul style="list-style-type: none"> <li>• Most media enhance content.</li> <li>• Most files show creativity</li> </ul>	<p><u>2 points</u></p> <ul style="list-style-type: none"> <li>• Some media don't enhance content.</li> <li>• Some use of creativity is evident to enhance content.</li> </ul>	<p><u>0 points</u></p> <ul style="list-style-type: none"> <li>• Media are inappropriate or detract from content.</li> </ul>	
<b>Fair Use Guidelines</b>	<p><u>6 points</u></p> <p>Fair use guidelines are followed with proper citations.</p>	<p><u>4 points</u></p> <p>Fair use guidelines are frequently followed; most material is cited.</p>	<p><u>2 points</u></p> <p>Sometimes fair use guidelines are followed with some citations.</p>	<p><u>0 points</u></p> <p>Fair use guidelines are not followed. Material is improperly cited.</p>	
<b>Links</b>	<p><u>3 points</u></p> <p>All links are active and functioning.</p>	<p><u>2 points</u></p> <p>Most links are active</p>	<p><u>1 point</u></p> <p>Some links are not active.</p>	<p><u>0 points</u></p> <p>Many links are not active.</p>	
<b>Layout and Text Elements</b>	<p><u>3 points</u></p> <ul style="list-style-type: none"> <li>• Fonts are easy-to-read</li> <li>• Use of bullets, italics, bold, enhances readability.</li> <li>• Consistent format throughout</li> </ul>	<p><u>2 points</u></p> <ul style="list-style-type: none"> <li>• Sometimes fonts, size, bullets, italics, bold, detract from readability.</li> <li>• Minor formatting inconsistencies exist</li> </ul>	<p><u>1 point</u></p> <ul style="list-style-type: none"> <li>• Text is difficult to read due to formatting</li> </ul>	<p><u>0 points</u></p> <ul style="list-style-type: none"> <li>• Text is difficult to read with misuse of fonts, size, bullets, italics, bold</li> <li>• Many formatting tools are misused</li> </ul>	
<b>Writing Mechanics</b>	<p><u>3 points</u></p> <p>No grammar, capitalization, punctuation, spelling errors</p>	<p><u>2 points</u></p> <p>Few grammar, capitalization, punctuation, and spelling errors</p>	<p><u>1 point</u></p> <p>4+ errors in grammar, capitalization, punctuation, and spelling</p>	<p><u>0 points</u></p> <p>More than 6 grammar/spelling/punctuation errors.</p>	
<b>TOTAL POINTS</b>					/30



\_\_\_\_\_ In general:

- *website and article titles pull reader in*
- *articles review what readers can expect, provide evidence with supporting links, and include a summary of content*
- *tone/voice fits this type of writing and intended audience*
- *links connect to evidence and links work*
- *at least one media is provided to support each article (picture, video, sound)*
- *posts understand target audience. How are blog readers different from Twitter? Or essay writing?*
- *writing purpose is clear. How is a blog different from tweets? Essays? Poems?*
- *citations are included as needed*
- *occasional teamwork is exhibited*

### Vocabulary Decoding Tools

\_\_\_\_\_ Show students how to access the native apps or webtools on their digital devices that can be used to decode vocabulary students don't understand. Depending upon the device, these will be on the homepage, the browser toolbar, a shortcut, or a right click. Show students how to quickly look up words from any of their classes rather than skipping over content that includes the word. Let them practice with several of the words in this lesson's *Vocabulary* list.

\_\_\_\_\_ Options include:

- *right click on word in MS Word and select 'Look up'*
- *right click in Google Apps (i.e., Google Docs) and select 'research'*
- *an online dictionary*
- *a browser app*

\_\_\_\_\_ A note: Every chance you get, use technology to facilitate teaching. Lead by example. Students want to use tech. Don't discourage them!

**Class exit ticket:**      ***Students send a well-constructed email to a classmate (if students have email accounts) and reply to one.***



### Differentiation

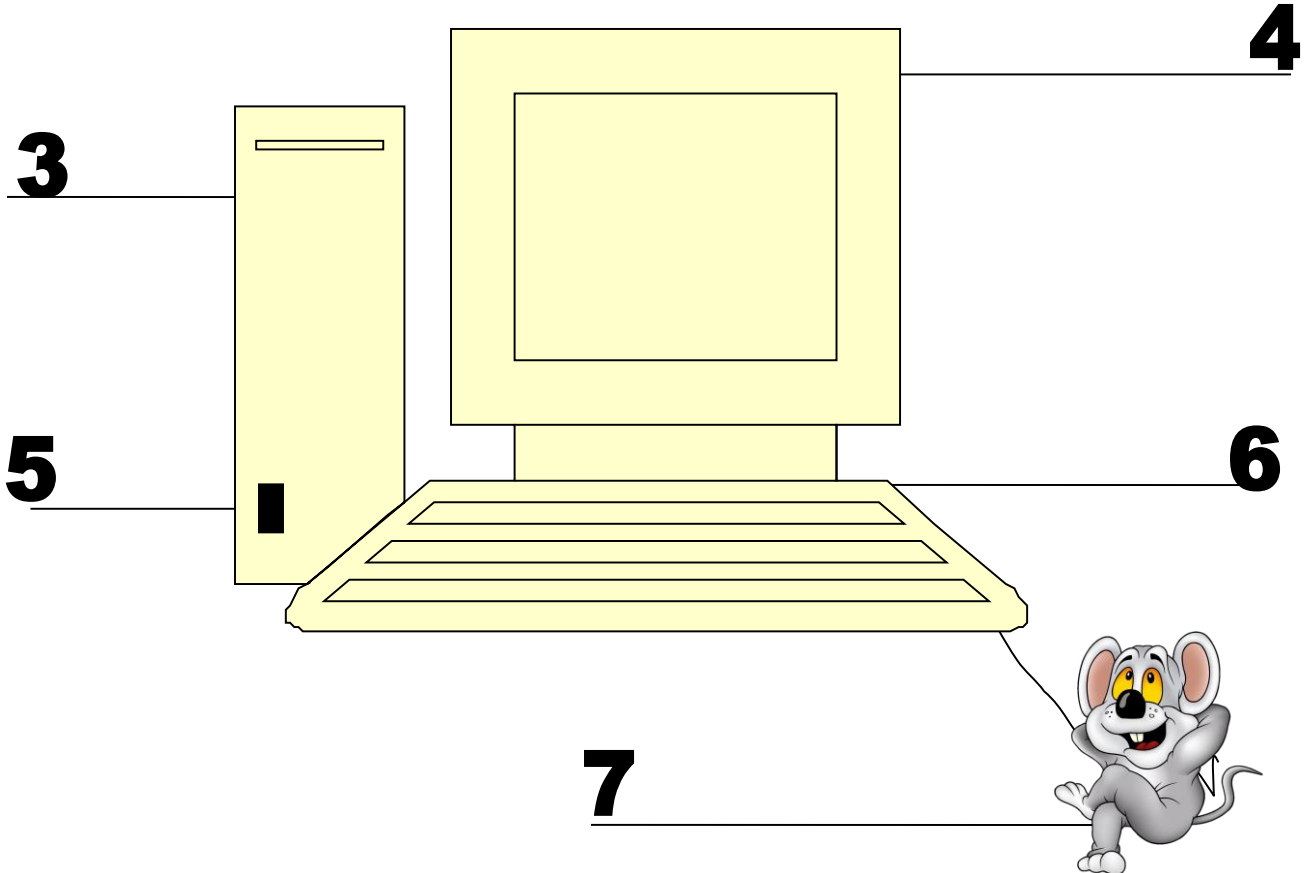
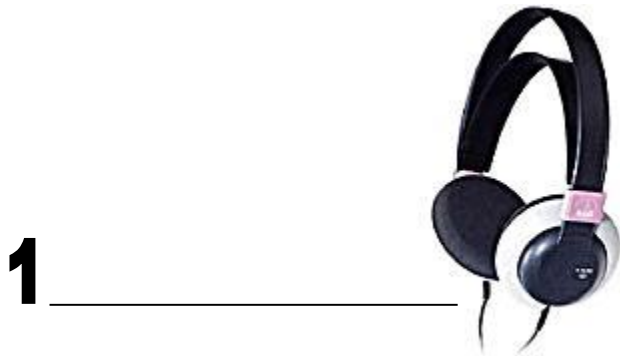
- *Explore inside computer.*
- *See article at end of Lesson on **Internet Start Pages**.*
- *For more Google Apps, try these:*
  - *Map Maker: Create a map, or update a map of a specific destination*
  - *Maps: Explore, create and collaborate with mapping tools*
  - *Scholar: Research and analyze sources from books, websites, other*
  - *Tour Builder: Use Google Earth to create an online tour of anywhere in world*
  - *Translate: Free online translation tool for any text*

Assessment 1—Parts of the computer

**HARDWARE—PARTS OF THE COMPUTER**

Student name: \_\_\_\_\_

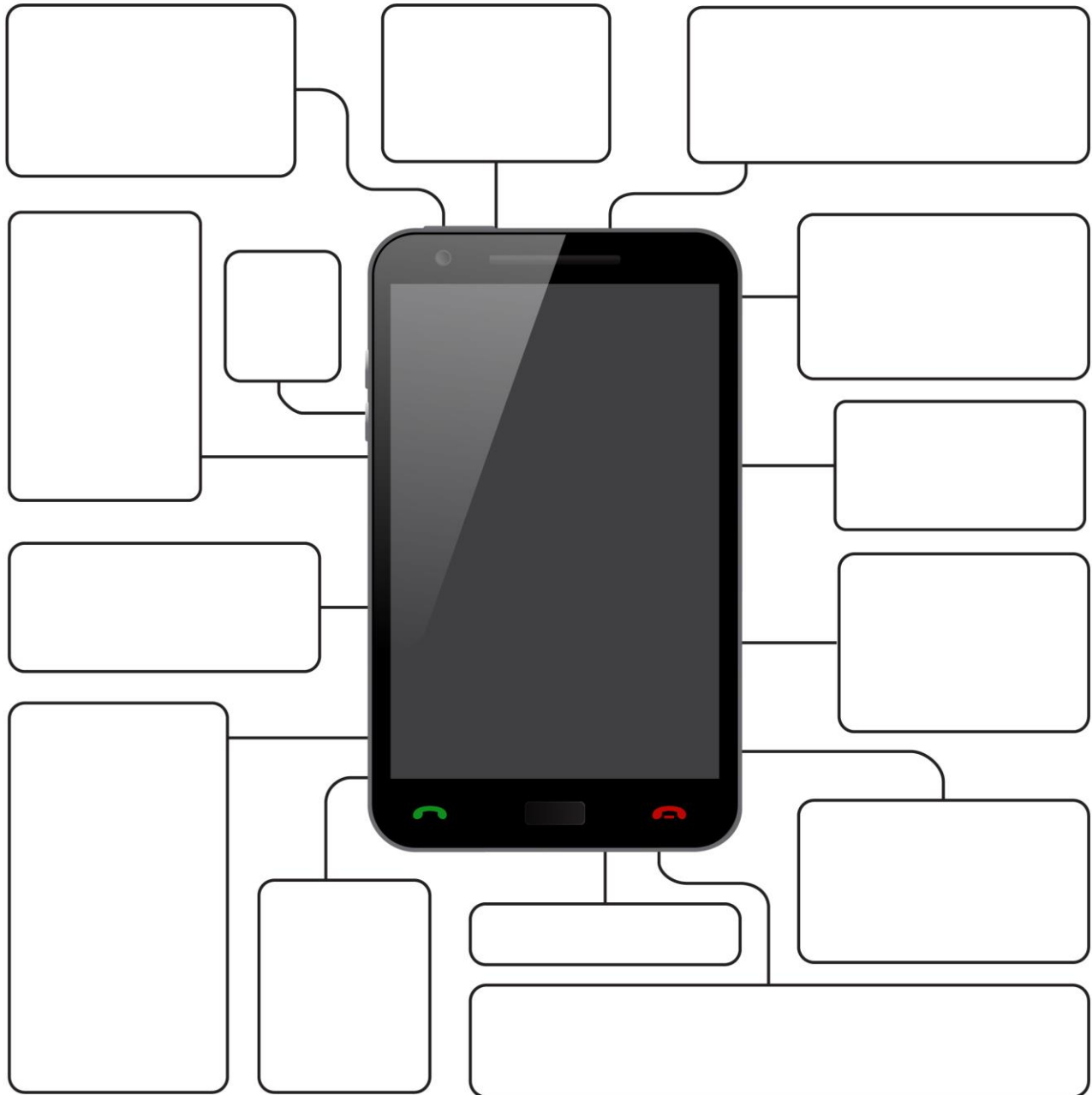
Name each part of computer hardware system and whether it's *INPUT* or *OUTPUT*.  
Spelling must be correct to get credit



# **HARDWARE—PARTS OF THE SMARTPHONE**

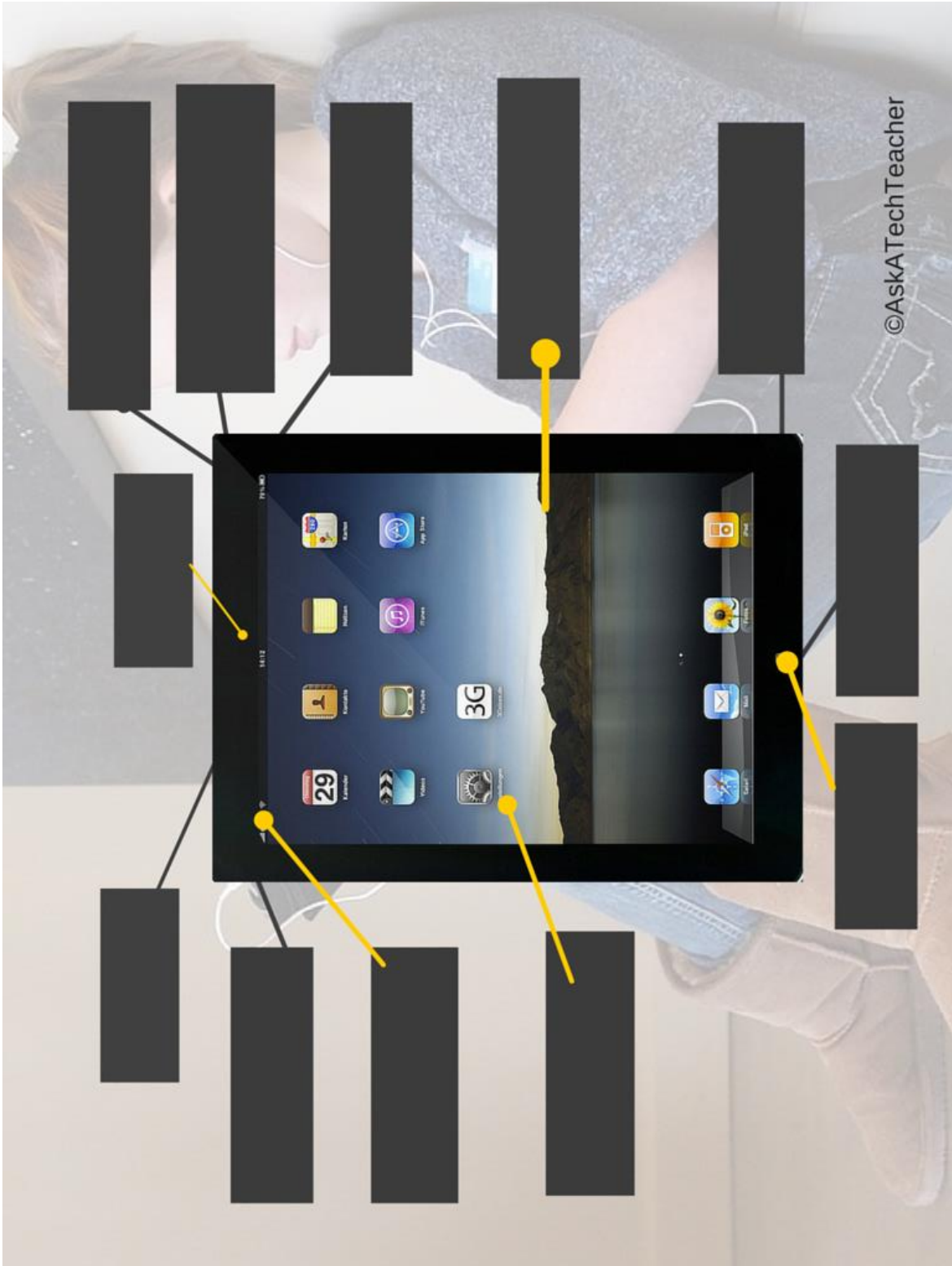


*Adapt this to your needs*



Assessment 3—Parts of an iPad

# Parts of an iPad



Assessment 4--Chromebook parts



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## ***Sixth Grade Blogging Rules***

1. I will not give out any information more personal than my first name
2. I will not plagiarize; instead I will expand on others' ideas and give credit where it is due.
3. I will use language appropriate for school.
4. I will always respect my fellow students and their writing.
5. I will only post pieces that I am comfortable with everyone seeing.
6. I will use constructive/productive/purposeful criticism, supporting any idea, comment, or critique I have with evidence.
7. I will take blogging seriously, posting only comments and ideas that are meaningful and that contribute to the overall conversation.
8. I will take my time when I write, using formal language (not text lingo), and I will try to spell everything correctly.
9. I will not bully others in my blog posts or in my comments.
10. I will only post comments on posts that I have fully read, rather than just skimmed.
11. I will not reveal anyone else's identity in my comments or posts.

Any infraction of the Sixth Grade Blogging Rules may result in loss of blogging privileges and an alternative assignment will be required.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_



# Student Blog Rubric

Adapted from University of Wisconsin-Stout

Evaluation scale:

Exemplary: 32-36 points  
 Proficient: 28-31 points  
 Partially Proficient or Incomplete: < 28 points (resubmit)

CRITERIA	Exemplary	Proficient	Partially	Incomplete	PTS
<b>Relevance of Content to Students and Parents</b>	<p><b>9 points</b></p> <ul style="list-style-type: none"> <li>Content has useful information</li> <li>Content is clear, concise; points readers to up to date resources.</li> <li>Blog is updated frequently</li> </ul>	<p><b>6 points</b></p> <ul style="list-style-type: none"> <li>Content points readers to quality resources, is informative</li> <li>Resources are clearly described so readers can navigate easily</li> </ul>	<p><b>3 points</b></p> <ul style="list-style-type: none"> <li>Content points to unrelated information.</li> <li>Resources are not clearly described so readers cannot navigate easily.</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Resources pointed to are inaccurate, misleading or inappropriate</li> <li>Annotations are missing, do not describe what is found</li> </ul>	
<b>Use of Media</b>	<p><b>6 points</b></p> <ul style="list-style-type: none"> <li>Media enhance content and interest.</li> <li>Creativity enhances content</li> </ul>	<p><b>4 points</b></p> <ul style="list-style-type: none"> <li>Most media enhance content.</li> <li>Most files show creativity</li> </ul>	<p><b>2 points</b></p> <ul style="list-style-type: none"> <li>Some media don't enhance content.</li> <li>Some use of creativity is evident to enhance content.</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Media are inappropriate or detract from content.</li> </ul>	
<b>Fair Use Guidelines</b>	<p><b>6 points</b></p> <p>Fair use guidelines are followed with proper citations.</p>	<p><b>4 points</b></p> <p>Fair use guidelines are frequently followed; most material is cited.</p>	<p><b>2 points</b></p> <p>Sometimes fair use guidelines are followed with some citations.</p>	<p><b>0 points</b></p> <p>Fair use guidelines are not followed. Material is improperly cited.</p>	
<b>Links</b>	<p><b>3 points</b></p> <p>All links are active and functioning.</p>	<p><b>2 points</b></p> <p>Most links are active</p>	<p><b>1 point</b></p> <p>Some links are not active.</p>	<p><b>0 points</b></p> <p>Many links are not active.</p>	
<b>Layout and Text Elements</b>	<p><b>3 points</b></p> <ul style="list-style-type: none"> <li>Fonts are easy-to-read</li> <li>Use of bullets, italics, bold, enhances readability.</li> <li>Consistent format throughout</li> </ul>	<p><b>2 points</b></p> <ul style="list-style-type: none"> <li>Sometimes fonts, size, bullets, italics, bold, detract from readability.</li> <li>Minor formatting inconsistencies exist</li> </ul>	<p><b>1 point</b></p> <ul style="list-style-type: none"> <li>Text is difficult to read due to formatting</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Text is difficult to read with misuse of fonts, size, bullets, italics, bold</li> <li>Many formatting tools are misused</li> </ul>	
<b>Writing Mechanics</b>	<p><b>3 points</b></p> <p>No grammar, capitalization, punctuation, spelling errors</p>	<p><b>2 points</b></p> <p>Few grammar, capitalization, punctuation, and spelling errors</p>	<p><b>1 point</b></p> <p>4+ errors in grammar, capitalization, punctuation, and spelling</p>	<p><b>0 points</b></p> <p>More than 6 grammar/ spelling/ punctuation errors.</p>	
<b>TOTAL POINTS</b>					<b>/30</b>

# Student Website Rubric

Adapted from University of Wisconsin-Stout

Evaluation scale:

Exemplary: 32-36 points  
 Proficient: 28-31 points  
 Partially Proficient or Incomplete: < 28 points (resubmit)

CRITERIA	Exemplary	Proficient	Partially	Incomplete	PTS
<b>Relevance of Content to Students and Parents</b>	<p><b>9 points</b></p> <ul style="list-style-type: none"> <li>Content has useful information</li> <li>Content is clear, concise; points readers to up to date resources.</li> <li>Content is updated frequently</li> </ul>	<p><b>6 points</b></p> <ul style="list-style-type: none"> <li>Content points readers to quality resources, is informative</li> <li>Resources are clearly described so readers can navigate easily</li> </ul>	<p><b>3 points</b></p> <ul style="list-style-type: none"> <li>Content points to unrelated information.</li> <li>Resources are not clearly described so readers cannot navigate easily.</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Resources pointed to are inaccurate, misleading or inappropriate</li> <li>Annotations are missing, do not describe what is found</li> </ul>	
<b>Use of Media</b>	<p><b>6 points</b></p> <ul style="list-style-type: none"> <li>Media enhance content and interest.</li> <li>Creativity enhances content</li> </ul>	<p><b>4 points</b></p> <ul style="list-style-type: none"> <li>Most media enhance content.</li> <li>Most files show creativity</li> </ul>	<p><b>2 points</b></p> <ul style="list-style-type: none"> <li>Some media don't enhance content.</li> <li>Some use of creativity is evident to enhance content.</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Media are inappropriate or detract from content.</li> </ul>	
<b>Fair Use Guidelines</b>	<p><b>6 points</b></p> <p>Fair use guidelines are followed with proper citations.</p>	<p><b>4 points</b></p> <p>Fair use guidelines are frequently followed; most material is cited.</p>	<p><b>2 points</b></p> <p>Sometimes fair use guidelines are followed with some citations.</p>	<p><b>0 points</b></p> <p>Fair use guidelines are not followed. Material is improperly cited.</p>	
<b>Links</b>	<p><b>3 points</b></p> <p>All links are active and functioning.</p>	<p><b>2 points</b></p> <p>Most links are active</p>	<p><b>1 point</b></p> <p>Some links are not active.</p>	<p><b>0 points</b></p> <p>Many links are not active.</p>	
<b>Layout and Text Elements</b>	<p><b>3 points</b></p> <ul style="list-style-type: none"> <li>Fonts are easy-to-read</li> <li>Use of bullets, italics, bold, enhances readability.</li> <li>Consistent format throughout</li> </ul>	<p><b>2 points</b></p> <ul style="list-style-type: none"> <li>Sometimes fonts, size, bullets, italics, bold, detract from readability.</li> <li>Minor formatting inconsistencies exist</li> </ul>	<p><b>1 point</b></p> <ul style="list-style-type: none"> <li>Text is difficult to read due to formatting</li> </ul>	<p><b>0 points</b></p> <ul style="list-style-type: none"> <li>Text is difficult to read with misuse of fonts, size, bullets, italics, bold</li> <li>Many formatting tools are misused</li> </ul>	
<b>Writing Mechanics</b>	<p><b>3 points</b></p> <p>No grammar, capitalization, punctuation, spelling errors</p>	<p><b>2 points</b></p> <p>Few grammar, capitalization, punctuation, and spelling errors</p>	<p><b>1 point</b></p> <p>4+ errors in grammar, capitalization, punctuation, and spelling</p>	<p><b>0 points</b></p> <p>More than 6 grammar/ spelling/ punctuation errors.</p>	
<b>TOTAL POINTS</b>					/30

Assessment 8--Digital portfolio rubric

**Digital Portfolio Rubric**

CATEGORY	Exemplary	Proficient	Developing	Unsatisfactory	RATING
<b>Selection of Artifacts</b>	All artifacts and work samples are clearly and directly related to the purpose of portfolio.	Most artifacts and work samples are related to the purpose of the digital portfolio.	Some of the artifacts and work samples are related to the purpose of the digital portfolio.	None of the artifacts and work samples is related to the purpose of portfolio.	
<b>Reflections</b>	All reflections clearly describe growth, achievement and accomplishments, and include goals for continued learning (long and short term).	Most reflections describe growth and include goals for continued learning. It is clear student put thought and consideration into writing.	A few of the reflections describe growth and include goals for continued learning. It is not clear student put thought into his/her writing.	None of the reflections describes growth and does not include goals for continued learning. It is clear student put little thought into these writings.	
<b>Use of Multimedia</b>	Photographs, graphics, audio and/or video files enhance understanding of concepts, ideas and relationships, create interest, and are appropriate for chosen purpose.	Most of the graphic elements and multimedia contribute to understanding concepts, ideas and relationships, enhance the written material and create interest.	Some of the graphic elements and multimedia do not contribute to understanding concepts, ideas and relationships.	None of multimedia contribute to understanding concepts, ideas and relationships. The inappropriate use of multimedia detracts from content.	
<b>Documentation &amp; Copyright</b>	All images, media and text follow copyright guidelines with accurate citations. All content throughout portfolio displays appropriate copyright permissions.	Most images, media and text created by others are cited with accurate, properly formatted citations.	Some images, media or text created by others are not cited with accurate, properly formatted citations.	No images, media or text created by others are cited with accurate, properly formatted citations.	
<b>Ease of Navigation</b>	Navigation links are intuitive. The various parts of portfolio are labeled, clearly organized and allow reader to easily locate an artifact.	Navigation links generally function well, but it is not always clear how to locate an artifact or move to related pages or different section.	Navigation links are confusing and it is often unclear how to locate an artifact or move to related pages or section.	Navigation links are confusing, and it is difficult to locate artifacts and move to related pages or a different section.	
<b>Layout and Text Elements</b>	Digital portfolio is easy to read. Fonts and type size vary appropriately for headings, sub-headings and text. Use of font styles (italic, bold, underline) is consistent and improves readability.	Digital portfolio is generally easy to read. Fonts and type size vary appropriately for headings, sub-headings and text. Use of font styles (italic, bold, underline) is generally consistent.	Digital portfolio is often difficult to read due to inappropriate use of fonts and type size for headings, sub-headings and text or inconsistent use of font styles (italic, bold, underline).	Digital portfolio is difficult to read due to inappropriate use of fonts, type size for headings, subheadings and text, and font styles (italic, bold, underline).	
<b>Captions</b>	All artifacts are accompanied by a caption that clearly explains importance of item including title, author, and date.	Most artifacts are accompanied by a caption that clearly explains importance of item including title, author, and date.	Some artifacts are accompanied by caption that explains importance of item including title, author, and date.	No artifacts are accompanied by a caption that explains importance of item.	
<b>Writing Mechanics</b>	There are no errors in grammar, capitalization, punctuation, and spelling.	There are few errors in grammar and spelling. These require minor editing and revision.	There are four or more errors in grammar and spelling requiring editing and revision.	There are more than six errors in grammar and spelling requiring major editing and revision.	

## 13 Ways Blogs Teach Common Core

If you aren't blogging with your students, you're missing one of the most effective tools available for improving student literacy and math. Blogs are easy to use, fun for students, encourage creativity and problem solving, allow for reflection and feedback, enable publishing and sharing of work, and fulfill many of the Common Core Standards you might be struggling to complete. Aside from math and literacy, Common Core wants students to become accomplished in a variety of intangible skills that promote learning and college and career readiness.



Look at these 13 benefits of blogging and how they align with Common Core:

1. **provide and get feedback**—building a community via comments is an integral part of blogging. If you didn't want feedback, you'd publish a white paper or submit work the old fashioned hard copy way. When students publish their ideas in blogs, other students, teachers, parents can provide feedback, join the conversation, and learn from the student.
2. **write-edit-review-rewrite**—teachers don't expect students to get it right the first time. Part of the writing process is revising, editing, rewriting. This is easy with blogs. Students publish a topic, collect comments, incorporate these ideas into their own thinking, and then edit their post.
3. **publish**—the idea that student work is created for a grade then stuffed away in a corner of their closet is disappearing. Current educators want students to publish their work in a way that allows everyone to benefit from the student's knowledge and work. There are many ways to do that—blogs are one of the easiest.
4. **share**—just like publishing, students no longer create for a grade; they share with others. Blogs allow for sharing of not only writing, but artwork, photography, music, multimedia projects, pretty much anything the student can create.
5. **collaborate**—blogs can easily be collaborative. Student groups can publish articles, comment on others, edit and rewrite. They can work together on one blog to cover a wider variety of topics and/or make its design attractive, appealing and enticing to readers.
6. **keyboarding**—blogs are small doses of typing—300-500 words, a few dozen for comments. This is an authentic opportunity to practice the keyboarding skills students will need for Common Core Standards in 4th grade and up.
7. **demonstrate independence**—blogs are about creativity. No two are alike. They offer lots of options for design and formatting so students can tweak it to their preference. Because they are open 24/7, students can do blog work when it suits them, not in the confines of a 50-minute class.
8. **build strong content knowledge**—blog posts can be drafted as the student collects information, posted when the student is ready. Links can be included to provide evidence of student statements, as well as linkbacks for reference and deeper reading for interested students.
9. **respond to the varying demands of audience, task, purpose, and discipline**—Students can create their work in whatever digital tool fits the audience, task, purpose they are focused on, and then embed it into their blog post. This is possible even in a simplified blogging platform like Kidblog. Most online tools (such as Voki, Wordle, and Tagxedo) provide the html codes that can be easily placed in

the blog post. Then, the student at their option can focus on presenting their ideas as music, art, photos, text, an infographic, a word cloud—whatever works for their purposes.

10. **comprehend as well as critique**—student bloggers are expected to critique the posts of others by thoroughly reading the post and commenting based on evidence. If the reader doesn't understand, they ask questions in the comments. This insures that when they evaluate the post, they have all the information required to reach a conclusion.
11. **value evidence**—blogs make it easy to provide all the necessary evidence to support a point of view. Students can link back to sources to provide credit and link to experts to provide credibility for statements. In fact, in the blogosphere, good bloggers are expected to do this as a means of building credibility for opinions they write
12. **use technology and digital media strategically and capably**—certainly blogs are great for writing, but they're also excellent as digital portfolios to display student work developed in a variety of places. Students pick the technology that fits what they're expected to accomplish in a class, then publish it to the blog. Have you seen the movies students put together on a topic? Some are amazing.
13. **understand other perspectives and cultures**—blogs are published to the Internet. Even private blogs are accessed by many more people than possible with a hand-written paper. Students write knowing that people of all cultures and perspectives will read their material, knowing they can add comments that share their beliefs. This encourages students to develop the habit of thinking about *perspective* as they write.



Don't try all of this at once. Spiral into it, starting in second or third grade. Let their blogging grow with their intellectual skills.

### Basics of Posts

Blogs used to be too cutting edge for pedestrian rules like grammar and spelling. That's not true anymore. Before students write their first post, remind them:

- *make content pithy*
- *use correct spelling and grammar*
- *avoid slang*
- *appeal to readers with content and design*
- *interact with readers via questions in the blog and answering comments*
- *avoid mistakes, redundancies, jerky flow by proof reading*

Blogs are everything you want in a school activity—student-centered, independent, supportive of problem solving and creative thinking, transferable to many classes and home activities. If you have questions, add them to the comments. I'll see if I can help.

**Pages skipped on purpose**



## Lesson #11-12—Spreadsheets

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> <li>Algorithm</li> <li>Autosum</li> <li>Axis</li> <li>F11</li> <li>Formula</li> <li>Legend</li> <li>Model</li> <li>Spreadsheet</li> <li>Symbols</li> <li>Workbook</li> <li>Worksheet</li> </ul>	<ul style="list-style-type: none"> <li>Formula doesn't work (add =)</li> <li>Formula still doesn't work (is there extraneous text in cell?)</li> <li>Graph is empty (is data highlighted)</li> <li>Can't format plot area (click plot area –not chart)</li> <li>Chart doesn't look right (highlight ONLY data, headings)</li> <li>Why use spreadsheet program?</li> <li>Spreadsheet answer is different from mine (use standard algorithm)</li> </ul>	<p><b>New</b></p> <p><b>Scaffolded</b></p> <p>Problem solving Keyboarding Digital citizenship Spreadsheet formulas Graphs and charts</p>
<p><b>Academic Applications</b></p> <p>Math, problem solving, compare-contrast</p>	<p><b>Materials Required</b></p> <p>Spreadsheet tool, backchannel, screenshot app, sample data, assessment</p>	<p><b>Standards</b></p> <p>CCSS: Math.Practice.MP1-8 NETS: 5a-d, 6a</p>

### Essential Question

*How do I make data interesting and still allow viewers to draw their own conclusions?*

### Big Idea

*Students turn data into information*

### Teacher Preparation

- Collect words for Speak Like a Geek Board.
- Ensure required links are on student digital devices.
- Talk with grade-level team so you tie into inquiry.
- Integrate domain-specific vocabulary into lesson.
- Ask what tech problems students had difficulty with.
- 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

- Annotated workbook (if using)
- Worked independently
- Used good keyboarding habits
- Completed project
- Completed warm-up, exit ticket
- Joined classroom 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:** 180 minutes

**Class warm-up:** Keyboard, paying attention to posture

**Required skill level: Spreadsheet basics.**

In this lesson, students review spreadsheet formulas to assess student skills with spreadsheet tools.



## 6th Grade Technology Curriculum: Teacher Manual

\_\_\_\_\_ Before beginning, put backchannel device on class screen to track student comments.

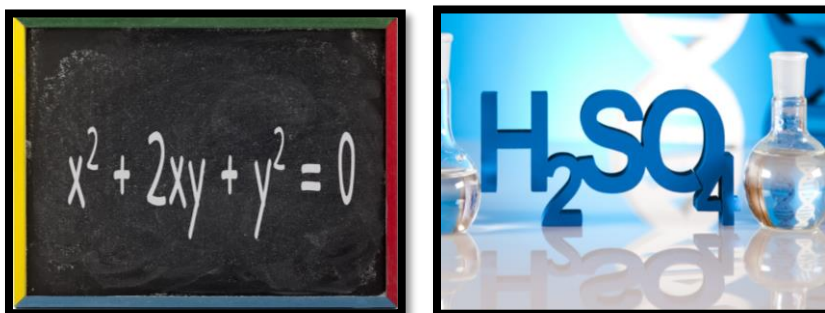
\_\_\_\_\_ Discuss this Common Core statement—

*Mathematically proficient students consider available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, ruler, protractor, calculator, **spreadsheet**, computer algebra system, statistical package, or dynamic geometry software.*

\_\_\_\_\_ What does it mean to ‘model’ a concept? What are models students are aware of? Anyone make model airplanes? Lego models? Discuss how important it is to do these carefully, with precision. Anyone who sees the ‘model’ gets the message.

\_\_\_\_\_ How does this compare to formulas discussed in class?

Figure 79a-b--Two formulas



\_\_\_\_\_ Formulas are a tool, like a calculator, strategically used to analyze data, and draw conclusions that would be difficult to comprehend without the assistance of automaticity. They do not supplant student responsibility for learning the process.

\_\_\_\_\_ Spreadsheets are a time-proven method for using formulas to model data and solve problems. A familiarity with spreadsheets should start when students begin math, as a tool strategically used. In the Structured Learning curriculum, students start in second grade. Remember these spreadsheet projects from 2<sup>nd</sup> (Figure 80a), 3<sup>rd</sup> (Figure 80b) and 4<sup>th</sup> (Figure 80c) grade:

Figure 80a-c--Spreadsheet projects



\_\_\_\_\_ For this lesson, use Numbers, Excel, or Google Spreadsheets. If you have Chromebooks, use the online versions. For iPads, use the app versions but adapt the project to accommodate.

\_\_\_\_\_ Why pick spreadsheets for projects rather than DTP, word processing, or



slideshows? If students use workbooks, have them fill in the categories under *Spreadsheet* in *Figure 81* (see *Figure 74* in an earlier lesson for completed version).

*Figure 81--Compare spreadsheets to other tools*

Element	Presentation	Word processing	Spreadsheets	DTP
Purpose				
Basics				
Sentences				
Content				
Use				
Presentation				
What else				

\_\_\_\_\_ This lesson includes four activities. Students can work individually or in small groups:

- *spreadsheet formulas*
- *automath*
- *charts and graphs*
- *summative spreadsheet skills*

### Spreadsheet formulas

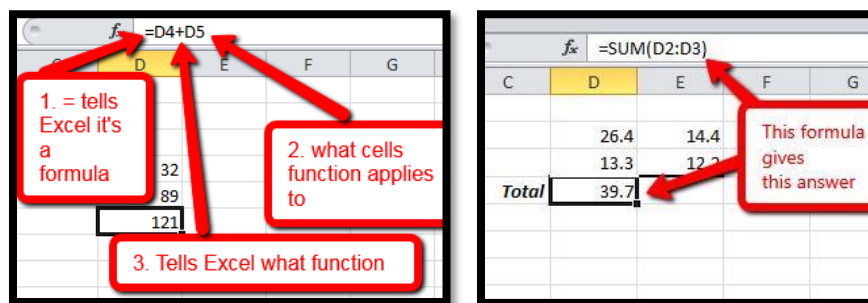
\_\_\_\_\_ Build spreadsheet formulas for adding, subtracting, multiplying, and dividing (*Fig. 82a-b*).

\_\_\_\_\_ Formulas are composed of:

- = (*introduce formula*)
- **Function** (*add, subtract, multiply, divide*)
- **Location** (*cells function applies to*)
- ( ) (*group numbers*)

\_\_\_\_\_ Resulting formula will look like either *Figure 82a* or *82b*:

Figure 82a-b--Formula unpacked



Open spreadsheet program. Adapt the directions to the tool you're using (side of Figure 83).

Figure 83—Spreadsheet project

	A	B	C	D	E	F	G
1	<b>T2 SPEED QUIZ</b>						
2		<b>WPM</b>	<b>Grade</b>		<b>Teach this with each speed quiz:</b>		
3	1	22	9		rename tab	font size	
4	2	21	10		recolor tab	fill	
5	3	19	6		enter data	merge cells	
6	4	14	8		average column		
7	5	21	8		<b>Teach this with 3-week training</b>		
8	6	24	8		add count, min, max, median, mode		
9	7	29	10		add label for WPM and Grade		
10	8	28	10		add labels for formulas		
11	9	19	9		click on cells and see the formula		
12	10	21	10		add separator line under data		
13	11	15	8		B/I rows 21-24		
14	12	17	10		F11 graph		
15	13	16	10		Who's the slowest		
16	14	19	10		Who's the fastest		
17	15	20	10		Who got the highest grade		
18	16	18	10		Who got the lowest grade		
19	17	14	10		Format Graph		
20	18	20	10		rt click--chart options		
21	<b>average</b>	<b>19.83333</b>	<b>9.222222</b>		explore chart options		
22	<b>median</b>	<b>19.5</b>	<b>10</b>		rt-click--chart type		
23	<b>mode</b>	<b>21</b>	<b>10</b>		change colors		
24	<b>count</b>	<b>18</b>	<b>18</b>		change background		
25	<b>max</b>	<b>29</b>	<b>10</b>				
26	<b>min</b>	<b>14</b>	<b>6</b>				
27							

Rename worksheet; color tab.

**A1**—add title (i.e., *T2 Speed Quiz*). Merge A1 and A2 to span title over two columns.

**A2**—add data. Resize column to fit data on the class screen. 1) Sort data from smallest to largest, 2) Format speed *under 35wpm* red, *at 35wpm* black, and *above 35wpm* green.

Remind students: Spreadsheet programs can't evaluate letters or symbols—only numbers.

Find average using ribbon tool. Notice the formula in the cell: **=AVERAGE(H8:H15)**. Copy the formula and replace *AVERAGE* with *median*, or *mode* for those calculations.

Calculate 'Count', 'Max', 'Min'. Evaluate formulas. Why do they work?

Discuss first as a group, then as a class: How do equations (accessed by clicking answer cell and observing address box) correspond to given situations? Why is it a good idea to use equations to solve problems? How can this model be replicated for other circumstances? How is precision in building formulas important? Will it always work if the formula is correct?

**Auto Math**

- \_\_\_\_\_ This is a review of basic formulas available in most spreadsheet programs. If students have been using this curriculum since 3<sup>rd</sup> grade, this is a formative assessment of skills.
- \_\_\_\_\_ Open workbook and add a tab called 'Auto Math'; change tab color.
- \_\_\_\_\_ **A1**—add title; merge-center A1-G1; color with paint bucket.
- \_\_\_\_\_ **A2**—add student name.
- \_\_\_\_\_ **A3**—type 'Addition'; select entire row; use paint bucket to color.
- \_\_\_\_\_ Add 'Total' next to answers; right-align cell.
- \_\_\_\_\_ Discuss place value. Show how to format cells for multiple decimal places.
- \_\_\_\_\_ Input data (not answers). Add a line beneath bottom row of data.

Figure 84--AutoMath

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
1	<b>AUTO MATH</b>														
2	your name														
3	<b>Addition</b>								<b>Instructions:</b>						
4			26	144	720	1044	2583	double click 'sheet 2' tab and rename 'auto math'							
5			13	12	20	2	3	rt click on 'auto math' tab and recolor							
6		Total	39					input title (caps lock, font size 36)							
7								input your name (rest of spreadsheet in font size 10)							
8	<b>Subtraction</b>								A3--input 'addition'						
9			26	144	720	1044	2583	click '3' and color row 3							
10			13	12	20	2	3	B6--input 'total' and right-align							
11		Total	13					input data							
12								add line under data							
13	<b>Multiplication</b>								add using formula (equal sign, select first cell, +, select second cell, enter						
14			26	144	720	1044	2583	change numbers to see how Excel adds for you							
15			13	12	20	2	3	subtract, multiply, divide in same way (-=subtract; *=multiply; /=divide)							
16		Total	338					highlight from a1 to g1, merge-center; fill with paint bucket							
17								print preview--set-up--change to landscape, change size to 175%							
18	<b>Division</b>								print page 1 only						
19			26	144	720	1044	2583								
20			13	12	20	2	3								
21		Total	2												
22															

\_\_\_\_\_ Cell beneath problem (and line) is for formula. Easiest way to create a formula is:

- start with =
- select the first cell with a mouse click
- input function—+, - /, \*
- select the second cell
- push enter for the answer

\_\_\_\_\_ Before entering answer formula, students try mental math. This can be done two ways:

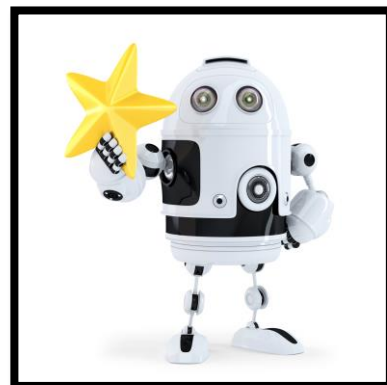
- race with spreadsheet—see if the student or the program gets the answer first
- work in pairs—one student mentally calculates answer while second uses formula

\_\_\_\_\_ When answer shows up, does it look correct: 1) eyeball answer to determine if logic and experience say it is accurate, 2) use mental math, 3) guess-and-check, 4) use an algorithm.

**In short: Students construct a viable argument, and then critique reasoning.**

Share with students a teacher secret: We roughly know the answer before it comes up. If the spreadsheet is not close to what we expect, we re-evaluate. Did we input the formula correctly? Did we point to the correct cells?

**As they work to solve a problem, mathematically proficient students maintain oversight of the process while attending to details. They continually evaluate the reasonableness of intermediate results (from Common Core).**



If answer is wrong, show students how to troubleshoot:

- Is function correct (+, -, \*, /)?
- Is formula in right spot
- Did student type answer rather than formula?
- Does formula start with =?
- Is column wide enough (or is \*\*\* in the answer cell instead of a number)?
- Are cells pointed to by formula different?

Have students complete problems, first with standard algorithm and then formulas.

In spreadsheet, students identify which are 1) dependent, and 2) independent variables. How does changing one affect the other? Analyze the relationship between these two.

Have students look both for general methods and shortcuts. For example, copy formula =b4+b5 and replace addition symbol with \* for multiplication. Students understand that will work because they understand the importance of **repeated reasoning**.

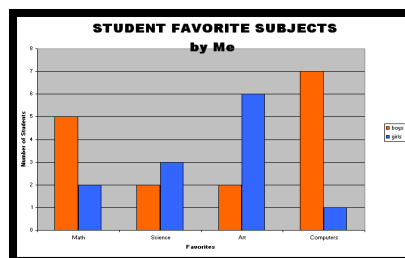
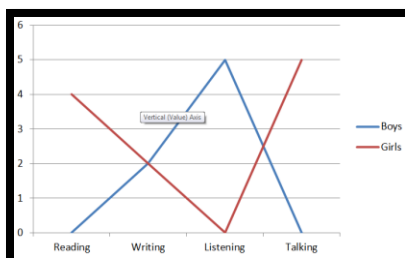
Save (Ctrl+S) if not in GAFE. What's the difference between 'save', 'save-as'? Print (Ctrl+P), share, or publish as is the custom in your class. Embed with code into blog/website if this is available (say, with Google Sheets).

## Charts and Graphs

What the difference between a table (Figure 85a), a chart (can be a table or graph—Figure 85b), and a graph (Figure 85c)? How does each analyze data? Which tells more? Which is better at 'making sense' of data?

Figure 85a-c—Tables, charts, and graphs

	A	B	C	D	E	F
1	<b>What Is Your Favorite Subject?</b>					
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						



Take a classroom poll and turn it into a graph. Or: Collect data for a science experiment.

This activity reviews skills students are familiar with if they've been using this curriculum since 3<sup>rd</sup> grade. Use this as a summative assessment. Expect them to work as independently



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as possible.

\_\_\_\_\_ Open the spreadsheet program on the class screen while students open it on their digital devices. Today, the class will collect data to create a table and a graph and evaluate which is more useful.

\_\_\_\_\_ Rename 'sheet 1' to subject being analyzed; change tab color. Add table name (i.e., *What is Your Favorite Subject?*), student name, date, column headings (*subject, boys, girls*), and categories (*math, science, art, computers*).

\_\_\_\_\_ See 'Instructions' on right side of *Figure 86*? If this is review, have students complete independently or in groups.

\_\_\_\_\_ When you reach 'Survey Class...' under 'Instructions': Collect data by a show of hands. One vote per student and no one can change their vote (allowing this complicates the process).

\_\_\_\_\_ Demonstrate how to highlight data. In *Figure 86*, that includes a4 to c8 (labels, titles, and data); push *F11* to turn table into a chart similar to *Figure 85c* without the title or formatting.

*Figure 86—Graph data*

	A	B	C	D	E	F	G	H	I
1	<b>HOW DO I LEARN</b>								
2	your name			<b><u>Instructions:</u></b>					
3				<i>double click 'sheet 3' tab and rename 'survey data'</i>					
4		Boys	Girls	<i>rt click on 'survey data' tab and recolor</i>					
5	Reading	0	4	<i>A1--input title (caps lock, font size 12)</i>					
6	Writing	2	2	<i>A2--input your name (rest of spreadsheet in font size 10)</i>					
7	Listening	5	0	<i>A3--date (Ctrl+;)</i>					
8	Talking	0	5	<i>B3/B4, input 'boys', 'girls'</i>					
9				<i>A4-A8--input subjects</i>					
10				<i>survey class to collect data</i>					
11				<i>highlight from a1 to c1, merge-center, fill with paint bucket</i>					
12				<i>highlight from A4-c8; f11</i>					
13	<b>WHEN I DO HOMEWORK</b>								
14		Boys	Girls	<i>format chart</i>					
15	Do early			<i>add title, x and y labels</i>					
16	Do on time			<i>add backgrounds</i>					
17	Do late			<i>print preview--set-up--change to landscape, size to 175%</i>					
18	Don't do			<i>Print page 1 only</i>					

\_\_\_\_\_ Take a moment to study graph. Ask students:

- *What does the x axis represent? How about the y axis?*
- *What's the ratio of the two types of favorites?*
- *What is the unit rate for the ratio of two favorites?*
- *What is the percent of girls who like reading? How does that compare to boys?*
- *Write a word problem that could be represented by the graph.*
- *If girls 'writing' is distributed among other choices, which would be the favorite?*

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- Based on the chart, predict whether girls prefer reading or listening?
- What is the statistical spread of data?



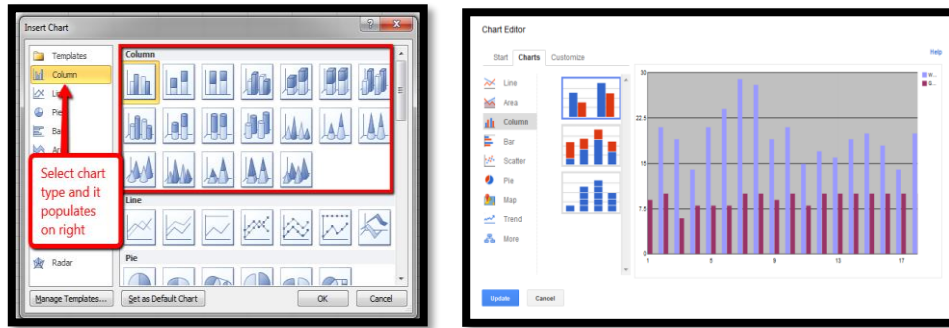
\_\_\_\_\_ Format chart area, add title, add labels to x and y axes, change background, add student name, and format plot area. Remind students to pay attention to chart clarity (for example, in *Figure 85c*, background makes it easy to read x axis and y axis descriptors).

\_\_\_\_\_ In algebraic terms, what is the 1) dependent, and 2) independent variable?

\_\_\_\_\_ Use ratio language to describe a relationship between two quantities in the graph.

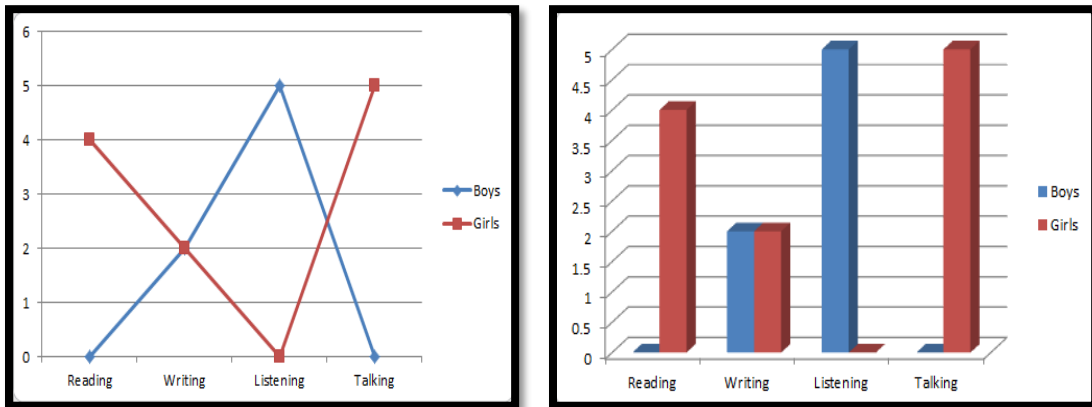
\_\_\_\_\_ Ask students to re-form graph as a line graph, a 3D graph, or other options.

*Figure 87a-b: Graph options in Excel and Google Spreadsheet*



\_\_\_\_\_ Are these clearer or more confusing? Which is best for this data (*Figures 88a or 88b*)?

*Figure 88a-b: Two types of graphs*



\_\_\_\_\_ Is there a danger in allowing the chart to interpret data for us—that we won't draw our own conclusions? That we won't critically think about data?

### Summative Spreadsheet Skills

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\_\_\_\_\_ Students assess their 1) general knowledge of spreadsheets, and 2) skills they are most likely to use in Middle School/High School. *Assessment 23* is a sample but collect skills relevant to your students.

\_\_\_\_\_ Test-taking strategies:

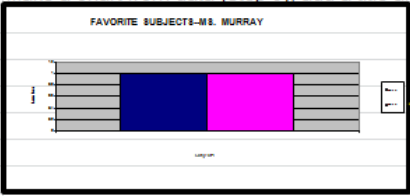
- *Answer questions you know first—go back for others*
- *Don't know the entire answer? Answer what you know*
- *Check your work when you're done*

\_\_\_\_\_ Offer extra credit items for those who have pushed ahead. Some are provided in the sample or add different ones suited to your students.

\_\_\_\_\_ When finished, students save/share to their digital portfolio.

\_\_\_\_\_ Give students one class to complete assessment. Do not answer questions. All skills have been covered between 2<sup>nd</sup> and 6<sup>th</sup> grade. Adjust assessment as needed to satisfy particular circumstances. You may choose to make this a collaborative exercise or individual.

*Assessment 23--Spreadsheet summative*

1	A	B	C	D	E	F	G	H																																												
1	<b>SUMMATIVE SPREADSHEET QUIZ</b>																																																			
2	1	Read all directions first	4	Watch spelling--errors count against you																																																
3	2	Enter information in the correction location (see Column A)	5	If you're stuck, you may use the 'help' files																																																
4	3	If you get stuck, move on to the next step	6	When you're finished, try the Extra Credit																																																
5	<b>Cell Skill</b>																																																			
6	A1	Enter title 'Fifth Grade Skills'--font size 26; Merge-center over A1-F1	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Extra Credit</th> </tr> </thead> <tbody> <tr> <td colspan="3">Step 8: format chart (change bars, colors, background)</td> </tr> <tr> <td colspan="3">Enter time using keyboard shortcut</td> </tr> <tr> <td colspan="3">Turn picture into a hyperlink to your file folder</td> </tr> <tr> <td colspan="3">Add text 'Click Here for Falcon.net'; make it a hyperlink to falcon.net</td> </tr> </tbody> </table>					Extra Credit			Step 8: format chart (change bars, colors, background)			Enter time using keyboard shortcut			Turn picture into a hyperlink to your file folder			Add text 'Click Here for Falcon.net'; make it a hyperlink to falcon.net																																
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Add text 'Click Here for Falcon.net'; make it a hyperlink to falcon.net																																																				
7		rename the worksheet tab 'quiz'																																																		
8		recolor the 'quiz' tab																																																		
9	A2	Your name--font size 10, font color red																																																		
10	A3	Your teacher's name; font comic sans																																																		
11	A4	The date, using keyboard shortcut																																																		
12	G1-J6	Insert any picture																																																		
13		resize Row 3 and Column D																																																		
14	A6-C10	Enter the data and labels to the right	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Subject</th> <th style="width: 20%;">boys</th> <th style="width: 20%;">girls</th> </tr> </thead> <tbody> <tr> <td>Arts</td> <td style="text-align: center;">5</td> <td style="text-align: center;">3</td> </tr> <tr> <td>LA</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Math</td> <td style="text-align: center;">5</td> <td style="text-align: center;">8</td> </tr> <tr> <td>Science</td> <td style="text-align: center;">1</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>					Subject	boys	girls	Arts	5	3	LA	0	0	Math	5	8	Science	1	0																														
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LA	0	0																																																		
Math	5	8																																																		
Science	1	0																																																		
15		Include shading and border																																																		
16																																																				
17		Make a chart from data (step 9): add a title and the X and Y labels																																																		
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26		Color row 5 and row 11 blue (on the 'quiz' worksheet)																																																		
27	A12-E21	Type the table below, including all data; use Excel formulas to find the answers	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Average</th> <th style="width: 10%;">Addition</th> <th style="width: 10%;">Subtract</th> <th style="width: 10%;">Multiply</th> <th style="width: 10%;">Divide</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">22</td> <td style="text-align: center;">44</td> <td style="text-align: center;">123</td> <td style="text-align: center;">33</td> <td style="text-align: center;">144</td> </tr> <tr> <td style="text-align: center;">33</td> <td style="text-align: center;">32</td> <td style="text-align: center;">33</td> <td style="text-align: center;">55</td> <td style="text-align: center;">12</td> </tr> <tr> <td style="text-align: center;">44</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">55</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">66</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">77</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">77</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">88</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Average	Addition	Subtract	Multiply	Divide	22	44	123	33	144	33	32	33	55	12	44					55					66					77					77					88				
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Assessment 24--Spreadsheet summative

## Spreadsheet Grading Rubric

Name \_\_\_\_\_ Teacher \_\_\_\_\_

---

1. Worksheet title added, font size 26 \_\_\_\_ in A1 \_\_\_\_\_
2. Title merge-centered A1-F1 \_\_\_\_\_
3. Worksheet tab renamed 'quiz' \_\_\_\_\_ recolored \_\_\_\_\_
4. Name filled in, font size 10 \_\_\_\_ font color red \_\_\_\_ in A2 \_\_\_\_\_
5. Teacher's name filled in, font comic sans \_\_\_\_\_ in A3 \_\_\_\_\_
6. Date filled in (using keyboard shortcut) \_\_\_\_\_ in A4 \_\_\_\_\_
7. Picture added (any picture) \_\_\_\_\_ in G1-J6 \_\_\_\_\_
8. Row 3 resized \_\_\_\_\_ Column D resized \_\_\_\_\_
9. Data table entered (labels, data) \_\_\_\_\_ in A6-C10 \_\_\_\_\_
10. Data table heading row shaded \_\_\_\_\_ with border \_\_\_\_\_
11. Chart created from data \_\_\_\_ Titles added (chart name, x/y axis labeled) \_\_\_\_
12. Row 5 colored blue \_\_\_\_\_ Row 11 colored blue \_\_\_\_\_
13. Data entered from 2<sup>nd</sup> table \_\_\_\_\_
14. Average calculated with formula \_\_\_\_\_
15. Addition calculated with formula \_\_\_\_\_
16. Subtraction calculated with formula \_\_\_\_\_
17. Multiplication calculated with formula \_\_\_\_\_
18. Division calculated with formula \_\_\_\_\_
19. No spelling errors \_\_\_\_\_
20. Overall \_\_\_\_\_

### **EXTRA CREDIT**

1. Format chart (change bars, colors, background) \_\_\_\_\_
2. Turn the picture into a hyperlink \_\_\_\_\_
3. Add text 'Click here for Falcon.net' \_\_\_\_\_

**Pages skipped on purpose**

## Lesson #29—Write an Ebook

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> <li>Ebook</li> <li>GHO</li> <li>Kindle</li> <li>Novella</li> <li>Point of view</li> <li>Prologue</li> <li>Rhetoric</li> <li>Share</li> <li>Tense</li> <li>Theme</li> <li>Voice</li> </ul>	<ul style="list-style-type: none"> <li>I forgot to attend GHO (is it taped?)</li> <li>I started my novel in Word, but it's not on all computers (import to Google Docs)</li> <li>I can't think of what else to say (ask group)</li> <li>I'm not comfortable evaluating classmates (build a checklist—be objective)</li> <li>I don't have classmate emails (Use 'share')</li> <li>Can't get my book ready on time (discuss with GHO group how to do this)</li> <li>I lost my document (did you back up?)</li> <li>I don't want to sell book (discuss options)</li> </ul>	<p><b>New</b> Write an ebook</p> <p><b>Scaffolded</b> Problem solving Keyboarding Digital citizenship</p>
<p><b>Academic Applications</b> Writing, research, collaboration, sharing</p>	<p><b>Materials Required</b> Publication account for ebook; parent permission slips for GHO, back-up for novellas (cloud, flash drive, other)</p>	<p><b>Standards</b> CCSS: W.6.5-7, 10 NETS: 1b, 6b, 6d</p>

### Essential Question

*I'm just a kid. How can I write a book?*

### Big Idea

*With proper planning, any sixth grader can write a book.*

### Teacher Preparation

- Parent permission slips for GHO (if necessary).
- Ask about tech problems students found difficult.
- Integrate domain-specific vocabulary into lesson.
- Know whether you need extra time for lesson.
- Something happen you weren't prepared for? Show students how you fix the emergency without a meltdown and with a positive attitude.

### Assessment Strategies

- Worked independently
- Used good keyboarding habits
- Completed exit ticket
- Joined classroom 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:** 90 minutes a week, every week of the semester or grading period

**Class warm-up:** Meet in critique group to discuss required topics

This project is completed over a period of months. It is an ongoing exercise in language and writing skills.

**Required skill level: Enthusiasm and passion for writing.**





\_\_\_\_\_ Before beginning, put backchannel device on class screen.

\_\_\_\_\_ Students will write a short novelle working in a critique group with four-five classmates. Each week, students complete one of the steps required to complete the ebook, and then meet with their critique group virtually. The critique group will serve as mentor and coach. For example, if the assignment is to establish a theme (as in #3 below), each student will bring **their theme** to critique group and share, be critiqued, and comment on the ideas of others:

- *Prepare for the session by reading groupmates' work.*
- *Use evidence to evaluate classmate's point of view.*
- *Build on others' ideas and express their own clearly and persuasively.*

\_\_\_\_\_ During critique sessions, through classmate novellas, students will be exposed to all types of writing (as required in 6<sup>th</sup> grade) and open-mindedly evaluate them.

\_\_\_\_\_ Once planning steps are completed (Steps 1-5 and Prologue), students will write their story.

\_\_\_\_\_ About once a month, students reflect on their story—what was easy, hard, writer's block, and research needed. This can be done in blogs, Discussion Boards, or even a Twitter feed.

\_\_\_\_\_ About once a week, students comment on the reflections of at least three classmates.

\_\_\_\_\_ Before beginning, discuss 1) difference between an amateur and professional writer, 2) what it means to be 'published', and 3) publication options (see 7: **Publish!**).

### **Prologue: Discuss young authors, i.e. (Google for their websites):**

\_\_\_\_\_ Alexandra Adornetto--published *The Shadow Thief* at age 15 and *Halo* at 18.

\_\_\_\_\_ Christopher Paolini--published *Eragon* at age 16

\_\_\_\_\_ Steph Bowe--published *Girl Saves Boy* at age 16.

\_\_\_\_\_ Alec Greven--published *How to Talk to Girls* at age 9

### **1: Make decisions about how to tell story**

\_\_\_\_\_ 1<sup>st</sup> or 3<sup>rd</sup> person? Discuss and research.

\_\_\_\_\_ Present or past tense--discuss and research.

\_\_\_\_\_ Author's voice--discuss and research.

\_\_\_\_\_ Genre--science fiction, YA? Discuss and research.

\_\_\_\_\_ Topic--how do you pick a topic?

- *What is student's area of expertise?*
- *What are they passionate about?*
- *What do they have experience in/with?*

\_\_\_\_\_ Be prepared to discuss these with critique group.

### **2: Brainstorm content**

\_\_\_\_\_ Where does story occur? What fits story's characters, theme, and goals?

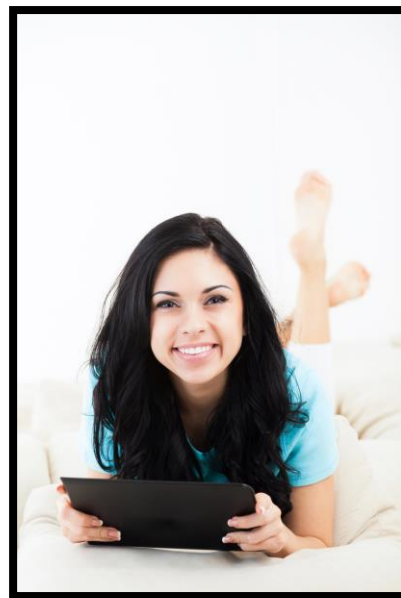
\_\_\_\_\_ Each student shares a one-paragraph summary of their story with their critique group. This should read like the inside flap of a novel--quick introduction to characters, plot, setting, and why readers should be interested. Each group member reads all summaries.

\_\_\_\_\_ At critique sessions, each student makes suggestions based on evidence.

### **3: What is the theme?**

\_\_\_\_\_ What is it? Review books students have read and discuss its impact on story's success.

\_\_\_\_\_ Determine theme of student story and discuss how it will be conveyed to the critique group.



**4: Heroes, villains, plot, and where it happens**

\_\_\_\_\_ Based on theme, determine characters, how they deliver the story, story arc (plot), and setting.

\_\_\_\_\_ Make sure characters grow from experiences.

\_\_\_\_\_ With critique group, pay attention to:

- *What makes the plot unfold*
- *how the characters change as the plot moves toward resolution*
- *whether story is a character- or plot-driven (explain)*

\_\_\_\_\_ When discussing, critique group members cite evidence to support analysis.

**5: Sketch out at least ten chapters of the book.**

\_\_\_\_\_ Chapters continually increase reader interest:

- *What problem creates a crisis to be solved?*
- *What plot points make the story increasingly complex and interesting?*
- *What conflicts and resolutions develop?*
- *What is the final critical conflict/crisis?*

\_\_\_\_\_ Share outline with the teacher.

\_\_\_\_\_ When discussing, GHO group members cite evidence to support analysis.

**6: Write the book**

\_\_\_\_\_ Write in whatever word processing program works best (Google Docs, Word, Notes, or another).

\_\_\_\_\_ Write 1000 words at a sitting—about three pages. Let the words tumble out, based on the outline and research. Don't edit until the end. Each novella must be 15,000 words.

\_\_\_\_\_ Use proper writing conventions, relevant descriptive details, and well-structured sequences.

\_\_\_\_\_ Use domain-specific and academic language in story.

\_\_\_\_\_ Use narrative techniques such as dialogue, pacing, and description to develop experiences, events, and characters.

\_\_\_\_\_ Use transition words to signal shifts from one time frame or setting to another.

\_\_\_\_\_ Provide a conclusion that follows from events.

\_\_\_\_\_ Develop and strengthen writing by planning, revising, editing, rewriting, or trying a new approach, based on collaboration and feedback from critique group.

\_\_\_\_\_ Research where necessary; draw on several sources and refocus when appropriate.

\_\_\_\_\_ Hints for writing:

- *Write every day even if you don't want to. Write, throw it out, but write.*

**How to Write Ebook**

1. Research young authors
2. Decide POV for story
3. Decide voice for story
4. Decide genre story
5. Decide theme
6. Decide topic
7. Brainstorm content with writing group
8. Flesh out characters
9. Plot action
10. Research settings
11. Sketch out chapters
12. Write book
13. Review book as you write
14. Publish!



- *Read—a lot. Especially in your genre.*
- *Experience life—so you can write about it. Notice the world around you. Think how you could write about it.*

\_\_\_\_\_ As student works, share their draft with critique group, specifically looking for:

- *Does it demonstrate command of grammar and spelling conventions?*
- *Are sentence patterns varied?*
- *Is style and tone consistent?*
- *Does plot unfold in episodes?*
- *What details carry theme?*
- *Do characters grow with the plot?*
- *Are word meanings clear based on context?*
- *How is point of view developed? Is it effective? Why?*
- *Does story engage reader by establishing a context, introducing narrator/characters, and organizing events to unfold naturally and logically?*
- *Does story use narrative techniques to develop events, and characters?*
- *Does story use transition words and phrases to signal shifts from one time frame or setting to another?*
- *Does conclusion follow events?*

\_\_\_\_\_ Remind students to back up their work:

**Class exit ticket:** ***Tweet about progress with a #hashtag like #6thgradebook.***

### Great Writing Quotes

A book is proof humans are capable of magic. —Carl Sagan

I'm a writer. Anything you say or do may appear in a story. —Anonymous

All good writing is like swimming under water and holding your breath. —F. Scott Fitzgerald

There is nothing to writing. All you do is sit at a typewriter and bleed. — Ernest Hemingway

Writing is easy. All you do is cross out the wrong words. —Mark Twain

The road to hell is paved with adverbs. —Stephen King

Why don't you write books people can read? —Nora Joyce to her husband James

The true writer has nothing to say. What counts is the way he says it. — Alain Robbe-Grillet

It takes a heap of sense to write good nonsense—Mark Twain

It's difficult switching gears because characters have very different voices and very different ways of thinking. — George RR Martin

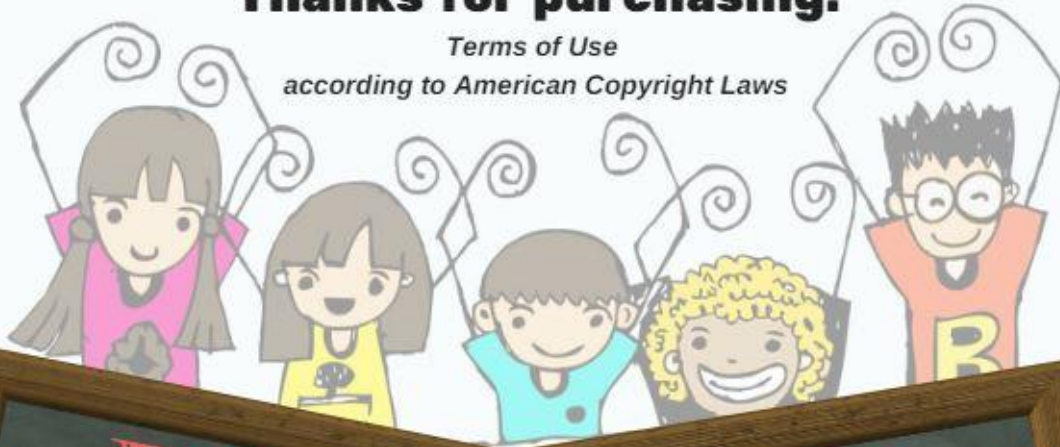
### Differentiation

- Compare Mark Twain's quote about the use of the word 'very' ("Substitute 'damn' every time you're inclined to write 'very;' your editor will delete it and the writing will be just as it should be") and George RR Martin's (author of "Game of Thrones") quote including 'very' three times. What do students think about that? BTW, be ready to swap Twain's D word for a more 6<sup>th</sup>-grade friendly one.
- Compare and contrast two student novellas, including what they "see" and "hear" when reading text to what they perceive when they listen or watch.
- This activity might be used for Genius Hour for some students.
- Assign a student to enter critique meeting times, publication dates, and more.

**Pages skipped on purpose**

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