

Technology curriculum

.....

**Student
Workbook
6th Edition**

.....

Grade 1

by Ask a Tech Teacher

TECHNOLOGY CURRICULUM STUDENT WORKBOOK

FIRST GRADE

SIXTH EDITION

By Ask a Tech Teacher©

Part Two of Nine in the SL Technology Curriculum

Sixth Edition 2016

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INTRODUCTION

Technology in your classroom—what an exciting way to enhance your learning! You won't be memorizing tools and struggling through new programs. You'll learn them as you use them—authentically, as part of classroom activities. Your goal: Make school easier, more relevant, and more in tune with how you learn. We're going to help. All you need to do is follow this workbook.

How much time will that take? Here's an estimate:

Grades K-2	15-30 min. a week
Grades 3-8	30-60 min. a week

Are you surprised you can learn so much in such a short time? Wait till you see how much fun it is! We give you lots of choices. You can even work with a friend, both of you on laptops, Chromebooks, iPads (sometimes) or desktops, Windows or Macs.



Follow the plan. Execute it faithfully. It works.

PROGRAMS YOU'LL USE

Programs used in this curriculum focus on those that serve the fullness of your educational journey. Free alternatives are noted where possible:

General		K-2
Email	Drawing tools	Productivity tools (Office, Google Docs)
Google Earth	Keyboard tools	Desktop publishing tools
Web tools		Photo editing tool(s)

To become the person in *Figure 4* means you use technology as a learning tool. We'll show you how.

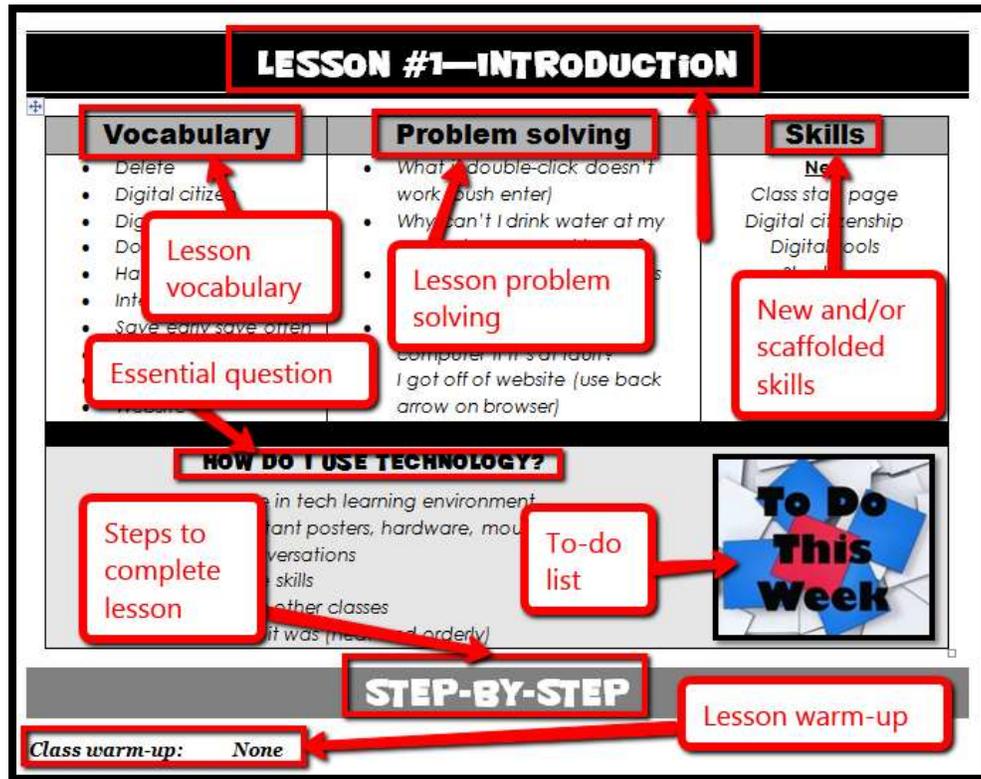
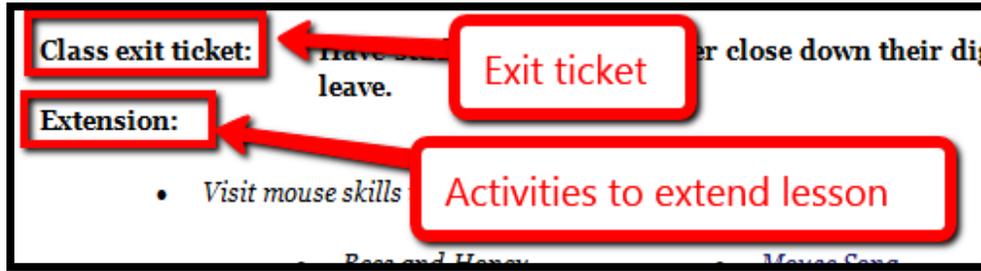
WHAT'S IN THIS WORKBOOK?

Each lesson includes:

- activities to extend lessons
- class exit ticket
- class warm-up
- essential question
- examples, rubrics, images, printables
- problem solving
- skills—new and scaffolded
- steps to accomplish goals
- suggestions based on digital device
- supporting links
- to-do list
- vocabulary used

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

Figure 1a-b—Detail of each lesson



HOW TO USE THIS BOOK

Your teacher(s) (meaning the adults who direct your technology training) will work with you about forty-five minutes a week. You'll spend an additional fifteen-sixty minutes each week using tech skills—online, with software, teaching friends, for homework, or in class projects. If there is a skill you don't understand, get help, especially when you see it come up a second or third time. By the end of 8th grade, you'll have a well-rounded tech education that prepares you for college and career.

The curriculum map in Figure 2 shows what's covered in which grade. Where units are taught multiple years, teaching reflects increasingly less scaffolding and more student direction.

1st Grade Technology Curriculum: Student Workbook

Figure 2—Curriculum Map—K-8

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

Figure 3 is a month-by-month map. Highlight each with your PDF annotation tool when you finish it.

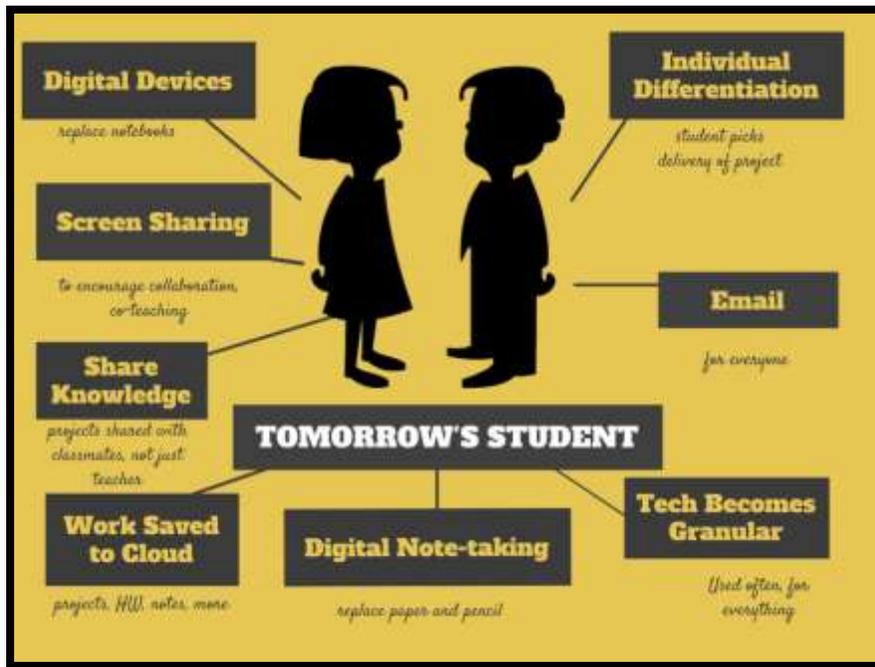
Figure 3—Curriculum Map—1st grade, month-to-month

	Sept Wk1-4	Oct Wk5-8	Nov Wk9-12	Dec Wk13-16	Jan Wk17-20	Feb Wk21-24	March Wk25-28	April Wk29-32
<i>Blogs</i>								
<i>Class mgmt tools</i>	x							
<i>Coding/Programming</i>	x		x					
<i>Communication</i>			x	x	x	x	x	x
<i>Computer etiquette</i>	x							
<i>Critical thinking</i>	x		x	x	x		x	
<i>DTP</i>								
<i>Digital Citizenship</i>	x		x		x	x	x	x
<i>Google Earth</i>				x				
<i>Graphics</i>	x		x	x	x	x	x	
<i>Hardware/Software</i>	x	x			x			
<i>Internet</i>	x		x			x		
<i>Internet privacy</i>			x					
<i>(Pre)Keyboarding</i>	x	x						
<i>Problem solving</i>	x	x	x	x	x	x	x	x

<i>Publishing/sharing</i>								
<i>Research</i>								
<i>Slideshows</i>								X
<i>Speaking and Listening</i>					X	X		X
<i>Spreadsheets</i>				X				
<i>Visual learning</i>					X	X	X	
<i>Vocabulary</i>	X	X	X	X	X	X	X	X
<i>Webtools</i>	X	X	X		X	X		X
<i>Word Processing</i>	X	X	X	X		X		X

Here's where you're headed (Figure 4)—zoom in if necessary:

Figure 4—Tomorrow's student



Here are a few hints on how this workbook will get you there:

- You can use this workbook on the following digital devices:

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

Figure 5a-h—Digital Devices for workbooks



...at school or at home

Figure 6—Use workbooks at school or home



- Check with your teacher on which of these are available with your program license.
- At your grade level, we expect you to have help from a teacher, parent, or another adult as you work. That's fine.
- When you see a section for 'Notes' at the end of some lessons, this is where whoever is helping you with your lessons can add their thoughts, ideas, comments, and suggestions.
- Each lesson starts with a *warm-up* to get you back into tech.
- Each class ends with an *Exit Ticket* to wrap up learning.
- Lessons include *Extensions*, in case you get done early.
- Zoom in or out of workbook pages to get exactly the size that works for your needs. Don't worry if the PDF reader is at 80% or 120%. Set it to fit your learning style.
- You can work at your own pace, try skills and ask for help when you need it. There's a lot of detail in the book to explain how to complete projects and lessons.
- Follow lessons in the order presented (grades K-5). Lessons introduce, reinforce, and circle back on concepts. Certain skills scaffold others so you want them solid before moving on.
- Use lesson vocabulary in class and out. You gain authentic understanding by doing so.



- This icon means there's a video to watch. **Be aware: Video links change.** Your teacher may replace the workbook links with others.



- This icon means you'll work with a partner. Collaboration and working in groups is an important part of learning.



- This icon means there is an activity that requires you (as student) to write something in the workbook. This may be recording information, using a sample project, or something else your teacher will explain.
- Focus on problems listed in the lesson, but embrace all that come your way. Be a risk taker.
- Check off items you finish (on the _____ in front of each task) so you know what you've completed. It's fine if you don't get everything done. Return to it when you finish a lesson ahead of time. With adult assistance, use an annotator like [iAnnotate](#), [Evernote](#), [OneNote](#), [Notability](#), or Adobe Acrobat. You can also use these tools to add notes to the lessons.
- Your teacher will assess your work based on the weekly 'To Do' list. Be sure you've completed items and submitted in the manner required.
- Remember: It takes five times working with a skill to get it—

- *First:* *you hope it'll go away*
- *Second:* *you try it*
- *Third:* *you remember it*
- *Fourth:* *you use it outside of class*
- *Fifth:* *you teach a friend*

- When you finish each lesson, transfer knowledge to projects at school, home, the library, a club—wherever you use digital devices.
- At the end of each tech session, leave your station as you found it—organized and neat.
- If you have an idea on how to complete a lesson using a different tool, suggest it. Your teacher will probably be happy to accommodate you.
- You'll find a lot of links in this ebook, but know this: **Links die**. If a link doesn't work, try a different one (if there are options). If that doesn't work, contact your teacher or ask us at Ask a Tech Teacher (with teacher permission). We'll help.

Figure 7—Tech use plan



Typical Lesson

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

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

Here's how a lesson will run in **the tech lab**:

- Find a **written schedule** for the day on class screen:
 - *Warm up*
 - *Main activity*
 - *Exit ticket*

Start with the warm-up when you arrive to class.

- Complete **Board presentations** (grades 3-8).
- Occasionally, review skills accomplished.
- If starting a **new project, your teacher will review it**. If in the middle of one, you'll get the balance of class to work towards completion.
- Before leaving, **complete the class exit ticket**.

Figure 8--Keep lessons in order



In your grade-level classroom, scatter the lesson pieces above throughout the week:

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

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About the Author

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 website articles help thousands of teachers, homeschoolers, and those serious about finding the best way to maneuver the minefields of technology in education. They have published hundreds of ebooks, workbooks, articles, and have materials shared throughout the world.

TABLE OF CONTENTS

[Introduction](#)

[What's in This Workbook?](#)

[Programs You'll Use](#)

[How to Use This Book](#)

[Table of Images](#)

[Table of Assessments](#)

[Lessons](#)

1	Introduction	17	Reading on Digital Devices
2	Digital Tools in the Classroom	18	Habitats
3	Tools and Toolbars	19	Open House Drawing #1
4	Symbols	20	Open House Drawing #2
5	Software	21	Holiday Letter or Greeting
6	Problem solving	22	Open House Drawing #3
7	Pre-Keyboarding	23	Edit Writing
8	Intro to Operating Systems	24	Writing With Digital Tools
9	Internet and Dig. Citizenship	25	Open House Drawing #4
10	Hour of Code	26	Architecture and Design I
11	Digital Letter Writing	27	Architecture and Design II
12	Fills	28	Visual Learning and Reading
13	Holiday Greetings	29	Cover Page
14	Shapes in the World	30	Tell a Story with Comics
15	Introduction to Spreadsheets	31	Share a Slideshow
16	Introduction to Google Earth	32	Graduation

TABLE OF IMAGES

Figure 1 a-b—Detail of each lesson.....	5
Figure 2—Curriculum Map—K-8.....	6
Figure 3—Curriculum Map—1 st grade, month-to-month.....	6
Figure 4—Tomorrow's student.....	7
Figure 5a-h—Digital Devices for workbooks.....	7
Figure 6—Use workbooks at school or home.....	8
Figure 7—Tech use plan.....	9
Figure 8--Keep lessons in order.....	9
Figure 9—Digital student.....	17
Figure 10a-d—Posters: save and save-as; delete; portrait; landscape.....	17
Figure 11a—Undo; 11b—Save early; 11c—Select-do.....	18
Figure 12—Computer lab rules.....	18
Figure 13—Annotated workbook list.....	19
Figure 14—Keyboarding posture.....	19
Figure 15a-c Hardware assessments for computer, iPad, Chromebook.....	Error! Bookmark not defined.
Figure 16—How to log in.....	Error! Bookmark not defined.
Figure 17—Log-in card.....	Error! Bookmark not defined.
Figure 18a—Mouse hold; 18b—mouse skills.....	Error! Bookmark not defined.
Figure 19a-c: Practice mouse skills.....	Error! Bookmark not defined.
Figure 20—Windows desktop.....	Error! Bookmark not defined.
Figure 21—Chromebook screen.....	Error! Bookmark not defined.
Figure 22—iPad parts.....	Error! Bookmark not defined.
Figure 23—How to use an iPad.....	Error! Bookmark not defined.
Figure 24—Compare-contrast digital devices.....	Error! Bookmark not defined.
Figure 25—Tour of Chromebook.....	Error! Bookmark not defined.
Figure 26a—Annotate PDFs with Notability; 26b—Acrobat.....	Error! Bookmark not defined.
Figure 27a—Class calendar using GAFE; 27b—Padlet; 27c—Publisher.....	Error! Bookmark not defined.
Figure 28—Sample of class Internet start page.....	Error! Bookmark not defined.
Figure 29a-b—Webtools to create avatar and badges; 29c—write comics; 29d—read RAZ Kids.....	Error! Bookmark not defined.
defined.	
Figure 30—Hardware problems.....	Error! Bookmark not defined.
Figure 31a-d—Toolbars in Paint, DanceMat Typing, ABCYa, and KidPix.....	Error! Bookmark not defined.
Figure 32—Windows taskbar.....	Error! Bookmark not defined.
Figure 33a-b—Kindergarten drawings with text.....	Error! Bookmark not defined.
Figure 34a-c—Symbols to be interpreted.....	Error! Bookmark not defined.
Figure 35a-c—Varied symbols.....	Error! Bookmark not defined.
Figure 36a—Icons; 36b-c—street signs.....	Error! Bookmark not defined.
Figure 37a—Toolbars in Paint; 37b—ABCYaPaint; 37c—KidPix.....	Error! Bookmark not defined.
Figure 38a—Math symbols; 38b—numbers symbols.....	Error! Bookmark not defined.
Figure 39a-b—Drawing symbols.....	Error! Bookmark not defined.
Figure 40—Parts of computer.....	Error! Bookmark not defined.
Figure 41—Mouse hold.....	Error! Bookmark not defined.
Figure 42—Compare-contrast software and online tools.....	Error! Bookmark not defined.
Figure 43—How to solve a problem.....	Error! Bookmark not defined.
Figure 44—Hardware problem solving.....	Error! Bookmark not defined.
Figure 45—Shortkeys.....	Error! Bookmark not defined.

Figure 46—Problem-solving board.....	Error! Bookmark not defined.
Figure 47—K-5 Keyboarding stages.....	Error! Bookmark not defined.
Figure 48—Why learn keyboarding?	Error! Bookmark not defined.
Figure 49—Important non-letter keys.....	Error! Bookmark not defined.
Figure 50—Keyboarding posture	Error! Bookmark not defined.
Figure 51—Keyboarding hints for K-2.....	Error! Bookmark not defined.
Figure 52a—PC; 52b—Chromebook	Error! Bookmark not defined.
Figure 53a—iPad; 53b—Mac.....	Error! Bookmark not defined.
Figure 54—Windows troubleshooting	Error! Bookmark not defined.
Figure 55—Tabbed browsing.....	Error! Bookmark not defined.
Figure 56—Parts of Internet page	Error! Bookmark not defined.
Figure 57—Digital neighborhood.....	Error! Bookmark not defined.
Figure 58—What to avoid on a webpage.....	Error! Bookmark not defined.
Figure 59—Digital safety	Error! Bookmark not defined.
Figure 60a—Netiquette rules; 60b—Digcit topics pyramid; 60c—virtual wall	Error! Bookmark not defined.
Figure 61a-b—What coding looks like	Error! Bookmark not defined.
Figure 62a-b—Kindergarten coding.....	Error! Bookmark not defined.
Figure 63a-h—Coding online and with apps.....	Error! Bookmark not defined.
Figure 64a-f—Human sequence	Error! Bookmark not defined.
Figure 65a-f—Human sequence numbered.....	Error! Bookmark not defined.
Figure 66a-i—Human algorithm	Error! Bookmark not defined.
Figure 67a-c—Letters from kindergarten.....	Error! Bookmark not defined.
Figure 68--Letter template	Error! Bookmark not defined.
Figure 69a-c—iPad drawing apps	Error! Bookmark not defined.
Figure 70a-b—Chromebook drawing programs.....	Error! Bookmark not defined.
Figure 71a—Letter using 2Create a Story; 71b—KidPix; 71c—Paint	Error! Bookmark not defined.
Figure 72—Correct misspellings.....	Error! Bookmark not defined.
Figure 73a—Birthday card in Phrase-it; 73b—birthday card.....	Error! Bookmark not defined.
Figure 74a-b—Coloring book pages	Error! Bookmark not defined.
Figure 75a-b—Fills from kindergarten	Error! Bookmark not defined.
Figure 76a-e—Digital coloring pages.....	Error! Bookmark not defined.
Figure 77a-b—Same image, varied fills.....	Error! Bookmark not defined.
Figure 78—Fills: One color; different texture.....	Error! Bookmark not defined.
Figure 79—Fills: Many styles.....	Error! Bookmark not defined.
Figure 80—Fills: Realistic.....	Error! Bookmark not defined.
Figure 81--It takes 5 times.....	Error! Bookmark not defined.
Figure 82a-b—Kindergarten greeting cards.....	Error! Bookmark not defined.
Figure 83a—Greeting in ABCYaPaint, 83b—ScreenChomp	Error! Bookmark not defined.
Figure 84a-b—Two ways to create a greeting.....	Error! Bookmark not defined.
Figure 85a—Greeting with a background; 85b—stamps.....	Error! Bookmark not defined.
Figure 86a-b—Greeting card with a template.....	Error! Bookmark not defined.
Figure 87a-b—Shapes in the classroom	Error! Bookmark not defined.
Figure 88a-b—Where are the shapes?.....	Error! Bookmark not defined.
Figure 89—Shapes template	Error! Bookmark not defined.
Figure 90—Holiday shapes I.....	Error! Bookmark not defined.
Figure 91a-b—Holiday shapes II.....	Error! Bookmark not defined.
Figure 92—Holiday shapes III	Error! Bookmark not defined.
Figure 93a-b—Holiday shapes IV	Error! Bookmark not defined.
Figure 94a—How to draw a triangle; 94b—draw a diamond	Error! Bookmark not defined.
Figure 95—Parts of spreadsheet.....	22
Figure 96a-b—Spreadsheet pictures	22

1st Grade Technology Curriculum: Student Workbook

Figure 97a—Paint by numbers I: 97b—completed	23
Figure 98a—Paint by numbers II; 98b—completed	23
Figure 99a-c—Freehand drawings	24
Figure 100a-b—Freehand drawing with shapes.....	24
Figure 101—Directions for hidden picture.....	25
Figure 102a-d—Common symbols.....	Error! Bookmark not defined.
Figure 103a-b—Google Earth virtual tour in K.....	Error! Bookmark not defined.
Figure 104a-c—Amazing visits through Google Earth.....	Error! Bookmark not defined.
Figure 105—White House via Street Guy.....	Error! Bookmark not defined.
Figure 106—Golden Gate Bridge via GE	Error! Bookmark not defined.
Figure 107a-c—GE with 3D locations	Error! Bookmark not defined.
Figure 108a—Geogreetings; 108b—Search an address with GE	Error! Bookmark not defined.
Figure 109—Tabbed browsing.....	Error! Bookmark not defined.
Figure 110a—Webpage you see; 110b—what scrollbar reveals.....	Error! Bookmark not defined.
Figure 111a—Kindergarten mindmap; 111b--careful use of the Internet.....	Error! Bookmark not defined.
Figure 112a-d—Guided reading collections	Error! Bookmark not defined.
Figure 113--Mouse hold.....	Error! Bookmark not defined.
Figure 114a-b—Use background and images	Error! Bookmark not defined.
Figure 115a—Folders for thumbnails: 115b—exploded folder	Error! Bookmark not defined.
Figure 116—Annotate a website	Error! Bookmark not defined.
Figure 117a-c—Habitat websites	Error! Bookmark not defined.
Figure 118a-d—Open House examples	Error! Bookmark not defined.
Figure 119—Edit word processing	Error! Bookmark not defined.
Figure 120a-b—Open House drawing #1	Error! Bookmark not defined.
Figure 121a-b—Open House #2	Error! Bookmark not defined.
Figure 122a-e—Drawing webtools.....	Error! Bookmark not defined.
Figure 123a-c—This is my family	Error! Bookmark not defined.
Figure 124a-e—Symbols 1st graders may know	27
Figure 125—Letter template.....	28
Figure 126a-c—Holiday letters I.....	28
Figure 127—Holiday letter samples II	28
Figure 128a-b—Holiday greetings.....	29
Figure 129a-b—Open House #3	Error! Bookmark not defined.
Figure 130a-c—How would you correct this grammar?.....	Error! Bookmark not defined.
Figure 131—Box of links on Internet start page.....	Error! Bookmark not defined.
Figure 132--Grammar rules	Error! Bookmark not defined.
Figure 133a-e--Writing tools	Error! Bookmark not defined.
Figure 134—Edit this drawing.....	Error! Bookmark not defined.
Figure 135--1st grade digital writing.....	Error! Bookmark not defined.
Figure 136—1st grade grammar rules.....	Error! Bookmark not defined.
Figure 137a-f—Digital quick writes.....	Error! Bookmark not defined.
Figure 138a-c—Digital quick write examples.....	Error! Bookmark not defined.
Figure 139a-c—Digital letter writing examples	Error! Bookmark not defined.
Figure 140a-c—Collaborative writing examples	Error! Bookmark not defined.
Figure 141a-e—Audio quick writes	Error! Bookmark not defined.
Figure 142a-d—Image annotation examples	Error! Bookmark not defined.
Figure 143a-c—Digital storytelling examples	Error! Bookmark not defined.
Figure 144a-c—Digital cards examples.....	Error! Bookmark not defined.
Figure 145a-b—Brainstorming and mindmapping examples	Error! Bookmark not defined.
Figure 146—Brainstorming template.....	Error! Bookmark not defined.
Figure 147a-b—Timeline examples	Error! Bookmark not defined.

Figure 148--Open House pics	Error! Bookmark not defined.
Figure 149a-b—Open House #4	Error! Bookmark not defined.
Figure 150a-b—Pictures vs. text.....	Error! Bookmark not defined.
Figure 151a-c—#4 examples.....	Error! Bookmark not defined.
Figure 152a-c—Design-layout samples	Error! Bookmark not defined.
Figure 153a-d—Two dimensions or three?	Error! Bookmark not defined.
Figure 154—Safe Internet use	Error! Bookmark not defined.
Figure 155a-b—Classroom architect	Error! Bookmark not defined.
Figure 156—Design the neighborhood	Error! Bookmark not defined.
Figure 157--House floorplan I	Error! Bookmark not defined.
Figure 158a-c—Room design in drawing tools	Error! Bookmark not defined.
Figure 159—Sample architecture file folders	Error! Bookmark not defined.
Figure 160a-f—Sample sticker/icons.....	Error! Bookmark not defined.
Figure 161a-c—Holiday cards	Error! Bookmark not defined.
Figure 162a-f—Online story websites	Error! Bookmark not defined.
Figure 163a-c—Common graphic organizers	Error! Bookmark not defined.
Figure 164a-d—Graphic organizers in K-8.....	Error! Bookmark not defined.
Figure 165a-b—Graphic Organizers for story parts	Error! Bookmark not defined.
Figure 166a—Brainstorm sample; 166b—in Bubbl.us.....	Error! Bookmark not defined.
Figure 167a-c—Brainstorm samples	Error! Bookmark not defined.
Figure 168a—IdeaSketch; 168b—Kidspiration; 168c—Popplet for iPads	Error! Bookmark not defined.
Figure 169—Brainstorming directions.....	Error! Bookmark not defined.
Figure 170a—Cover for fairytale book hand-drawn; 170b—constructed	Error! Bookmark not defined.
Figure 171a—Fairytale booklet without a cover; 171b—with a cover	Error! Bookmark not defined.
Figure 172a-e—Cover webtools	Error! Bookmark not defined.
Figure 173a-b—Cover page samples	Error! Bookmark not defined.
Figure 174a-d—Comic-creation tools.....	Error! Bookmark not defined.
Figure 175—Decoding a comic strip	Error! Bookmark not defined.
Figure 176a-c—Sample comics	Error! Bookmark not defined.
Figure 177—Comic template	Error! Bookmark not defined.
Figure 178—2nd grade comic:	Error! Bookmark not defined.
Figure 179a—Run slideshow in PC's; 179b—on Macs.....	Error! Bookmark not defined.
Figure 180a—Run slideshows on Chromebooks; 180b—iPads.....	Error! Bookmark not defined.
Figure 181a-d—Picture story.....	Error! Bookmark not defined.
Figure 182a-e—Projects for Open House slideshow.....	Error! Bookmark not defined.
Figure 183a-e—Greeting cards for Open House.....	Error! Bookmark not defined.
Figure 184a-c—Holiday cards	Error! Bookmark not defined.

TABLE OF ASSESSMENTS

Assessment 1—Parts of the computer.....	Error! Bookmark not defined.
Assessment 2—Parts of an iPad.....	Error! Bookmark not defined.
Assessment 3—Parts of a Chromebook	Error! Bookmark not defined.
Assessment 4—Brainstorm assessment	145

LESSON #1—INTRODUCTION

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> • Back button • Digital citizenship • Digital student • Habits of Mind • Landscape • Poll • Portrait • Select-do • Shortkey • Start page • Tech-infused • Website 	<ul style="list-style-type: none"> • I got off assigned website (click start page tab) • Why do we need rules? • Why can't I eat at the computer? I can at home • I can't find the class Internet start page (do you remember instructions?) • I can't find the suggested websites (where did teacher say they were?) • What's the difference between learning to draw and communicating with drawings? 	<p>New</p> <ul style="list-style-type: none"> • Shortkeys • Digital tools • Server room (if taking field trip) <p>Scaffolded</p> <ul style="list-style-type: none"> • Class Internet start page • Tech rules • Digital citizenship • Visiting websites

HOW DO I USE TECHNOLOGY?

- Get comfortable in tech learning environment
- Reviewed important posters, hardware, mouse
- Completed exit ticket
- Successfully annotated workbook
- Transferred knowledge from kindergarten
- Decisions followed class rules
- Joined class conversations
- Tried computer websites (if time)
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: *None*

_____ Welcome to tech class! Your teacher will start by explaining her/his expectations—including that they expect persistence, thoughtful work, and independence.

_____ Next, as a class, you'll discuss tech goals in terms of blended learning. How does tech support your education and life goals? What are your goals? Phrase these as authentic tasks:

*Not: I want to draw online.
Rather: I want to communicate better.*

_____ Your teacher will help you to clarify technology in your life by drawing a silhouette of a student on

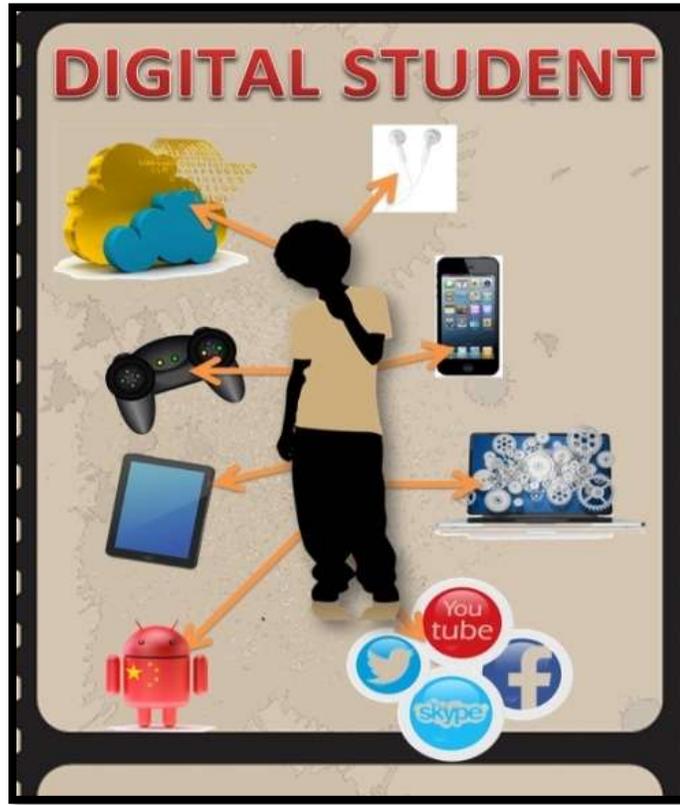


the class screen and asking you what you use technology for. It may look like *Figure 9* (zoom in if necessary):

_____ Using your digital annotation tool (if you know how to use it—more on that later), add your thoughts and those your classmates come up with to the white space beside *Figure 9*.

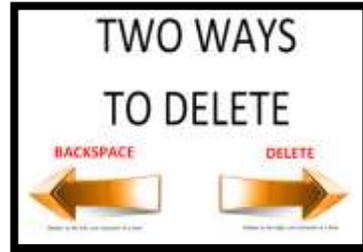


Figure 9—Digital student



_____ Tour classroom. Your teacher will show you where everything is and review important posters, i.e., the difference between ‘save’ and ‘save-as’ (*Figure 10a*), the difference between ‘backspace’ and ‘delete’ (*Figure 10b*), and portrait or landscape orientation of documents (*Figures 10c and 10d*).

Figure 10a-d—Posters: save and save-as; delete; portrait; landscape



_____ Point out the Undo shortkey (*Figure 11a*).

_____ Point out ‘save early save often’ (*Figure 11b*). What’s this mean? Why is it a good idea?

Review 'Select-Do' (Figure 11c). What does that mean? (Hint: You must select something before you can do to it).

Figure 11a—Undo; 11b—Save early; 11c—Select-do



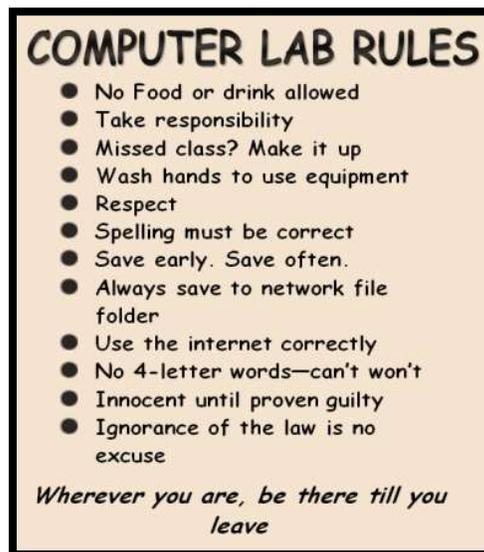
Now it's time to collect rules from classmates to guide classroom actions, including:

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



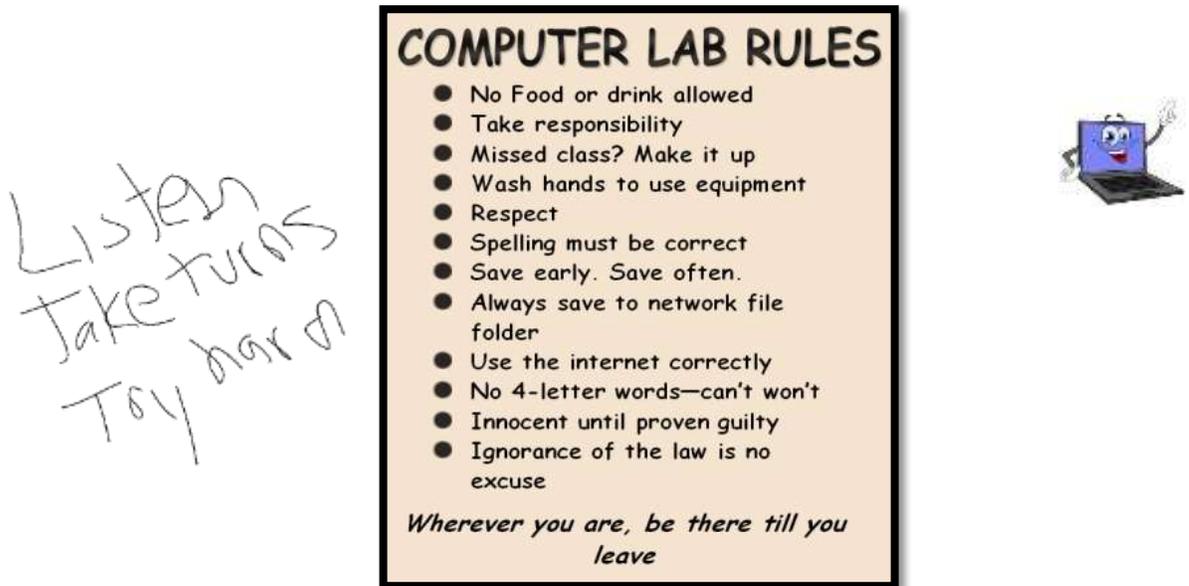
You may start with a list like Figure 12 from the prior year (zoom in if needed):

Figure 12—Computer lab rules



Using your digital annotation tool (if you know how to use it), add your thoughts and those your classmates come up with to the white space beside *Figure 13*. It may end up looking like:

Figure 13—Annotated workbook list



*Listen
Take turns
Toy bar on*

COMPUTER LAB RULES

- No Food or drink allowed
- Take responsibility
- Missed class? Make it up
- Wash hands to use equipment
- Respect
- Spelling must be correct
- Save early. Save often.
- Always save to network file folder
- Use the internet correctly
- No 4-letter words—can't won't
- Innocent until proven guilty
- Ignorance of the law is no excuse

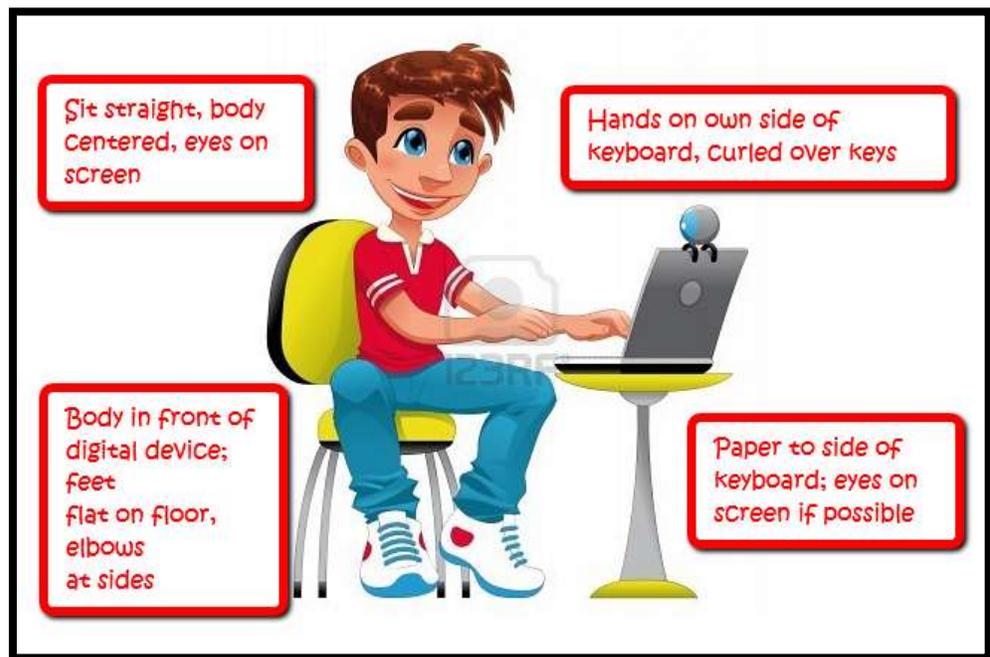
Wherever you are, be there till you leave



Discuss **digital citizenship**. You'll cover it later this year and discuss it every time you use the Internet. Basically: Any time you visit the Internet, do so safely and legally.

Sit at your station as though using the computer. Review posture and position in *Figure 14* (zoom in if necessary):

Figure 14—Keyboarding posture



_____ Your teacher will open the class Internet start page on the class screen. This is where you'll find websites to be used during the current week, bundles of themed websites, and more. Do you remember it from last year?

Class exit ticket: You'll find a poll on the class screen where you'll select your answer to 'How I used tech this summer' as you leave class.

Extension: Visit one of these websites—click image or link to access website:

- [Computer basics](#)
- [Computer Insides](#)
- [Computer puzzle](#)
- [Find the Technology](#)



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



LESSON #15 INTRO TO SPREADSHEETS

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> Cells Columns Decode Excel Grid lines Legend Palette Rows Spreadsheet 	<ul style="list-style-type: none"> Screen froze (Is dialogue box open? Is program blinking on taskbar?) Can't exit program (try Alt+F4) How do I know what to fill (where the letter column and number row meet) I filled the wrong color (that's OK; fill over it) Can't find print (Ctrl+P; file-print) It prints weird in Excel (ask for help) 	<p>New</p> <p>Spreadsheets Formatting cells Decoding information</p> <p>Scaffolded</p> <p>Fills Keyboarding Problem solving</p>

CAN I DRAW OUTSIDE OF ART CLASS?

- Annotated workbook
- Understood the purpose of spreadsheets
- Completed project
- Decisions followed class rules
- Completed warm-up and exit ticket
- Joined class conversations
- Tried computer websites (if time)
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: *Keyboard on class typing tool. Watch your neighbor's posture and hand position and make suggestions.*



_____ Spreadsheets are often used to analyze data and add or subtract numbers, but today, you'll use them to draw a picture.

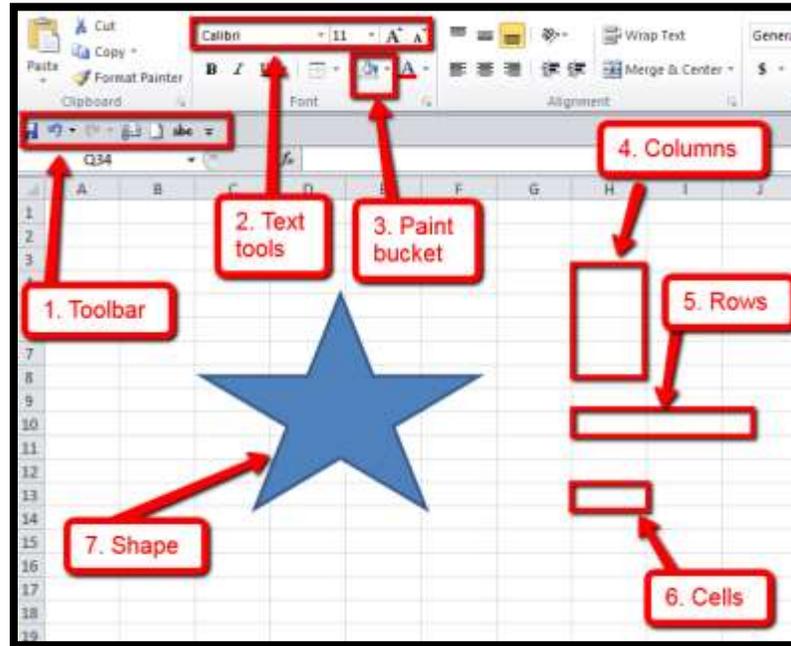
_____ Open the spreadsheet program you use in your school (Numbers, Google Sheets, Excel, or another) on your digital device while your teacher opens it on the class screen. Take a few moments to look around this new program. Find the following items as your teacher points them out on the class screen (match the number to *Figure 95*—zoom in if needed):

- cells (#6)
- columns (#4)
- rows (#5)
- tools and toolbars (#1)

_____ You will use four tools today (match to number in *Figure 95*—zoom in if needed):

- tools and toolbars (#1)
- paint bucket with color palette (#3)
- text tool (#2)
- shapes--if doing the Hidden Picture activity, find 'shapes' on the toolbar (#7)

Figure 15—Parts of spreadsheet



_____ You will do one or more of the following activities:

- coloring book
- paint-by-numbers
- freehand drawing
- hidden picture

Spreadsheet Coloring Book

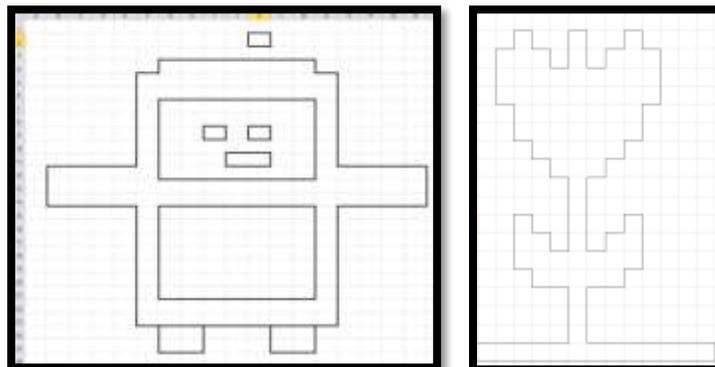
_____ Open a drawing like *Figures 96a-b* from the common file sharing folder used for class. Your teacher will show you how to use the spreadsheet paint bucket and color palette to fill it in.

_____ If necessary, change the color by filling over the original.

_____ If you don't have a spreadsheet program, use the annotation paint brush tool and color in the cells as you would in a coloring book.



Figure 16a-b—Spreadsheet pictures



Paint-by-numbers

Each cell includes a letter for the color of the required fill (*Figures 97a and 98a*). Use the paint bucket and palette to paint, as you would a ‘paint by numbers’ drawing. If you don’t have a spreadsheet drawing, use your annotation tool and cover each letter with the appropriate color:

Figure 17a—Paint by numbers I: 97b—completed

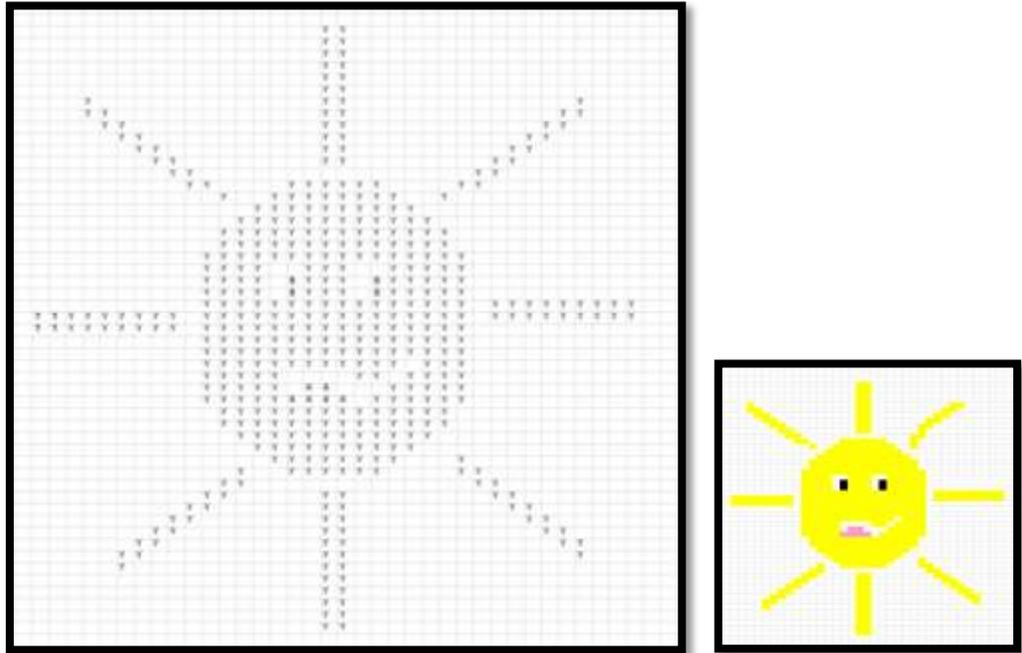
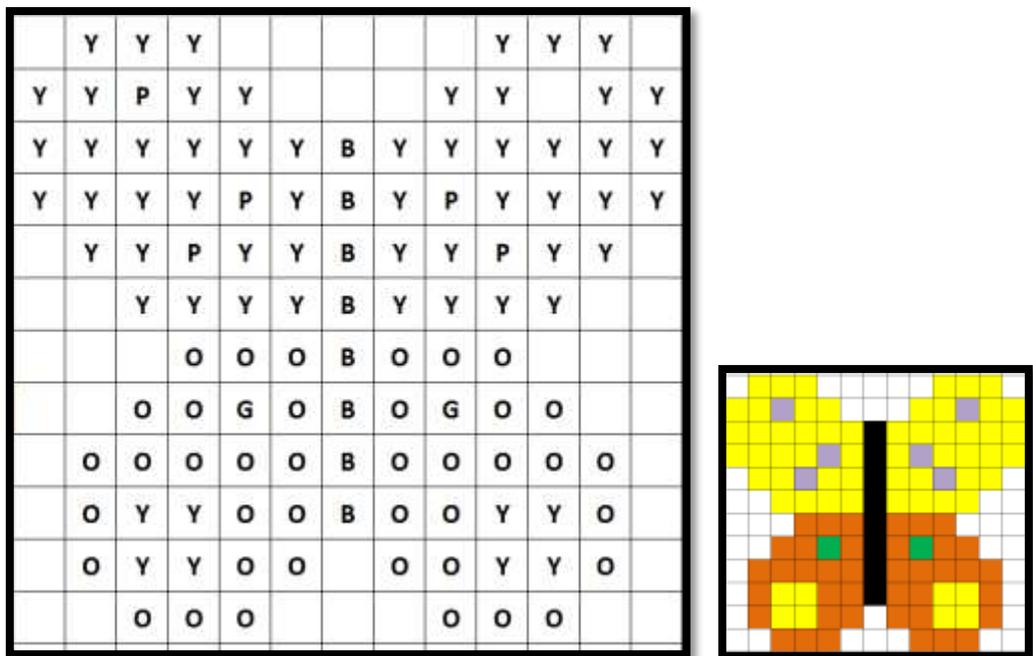


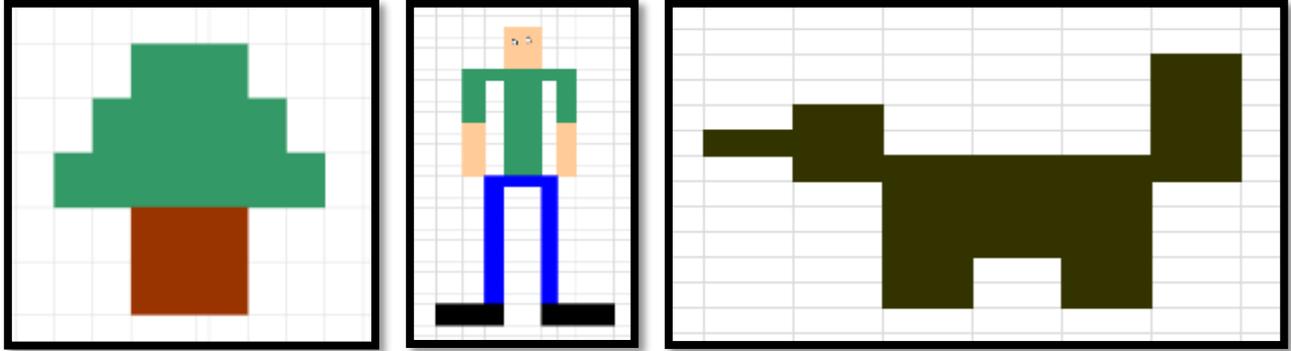
Figure 18a—Paint by numbers II; 98b—completed



Freehand drawing

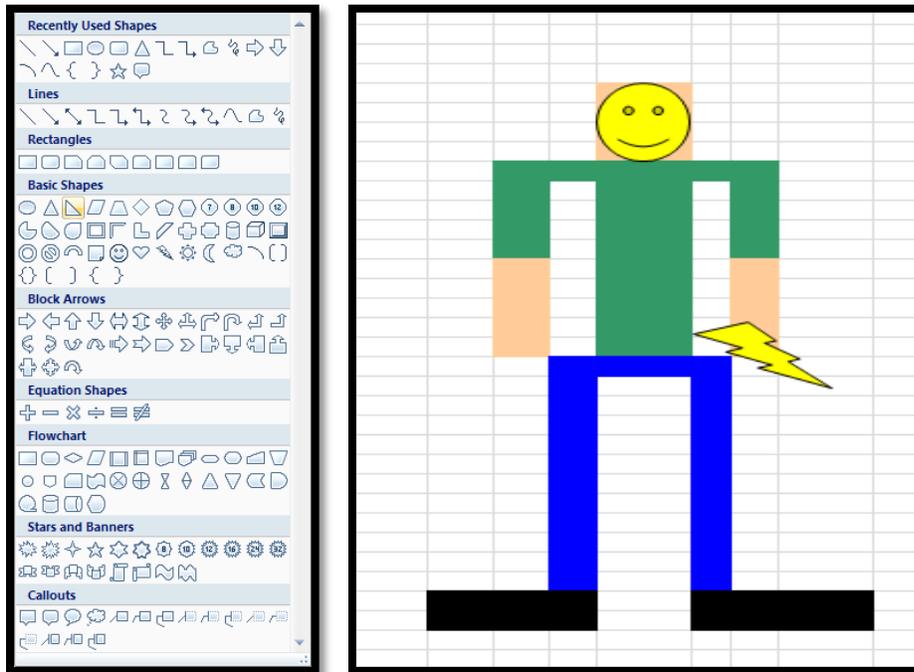
_____ Draw a picture in the spreadsheet program by filling in cells with different colors to create an image (such as a rain forest tree in *Figure 99a* or a story character in *Figure 99b* or *99c*):

Figure 19a-c—Freehand drawings



_____ Once you're comfortable drawing this way, use the shape tools under *Insert>Shapes* (*Figure 100a*) to add bling as in *Figure 100b*:

Figure 20a-b—Freehand drawing with shapes



Hidden Picture

_____ Work in pairs to uncover a hidden picture.

_____ Your teacher will pass out directions or have them available digitally (like *Figure 101* – zoom in if needed):

Figure 21—Directions for hidden picture

Pale Blue	Directions to Find Secret Picture
A1, B1, C1, D1, G1, H1, I1, J1, A2, B2, I2, J2, A3, J3, A5, A6, A7, A8, A9, A10, J5, J6, J7, J8, J9, J10	1 change cells to squares (49 pixels for rows and columns)
Dark Red	2 color each cell per directions to the left
E1, F1, C2, D2, E2, F2, G2, H2, B3, C3, D3, E3, F3, G3, H3, I3, A4, B4, C4, D4, E4, F4, G4, H4, I4, J4, E8, F8, E9, F9, E10, F10	3 add your name to cell A11
Brown	4 add a picture to cell B7-C10
B5, C5, D5, E5, F5, G5, H5, I5, B6, D6, E6, F6, G6, I6, B7, D7, E7, F7, G7, I7, B8, C8, D8, G8, H8, I8, B9, C9, D9, G9, H9, I9, B10, C10, D10, G10, H10, I10	5 highlight the picture and add a border
Green	6 save and print
A11, B11, C11, D11, E11, F11, G11, H11, I11, J11	
Your name in Black at bottom	
Insert picture in door	

- _____ Read the directions on the right side. Your teacher may have you skip some of the steps, such as #1, #4, or #5. Then, start coloring!
- _____ Remember to NOT tell classmates what the picture is when you uncover it. Let friends discover it themselves.
- _____ When done, save to your digital portfolio. Publish/share/print as is done in your classroom.
- _____ If printing in Excel, your teacher will help you. It's a bit more complicated than other spreadsheet programs.

Class exit ticket: **Participate in a collaborative paint-by-numbers drawing your teacher posted to the class screen. Instead of colors, it's coded by your name, with a legend telling you your color. Find your name and fill in your color.**

Extension:

- If you're excited about art, watch [this YouTube](#) that provide the entire process of drawing with Excel.
- Create your own paint-by-numbers to share with a neighbor.



If you don't know where you're going,
any road will get you there.

—Anonymous

LESSON #21 HOLIDAY LETTER OR GREETING

Vocabulary	Problem solving	Skills
<ul style="list-style-type: none"> Background Backspace Body Close Export Font size Grammar Greeting Text tool Toolbar 	<ul style="list-style-type: none"> Double-click doesn't work (use enter) Drawing program won't allow saving (take a screen shot and save that) I can't find my digital portfolio (check log-in. Are you in correct root?) Writing is hard (one sentence is fine) What's the difference between backspace and delete? What's the difference between 'save' and 'export'? 	<p>New</p> <p>Scaffolded</p> <p>Letter writing</p> <p>Pre-keyboarding</p> <p>Digital citizenship</p> <p>Symbols</p> <p>Images-text to communicate</p>

HOW DO I USE TECH TO SHARE A GREETING?

- Completed project
- Annotated workbook as needed
- Followed proper letter writing conventions (if required)
- Used skills from prior lessons
- Used class writing conventions
- Completed warm-up and exit ticket
- Joined class conversations
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: Keyboard using online pre-keyboarding tool

_____ Today, you will create a holiday letter or greeting as independently as possible. You'll use paint bucket, spray can, paint brush, text, or other tools available on the class drawing program. Grammar and spelling are important. See *Figures 126a-c* and *Figures 128a-b* for examples.

_____ Open drawing software (KidPix, Paint, TuxPaint, or another).

_____ If you are using Chromebooks, try (click the link or the image to start):

- [Sketchpad](#)
- [ABCYa Paint](#)



_____ If you're an iPad school, try (click the link or the image to start):

- [Doodle Buddy](#)

- [KidPix Deluxe 3D](#)
- [Paint Studio](#)
- [Screen Chomp](#)

_____ If you are going on the Internet for your drawing tool, remember how to do that safely (hint: stay on assigned websites, avoid ads, and ignore bling). You can access the site directly from this workbook or from icons installed on your digital device.

_____ When your teacher asks, share some holiday symbols you relate to the current holiday, such as *Figures 124a-e*:

Figure 22a-e—Symbols 1st graders may know



_____ Your teacher will tell you which project you will complete today:

- *a holiday card*
- *a holiday greeting*

Holiday Letter

_____ Discuss what makes a letter different from a story.

_____ What are the parts of a letter? You learned these in kindergarten and may have reviewed them this year so try to come up with these independently (or you can peek below):

Greeting—
Dear Mom/Dad

Body—
One sentence about the holiday

Closing—
Student Name

_____ Draft the three parts of your letter right now, onto the workbook page (next to *Figure 125—zoom in if necessary*), using the class annotation tool. If you make a mistake, use the annotation ‘erase’ tool and start over.



Figure 23—Letter template



Dear _____

Love

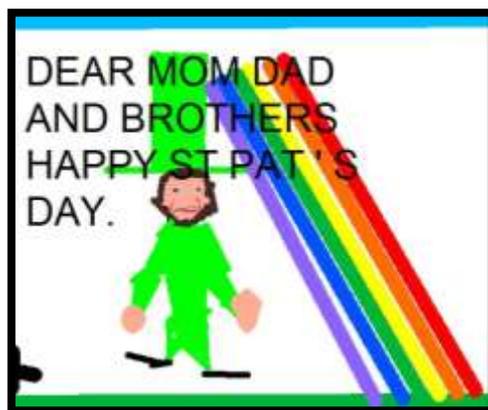
_____ Now open the drawing tool you'll use. Draw a holiday symbol and copy the letter you drafted above to the card. Use text tool, font size 48, any color and font. It may look like *Figure 126a-c*:

Figure 24a-c—Holiday letters I



_____ What's wrong with *Figure 127*? Zoom in if necessary to see it better.

Figure 25—Holiday letter samples II



_____ If you need to edit your letter, remember how that is done with:

- *backspace*
- *Ctrl+Z*
- *delete*
- *undo*

_____ Save to your digital portfolio. Share/export/print independently, as is the custom in your class.
If necessary, use the screenshot tool

Holiday Greeting Card

_____ Instead of a letter, create a holiday card (see *Figures 128a-b*):

Figure 26a-b—Holiday greetings



_____ These will follow the same formatting guidelines as the holiday letter, just with different text.
Again, grammar and spelling are important.

_____ When done, save it to your digital portfolio with assistance.

_____ Print/share/publish as independently as possible. Depending upon the tool you are using to draw, a screenshot might be the easiest option for saving.

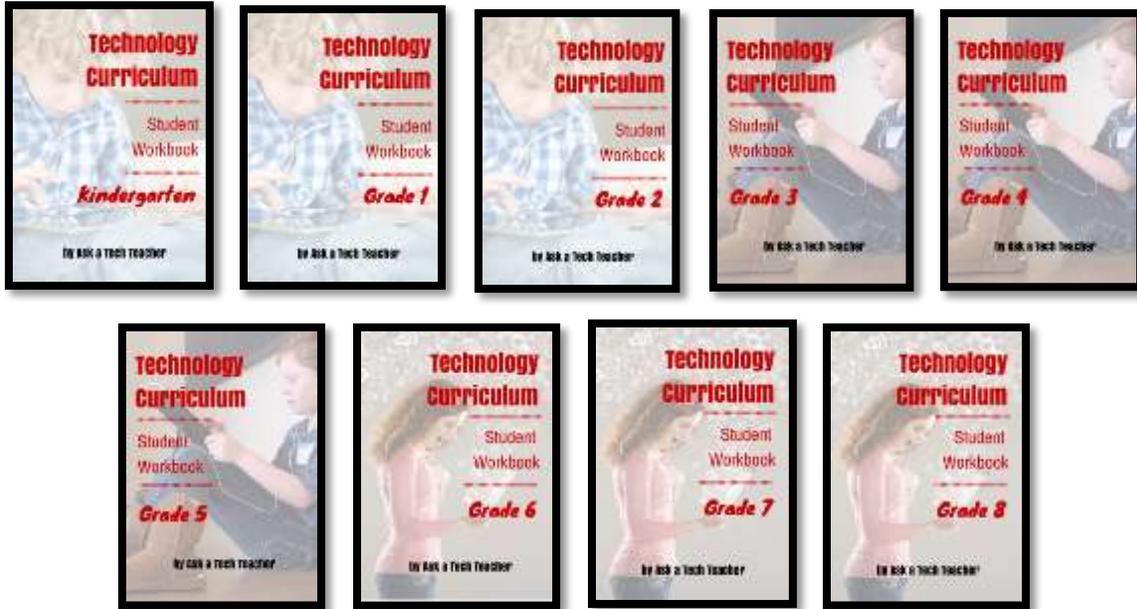
Class exit ticket: Have neighbor check that your card or greeting is saved to your digital portfolio



Extension: Visit holiday websites [like these](#) and apps [like these](#).

MORE FROM STRUCTURED LEARNING

If you're looking for other student workbooks that accompany the K-8 technology curriculum, try these:



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At home**

