Technology Curriculum

Student Workbook

6th Edition

Grade 1

by Ask a Tech Teacher

TECHNOLOGY CURRICULUM
Student Workbook

First Grade

By Ask a Tech Teacher©

Part Two of Nine in the SL Technology Curriculum

6.3

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*
- *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
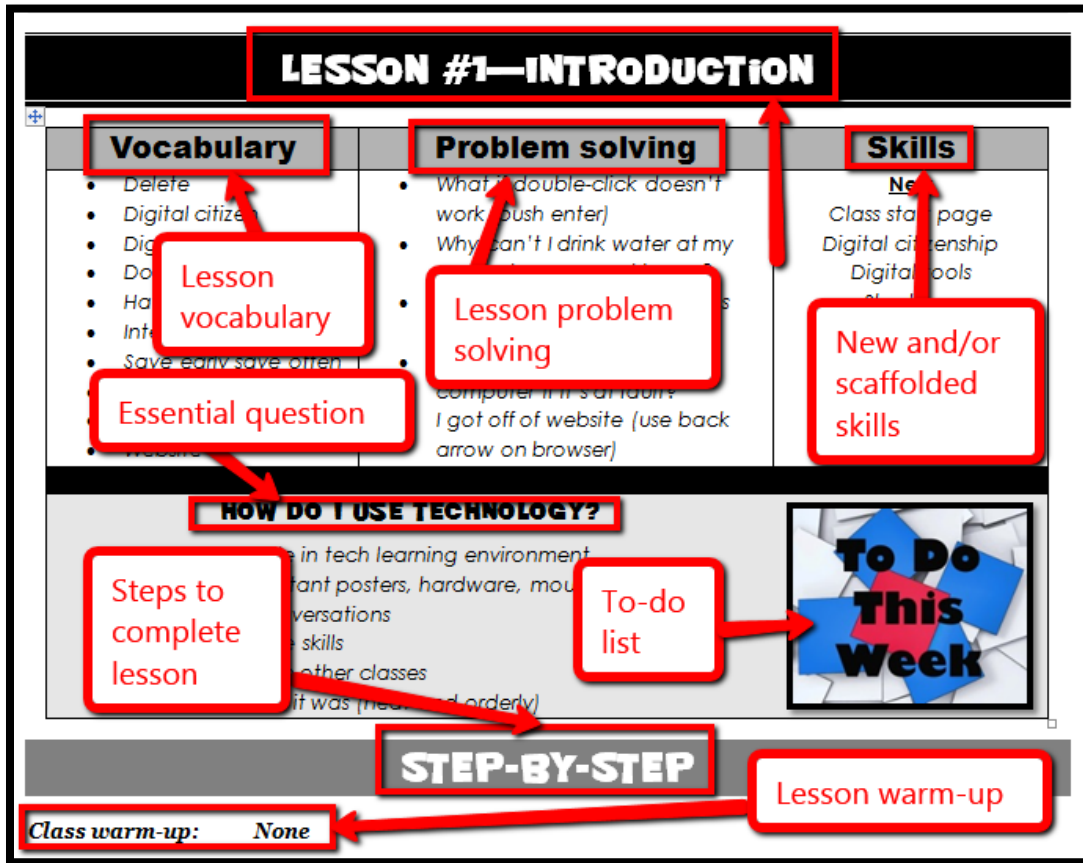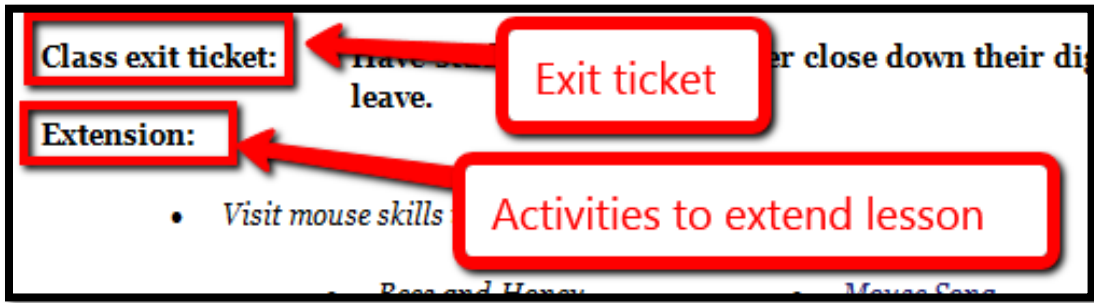
How to Use This Book

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.

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
Blogs								
Class mgmt tools	x							
Coding/Programming	x		x					
Communication			x	x	x	x	x	x
Computer etiquette	x							
Critical thinking	x		x	x	x		x	
DTP								
Digital Citizenship	x		x		x	x	x	x
Google Earth				x				
Graphics	x		x	x	x	x	x	
Hardware/Software	x	x			x			
Internet	x		x			x		
Internet privacy			x					
(Pre)Keyboarding	x	x						
Problem solving	x	x	x	x	x	x	x	x

Publishing/sharing								
Research								
Slideshows								x
Speaking and Listening					x	x		x
Spreadsheets				x				
Visual learning					x	x	x	
Vocabulary	x	x	x	x	x	x	x	x
Webtools	x	x	x		x	x		x
Word Processing	x	x	x	x		x		x

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

Figure 4—Tomorrow's student
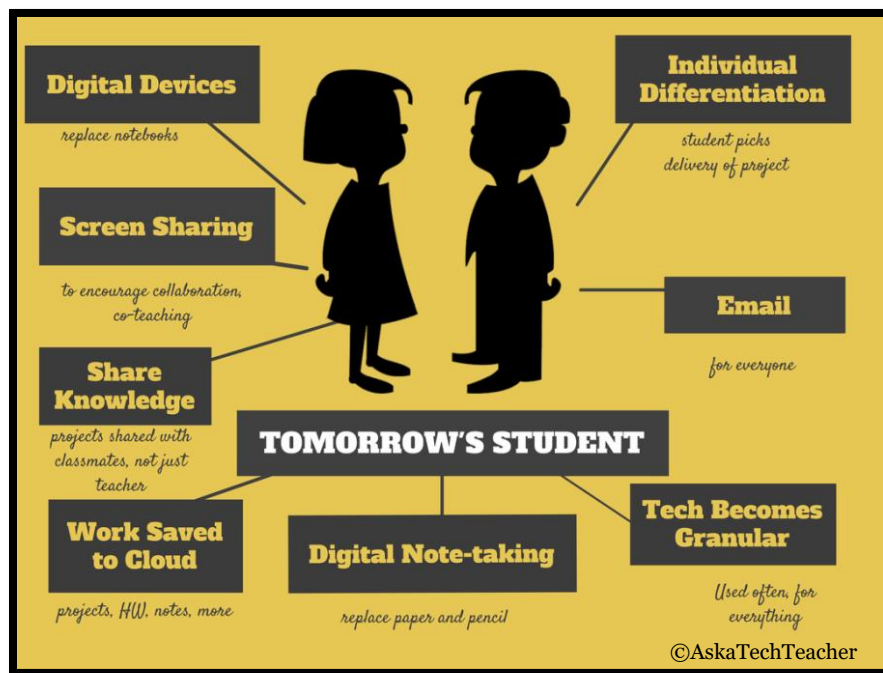
Here are a few hints on how this workbook will get you there:

- 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 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.

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:

  - o *Warm up*
  - o *Main activity*
  - o *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**.
- Before leaving, **complete the class exit ticket**.

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*

Figure 7—Tech use plan

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About the Author

Ask a Tech Teacher is a group of technology teachers who run an award-winning resource blog, Ask a Tech Teacher. 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.

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Lesson #1—Introduction

Vocabulary	Problem solving	Skills
• *Back button* • *Digital citizenship* • *Digital student* • *Habits of Mind* • *Landscape* • *Poll* • *Portrait* • *Select-do* • *Shortkey* • *Start page* • *Tech-infused* • *Website*	• *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?*	**New** *Shortkeys* *Digital tools* *Server room (if taking field trip)* **Scaffolded** *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
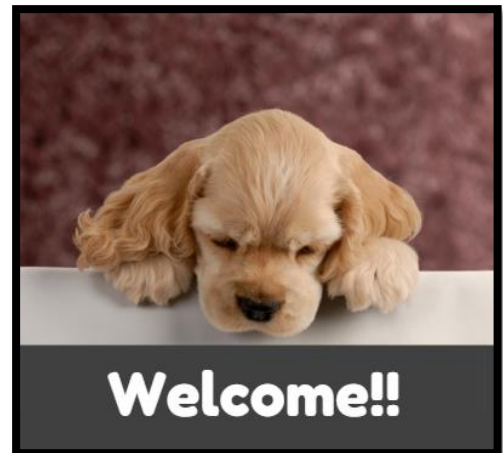
the class screen and asking you what you use technology for. It may look like *Figure 9* (zoom in if necessary)*:*

_____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
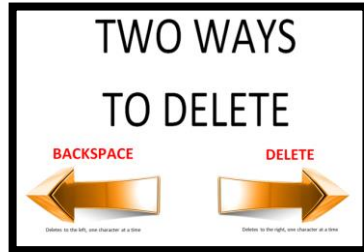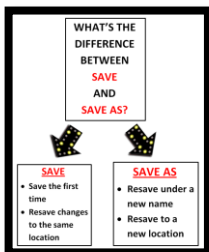
_____Point out the Undo shortkey (*Figure 11a*).
_____Point out 'save early save often' (*Figure 11b*). What's this mean? Why is it a good idea?

_____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):
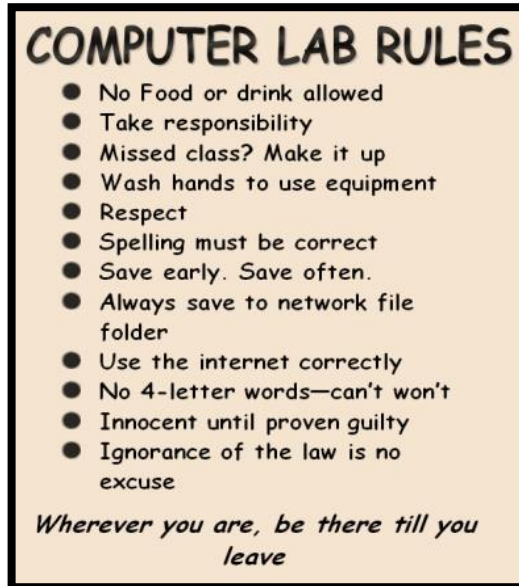
Figure 12—Computer lab rules
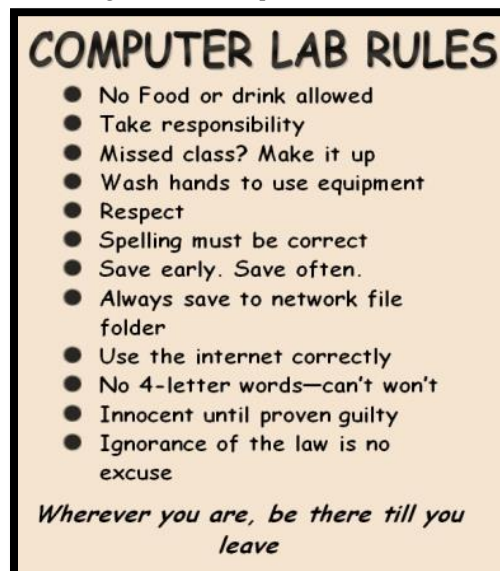
_____Using your digital annotation tool (if you know how to use it), add your thoughts and those your classmates come up with to the white space beside *Figure 13*. It may end up looking like:

Figure 13—Annotated workbook list
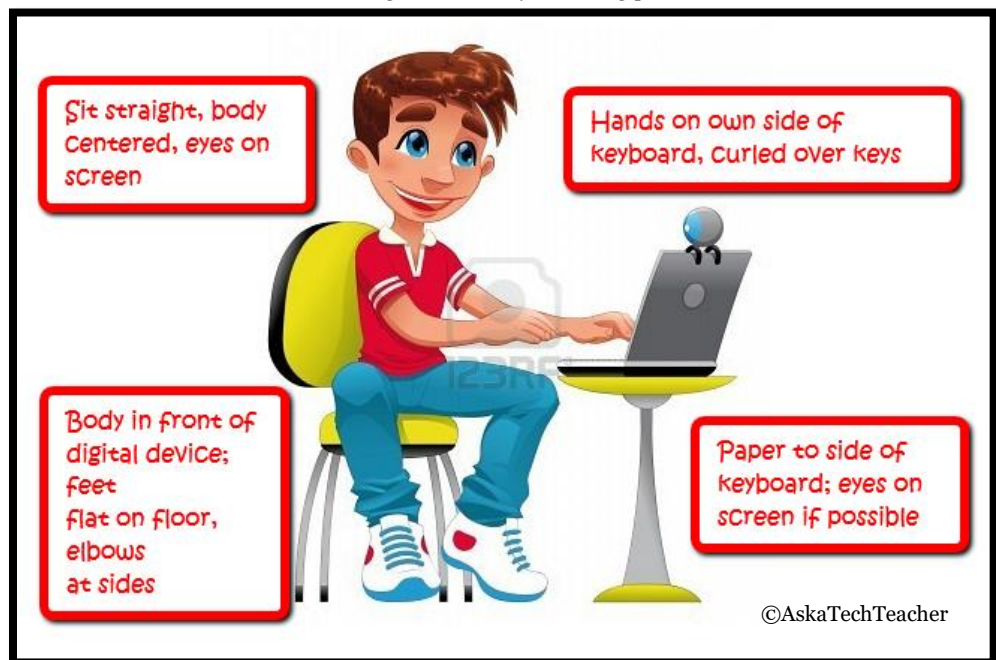

_____Discuss **digital citizenship**. You'll cover it later this year and discuss it every time you use the Internet. Basically: Any time you visit the Internet, do so safely and legally.

_____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 a website about computer basics provided by your teacher:**

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.

_____

_____

_____

_____

_____

_____

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Lesson #15 Intro to spreadsheets

Vocabulary	Problem solving	Skills
• Cells • Columns • Decode • Excel • Grid lines • Legend • Palette • Rows • Spreadsheet	• 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)	**New** *Spreadsheets* *Formatting cells* *Decoding information* **Scaffolded** *Fills* *Keyboarding* *Problem solving*

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
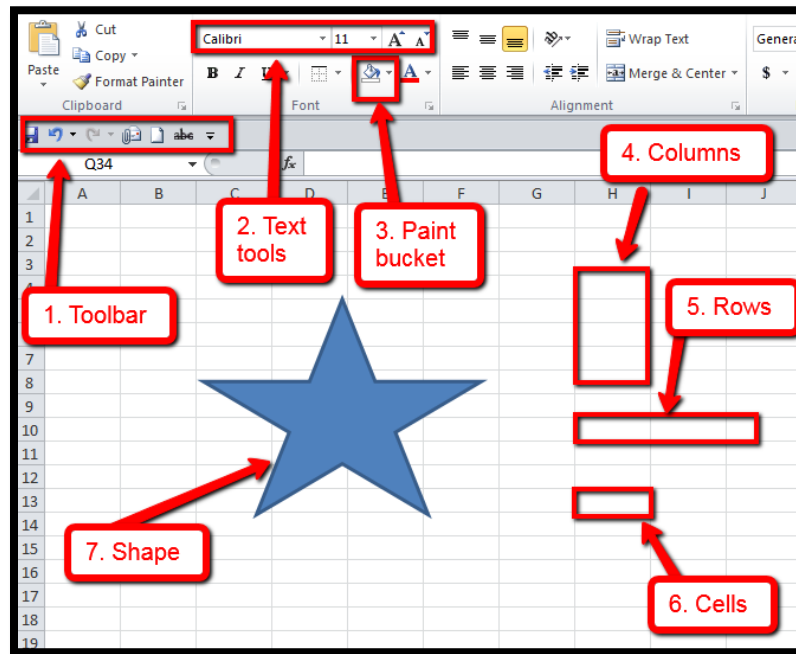
_____You will do one or more of the following activities:

- *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
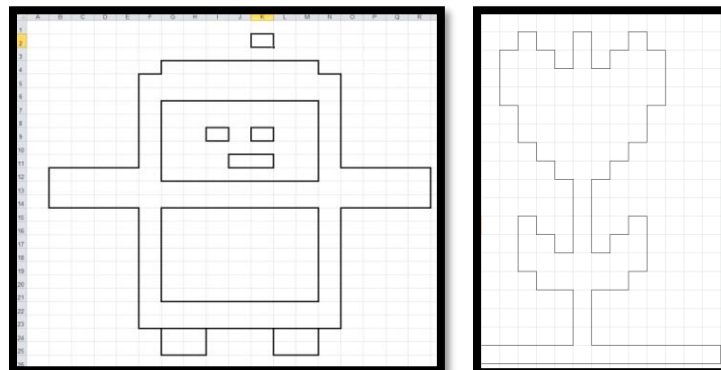
Paint-by-numbers

_____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:

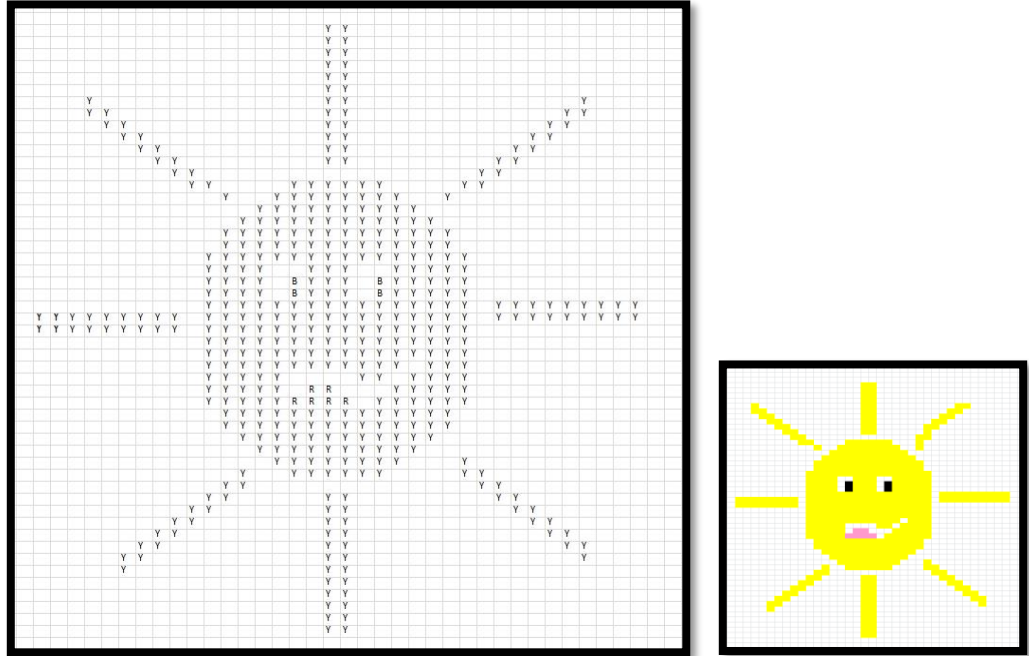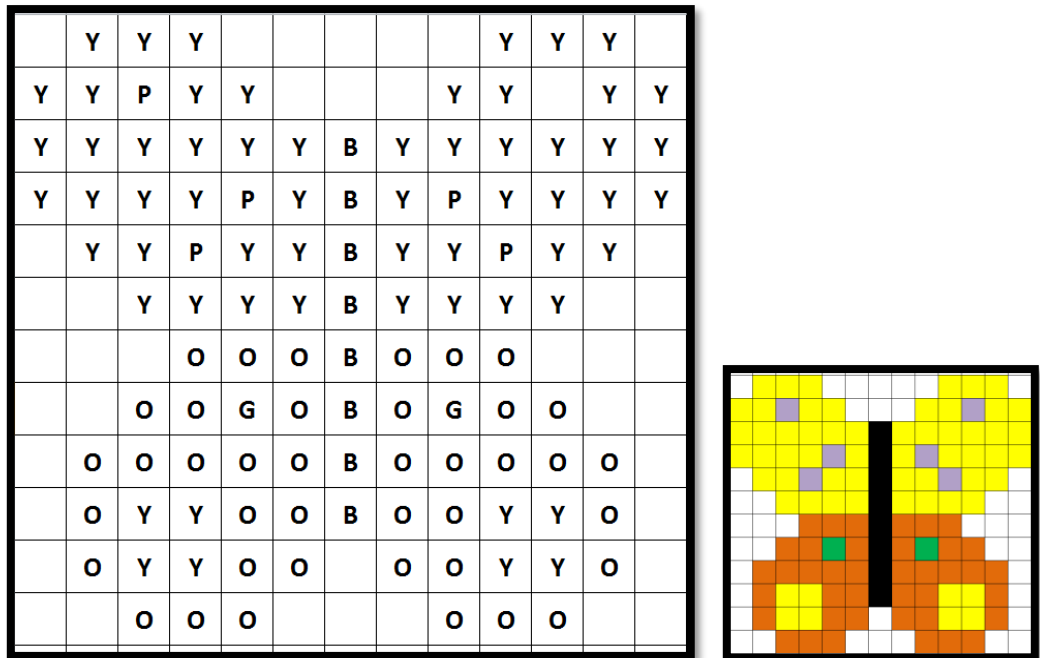*Figure 17a—Paint by numbers I: 97b—completed*

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

	Y	Y	Y						Y	Y	Y	
Y	Y	P	Y	Y				Y	Y		Y	Y
Y	Y	Y	Y	Y	Y	B	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	P	Y	B	Y	P	Y	Y	Y	Y
	Y	Y	P	Y	Y	B	Y	Y	P	Y	Y	
		Y	Y	Y	Y	B	Y	Y	Y	Y		
			O	O	O	B	O	O	O			
		O	O	G	O	B	O	G	O	O		
	O	O	O	O	O	B	O	O	O	O	O	
	O	Y	Y	O	O	B	O	O	Y	Y	O	
	O	Y	Y	O	O		O	O	Y	Y	O	
		O	O	O				O	O	O		

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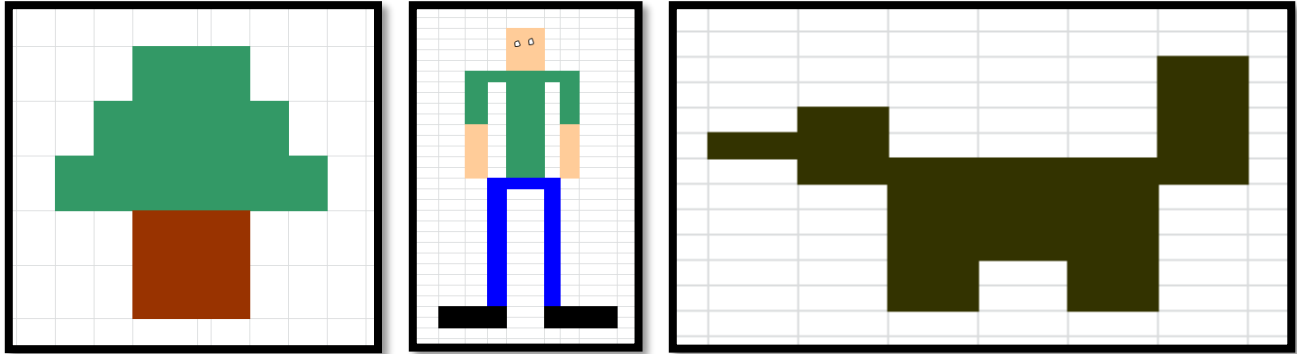
_____Once you're comfortable drawing this way, use the shape tools under *Insert>Shapes (Figure 100a)* to add bling as in *Figure 100b*:

Figure 20a-b—Freehand drawing with shapes
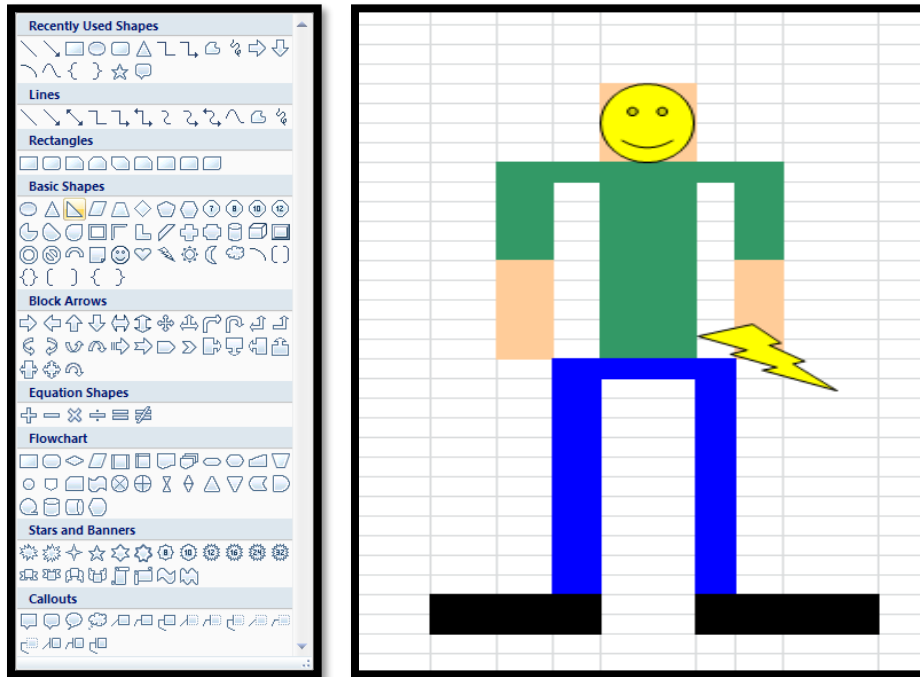
Hidden Picture

_____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:

- *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*
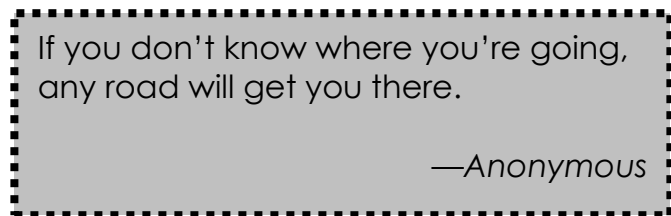
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Lesson #21 Holiday Letter or Greeting

Vocabulary	Problem solving	Skills
• *Background* • *Backspace* • *Body* • *Close* • *Export* • *Font size* • *Grammar* • *Greeting* • *Text tool* • *Toolbar*	• *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'?*	**New** **Scaffolded** *Letter writing* *Pre-keyboarding* *Digital citizenship* *Symbols* *Images-text to communicate*

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 use Chromebooks, try Sketchpad or ABCYa Pain or one recommended by your teacher.
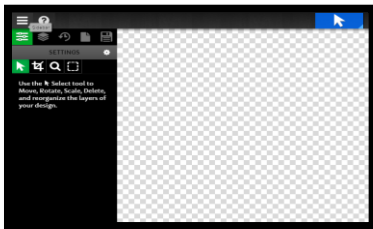
_____If you're an iPad school, try one like Doodle Buddy.

_____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 letter*
- *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.
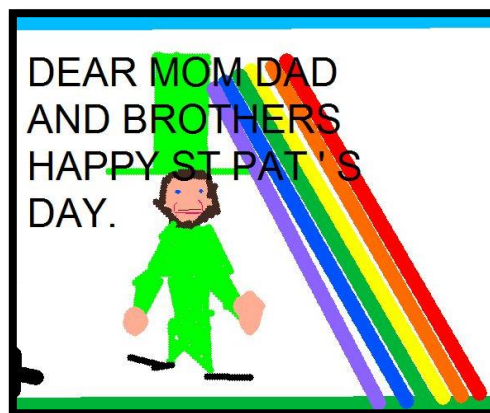
Figure 23—Letter template

_____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 suggested by your teacher.**

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