Technology Curriculum

Student
Workbook

6th Edition

Grade 4

by Ask a tech teacher

TECHNOLOGY Curriculum Student Workbook

Fourth Grade

By Ask a Tech Teacher©

Part Five of Nine in the SL Technology Curriculum

2024 V.6.3

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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 included 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?

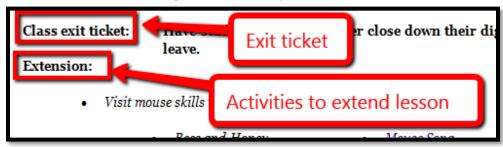
Each lesson includes:

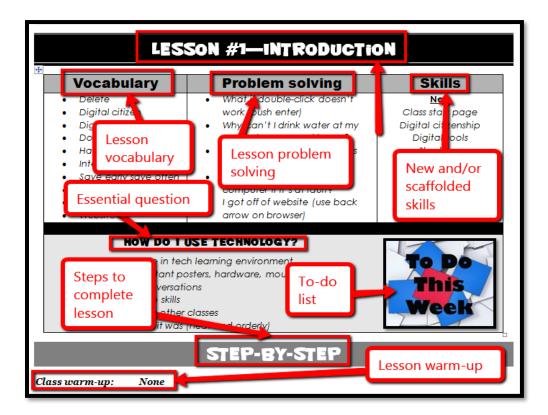
- activities to extend lessons
- class exit ticket
- class warm-up
- essential question
- examples, rubrics, images, printables
- problem solving

- 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* (zoom in if needed) shows what's covered in which grade. Where units are taught multiple years, teaching reflects increasingly less scaffolding and more independence on your part.

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	☺	©	00	☺	©					©		©	©	☺		☺
1	©	©	0	©	©			©	©	©		©	☺	☺		☺
2		©	©	©	©	()	©	©	☺	©		©	☺	☺		©
3		©	©	☺	©	©	©	☺	(i)	☺	☺	©	©	☺		☺
4		③	(i)		©	0	(i)	☺	(i)	☺	☺	©	©	☺		☺
5		(1)	(1)		©	①		3	©	(1)	☺	3	①	©		©
6		(1)	9	(1)	©	①	3	©	©	(1)	☺	3	①	©		©
7		9	9	9	©	©			3	9	☺	③	(3)	©	0	©
8		☺	©	©	©	©			©	©	☺	©	©	☺	©	©

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

Figure 3—Curriculum Map—4th grade, month-to-month

	Sept Wk1-4	Oct	Nov Wk9-12	Dec <i>Wk13-16</i>	Jan <i>Wk17-20</i>	Feb Wk21-24	March Wk25-28	April Wk29-32
Blogs		X						
Class mgmt tools	X							
Coding/Programming		X						
Collaboration				X			X	
Communication	X	X		X	X	X		X
Computer etiquette	X							
Critical thinking	Х		X	X	X			X
DTP				X	X	X		
Digital Citizenship	X	X	X	X	X	X		
Google Earth		X				X		
Graphics					X	X		X
Internet		X	X				X	
Internet privacy		X						
Keyboarding	X	X	X	X	X	X	X	X
Presentations							X	X

Problem solving	X	X	X	X	X	X	X	X
Publishing/sharing				X		X		X
Research		X	X	X			X	
Spreadsheets						X		
Visual learning					X	X		
Vocabulary	X	X	X	X	X	X	X	X
Webtools		X	X	X	X			
Word Processing	X		X	X	X			

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

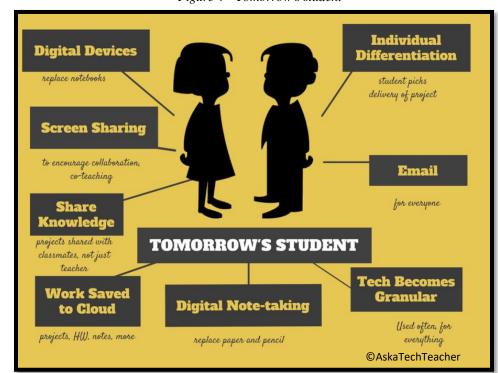


Figure 4—Tomorrow's student

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, iPad, or smartphone:







Figure 5a-h—Digital Devices for workbooks

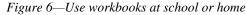








...at school or at home







- Check with your teacher on which of these are available with your program license.
- At your grade level, you'll probably have help from a teacher, parent, or another adult as you work. When you see a section for 'Notes' at the end of some lessons, this is where you add your 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 don't change the lesson order (except where noted otherwise—like Coding).
- 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 to write something in the workbook. Your teacher will explain more.
- Focus on problems listed in each 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. Use an annotator like 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 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.

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

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
 - Main activity
 - Exit ticket

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

- Complete **Board presentations** (grades 3-8).
- Occasionally, review/introduce skills.
- 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.

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 8—Keep lessons in order



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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.

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Lesson #5 Outline in word processing

Vocabulary	Problem solving	Skills
 Alignment 	Outline numbers disappeared	<u>New</u>
 Alt+F4 	(backspace until into outline; push	Outlining
 Bullets 	enter for next number	
Ctrl+Z	 I can't find tool (use Search) 	
Icons	Outline won't work (try shortkeys)	<u>Scaffolded</u>
 Indent/exdent 	How do I indent (tab)	Word processing
 Monitor 	 I can't find tool on ribbon (try shortkey) 	Keyboarding
 Mulligan Rule 	I can't find the answer to my problem	Speaking and
 Outline 	and my parents can't help	listening
Shortkey	I was sick during last quiz (retake for full	
• Title	credit—Mulligan Rule)	

How do I use tech to organize ideas?

- Completed Important Keys quiz
- Signed up for Board
- Brought class book to outline
- Followed directions
- Used good keyboarding habits
- Completed warm-up and exit ticket
- Successfully annotated workbook
- Decisions followed class rules
- Joined class conversations
- Left station as it was (neat and orderly)



Step-by-step

Class warm-up: Keyboard in class typing tool

_______Warm up with keyboarding practice using a tool that focuses on one row at a time. You used this last year so should be able to begin independently. Maintain correct posture, keep elbows at sides, and use proper hand position with no flying hands.

_______This is the same website you will use for homework.

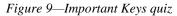
_______While keyboarding, if you haven't, sign up for the Problem-solving Board. It starts next week.

_______Your teacher will preview Problem-solving Board. You

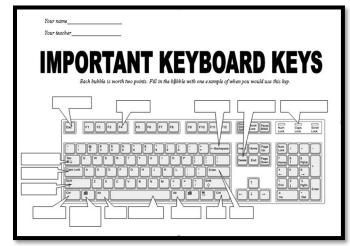
or the teacher as a last resort. It takes about three minutes.
_Your teacher will review the Hardware Quiz. Remember:
The Mulligan Rule applies.

teach classmates how to solve a problem and take their questions. You can get help from family, friends, neighbors

Important Keys quiz today. *Figure 45* is a thumbnail—full size at end of lesson 2:







_This includes fifteen non-letter keys you should know. You can work in groups or individually. You'll only get about seven minutes.

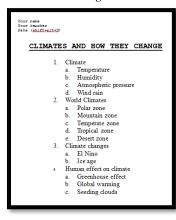


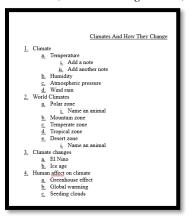
Your teacher will review grading (which is the same as the keyboarding speed-accuracy quiz).

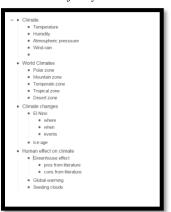
_Any evidence of learning for Evidence Board?

_Today, you'll outline one chapter in a book you've brought from class. You'll be expected to find the main topics and supporting points to be included in the outline. Your outline will look something like *Figures 46a-c*:

Figure 10a—Outline in Word; 46b—in Google Docs; 46c—in Workflowy







_Why outline? How does it benefit your understanding of a topic? How does it assist in organizing information? Consider:

- to encourage a better understanding of a topic
- to organize ideas
- to promote reflection on a topic
- to assist analysis of a topic

- ____How you access an outline tool will be slightly different if you use a computer (PC, Mac), a Chromebook, or an iPad.
 - _Open a word processing program like MS Word or Google Docs as your teacher opens it on the class screen.
- ___If you don't use MS Word or Google Docs on your digital device, your teacher may have you try OneNote part of the MS Office suite; also a web app or an iPad app.
- ____If these don't work on your Chromebook, try an outlining tool suggested by your teacher. S/he'll have ideas for you.
 - __If you're an iPad school, you may use the Google Docs or MS Word app.
 - _Any time you go online, remember to do so safely.
 - _Put heading at top (name, teacher, date). What's the purpose of the heading? Add date with shortkey (if available).



_Center title beneath heading. What's the purpose of a 'title'?

_Use three ribbon tools—or adapt for the toolbar in the word processing program you use: 1) bullet or numbered list, 2) indent—push text to right (subpoint), and 3) exdent—push text to left (more important point). See *Figure 47* (in MS Word):

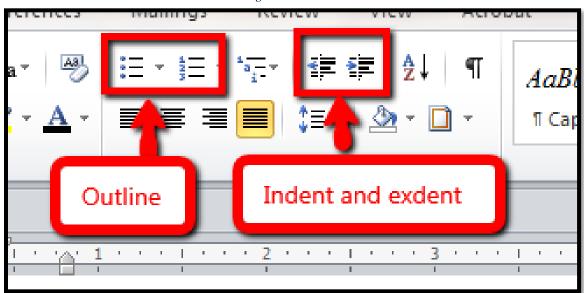


Figure 11—Outline tools

Or, alternatively, you may use tab to indent and Shift+tab to exdent—I like this better.



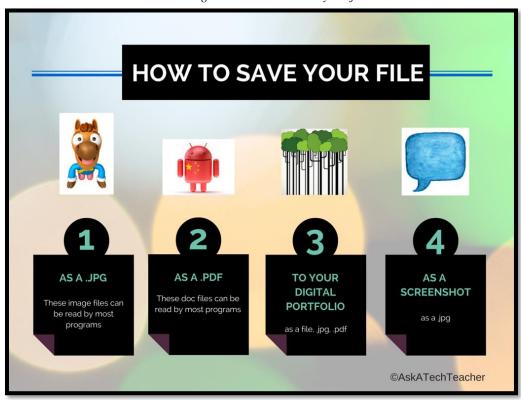
_Outline chapter headings, subheadings in the book you brought to class. Summarize and/or paraphrase relevant points in text.

_Work individually or in small groups.

- _Done? Now edit. As a group, suggest information on this topic learned from other resources (library books, videos, personal experience) and integrate it into the right spot by adding points and subpoints, even images. How does this contribute to overall understanding of topic? How does this enable you to knowledgeably discuss the subject?
- _____Remember: Every time you use computers, practice keyboarding skills.
 - _Remember: Save early save often. Why? How often?
- _____If printing, preview to be sure outline takes only one page. Save or save-as? Which is right for this situation?

__Review how to save (Figure 48):

Figure 12—How to save your file



______Why is it important to put your name in the file name? Your teacher will demonstrate a search of student name. See how a file shows up even if they didn't save it right—as long as they saved it 1) with their last name in the file name, and 2) to school network (if using that approach).

_Print/save/share/publish—you decide.

_____Remember: The Blank Keyboard quiz is next week.

Class exit ticket:

Tack a post-it on a virtual or physical Vocabulary Wall with a tech word you don't know.

Extension:

- Volunteer to add the start of the Problem-solving Board to the class calendar.
- Volunteer to add next week's Blank Keyboard quiz to the calendar.
- Visit class internet start page for websites connected to inquiry.

Lesson #6 Digital Citizenship

Vocabulary	Problem solving	Skills
BlogCyberbullyDigital footprintFair use	 Aren't all images on Google free (no—they're to view, not steal) I'm anonymous. Why worry about my actions (your true measure is how you 	New Digital footprint Digital rights and responsibilities
 Format Forums Netiquette Online presence Texting Virus 	 act when no one is looking) Why doesn't 'fair use' cover everything when I'm a student (it only covers academic stuff) I can't find the copyright (try the bottom of the page) 	Scaffolded Digital citizenship Cyberbullying Digital privacy Plagiarism

How do I go online safely?

- Completed presentation
- Shared evidence of learning
- Completed blank keyboard quiz
- Used good keyboarding habits while typing
- Completed warm-up and exit ticket
- Successfully annotated workbook
- Decisions followed class rules
- Joined class conversations
- Left station as it was (neat and orderly)



Step-by-step

Keyboard homerow Class warm-up:

_Warm up with keyboarding using a tool that focuses on one row at a time. At this point, you are on Home or QWERTY row. Pay attention to your posture, hand position, and other good keyboarding habits.

Your teacher will review last week's quiz.

Did you use tech knowledge to help at home or other classes? If so, share and then post a badge on the Evidence Board.

a thumbnail—full-size Assessment at the end of keyboarding lesson). You can work in groups or pairs—or individually. You get ONLY five-ten minutes for this quiz. You

should know key placement by now.

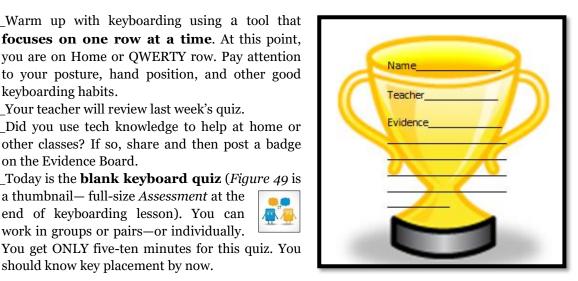
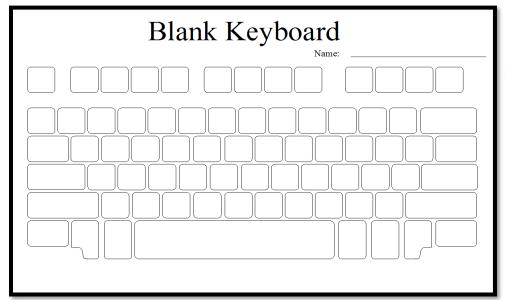


Figure 13—Blank keyboard





_____Remember: Homework due end of each month. The entire years' worth of assignments is at the end of this workbook.

_Start Problem-solving Board. Your teacher will review how it works.

Digital Citizenship

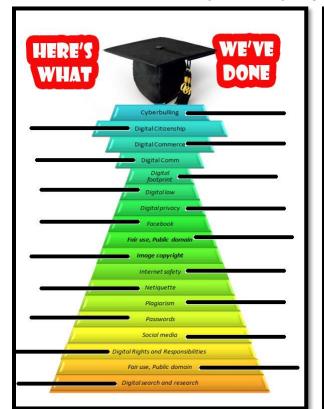
_____Discuss digital citizenship. You'll cover it in depth throughout the year.
_____As a group, throughout the school year, you'll discuss the topics listed under '4th grade' (*Figure 50*—zoom in if needed).

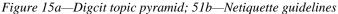


Figure 14—DigCit topics

Digital Citizenship Topics	K	1	2	3	4	5	6
Cyberbullying	х	х	х	х	х	х	х
Digital citizenship	х	х	х	х	х	х	х
Digital commerce					х		х
Digital communications				х		х	х
Digital footprint and Online presence			х	х	х	х	x
Digital law				х		х	х
Digital privacy				x	x	х	x
Digital rights and responsibilities	x	х	х	х	х	х	х
Digital search and research				х	х	х	x
Fair use, Public domain			X	х	х	х	x
Image copyright			х		х	х	x
Internet safety	х	х	х	x	x	x	x
Netiquette		х	х	х	х	х	x
Online Plagiarism				х	х	х	х
Passwords	х	х	х		х	х	
Social media						х	х
Stranger Danger	х	х	х				

Figure 51 is posted in your classroom. Every time you discuss a topic, volunteer to mark it off:





Netiquette Rules

Follow the same rules of behavior you follow in real life Be aware of your digital

Share your knowledge Help keep 'flame wars' under

Respect other's privacy
Be forgiving of other's mistakes

footprint

control

General discussion of Digital Citizenship

- Volunteer to review last year's digital citizenship discussion.
- Discuss Twitter and hashtags. Watch a video on hashtags suggested by your teacher.
- Discuss blogs as a group. Discuss texting. Watch a video on texting suggested by your teacher.

Cyberbullying

- What is **cyberbullying**? What does 'cyber' mean? What is the same/different about bullying and cyberbullying?
- Use tools employed to deal with neighborhood bullies on cyberbullies. Discuss these as a group.
- Watch videos suggested by your teacher on cyberbullying.

Digital footprint

- Discuss your digital footprint. Why is it important?
- Watch a video on digital footprints suggested by your teacher.

Digital privacy

- Discuss **Digital Privacy**. Discuss how **passwords** protect privacy. Remember you never share passwords, even with friends.
- Discuss password guidelines and rules.
- Watch a video on passwords suggested by your teacher.

Digital rights and responsibilities

- What are the digital rights and responsibilities of a fourth grader? Watch a video on this topic suggested by your teacher. Discuss:
 - Act the same online as you'd act in your neighborhood.
 - Don't share personal information. Don't ask others for theirs.
 - Be aware of your surroundings. Know where you are in cyberspace.
 - Always show your best side online.
 - Anonymity doesn't protect the individual.
 - Share knowledge online.
 - If someone is 'flaming', stop it if possible or walk away.

Netiquette

• What is 'netiquette' to a fourth grader? Review *Figure 51b* (zoom in if necessary).

Online search/research

• This is covered in other lessons

Plagiarism

- What does 'plagiarism' mean? Why give credit to original authors/artists?
- Watch a video on plagiarism suggested by your teacher.
- Discuss plagiarism concepts like image copyrights, fair use, and public domain.

Class exit ticket:

Send an email to the teacher listing the top three digital tools you're excited to use.

Extension:

- Volunteer to add homework due date to the class online calendar each month.
- Check email (if you have student email).
- *Visit class internet start page for websites that tie into inquiry.*

"A printer consists of three main parts: the case, the jammed paper tray and the blinking red light"

Intentionally deleted

Lesson #12 Word Processing Tables I

Vocabulary	Problem solving	Skills
4x5Categories	I deleted my work (Ctrl+Z)What's today's date (Shift+Alt+D)	<u>New</u>
• Cells	I ran out of rows! (click in the last cell of	<u>Scaffolded</u> Table skills
ColumnsHandles	table and push tab)There's not enough room (keep typing;	Keyboarding skills
RowsShift-tab	cell increases in size) Column is too narrow (drag margin to	Digital citizenship Problem-solving
• Table	resize)	strategies

How do tables present info clearly?

- Developed and organized a table appropriate to task, audience, and purpose
- Used good keyboarding habits
- Completed warm-up and exit ticket
- Decisions followed class rules
- Joined class conversations
- Left station as it was (neat and orderly)



Step-by-step

Class warm-up: Keyboard lower row

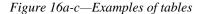
_____Continue Problem-solving Board presentations. If your turn is next week, be sure you come to class prepared. You can use notes if your teacher allows it.

___Any evidence of learning to post on Evidence Board? Did you share tech skills with family?

_Today starts a two-week project on organizing information with tables.

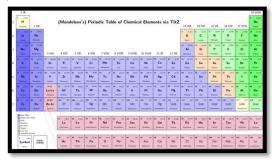
___Discuss the meaning of 'table'. Why choose a table instead of a narrative paragraph (Hint: Its rows and columns cleanly group related information; it organizes facts and details that support the theme).

_____Where have you seen tables outside of school (i.e., class schedule—*Figure 72a*, sports roster—*Figure 72b*, Periodic Table of Elements—*Figure 72c*—ask your parents about this one)?



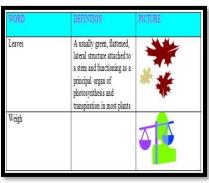


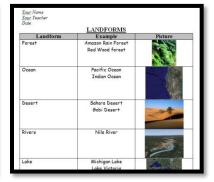




_Do you remember tables in 2nd grade (*Figure 73a*—the Number Square)? 3rd grade (*Figure 73b*—vocabulary or *Figure 73c*—Landforms)—if you've been using the SL tech curriculum:

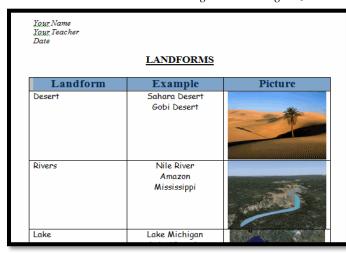
Figure 17a—Table in 2nd grade; 73b—3rd grade; 73c—3rd grade

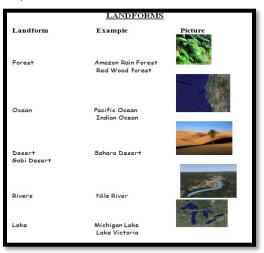




Notice the difference between information arranged in a table (*Figure 74a*) and arranged with tabs, columns, and/or returns (*Figure 74b*). Which is easier to understand? Which takes longer to create? Your teacher may model both for you on the class screen:

Figure 18a—Organize data in table; 74b—in columns





_Your teacher will open a word processing program on the class screen (MS Word, Notes, Google Docs, or another) while you open it on your digital device. S/he'll model table creation as you work along.

_Moving around a table is NOT about clicking the mouse in the cell in which you want to enter data. Instead, use these basic shortkeys to move around your table:

- tab moves right
- shift+tab moves left
- enter adds another line in the cell
- tabbing in last cell adds a new row

_Add a 4x5 table with column headings (such as *Ecosystems, Example, Definition, Picture*) and row categories (such as *Mountains, Coast, Desert*). *Figure 75a* is an example of adding a table in MS Word, *75b* in Google Docs:

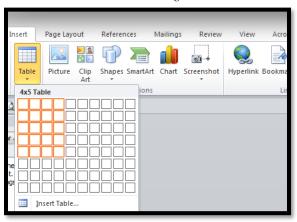
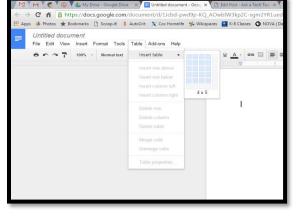


Figure 19a—Table tool in MS Word; 75b—in Google Docs



- ____Ooops. You added five columns. How do you delete a column?
- _____Discuss meaning and purpose of column 'headings' and row 'categories'.
 - __Center column headings; use #22 font, caps lock, bold.
- ______Discuss each ecosystem included in the row categories. Fill cells based on the class input. Notice how cell enlarges to accommodate more information.
- _____Finish table by filling in the rest of columns one-three (skip 'Picture' column until next week). It may look like *Figure 76*:

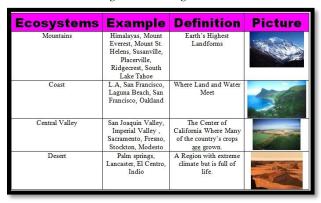


Figure 20—4th-grade table

_____Check grammar and spelling with red and green squiggly lines.
_____Save to digital portfolio. What's the difference between 'save' and 'save as'?

Class exit ticket:

Check your neighbor's digital portfolio to be sure their table is saved correctly. It will be used next week.



Extension:

- Instead of tables, use a spreadsheet to organize information.
- Visit class internet start page for websites that tie into topic (such as 'ecosystems').
- Volunteer to add table project to class calendar.
- Shade heading row so it stands out.

Intentionally deleted