

Student Workbook

6th Edition

Grade 8

by Ask a Tech Teacher

TECHNOLOGY CURRICULUM STUDENT WORKBOOK

Eighth GRADE

SIXTH EDITION

By Ask a Tech Teacher©

Part Nine of Nine in the SL Technology Curriculum

Sixth Edition 2016

ALL MATERIAL IN THIS BOOK IS PROTECTED BY THE INTELLECTUAL PROPERTY LAWS OF THE USA.

No part of this work can be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, Web distribution or information storage and retrieval systems—without the prior written permission of the publisher 2016© Structured Learning LLC. All Rights Reserved

For permission to use material from this text or product, contact us by email at: info@structuredlearning.net structuredlearning.net

ISBN 978-1-942101-14-7

Printed in the United States of America

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, part of class 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.

Here's where you're headed (Figure 1):

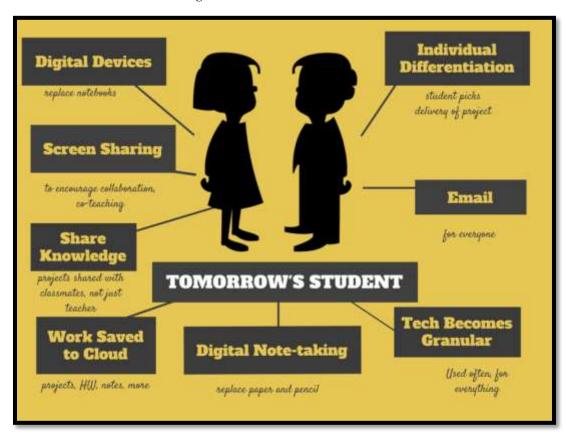


Figure 1—Tomorrow's student

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)

WHAT'S IN THIS WORKBOOK?

Fach 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

Figures 2a-b shows what comes at the beginning of each lesson and the end (zoom in if needed):

Vocabulary
Problem solving
Lesson title

Vocabulary
Problem solving

How do if solving

How do if solving

Tech problemsolving

Tech problemsolving
Flipped classroom homework-do before class

Wiffort

Wiffort

President world

Research markets come por the solving of the solving of the solving

Assessment

Completed proper

Tech problemsolving

Assessment

Assessment

Tech problemsolving

Assessment

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

Assessment

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

How can came the teap for the solving of the solving property

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

How can came the solving of the solving property

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

How can came the solving of the solving property

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

How can came the solving of the solving property

Tech problemsolving

Flipped classroom homework-do before class

Wiffort

How can came the solving of the solving property

Tech problemsolving

Flipped classroom homework-do before class

Flipped classroom homework-do before class to the solving problem homework-do before class to the solving pr

Figure 2a-b—What's included in each lesson



HOW TO USE THIS BOOK

Your teacher(s) (meaning: all those who direct your technology training) will work with you during classtime. You'll spend an additional thirty-sixty minutes each week using your tech skills—online, with software, teaching friends, for homework, and 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 (Figure 3) shows what's covered in which grade. Units taught multiple years reflect increasingly less scaffolding and more student direction. Here's how to use it:

• Determine what skills were covered in earlier years. Transfer that knowledge to this new school year. Your teacher will review the topics and skills from prior years, but won't re-teach.

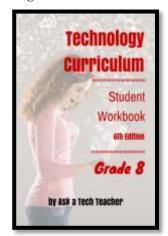
Problem-Platform Keyboard WP Slide-DTP Spread-Google Search/ Graphics/ WWW Game Dig Skills - Hardware ding Research 0 \odot \odot K 0 \odot (0) (0) \odot \odot (0) (0) (0) (0) \odot (0) (0) \odot \odot (0) 2 0 0 \odot 0 0 \odot 0 \odot \odot 0 \odot \odot (0) \odot 0 \odot \odot 0 \odot (0) \odot \odot 0 \odot \odot 0 3 0 0 (0) 0 (0) (0) (0) \odot (0) \odot \odot 0 4 \odot (0) 5 \odot \odot \odot 0 \odot \odot \odot 0 0 \odot \odot 0 6 \odot 0 0 0 0 0 0 \odot 0 0 0 0 7 \odot 0 \odot 0 \odot \odot 0

Figure 3—Curriculum Map—K-8

Here are hints on using this curriculum:

- This workbook is part of the K-8 curriculum your school selected to guide you through technology skills. Each lesson takes two sessions of 30-45 minutes with equal time devoted to home practice.
- This curriculum uses the 'flipped classroom' approach. Homework prepares you for the class lesson so class time is spent on enrichment. Homework materials will be shared via the class website, blog, Internet start page, as videos, links, or other resources. You will cover the homework material before class, arriving at class prepared to fully participate in activities. If you have any difficulties accessing the homework, talk to your teacher so s/he can help you work that out.
- Every effort has been made to accommodate varied digital devices.
 Lesson samples are often in multiple platforms. If you have difficulty adapting your digital device to lesson expectations, talk to your

Fig. 4—Student workbook



teacher.

 You can use this workbook on PCs, Macs, Chromebooks, or iPads. You can use a desktop, laptop, or a netbook.

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.
- A number of lessons are mixed throughout the year:
 - #3 Digital Citizenship
 - #4 Keyboarding
 - #5 Problem-solving
- Lessons include Extensions, in case you finish early.
- Zoom in or out of workbook pages to get exactly the size that works for your needs.
- Most lessons start with a warm-up to get you into tech and end with a summative exit ticket.
- Some lessons offer several activities that meet goals outlined in the Essential Question.



indicates video



indicates work with a partner



indicates workbook material

- Always use lesson vocabulary. You gain an authentic understanding of terms by using them in conversation.
- Consider backing up your work—as a life habit. This can be done with a flash drive, by emailing the document to yourself, or saving to a secondary location.
- Expect to be a risk taker. Your teacher won't rush in to solve your problems. Instead, s/he'll ask
 you to think how it was done in the past. Don't be afraid of failing. That often precedes success.

Lessons expect you to develop sixteen 'habits of mind' (Figure 6). In a sentence: Habits of Mind
ask you to engage in learning, not simply memorize. Your teacher will cover this in more depth.

Figure 6—Habits of Mind Listen with 5. Manage Persist understanding Think Think about impulsivity and empathy flexibly thinking 16. Remain open to Strive for continuous accuracy learning 15 Think Question and interdependently pose problems Apply past 14. Find humor knowledge to new situations Ask a Tech Teacher © 12. Think and 13. 10. Respond with communicate Take responsible Gather data Create, imagine, onderment and with clarity and with all senses innovate awe precision

- Each lesson includes a short list of tech problems. Be sure you are able to solve those before leaving the lesson.
- Your teacher will assess your work based on the weekly 'To Do' list and the Essential Question. Be sure you've completed items and submitted in the manner required.
- If lesson instructions don't work, ask your teacher for help or email us (with parent and/or teacher approval) at askatechteacher@gmail.com.
- Check off items you finish (using the ______ in front of each task). 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 <u>iAnnotate</u>, <u>Evernote</u>, <u>OneNote</u>, <u>Notability</u>, or Adobe Reader. Also, use these tools to add notes to the lessons.
- When you finish each lesson, transfer knowledge to projects at school, home, the library, a club—wherever you use digital devices.
- Remember: It takes five times get a skill—

First: you hope it'll go away

Second: you try it

o Third: you remember it

o Fourth: you use it outside of class

o Fifth: you teach a friend

Figure 7—Tech use plan



COPYRIGHTS

You have a single-user license on this ebook which means you may reproduce copies of material for your personal use only. You may not reproduce the entire workbook and share it with a friend. Reproduction of any part for others is strictly prohibited. No part of this publication may be transmitted, stored, or recorded in any form without written permission from the publisher.

ABOUT THE AUTHOR

Ask a Tech Teacher is a group of technology teachers who run an award-winning resource <u>blog</u>. 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?

How to Use This Book

Table of Images

Table of Assessments

Lessons

#1	<u>Introduction</u>	#13-15	Engineering and Design
#2	Digital Tools in the Classroom	#16-18	Learn Through Service
#3	<u>Keyboarding</u>	#19-21	<u>Visual Learning</u>
#4-5	<u>Problem Solving</u>	#22-24	<u>Robotics</u>
#6-8	<u>Digital Citizenship</u>	#25-27	Programming with Alice
#9-10	<u>Search/Research</u>	#28-30	<u>SketchUp</u>
#11	Word Certification	#31-32	Web Communication Tools
#12	Gradebook and Budgets		

Arranged by theme

_			•	
ĸ	~	c	-	• •
u	u	3	·	. 3

#1	Introduction	#3	Keyboarding
#2	Digital Tools	#11	Word Certification

Logical Thinking

#4-5	Problem Solving	#22-24	Robotics
#13-15	Engineering and Design	#25-27	Programming with Alice
#19-21	Visual Learning	#28-30	SketchUp

Digital Citizenship

#1	Intro	#9-10	Search/Research
#2	Digital Tools	#31-32	Web Communication Tools
#6-8	Digital Citizenship		

Search/Research

#2	Digital Tools	#19-21	Visual Learning
#9-10	Search/Research		

<u>Progra</u>	<u>mming</u>			
	#4-5	Problem solving	#25-27	Programming with Alice
	#12	Gradebook and Budgets	#28-30	SketchUp
	#22-24	Robotics		
		·		
<u>Collab</u>	orate/Pul	<u>blish/Present</u>		
	#1	Intro	#11	Word Certification
	#2	Digital Tools	#16-18	Learn Through Service
	#3	Keyboarding	#19-21	Visual Learning
	#6-8	Digital Citizenship	#31-32	Web Communication Tools
	#9-10	Search/Research		

TABLE OF IMAGES

Figure 1—Tomorrow's student		4
Figure 2a-b—What's included in each lesson		
Figure 3—Curriculum Map—K-8		
Fig. 4—Student workbook		
Figure 5a-h—Digital Devices for workbooks		
Figure 6—Habits of Mind		
Figure 7—Tech use plan		
Figure 8a-b—Which image represents 'technology'?		
Figure 9—Table of Contents		
Figure 10—Class rules		
Figure 11—Digital citizenship poster		
Figure 12—How to hold a mouse		
Figure 13a-d—Digital devices and their parts		
Figure 14a—Parts of iPad; 14b—Chromebook		
Figure 15—Compare-contrast software vs. online tool		
Figure 16—Student workbooks		
Figure 17a—iAnnotate; 17b—Notability; 17c—Adobe Acrobat		
Figure 18a-d—Avatars		
Figure 19a-c—Backchannel devices		
Figure 20a-c—Student blogs		
Figure 21—Blog privacy		
Figure 22—Netiquette rules		
Figure 23a—Blogging rules; 23b—blogging rubric		
Figure 24a—Class calendar in Google; 24b—Padlet; 24c—DTP		
Figure 25a—Class start page in Protopage; 25b—Symbaloo; 25c—Portaportal; 25d—l		
Figure 26—Twitter—private account		
Figure 27a-b—Social media safety	Error! Bookmark not define	ed.
Figure 28a-b—Notetaking tools	Error! Bookmark not define	ed.
Figure 29—Collaborative notes in Google Spreadsheets	Error! Bookmark not define	ed.
Figure 30a—Evernote; 30b—Twitter	Error! Bookmark not define	ed.
Figure 31a—Wiki; 31b—Google Drive	Error! Bookmark not define	∍d.
Figure 32—Homework dropbox	Error! Bookmark not define	∍d.
Figure 33—Email etiquette	Error! Bookmark not define	∍d.
Figure 34a—Evidence Board; 34b—Badge	Error! Bookmark not define	∍d.
Figure 35—What is a flipped classroom?	Error! Bookmark not define	∍d.
Figure 36a—Blendspace; 36b—Flipped classroom	Error! Bookmark not define	∍d.
Figure 37—Google Apps	Error! Bookmark not define	∍d.
Figure 38—Google Hangouts	Error! Bookmark not define	∍d.
Figure 39—Google Contacts	Error! Bookmark not define	∍d.
Figure 40—MapMaker		
Figure 41a—Screenshot to explain log-in; 41b—screencast to explain the use of scree		
Figure 42—Student website rubric		
Figure 43—Screencast		
Figure 44—Privacy on YouTube		
Figure 45a-c—Digital dictionaries		
Figure 46 Why loans to keyboard?	Errorl Bookmark not define	24

Figure 47a. Kaub agraling markura, 47b. maritian	Freed Declare out and defined
Figure 47a—Keyboarding posture; 47b—position	
Figure 49—Shortkeys	
Figure 50a—iPad shortkeys; 50b—Chromebook shortkeys; 50c—PC shortkeys; 50d—Ir	
Figure 51a-e—Project-based learning and keyboarding	
Figure 52a-f—Projects that use keyboarding in 7th grade	
Figure 53—Why is key placement important?	
Figure 54—Important keys on keyboard	
Figure 55a—Blank keyboard quiz for PCs; 55b—for Chromebook	
Figure 56—Spreadsheet for Handwriting vs KB data	
Figure 57—Problem-solving quotes	
Figure 58—How to solve a problem	
Figure 59—Common tech problems	
Figure 60—When no one watches	
Figure 61—Digital Citizenship topics	
Figure 62a—Netiquette Rules; 62b—Digital pyramid	
Figure 63a-c—Digital Citizenship projects	
Figure 64—Steps for Internet research	
Figure 65—Sample search	
Figure 66—Search tips	
Figure 67—What are the parts of a website?	
Figure 68—Digital law—rephrased	
Figure 69a-b—Creative Commons licensing	
Figure 70—Two copyrighted images	
Figure 71—Copyright protections on browsers	
Figure 72a-b—Student drawing used without permission	
Figure 73—Real or a hoax?	
Figure 74a-b: Add or remove pieces from a photo	
Figure 75a-c—Real or hoax pictures?	
Figure 76a-c—Samples of search projects	
Figure 77—Compare/contrast B	
Figure 78—Compare/contrast B	
Figure 79a—Excel formula breakdown; 79b—spreadsheet formulas	
Figure 80—Spreadsheet chart	
Figure 81a—Formulas in decisions; 81b—model with mathematics with formulas	
Figure 82—Spreadsheet list of formulas	
Figure 83—Spreadsheet data	
Figure 84a-c——Spreadsheet projects in 2nd-7th	Error! Bookmark not defined.
Figure 85—Sample budget	
Figure 86—Sample bridge blueprint	Error! Bookmark not defined.
Figure 87a-b—Sample bridge designs	
Figure 88—Bridge parts	
Figure 89—Service learning and CC	Error! Bookmark not defined.
Figure 90—How to teach Seniors	Error! Bookmark not defined.
Figure 91—Student helping elder	Error! Bookmark not defined.
Figure 92—Tech infuse yourself	Error! Bookmark not defined.
Figure 93—Student quote on teaching elders	Error! Bookmark not defined.
Figure 94a-d—Visual learning projects	Error! Bookmark not defined.
Figure 95a-c—Thinglink hotspots	Error! Bookmark not defined.
Figure 96—Learning styles	Error! Bookmark not defined.
Figure 97—Learning style poll in Google Forms; 97b—PollDaddy	

Figure 98a—Visual organizers in 2nd grade; 98b—3 rd ; 98c—4 th ; 98d—6 th ; 98e—7 th	Errorl Bookmark not defined
Figure 99a-b—Sample infographics in Hubspot; 99c—Piktochart	
Figure 100—Piktochart	
Figure 101—Easel.ly	
Figure 102—Infoactive	
Figure 103—Infogr.am	
Figure 104—Canva	
Figure 105a-c—Infographics	
Figure 106a—Prezi; 106b—Glogster	
Figure 107—Reason abstractly and quantitatively	
Figure 108—Model with mathematics	
Figure 109—Use appropriate tools strategically	
Figure 110—Attend to precision	
Figure 111—Look for and make use of structure	
Figure 112—Regularity in repeated reasoning	
Figure 113—What's a '404'?	
Figure 114—Brainstorming on class screen	
Figure 115a-b—Robotic pieces	
Figure 116a-b—Robotics programming	Error! Bookmark not defined.
Figure 117a-b—Finding robot program	
Figure 118a-b—Completed robots	Error! Bookmark not defined.
Figure 119a-b—Bot Battles	
Figure 120a and 120b—Climbing robots	Error! Bookmark not defined.
Figure 121—Tournament elimination poster	Error! Bookmark not defined.
Figure 122a-b—Class using Alice	Error! Bookmark not defined.
Figure 123a—Student using Alice; 123b—first world	Error! Bookmark not defined.
Figure 124a—Make sense of problems; 124b—reason abstractly	Error! Bookmark not defined.
Figure 125—Construct viable arguments (in Alice)	Error! Bookmark not defined.
Figure 126a—The model; 126b—the result in Alice	
Figure 127—Use appropriate tools (Alice)	
Figure 128a—Attend to precision (in Alice); 128b—look for and express regularity	
Figure 129a-b—Alice programming	
Figure 130a-c—Math programming in Alice	
Figure 131a-c—Designs from SketchUp Warehouse	
Figure 132a-d—Geometric shapes in SketchUp	
Figure 133—House in SketchUp	
Figure 134a-b: Which is real? Which is SketchUp?	
Figure 135a—Icosahedron in SketchUp; 135b—building on campus	
Figure 136a—Ancient Rome; 136b—molecules; 136c—math shapes	
Figure 137a-bPuzzle Maker	
Figure 138a and 138b—BatchGeo	
Figure 139Build with Chrome	
Figure 140—Build with Chrome	
Figure 141a-b—Storytelling with comics	
Figure 142a—Diagrams; 142b—GIMP	
Figure 143a—Google Map Maker; 143b—Google Mapmaker	
Figure 144a—Hakitzu; 144b—Jeopardy	
Figure 145a—Jing; 145b—PollDaddy	
Figure 146a—Prezi; 146b—online magazine	
Figure 147a—Screencast-o-matic; 147b—HaikuDeck	
Figure 148a—Stock Market Game; 148b—Study Blue	Error! Bookmark not defined.

Figure 149a—Tackk; 149b—Trifolds	Error! Bookmark not defined.
Figure 150—Wolfram Alpha widget	Error! Bookmark not defined.
Figure 151—Webtool assessment	

TABLE OF ASSESSMENTS

Assessment 1—Parts of the computer	Error! Bookmark not defined
Assessment 2—Parts of the smartphone	Error! Bookmark not defined
Assessment 3—Parts of an iPad	Error! Bookmark not defined
Assessment 4—Chromebook parts	Error! Bookmark not defined
Assessment 5—Student blogging agreement	Error! Bookmark not defined
Assessment 6—Blog grading rubric	Error! Bookmark not defined
Assessment 7—Website grading rubric	Error! Bookmark not defined
Assessment 8—Digital portfolio rubric	Error! Bookmark not defined
Assessment 9—Keyboarding technique checklist	Error! Bookmark not defined
Assessment 10—Important Keys	
Assessment 11—Blank keyboard quiz	Error! Bookmark not defined
Assessment 12—Chromebook blank keyboard quiz	
Assessment 13—Keyboarding Challenge	
Assessment 14—Problem Solving Board	
Assessment 15a-b—Problem solving authentic data	67
Assessment 16—Problem solving presentation rubric	68
Assessment 17—Compare-contrast tools	88
Assessment 18—MS Word certification study guide	89
Assessment 19—Compare-contrast tools	
Assessment 20—Gradebook spreadsheet	
Assessment 21—Budget spreadsheet	Error! Bookmark not defined
Assessment 22—Bridge building rubric	
Assessment 23a-b—Learning style quizzes	
Assessment 24—Alice rubric	
Assessment 25—Webtool Assessment	Error! Bookmark not defined

LESSON #1 INTRODUCTION

Vocabulary	Problem solving	Homework
 Back-up Digital Digital citizen Right-click menu Save-as Save early/often Select-do 	 What's the difference between 'save' and 'save-as'? What's a quick way to ** (shortkey)? How do I annotate workbook (check Digital Tools Lesson)? I don't have a flash drive (how do you back up files?) 	Assigned prior week: What rules would you add to class? What's a 'flipped class'? What's 'tech'? Review materials
TechnologyWebtool	I can't do my keyboarding homework at home (come to afterschool club)	Check 'Homework' cell each week to prepare for class

HOW DO I USE TECHNOLOGY TO LEARN?

- Previewed required material; came prepared
- Completed exit ticket
- [tried to] solve own problems
- Decisions followed class rules
- Higher order thinking and Habits of Mind observed
- Successfully annotated workbook
- Joined class conversations
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: None

_Required skill level: Enthusiasm and passion for technology.

_Welcome to 8th grade technology! Success in this class is predicated on your enthusiasm for learning, transfer of knowledge, and evidence of problem-solving skills. You will often 'pick which program works best' or 'devise a plan to accomplish goals' or 'teach yourself'.

_Share your tech background with classmates—what you know, want to know, and difficulties you see taking this class. Discuss your expectations.

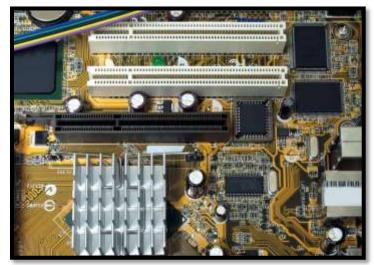
Decode domain-specific technology language these ways:

- Use correct 'geek speak' words during class.
- Decode words you don't understand. Don't skip over it.
- Add unknown words to a virtual wall or a similar collection spot.



_What does 'technology' mean at your school? Is it Figure 8a or Figure 8b?







Discuss the focus of 8th grade technology:

1. Think critically:

- which programs, tools, and strategies work best for what activity
- devise solutions to problems based on past knowledge
- trouble-shoot; find alternatives
- work collaboratively to draw on everyone's knowledge
- understand what you do and don't know, and the difference
- research answers effectively and ethically

2. Employ problem-solving skills:

- use available tools to solve a problem
- critically think about a problem; ignore chaff; focus on pertinent details
- present information in a way others understand
- make sense of data

3. Transfer knowledge:

- ...to other parts of academic and social life
- publish and share to collaborate and seek constructive criticism
- create a digital portfolio accessible from many locations
- link information to others

4. Be a good digital citizenship:



- learn to thrive in the digital world
- learn fundamentals of research, search, social media, and communication
- understand rights and responsibilities of those who inhabit the digital world

5. Learn fundamental tech skills:

- learn to type faster than you can think
- know how to word process in many programs
- use spreadsheets to turn data into information
- make presentations that are effective, responsive to the audience, and interesting
- understand tech hardware and how to troubleshoot when needed
- learn about digital devices needed to thrive in the learning community
- know what online tools are available and what they can be used for

_Review class syllabus and goals. Use Table of Contents if desired (zoom in on Figure 9):

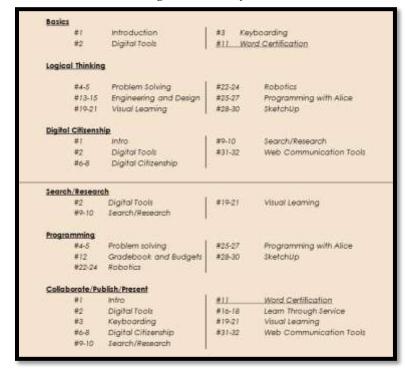


Figure 9—Table of Contents

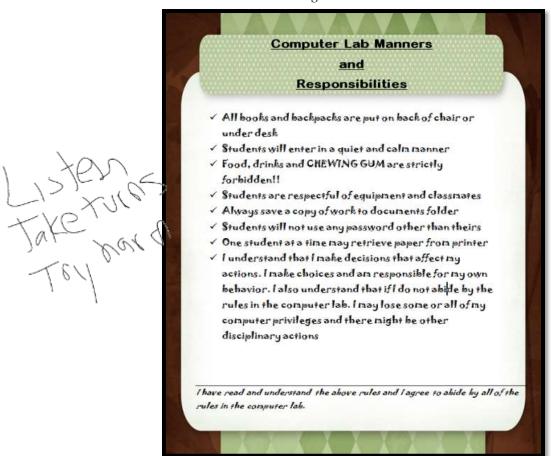
- Basics—Why is keyboarding important? Why is understanding tech important?
 How can understanding hardware help you use tech efficiently and with fewer problems? How does selecting the right tool affect communication?
- Logical thinking—How can technology teach critical thinking? How can bridge building, visual learning, robotics, Scratch, and programming show how to recognize/solve problems? What are common problem-solving strategies?
- Digital citizenship—How can you thrive in the virtual neighborhood? What are the rights and responsibilities you must consider? Which tools are best suited for your education journey?

- Search and Research—How can you use the boundless resources of the Internet effectively, efficiently, and legally?
- Programming—How does coding teach critical thinking and problem-solving? How can robotics, programming, and SketchUp make those lessons fun and easy?
- Collaborate/Publish/Present—How can you share knowledge with classmates and the world?

_Review class rules (zoom in on *Figure 10*). Share those you think will make class productive, efficient, and fair for all, such as:

- Save early, save often, about every ten minutes.
- No food or drink around digital devices.
- Respect the work of others and yourself.
- Keep your body to yourself—don't touch neighbor's digital device.
- No excuses; don't blame people or computer.
- Help neighbor with words, not by doing.
- When collaborating, build on others' ideas as you clearly express your own.
- As a general rule: Select first, then do. You can't do the latter without the former.
- Don't give up.
- Don't whine.

Figure 10—Class rules





Handwrite your suggested rules into this PDF by Figure 10. When done, sign (with your annotation tool) the bottom line where it says, "I have read and understood the above rules and I agree to abide by all of them."

Tour classroom to familiarize yourself with the room. Where are the tech devices that will assist you? Printer? Class announcements? Evidence Board? What else?

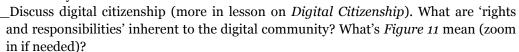




Figure 11—Digital citizenship poster



- flash drives—to a personal flash drive. If necessary, review their use.
- a separate location—such as the hard drive on your laptop (won't work with iPads or Chromebooks)
- email files to yourself—set up a file folder in email account for 'back-ups'.

Class exit ticket:

Vote on a poll your teacher has displayed on the class screen. Share which 8th grade tech topics you think will be the most fun, most useful, or most exciting to learn.

Extension:

- Volunteer to add homework due date to class online calendar this month.
- If you finish, start homework preview of the next Unit.



LESSON #4-5 PROBLEM SOLVING

Vocabulary	Problem solving	Homework
Authentic problemsConjectureDeductive reasoningDemocratic society	 What's the difference between 'save' and 'save-as'? Why 'save early save often'? Which tool do I use (what works) 	Assigned prior week: Review word processing, quotes, problem-solving strategies (for quiz)
Inductive reasoningMathematical language	best?)It's confusing (ask a friend to explain their thinking)	Select problem/date for Problem Solving Board
Proportional reasoning Possponsible citizen Possponsible citizen	I couldn't get on keyboarding website (try another one) I tried to solve the problem (try)	Review webtools and know which you will use
Responsible citizenVisual learner	 I tried to solve the problem (try another strategy; failure is fine) 	Keyboard 45 min., 15 a time

HOW DOES TECH HELP PROBLEM SOLVE?

- Signed up for Problem Solving Board
- Worked well in a group
- Completed warm-up, exit ticket
- [tried to] solve own problems
- Decisions followed class rules
- Higher order thinking, Habits of Mind observed
- Successfully annotated workbook
- Joined class conversations
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: Keyboard on class typing program, paying attention to posture.

This lesson is part of many lessons—not a standalone. Learn to consider yourself a 'problem-solver'.

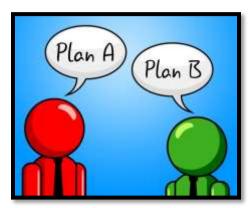
Required skill level: Personal bias for critical thinking and independent problem-solving.

Questions on homework? Come to class prepared.

Before beginning, open your backchannel device.

Discuss what it means to be a 'problem-solver'. Who do you go to when you need one? Do you believe s/he gets it right more often than others? Would you believe most people are wrong half the time?

Problem-solving is closely aligned with logical



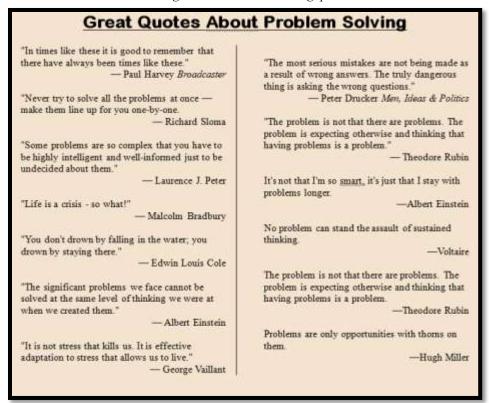
thinking, critical thinking, reasoning, and thought habits. Discuss why you should become a

problem-solver (hint: see prior point—most people are wrong half the time). _Discuss characteristics of a 'problem-solver' (from Common Core):

- attend to precision
- value evidence
- comprehend and critique
- demonstrate independence
- make sense of problems and persevere in solving them
- use appropriate tools strategically
- understand other perspectives

_Is problem-solving 'cerebrally-stimulating? Is it fun? Why or why not? Discuss great quotes about problem-solving in *Figure 57* (zoom in if needed).

Figure 12—Problem-solving quotes



__Discuss shortkeys. How are they problem-solving? Volunteer to demonstrate how you use a shortkey to perform a skill. Is it easier to explain with the shortkey or the toolbar tool? __Discuss problem-solving strategies (see *Figure 58*—zoom in if needed):

- o Act out a problem
- o Break a problem into parts
- Distinguish between relevant and irrelevant information
- o Draw a diagram
- o Guess and check
- Observe and collect data
- See patterns

- Think logically
- Try to solve before asking for help
- o Try, fail, try again
- o Use Help files
- o Use tools available
- Use what has worked in past
- Work backwards

Observe **Guess** and Try, fail, try and collect again patterns data Draw a diagram Think logically Apply inductive reasoning Never say can t Act out a problem Solve a Problem Notice Break Use what Distinguish the into has worked relevant from forest simpler in the past 'irrelevant' and the parts

Figure 13—How to solve a problem

____When you face a problem, use these strategies to solve it before asking for assistance. ____This lesson includes two projects to reinforce problem-solving in everyday life:

- Problem-Solving Board
- Analysis of authentic problem-solving skills

Problem-Solving Board

__The Problem-Solving Board includes common problems faced when using technology. Ideally, these were collected throughout the year—problems that stopped you as you tried to use tech. *Figure 59* shows what the list might include (zoom in if necessary):

Figure 14—Common tech problems

Problem

Problem		
My browser is too small	I can't find a tool	
Browser toolbar missing	My screen is frozen	
Can't exit a program	My menu command is grey	
What's today's date	Can't find Bold , Italic	
Double click doesn't work	Can't find the program	
Start button disappeared	Internet toolbar's gone	
Program disappeared	My computer doesn't work	
I erased my document	My programs are gone	

____Sign up for the Problem-Solving Board via a Padlet wall, SignUp Genius, a shared spreadsheet, or another method suggested by your teacher.

Here's how it works:

- Select presentation date.
- Select problem to teach classmates.
- Find solution. Almost all of problems will require only two-three steps.
- *Teach classmates how to solve problem.*
- *Take questions. The audience is responsible for making sure you make sense.*

Here's where you can get answers:

- Help files
- Google Search
- family and friends

You must come prepared, having researched question. You may use visual displays to clarify information, such as screenshots, screencasts, and graphics.



Entire presentation takes about three minutes. Assessment 14 will be adapted for your class:

Assessment 1—Problem Solving Board

PROBLEM SOLVING BOARD RUBRIC Problem solved: Knew question Knew answer Asked audience for help if didn't know answer No umm's, stutters No nervous movements (giggles, wiggles, etc.) No slang Overall

You should own these tech problems by the end of class.

Analysis of authentic problem-solving skills

During the grading period, identify five-ten problems faced in any part of your life—home, school, or personal. Record the problem-solving strategy you used to solve it in a collaborative spreadsheet shared with classmates, similar to Assessment #15b. It'll include:

tech problem you faced

- how you solved it
- strategy you used from the list
- additional comments

____At the end of class, it will be a resource you can draw on for future problems.

Assessment 2a-b—Problem solving authentic data

___Here's how it works:

- Record 5-10 problems faced during the grading period in a Google Spreadsheet.
- Answer a Google Forms poll (like Assessment 15a).
- Complete 5-10 of these during the grading period.

Class exit ticket: Enter one problem into Google Form.

Extension:

- Volunteer to create Google Form for Problem Solving to track class results.
- If you can't attend class (say, parent's car doesn't start), present your Problem Solving Board via a virtual room like Google Hangout.
- If you finish, start homework preview of the next Unit.

"If a man does his best, what else is there?"

- General George S. Patton (1885-1945)

Assessment 3—Problem Solving presentation rubric

Problem Solving Presentation Assessment

Problem solved:	Student/Team:
Webtool used:	
Strategy used:	

Stra	itegy usea:					
Pts	Investigate	Design	Plan	Create	Evaluate	Group
0	Team does not complete investigation to standard discussed in class	Team does not complete design to standard discussed in class	Team does not complete plan to standard discussed in class	Team does not complete work to standard discussed in class	Team does not complete evaluation to standard discussed in class	Team does not work together to standard discussed in class
1-2	Team states problem but not clearly, vaguely, understanding skills required. Students have difficulty verbalizing steps required to complete	Team addresses some detail about how project will be presented with selected tool, but leaves critical elements out	Team project plan contains some goals for completing project; timeline is not sustainable	Team creates at least part of storyboard, timeline, product/solution	Team evaluates product/solution as they work, but does not adapt plan or project to problems that arise	Team occasionally works well as a group, but has difficulty allocating work and arriving at consensus
3-4	Team states problem clearly with a strong understanding of skills required. Team shows evidence of researching and describes solution in detail	Team addresses all specifics required to create a how-to and present to class	Team produces a plan that contains a clear and achievable goal for using time wisely during class	Team uses appropriate techniques and equipment, storyboard is effective. Team follows plan, and modifies when required, resulting in good quality project	Team evaluates how-to project and their performance; suggests ways to improve, and tests solution before presenting to class	Team frequently incorporates group member input into project, showing respect for the value of all members
Tot al						/20

LESSON #11 WORD CERTIFICATION

Vocabulary	Problem solving	Homework
 Attributes 	Doc says 'read only' (save under a	Assigned prior week:
 Autocorrect 	different name)	Review notes to pre-
• Endnote	 What's the difference between save 	pare for project
 Footnote 	and save-as?	
 Hyperlinks 	 What is today's date? (Ctrl+;) 	Watch all videos; pre-
 Indentation 	 Can't find doc file (Start-search) 	pare reflections; com-
 Mail merge 	 Right-click doesn't work (reboot) 	plete compare-
 Quick Parts 	 I know the answers, but not fast enough 	contrast table; com-
 SmartArt 	for trial tests (make skills habits)	plete pre-test assess-
 Themes 	 Don't know answer (Google it; use Help 	ment
 Versions 	files, provided resources, teammates)	
Views	 How do I add a footer or header? 	Keyboard 45 minutes,
 Wordart 	 How do I save as a different file name? 	15 minutes at a time

HOW DO I BECOME EXPERT AT WORD?

- Worked independently
- Used good keyboarding habits
- Completed warm-up, exit ticket
- Completed MS Certification (whether passed or not)
- [tried to] solve own problems
- Decisions followed class rules
- Higher order thinking and Habits of Mind observed
- Successfully annotated workbook
- Left station as it was (neat and orderly)



STEP-BY-STEP

Class warm-up: Keyboard on the class typing program.

_Required skill level: Solid familiarity with MS Word; completed 5-10 projects using this tool.

_Any questions from homework? Open backchannel.

_Define 'word processing'? Name several word processing programs such as Word, Word Perfect, Google Docs, Open Office, Notes, and Text. Why is it important to be able to use them to:

- communicate to multiple audiences with a variety of media
- produce/publish writing and present relationships between ideas



- integrate information from different media to understand a topic
- write routinely for a range of tasks, purposes, and audiences

______Assessment 17 is a sample evaluation of the major differences between slideshows, word processing, spreadsheets and the collective category of 'desktop publishing'. Be aware: Word processing' includes not just traditional tools like MS Word and Google Docs but forums, Discussion Boards, blogs, and any tool that delivers the message primarily with text.

_Using your annotation tool and working with a partner, fill in as many of the cells under the 'Word processing' column as you can.



Assessment 4—Compare-contrast tools

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

_____When done, compare it to *Figure 77* (zoom in to see better):

Figure 15—Compare/contrast B

Element	Presentation	Word processing	Spread-	DTP
Parpuse	Эцина унивалите.	(Rure words	Turn numbers sto information	Share information soring a variety of media
Sastes	Chapter hased Design to important to content Layout communicates Few words, lets of reages	Text based Design is incombary to content Layout may detract from words from right words communicate	Number hostif Focus on tolking, graphs Unite text, loss of statistics and date Almost no words	Mis of reedle—equal exphasis on test, resque, ligrous, calor
Besteuren	Bulleted phrone	Full pertinear with proper connections	Nove	Pull amtenors, hallets.
Cantent	Mides over hadics, to remind presenter what he pay	Thansayli discussion of a mate. Majoritic he complete document	Statistics, date; charts, graphs	To draw as audience in
Dec	Anthorkupto presentation	Accomplete resource	Trapportation presentation methods	Good way to group Information for easy consumption
Presentation	Special present with their hack to the alsternor	Syrater reads, from duri umant.	Specierrum 19 a presentation or 2.1	Speaker passes out an a forming or toke tests
What stee	OT A PRINCE			

_____Any questions on preparing for the MS Word Certification? The lesson is self-directed. The test will be scheduled at your convenience.

Primary skills addressed are:

- attributes
- auto-correct
- comments
- endnotes
- fonts
- footers
- footnotes
- headershyperlinks
-
- images

- indentation/tabs
- mail merge
- navigate and search
- page setup settings
- protection
- Quick Parts
- save
- shapes,
- share documents
- SmartArt

- spacing settings
- spell/grammar check
- table of contents
- tables
- templates
- text boxes
- themes
- versions
- Views
- WordArt

_Before taking certification, design and take a practice test using a digital tool, such as:

- <u>Flippity</u>—create Jeopardy-style quiz
- <u>PuzzleMaker</u>—crosswords and more (Assessment 18)
- <u>StudyBlue</u>—flash cards and more
- <u>Kahoot</u>—compete in teams

Assessment 5—MS Word certification study guide

MS Word Certification

В Ε S S G Ν S Ε Ν S S S S S Ε Κ Κ Ε Т Ν Ν Ζ В Υ Х O L Ε S 0 0 S Ε Ε C Ε F R Ν С S N M HR М S Х D Ε С U Τ Ε Т Ε R Ε Т A M D K Ε C Τ O R Τ Ν Κ T Ζ Χ O Τ М QEBJ ΖQ Ζ A F Ζ Υ

_Here are test-taking hints:

- Tests are skills-based and take place in a simulated application environment.
- Most questions have multiple tasks; the exam is assessed on outcome and clicks.
- Users should be able to locate and utilize key features.
- Questions are not worded to be tricky or misleading.
- Be well versed in MS Word, persistent in finding answers.
- Test takes about 90 minutes.
- Skip questions you are not sure of. Return to them at the end of the test.
- Keep track of time.
- *Do not over-think questions.*
- Stick to the literal.

__Use as much class time as your teacher makes available as well as your own out-of-school time to prepare for test using an MSapproved prep website such as:

- <u>Certiport</u>
- Lynda.com

_____Training takes about five hours. Study in groups. Best practices include:

- use time wisely
- relate certification to college and career opportunities
- be self-motivated

Get a list of exam locations here: http://bit.ly/1I1Ha4H.



Class exit ticket:

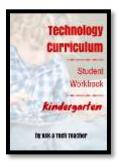
Complete as much as possible of *Assessment 18* (or similar) in the three-five minutes available before leaving class. Take a screenshot and send it to your teacher.

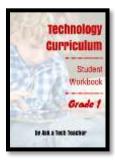
Extension:

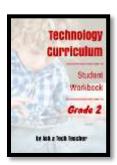
- Access free <u>online Word training</u>.
- Practice on MS 360 if available to get used to taking tests online.
- Reflect in your blog on taking the exam. Did you learn a lot? If you didn't pass, what happened? You are not graded on whether you got certified, rather the process followed in pursuing it.
- If you finish, start homework preview of the next Unit.

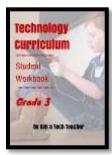
MORE FROM STRUCTURED LEARNING

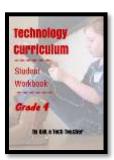
If you're looking for other student workbooks that accompany the K-8 technology curriculum, try these:

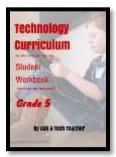


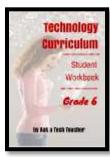


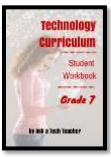


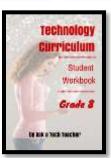












Ask your teacher how you can use this ebook on:

IPads... PCs... iMacs... Laptops... Macbooks... Netbooks... Chromebooks... Smartphones... At home

















