

	9th	10th	11th	12th	PA Standard	National Standard
I. BASIC COMPUTER LITERACY SKILLS - Operations/Concepts						
Apply knowledge of advanced input devices and hardware set up.	x	x			3.7.10.C.2 &3	#1
Make informed choices among technology systems, resources, and services.		x				#1
Identify and explain the function of the parts of a basic network.	x				3.7.10.E.2	#1
Illustrate an understanding of a computer network system by modeling, constructing or assembling its components		x				
Explain and demonstrate file transfer within and outside of a computer network and among different platforms.		x			3.7.10.E.4 & 3.7.12.E.2	#1
Demonstrate the ability to use software applications located on different drives and on the network.		x				
Effectively navigate through accessible network drives and folders.	x	x				
Effectively maneuver files in multiple drives, folders and subfolders.	x	x				
Analyze and solve basic operating systems problems	x	x			3.7.10.C.5	#1
Troubleshoot routine hardware and software problems.	x	x				
Access and use the Help feature in applications and operating systems.	x	x				
Demonstrate the ability to perform basic software installation.	x	x			3.7.10.C.7	#1
Describe and demonstrate atypical software installation.			x	x	3.7.12.C.1	#1
Analyze and solve hardware and advanced software problems.			x	X	3.7.12.C.2	#1
Access and use web-based help and support features to analyze and resolve hardware and software issues.			x	x		
Assess and apply multiple input and output devices to solve specific problems.			x	x	3.7.12.C.3	#1
Apply knowledge of protocol standards to solve connectivity problems.				x	3.7.12.E.4	#1

II. KEYBOARDING SKILLS						
Apply touch keyboarding skills and techniques at expectable speed and accuracy.	x				3.7.10.C.6	#1
III. SOCIAL, ETHICAL AND HUMAN ISSUES						
Identify legal restrictions in the use of software and the output of data.	x	x			3.7.10.D.1	#2
Demonstrate an age appropriate understanding of use rights and responsibilities as outlined in the district's Technology Usage Agreement	x	x	x	x		#2
Analyze the legal responsibilities of computer users.			x	x	3.7.12.D.5	#2
Evaluate the effectiveness of software to produce an output.			x	x	3.7.12.D.1	#2
Identify capabilities and limitations of technology resources and assess the potential of these systems.			x	x		#2
Identify & analyze the advantages and disadvantages of the widespread use and reliance on technology in the workplace and in society				x		#2
IV. USING TECHNOLOGY FOR PRODUCTIVITY - Applications						
Apply advanced word processing, database, and spreadsheet skills.	x	x	x	x	3.7.10.D.4	#3
Record, edit and use a macro.	x					
Effectively use word processing skills to complete essays and evaluations within given time limitations.	x					
Perform mail merges with queries from databases.	x					
Apply intermediate integration skills such as linking database tables and spreadsheet data to word documents.	x					
Design reports from queries.	x					
Design user friendly forms using fill-in-the blank, drop down menus and drop-down lists.	x					
Import data from external sources and convert for use in a specific database.	x					

Use the "logical operators" for data validation.	x					
Perform merges with spreadsheets.	x					
Transfer word processing tables into spreadsheet format for intermediate manipulations.	x					
Create conditional formatting of spreadsheets.	x					
Apply the statistical functions from excel.	x					
Import data from external sources and convert for use in a specific spreadsheet.	x					
Hide and protect worksheet areas.	x					
Use range names in formulas.	x					
Use calculation function functions on ranges.	x					
Use formulas with multiple operators.	x					
Concatenate "join" cells	x					
Use a spreadsheet to analyze database data.	x					
Manipulate chart data.	x					
Apply advanced graphic manipulation and desktop publishing techniques.	x	x			3.7.10.D.2	#3
Create an original computer drawing and incorporate into a piece to publish.	x					
Use technology tools and resources for managing and communicating information (schedules, correspondence, quantitative information, brochures, etc.)			x	x		
IV. USE TECHNOLOGY TO COMMUNICATE						

Apply basic multimedia applications.	x	x			3.7.10.D.3	#4
Apply multimedia tools to create curriculum and portfolio projects		x				
Design and apply advanced multimedia effects.			x	x	3.7.12.D.2	#4
Use technology tools and resources for managing and communicating curriculum-related information	x	x				
Describe and demonstrate how two or more software applications can be used to produce an output.		x			3.7.10.D.5	#4
Evaluate the effectiveness of a computer as a presentation tool.			x	x	3.7.12.D.4	#4
Assess the effectiveness of a computer-based communications system.			x	x	3.7.12.E.1	#4
Maintain an email account for educational purposes	x	x	x	x		
V. USING TECHNOLOGY TOOLS TO CONDUCT RESEARCH						
Identify and explain various types of on-line services	x				3.7.10.E.1	#5
Identify, describe and complete advanced on-line research.		x			3.7.10.E.5	#5
Use on-line information resources for research, publications, communications and productivity products.		x	x	x		
Conduct electronic searches of local and networked library resources	x	x	x	x		
Appropriately reference all on-line sources.	x	x	x	x		
Analyze the effectiveness of on-line information resources to meet the needs for collaboration, research, publications,			x	x	3.7.12.E.3	#5
VI. USING TECHNOLOGY TO SOLVE PROBLEMS						
Evaluate the effectiveness of software to produce an output and demonstrate the process				x	3.7.12.D.1	#6
Select and apply software designed to meet specific needs.		x			3.7.10.D.6	#6
Analyze, select and apply the appropriate software to solve complex problems.				x	3.7.12.D.3	#6
Investigate and apply expert systems, intelligent agents and simulations to solve real world problems.		x	x	x		