

PSD K-12 Technology and Computer Science

Student Learning Expectations by Level of Competency

Part 1: PSD K-6 Technology Learning Expectations by Level of Competency

Enduring Understandings:

1. Students will use computer operations and applications proficiently
2. Students will use technology for research, critical thinking, problem solving, collaborations, and communication
3. Students will use technology to create and deliver presentations
4. Students will demonstrate responsible safety and ethical procedures in using technology.

Students will exhibit proficiency in CS through:

Perseverance, Collaboration, Patterns, Tools (Evaluate and Select), Communication, Ethics and problem solving.

Levels of Competency:

I- Introduced: Student can do with assistance

D- Developing: Student can do with prompting or collaboration

M- Mastered: Independent User-Initiates use on own

Student SLE	K	1	2	3	4	5	6
T.I. Use computer operations and applications proficiently							
1. Log on/off the computer correctly	I	D	M	M	M	M	M
2. Know basic parts of computer by name: screen/monitor, mouse, keyboard, desktop, space bar, return	I	M	M	M	M	M	M
3. Understand and apply basic commands: click, double click, drag/drop, pen, highlight	I	D	D	M	M	M	M
4. Recognize and use desktop/toolbar icons and menus	I	D	D	D	D	D	D
5. Use developmentally appropriate multimedia resources and educational software to support learning	I	D	D	M	D	D	D
6.. Type text into a word processing document (Goals- 4th, 15 WPM, 5th, 20 WPM)	I	D	D	D	M	M	M
7. Insert graphics into word processing documents	/	I	D	D	D	D	D
8. Save and print a document	/	I	D	D	D	D	D
9. Toggle between two or more applications (minimize/maximize)	/	I	D	M	M	M	M
10. Utilize basic word processing applications: backspace, enter, shift/capital	I	D	D	M	M	M	M
11. Understand and apply additional commands: spotlight reveal, tap, erase	I	I	I	I	I	D	D
12. Spell-Check a document	/	I	I	D	D	M	M
13. Use formatting features purposefully(styles, colors, fonts,and size)	/	I	I	D	D	D	D
14. Understand and apply additional commands: select, right click, navigate, capture, freeze/unfreeze, shape	/	I	I	I	D	D	D

15. Utilize basic word processing applications: undo, table, shapes, thesaurus, pull up new page, go back, bullet, and numbering	/	I	I	D	D	D	D
T.II. Use technology for research, critical thinking, problem solving, collaboration, and communication							
1. Understand that the internet links computers around the world allowing people to access information and communicate	I	D	D	D	M	M	M
2. Create a graph in excel as a group	/	I	D	D	D	D	D
3. Use Bookmarks and hyperlinks to access the internet	/	I	D	D	D	D	D
4. Utilize the tools of a computer in pairs to create a product	/	I	D	D	D	D	D
5. Collect authentic data to create a graph or chart in Excel	/	I	I	D	D	D	D
6. Conduct a basic internet search using key words to find information on a given subject	/	I	I	D	D	M	M
7. Conduct an internet search using key words to find information on a given problem and propose a solution	/	I	I	D	D	M	M-
8. Find and evaluate information from digital resources to determine credibility and bias	/	/	I	I	I	D	D
	K	1	2	3	4	5	6
9. Collaborate within grade, school, and outside of district on a technology project or task	/	I	I	I	I	D	D
10. Use a variety of search engines	/	I	I	I	D	D	D
11. Narrow search to find specific information on a topic	/	I	I	I	I	D	D
12. Use available spreadsheet tool to create a graph and import graph into another document	/	I	I	D	D	D	D
13. Compute averages using a spreadsheet	/	/	/	I	I	D	D
14. Use multiple data to create a graph, determining which graphs are appropriate for different sets of data	/	I	I	I	I	D	D
T.III. Use technology to create and deliver presentations							
1. View digital presentations and understand their purpose	I	D	D	D	D	D	D
2. Create and present one or more curriculum related multimedia project with text and pictures as a group	/	I	D	D	D	D	D
3. Create and present one or more curriculum related multimedia project with text, pictures, and animation	/	I	D	D	D	D	D
4. Create a video, importing images from a cameras and other sources using available program	/	I	I	I	I	D	D
5. Publish a creative story	/	I	I	I	I	D	D
T.IV. Demonstrate responsible and ethical procedures while using technology							
1. Demonstrate appropriate behavior for technology use and show respect for technology equipment	I	D	M	M	M	M	M
2. Understand and abide by PSD acceptable use policy	I	D	D	D	D	D	D
3. Discuss copyright and plagiarism issues when using electronic media	/	I	I	I	I	D	D
4. Understand appropriate ways to utilize media from the Web; including music, pictures, and text.	/	I	I	I	D	D	D
5. Apply the concept and understand the consequences of plagiarism and copyright infringement	/	I	I	I	I	D	D
6. Identify and cite Internet and electronic references in a bibliography	/	/	/	I	I	D	D

Part 2: PSD K-8 Computer Science Learning Expectations by Level of Competency

CS. Computational Thinking and Problem Solving									
	K	1	2	3	4	5	6	7	8
1. Students will analyze problem-solving strategies	I	D	D	D	M	M	M	M	M
2. Students will analyze connections between elements of mathematics and computer science	I	D	D	M	M	M	M	M	M
3. Students will solve problems cooperatively and collaboratively.	D	D	D	M	M	M	M	M	M

CS. Data and Information									
	K	1	2	3	4	5	6	7	8
4. Students will analyze various ways in which data is represented	D	D	D	M	M	M	M	M	M
5. Students will collect, arrange, and represent Data.	I	D	D	M	M	M	M	M	M
6. Students will interpret and analyze data and information	I	I	D	D	M	M	M	M	M

CS. Algorithms and programs									
	K	1	2	3	4	5	6	7	8
7. Students will create, evaluate and modify algorithms	D	D	M	M	M	M	M	M	M
8. Students will create programs to solve problems	I	D	D	D	D	D	D	D	M

CS. Computers and Communications									
	K	1	2	3	4	5	6	7	8
9. Students will analyze the utilization of computers	I	I	I	D	D	D	D	D	M
10. Students will utilize appropriate digital tools for various applications	I	D	D	M	M	M	M	M	M
11. Students will analyze various components and functions of computers	I	I	I	D	D	M	M	M	M

CS. Community, Global, and Ethical Impacts									
	K	1	2	3	4	5	6	7	8
12. Students will analyze appropriate uses of technology	I	D	M	M	M	M	M	M	M

Part 3: PSD 7-12 Student Technology Learning Expectations by Level of Competency

Enduring Understandings:

1. Students will use computer operations and applications proficiently
2. Students will use technology for research, critical thinking, problem solving, collaborations, and communication
3. Students will use technology to create and deliver presentations
4. Students will demonstrate responsible safety and ethical procedures in using technology.

Levels of Competency:

I- Introduced: Student can do with assistance

D- Developing: Student can do with prompting or collaboration

M- Mastered: Independent User-Initiates use on own

Student SLE	7	8	9	10+			
I. Use computer operations and applications proficiently							
1. Log on/off the computer correctly	M	M	M	M			
2. Know basic parts of computer by name: screen/monitor, mouse, keyboard, desktop, space bar, return	M	M	M	M			
3. Understand and apply basic commands: click, double click, drag/drop, pen, highlight	M	M	M	M			
4. Recognize and use desktop/toolbar icons and menus	M	M	M	M			
5. Use developmentally appropriate multimedia resources and educational software to support learning	D	D	D	M			
6.. Type text into a word processing document (45-60wpm)	D	D	D	M			
7. Insert graphics into word processing documents	D	D	M	M			
8. Save and print a document-to u:drive	D	D	M	M			
9. Toggle between two or more applications (minimize/maximize)	M	M	M	M			
10. Utilize basic word processing applications: backspace, enter, shift/capital	M	M	M	M			
11. Understand and apply additional commands: spotlight reveal, tap, erase	D	D	D	M			
12. Use advanced editing features and shortcuts (including spell ck)	D	D	D	M			
13. Use formatting features purposefully(styles, colors, fonts, and size)	D	D	M	M			
14. Understand and apply additional commands: select, right click, navigate, capture, freeze/unfreeze, shape	D	D	D	M			
15. Utilize basic word processing applications: undo, table, shapes, thesaurus, pull up new page, go back, bullet, and numbering	D	D	D	M			
16. Utilize basic functions of a graphing calculator (M)	I	I	D	M			
17. Access Navinet applications (M)	/	/	D	D			
18. Correctly hook-up a computer and peripherals, including internet access	I	D	D	M			
19. Identify and define networking terms such as modem, LAN, data storage device.	I	I	D	M			
20. Install software and trouble shoot with familiar programs	I	I	I	D			
21. Manage and utilize files and applications appropriately for any given project	D	D	D	M			
22. Manage files from external sources: flashdrive, external hard drives	D	D	D	M			
23. Merge, export, import data from a variety of sources	D	D	D	M			
II. Use technology for research, critical thinking, problem solving, collaboration, and communication							
	7	8	9	10			
1. Understand that the internet links computers around the world allowing people to access information and communicate	M	M	M	M			
2. Create a graph in excel as a group	D	D	D	M			
3. Use Bookmarks and hyperlinks to access the internet	M	M	M	M			
4. Utilize the tools of a computer in pairs to create a product	M	M	M	M			
5. Collect authentic data and create a graph or chart in Excel	D	D	D	M			
6. Conduct a basic internet search using key words to find information on a given subject	M	M	M	M			
7. Collaborate within grade, school, and outside of district on a technology project or task	D	D	D	M			
8. Use a variety of search engines (Nettrectker, Brainpop, Google...	M	M	M	M			

9. Narrow search to find specific information on a topic using credible sources	D	D	D	M			
10. Use available spreadsheet tool to create a graph and import graph into another document	I	D	D	D			
11. Format and print spreadsheets to use as templates and forms	I	I	I	D			
12. Compute averages using a spreadsheet	I	I	I	D			
13. Apply function applications in a spreadsheet (M)	I	I	I	D			
14. Use multiple data to create a graph, determining which graphs are appropriate for different sets of data	I	I	D	D			
15. Use advanced data operation (ie. Linear regressions) on the graphing calculator(M)	I	D	D	M			
16. Access, store, and collaborate information using cloud base storage(M)	D	D	M	M			
17. Collaborate with others using multiple modes of technology(sending, receiving attachments through email, blogs, google docs.	D	D	D	M			
18. Participate in student projects that creates a data base that other students can use	I	I	D	M			
19. Make informed decisions in choosing the most appropriate technology systems, resources and services	I	D	D	M			
20. Use classroom management system to meet expectations of class (ie...Moodle, Web CT)	D	D	D	M			
21. Use data analysis software to manipulate data and generate a product	I	I	D	M			
22. Collect, organize, and graph data on software programs using lab equipment such as probes, etc.	D	D	D	M			
III. Use technology to create and deliver presentations							
1. View digital presentations and understand their purpose	M	M	M	M			
2. Create and present one or more curriculum related multimedia project with text and pictures as a group	M	M	M	M			
3. Create and present one or more curriculum related multimedia project with text, pictures, and animation	D	D	D	M			
4. Create a video, importing images from a digital camera using available program	D	D	D	M			
5. Publish a creative story using photostory3/Moviemaker	D	D	D	M			
6. Build a webpage	I	I	D	D			
7. Covert files for presentations (ex. jpg., flv., avi...)	I	I	D	M			
8. Create custom animations	I	D	D	M			
9. Proficiently use various presentation methods using technology to create a multimedia project to fit target audience, purpose, or goal	I	D	D	M			
10. Use paint tools to modify photos and create original art	I	D	D	M			
11. Apply good design principals in multimedia presentations	I	I	D	M			
IV. Demonstrate responsible and ethical procedures while using technology							
1. Demonstrate appropriate behavior for technology use and show respect for technology equipment	D	D	D	M			
	7	8	9	10+			
2. Understand and abide by PSD acceptable use policy	D	D	D	M			
3. Discuss copyright and plagiarism issues when using electronic media	D	D	D	M			
4. Understand appropriate ways to utilize media from the Web; including music, pictures, and text.	D	D	D	M			

5. Apply the concept and understand the consequences of plagiarism and copyright infringement	D	D	D	M			
6. Identify and cite Internet and electronic references in a bibliography correctly (using Word 7 or Biblio)	D	D	D	M			
7. Use password security and reset password in appropriate manner	M	M	M	M			
8. Demonstrate and advocate legal and ethical behaviors among community regarding use of technology	D	D	D	M			
9. Explain fair use guidelines for copyrighted materials	D	D	D	M			