

Student Standards for Technology Literacy

In addition to creating *Technology Integration Tiers for Teachers*, OSPI has created an official definition for technology literacy for students. Student standards will be measured and reported to the State, starting the 2006-07 school year. All eighth grade students will be measured according to the State developed *Technology Literacy Tiers for Students*. (See Appendix B) The Edmonds Tech Literacy Standards for grades K-8 will ensure that our 8th graders meet the State Standards at a minimum of Tier 2.

OSPI Definitions of Technology Literacy and Fluency

Technology literacy is the ability to responsibly, creatively, and effectively use appropriate technology⁷ to:

- communicate;
- access, collect, manage, integrate, and evaluate information;
- solve problems and create solutions
- build and share knowledge; and
- improve and enhance learning in all subject areas and experiences.

Technology fluency builds upon technology literacy and is demonstrated when students:

- apply technology⁸ to real-world experiences;
- adapt to changing technologies;
- modify current and create new technologies; and
- personalize technology to meet personal needs, interests, and learning styles.

⁷ **Definition of Technology** (from [2002 Washington State Educational Technology Plan](#)):

While technology, in its broadest sense, can be defined as "the practical application of knowledge" (from Webster's online dictionary), in this document we define technology to be "*the combination of human imagination, inventiveness and electronic tools that transform ideas into reality to meet a need or solve a problem.*" Educational technology includes hardware (computers, handheld devices, printers, digital cameras), software and content applications (programming classes, productivity software), and media (the Internet and videoconferencing).

⁸ Ibid.

Edmonds K-3 Grade Technology Literacy Standards

Learning Outcome: Using Information Resourcefully			
<ul style="list-style-type: none"> Manages Information Uses the Edmonds Research Process 			
Kindergarten	1st Grade	2nd Grade	3 rd Grade
<p>Reading Comprehension <i>With Assistance:</i></p> <ul style="list-style-type: none"> Selects applications by using icons (<i>e.g. understands that clicking on icons or hyperlinks allow them to access applications or Internet resources</i>). GLE 2.2.2 RDG <p>Uses the Internet <i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models whole group online research process by locating and displaying a web page. <p>Uses Graphical Organizers <i>Whole Group:</i></p> <ul style="list-style-type: none"> Students help teacher create class concept maps and Venn diagrams to sort information. (Kidspiration) <p>Uses Search Skills</p>	<p>Reading Comprehension <i>With Assistance:</i></p> <ul style="list-style-type: none"> Applies knowledge of printed and electronic text features to locate and comprehend text (<i>Identifies and uses icons, pull-down menus and toolbars</i>.) GLE 2.2.2 RDG <p>Uses the Internet <i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models whole group research process by displaying web pages. <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Follows pre-selected web links to access a web page (<i>e.g. Enchanted Learning</i>) <p>Uses Graphical Organizers <i>Whole Group:</i></p> <ul style="list-style-type: none"> Students help teacher create concept maps and Venn diagrams to sort and understand information. (Kidspiration) <p>Uses Search Skills</p>	<p>Reading Comprehension <i>On Own:</i></p> <ul style="list-style-type: none"> Applies knowledge of printed and electronic text features to locate and comprehend text (<i>e.g., uses icons, pull-down menus</i>) GLE 2.2.2 Reading <p>Uses the Internet <i>Whole Group:</i></p> <ul style="list-style-type: none"> Introduced to age appropriate databases as tools (<i>World Book Online, NetTrekker</i>). <p><i>On Own:</i></p> <ul style="list-style-type: none"> Follows pre-selected web links to gather information <p>Uses Graphical Organizers <i>On Own:</i></p> <ul style="list-style-type: none"> Completes graphic organizer templates and Venn diagrams to demonstrate understanding and to organize thoughts. (Kidspiration) <p>Uses Search Skills <i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models whole group online research process emphasizing keywords. <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Begins to use library database to locate materials. 	<p>Reading Comprehension <i>On Own:</i></p> <ul style="list-style-type: none"> Applies knowledge of printed and electronic text features to locate and comprehend text (<i>e.g., uses icons, pull-down menus, keyword searches</i>) GLE 2.2.2 Reading <p>Uses the Internet <i>With Assistance:</i></p> <ul style="list-style-type: none"> Uses reliable on-line sources with teacher guidance (<i>e.g. World Book, NetTrekker</i>) GLE 3.2.1 Communic. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Follows pre-selected web links to gather information <p>Uses Graphical Organizers <i>On Own:</i></p> <ul style="list-style-type: none"> Uses planning tools (<i>e.g. simple graphic organizers or drawings</i>) to take notes, demonstrate understanding and to organize thoughts. Writing GLE 1.1.1 <p>Uses Search Skills <i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models whole group online research process emphasizing keywords. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Conducts simple search on library database to locate materials <p>Evaluates Resources <i>On Own:</i></p> <ul style="list-style-type: none"> Compares examples of fact and opinion in different types of mass media (<i>e.g. TV, Internet, advertisements, video, signs, magazines</i>) GLE 1.2.2 Commun.

Edmonds 4-6 Grade Technology Literacy Standards

Learning Outcome: Using Information Resourcefully		
<ul style="list-style-type: none"> • Manages Information • Uses the Edmonds Research Process 		
4 th Grade	5 th Grade	6 th Grade
<p>Reading Comprehension</p> <ul style="list-style-type: none"> • Applies features of printed and electronic text to locate and comprehend text. (e.g. use icons, pull-down menus, key word searches) GLE 2.2.2 Reading <p>Uses the Internet</p> <ul style="list-style-type: none"> • Given a set of resource links, begins to research a problem using technology and works with a team to create a product. (e.g. uses reliable on-line sources with teacher guidance such as Internet, Worldbook Online) GLE 3.2.1 Communication <p>Uses Graphical Organizers</p> <ul style="list-style-type: none"> • Uses planning tools (<i>Inspiration or Kidspiration, notes, drawings</i>) to organize information in a logical sequence using transitions (e.g. <i>chronological order</i>) GLE 3.1.1 Communication <p>Uses Search Skills</p> <ul style="list-style-type: none"> • Uses key words to search library catalog to locate resources GLE 2.2.2 Reading <p>Evaluates Resources</p> <ul style="list-style-type: none"> • Select appropriate resources for locating information (e.g., <i>thesaurus, website, directory</i>) on a specific topic or for a specific purpose. GLE 2.3.2 Reading • Begins to evaluate the relevancy of selected electronic information sources, with assistance. 	<p>Reading Comprehension</p> <ul style="list-style-type: none"> • Applies features of printed and electronic text to locate and comprehend text. (e.g. use organizational features and electronic sources such as headings, numberings, CD-ROM, Internet, pull-down menus, keyword searches and icons to access information) GLE 2.2.2 Reading <p>Uses the Internet</p> <ul style="list-style-type: none"> • Given a set of resource links, researches a problem using technology and works with a team to create a product. (e.g. Uses reliable on-line sources such as Internet, Worldbook Online) GLE 3.2.1 Communication <p>Uses Graphical Organizers</p> <ul style="list-style-type: none"> • Uses planning tools (<i>template for a simple outline, Inspiration, notes, drawings</i>) to organize information in a logical sequence (e.g. <i>in order of importance</i>) using smooth transitions GLE 3.1.1 Communication <p>Uses Search Skills</p> <ul style="list-style-type: none"> • Uses keywords as a search strategy for locating information in an online database or in the library catalog for an assigned topic. (e.g., <i>World Book, eLibrary, NetTrekker, library catalogue</i>) GLE 2.2.2 Reading <p>Evaluates Resources</p> <ul style="list-style-type: none"> • Evaluates the relevancy and accuracy of electronic information sources, with assistance. • Compares and contrast information using two or more resources. • Identifies and explains examples of persuasion used in mass media (e.g. <i>advertisements in magazines, radio, TV, newspaper and advergimes on the Internet.</i>) GLE 1.2.2 Communication 	<p>Reading Comprehension</p> <ul style="list-style-type: none"> • Applies features of printed and electronic text to locate and comprehend text. (e.g. use organizational features and electronic sources such as headings, numberings, CD-ROM, Internet, pull-down menus, keyword searches and icons to access information) GLE 2.2.2 Reading <p>Uses the Internet</p> <ul style="list-style-type: none"> • Uses District online databases to support content learning and project development, and evaluates online resources. (e.g. <i>NetTrekker, World Book, Britannica Encyclopedia, Culture Grams</i>) <p>Uses Graphical Organizers</p> <ul style="list-style-type: none"> • Gathers information from a range of reliable on-line sources, and uses an organizer (e.g. <i>Inspiration, charts</i>) to analyze, synthesize and/or evaluate information to plan writing. GLE 1.1.1 Writing <p>Uses Search Skills</p> <ul style="list-style-type: none"> • Uses basic Boolean search terms when searching library catalog, online resources and the Internet (e.g. “<i>AND, NOT</i>”) <p>Evaluates Resources</p> <ul style="list-style-type: none"> • Evaluates the accuracy and relevancy of electronic information sources • Examines the purpose and use of visual and auditory information in the media (e.g. <i>automobiles, billboards, news reports, T-shirts, internet sites.</i>) GLE 1.2.2 Communication

Edmonds K-3 Grade Technology Literacy Standards

Learning Outcome: Managing Personally and Socially			
<ul style="list-style-type: none"> Manages and directs one's own learning Works with others to achieve a goal 			
Kindergarten	1st Grade	2nd Grade	3 rd Grade
<p>Follows Directions <i>On Own:</i></p> <ul style="list-style-type: none"> Follows classroom rules in using equipment. 	<p>Follows Directions <i>On Own:</i></p> <ul style="list-style-type: none"> Follows classroom rules in using equipment. 	<p>Follows Directions <i>On Own:</i></p> <ul style="list-style-type: none"> Follows classroom rules in using equipment. 	<p>Follows Directions <i>On Own:</i></p> <ul style="list-style-type: none"> Follows classroom and school guidelines in using equipment.
<p>Respects the property of others <i>Whole Group:</i></p> <ul style="list-style-type: none"> Recognizes that using a password protects privacy of information <p><i>On Own:</i></p> <ul style="list-style-type: none"> Shows respect for technology equipment and other users. 	<p>Respects the property of others <i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models following copyright laws. Teacher models procedures for safely and securely using telecommunication tools (e.g. e-mail). <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Recognizes that passwords protect security of technology systems <p><i>On Own:</i></p> <ul style="list-style-type: none"> Shows respect for technology equipment and other users. 	<p>Respects the property of others <i>Whole Group:</i></p> <ul style="list-style-type: none"> Begins to discuss copyright issues. Identifies procedures for safely and securely using class e-mail. Begins to discuss internet safety issues. <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Shows respect for technology equipment and other users. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Shows respect for technology equipment and other users. 	<p>Respects the property of others <i>Whole Group:</i></p> <ul style="list-style-type: none"> Follows procedures for safely and securely using telecommunication tools (e.g., e-mail, bulletin boards). <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Discusses copyright issues. Discusses internet safety issues. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Shows respect for technology equipment and other users. Cites sources (e.g. lists titles and authors) EALR 3.3.8 Writing
<p>Cooperates with Others <i>With Assistance:</i></p> <ul style="list-style-type: none"> Cooperates with others when using technology. 	<p>Cooperates with Others <i>On Own:</i></p> <ul style="list-style-type: none"> Cooperates with others when using technology. 	<p>Cooperates with Others <i>On Own:</i></p> <ul style="list-style-type: none"> Cooperates with others when using technology. 	<p>Cooperates with Others <i>On Own:</i></p> <ul style="list-style-type: none"> Cooperates with others when using technology.

Edmonds K-3 Grade Technology Literacy Standards

Learning Outcome: Communicating Effectively <ul style="list-style-type: none"> Communicates clearly and effectively Listens and Observes 			
<ul style="list-style-type: none"> Demonstrates Interpersonal Communication 			
Kindergarten	1st Grade	2nd Grade	3 rd Grade
<p>General Skills</p> <p><i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models how to use digital camera/camcorder. Teacher models how to locate, open, save, and close files. <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Uses icons to Save, Print <p><i>On Own:</i></p> <ul style="list-style-type: none"> Uses Doc Cam to share work Identifies major components of classroom technology (projector, computer, mouse, monitor, doc cam) Controls mouse; double clicks Locates appropriate desktop icon, being able to open and close it Locates letters, enter/return, space bar, backspace/delete on keyboard <p>Creating Products and Presentations</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Uses word processing program to type individual words. Uses a paint/draw program to draw basic shapes and illustrations. 	<p>General Skills</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Locates applications Chooses icons to open, save, print, and close files Saves to specific folders Begins to use digital camera/camcorder. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Uses Doc Cam to make short presentations, share work, and to explain thinking. GLE 1.5.1 Writing Logs on and Logs off computer Identifies and uses icons, pull-down menus, and toolbars. GLE 2.2.2 Rdg Begins to use two hands on keyboard to type words and phrases. Uses shift key to make capital letters. <p>Creating Products and Presentations</p> <p><i>On Own:</i></p> <ul style="list-style-type: none"> Uses word processing program to type sentences. Uses a paint/draw program to draw basic shapes and illustrations. Uses interactive <i>books</i> <p>E-mail</p> <p><i>Whole Group:</i></p> <ul style="list-style-type: none"> Teacher models how to communicate ideas relevant to the curriculum to others using e-mail or postings. 	<p>General Skills</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Find files and applications. Moves between applications Saves to specific folders <p><i>On Own:</i></p> <ul style="list-style-type: none"> Logs on and Logs off computer Uses digital camera/camcorder to record events. Uses two hands on keyboard to type complete sentences, including shift, space bar, and punctuation keys. <p>Creating Products and Presentations</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Creates developmentally appropriate multimedia products. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Creates short document or presentation. <p>Revises Work</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Begins to revise documents using spell check. <p>Enhances Products</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Begins to insert graphics into documents and presentations. <p>E-mail</p> <p><i>Whole Group:</i></p> <ul style="list-style-type: none"> Communicates ideas relevant to the curriculum to others via class e-mail. 	<p>General Skills</p> <p><i>On Own:</i></p> <ul style="list-style-type: none"> Logs on and Logs off computer Find files and applications. Toggles (moves) between applications Organizes (saves) documents into specific folders. Uses digital camera or camcorder and downloads to computer. Begins formal keyboard training, using correct posture and home row fingering. <p>Creating Products and Presentations</p> <p><i>With Assistance:</i></p> <ul style="list-style-type: none"> Creates and presents multimedia projects. <p><i>On Own:</i></p> <ul style="list-style-type: none"> Uses a variety of available technology as part of publication (e.g. <i>software program, document camera, digital picture</i>) EALR 1.5.1 Writing <p>Revises Work</p> <p><i>On Own:</i></p> <ul style="list-style-type: none"> Revises and formats documents and presentations, including using spell check. <p>Enhances Products</p> <p><i>On Own:</i></p> <ul style="list-style-type: none"> Inserts graphics into documents and multimedia presentations. <p>E-mail</p> <p><i>Whole Group:</i></p> <ul style="list-style-type: none"> Communicates ideas relevant to the curriculum to others via class e-mail.

Edmonds 4-6 Grade Technology Literacy Standards

Learning Outcome: Communicating Effectively <ul style="list-style-type: none"> • Communicates clearly and effectively • Listens and Observes 		
<ul style="list-style-type: none"> • Demonstrates Interpersonal Communication 		
4 th Grade	5 th Grade	6 th Grade
<p>General Skills</p> <ul style="list-style-type: none"> • Identify files by icons and extensions (<i>e.g. .doc, .ppt</i>) • Use correct terminology to describe common functions of application software • Saves files in correct location using appropriate file naming strategies. • Uses proper keyboarding position and technique. • Uses both alpha and numeric keys. <p>Creates Products and Presentations</p> <ul style="list-style-type: none"> • Creates written documents using writing process steps, word processing, and publishing programs. • Communicates ideas by creating and using presentation technology with teacher guidance (<i>e.g. PowerPoint., digital and video cameras.</i>) GLE 3.2.1 Communication <p>Revises Work</p> <ul style="list-style-type: none"> • Revises documents using program features such as spell check, cut, copy, paste (Revises writing by deleting or moving text - GLE 1.3.1 Writing) <p>Enhances Products</p> <ul style="list-style-type: none"> • Inserts meaningful graphics into documents <p>E-mail</p> <ul style="list-style-type: none"> • Uses class e-mail to write to a diverse audience 	<p>General Skills</p> <ul style="list-style-type: none"> • Accesses network resources and uses common peripherals (<i>e.g. printers, digital cameras</i>) • Organizes documents into folders and moves between different applications • Uses correct fingering position, keyboarding faster than handwriting (approximately 10-15 WPM.) <p>Creates Products and Presentations</p> <ul style="list-style-type: none"> • Uses technology tools for individual and collaborative writing, communication, and publishing activities to create products for audiences inside and outside the classroom. • Communicates ideas by creating and delivering a presentation in a variety of forms, such as brochures, reports, PowerPoint, video (<i>e.g. Uses available presentation technology independently</i>) GLE 3.2.1 Communication <p>Revises Work</p> <ul style="list-style-type: none"> • Revises documents using program features. (<i>e.g. spell check, cut, copy, paste, thesaurus, track changes</i>) <p>Enhances Products</p> <ul style="list-style-type: none"> • Formats documents using bold, italics, underline • Enhances documents and presentations with meaningful graphics • Uses spreadsheet to create tables, graphs, and charts to convey meaning <p>E-mail</p> <ul style="list-style-type: none"> • Uses class e-mail to write to a diverse audience 	<p>General Skills</p> <ul style="list-style-type: none"> • Navigates computer systems (move between applications, use help menu, and navigation aids. • Organizes materials in files and folders, on computer, server, and other media, and can easily access materials as needed. • Uses proper keyboarding position and technique to complete assignments. • Touch types at 15-20 WPM. <p>Creates Products and Presentations</p> <ul style="list-style-type: none"> • Uses technology to create, inform and/or enhance presentations (<i>e.g. print, on-line resources, visual display, presentation technology, video streaming, digital and video cameras</i>) GLE 3.2.1 Communication <p>Revises Work</p> <ul style="list-style-type: none"> • Revises documents using program features, such as spell check, cut, copy, paste, formatting tools, insertions of graphics and sound in presentation software <p>Enhances Products</p> <ul style="list-style-type: none"> • Formats documents using bold, italics, underline, justification, bullets, numbering, and line spacing to make communication more effective • Publishes material in appropriate form (<i>e.g. slideshow</i>) and format (<i>e.g. layout, color, font, keywords and phrases instead of whole sentences</i>) for visual and dramatic presentations. GLE 1.5.1 Writing • Creates simple spreadsheets to collect and record data, and uses simple formulas, and creates graphs to represent data in products <p>E-mail</p> <ul style="list-style-type: none"> • Uses class e-mail to write to a diverse audience

Edmonds K-3 Grade Technology Literacy Standards

Learning Outcome: Thinking Strategically			
<ul style="list-style-type: none"> Constructs meaning from information Problem solves creatively 		<ul style="list-style-type: none"> Investigates issues Demonstrates decision making skills 	
Kindergarten	1st Grade	2nd Grade	3 rd Grade
Constructs Meaning	Constructs Meaning	Constructs Meaning	Constructs Meaning
Solves Problems	Solves Problems	Solves Problems <i>Whole Group:</i> <ul style="list-style-type: none"> Teacher models tools to track data or solve a problem (Spreadsheet to record and graph weather). <i>With Assistance:</i> <ul style="list-style-type: none"> Uses teacher selected technology resources for problem solving, communication, and illustration of thoughts, ideas, and stories. (e.g. word processing, graphic organizers, drawing tools, cameras) <i>On Own:</i> <ul style="list-style-type: none"> Checks for reasonableness of results by using a calculator for repeated addition. GLE 3.3.1 Math 	Solves Problems <i>On Own:</i> <ul style="list-style-type: none"> Uses calculators to compute with large numbers GLE 1.1.6 Math Applies strategies for identifying and solving routine hardware and software problems. (e.g. how to go to task manager, change printers, re-plug things) Uses teacher selected technology resources for problem solving, communication, and illustration of thoughts, ideas, and stories. (e.g. word processing, graphic organizers, drawing tools, cameras)
Investigates Skills	Investigates Skills	Investigates Skills	Investigates Skills
Makes Choices <i>Whole Group:</i> <ul style="list-style-type: none"> Teacher models how to identify correct technology tool to complete a selected activity or learning experience 	Makes Choices <i>Whole Group:</i> <ul style="list-style-type: none"> Teacher models how to identify correct technology tool to complete a selected activity or learning experience 	Makes Choices <i>With Assistance</i> <ul style="list-style-type: none"> Begins to select appropriate technology tools (from limited choice) to complete an assignment. 	Makes Choices <i>On Own:</i> <ul style="list-style-type: none"> Selects appropriate technology tool (from limited choice) to complete an assignment. (e.g., calculator to compute large numbers, Kidspiration for pre-writing, MS Word to write a story.)

Edmonds 4-6 Grade Technology Literacy Standards

Learning Outcome: Thinking Strategically <ul style="list-style-type: none"> • Constructs meaning from information • Problem solves creatively 		
4th Grade	5th Grade	6th Grade
<p>Constructs Meaning</p> <ul style="list-style-type: none"> • Names common purposes of technologies found in daily life. • Describes how science and technology could be used to solve a human problem (<i>e.g. using a lamp as a source of varied light for plant growth</i>) GLE 3.1.1 Science • See Science 3.2.1-3.2.3 <p>Solves Problems</p> <ul style="list-style-type: none"> • Uses calculators to compute with large numbers. GLE 1.1.6 Math • Use technology to create pictographs GLE 1.4.5 Math • Identifies point of view in an oral story or video with teacher guidance. GLE 1.2.2 Communication <p>Investigation Skills</p> <p>Makes Decisions</p> <ul style="list-style-type: none"> • Describes purposes of different devices. • Selects appropriate technology tool (from limited choice) to complete an assignment. (<i>e.g. calculator to compute large numbers, Kidspiration for pre-writing, MS Word to write a story.</i>) 	<p>Constructs Meaning</p> <ul style="list-style-type: none"> • Describes how science and technology could be used to solve a human problem (<i>e.g. using a lamp as a source of varied light for plant growth</i>) GLE 3.1.1 Science • Describes how advancements in science and technology have developed over time and with contributions from diverse people. GLE 3.2.1 Science <p>Solves Problems</p> <ul style="list-style-type: none"> • Sort and analyze information using databases and spreadsheets. • Uses calculators to multiply or divide with two decimal numbers in the hundredth and/or thousandths place GLE 1.1.6 Math <p>Investigation Skills</p> <ul style="list-style-type: none"> • Investigates phenomena using a simple physical or computer model or simulation GLE 2.1.4 Science <p>Makes Decisions</p> <ul style="list-style-type: none"> • Identifies technologies that are personally valuable. • Determines when technology is useful and selects the appropriate tools(s) and technology resources to address a variety of tasks. 	<p>Constructs Meaning</p> <ul style="list-style-type: none"> • Describes how science and technology could be used to solve all or part of a human problem and vice versa (<i>e.g. understanding erosion can be used to solve some flooding problems.</i>) GLE 3.1.1 Science <p>Solves Problems</p> <ul style="list-style-type: none"> • Generates bar graphs, line graphs, and scatter plots from tables of data to interpret data. GLE 1.4.5 Math • Use technology to demonstrate how multiplication and division with decimals affects place value. GLE 1.1.5 Math <p>Investigation Skills</p> <ul style="list-style-type: none"> • Generates a logical plan for, and conducts, a scientific controlled investigation with the following attributes: appropriate materials, tools, and computer technology. GLE 2.1.2 Science <p>Makes Decisions</p> <ul style="list-style-type: none"> • Uses different available technologies to produce a finished product (<i>e.g. word processor, spreadsheets, multimedia</i>). GLE 1.5.1 Writing

Edmonds 7th – 12th Grade Tech Literacy Standards

Learning Outcome: Using Information Resourcefully	
<ul style="list-style-type: none"> • Manages Information • Uses the Edmonds Research Process 	
7 th Grade	8 th Grade and On
<p>Uses the Internet</p> <ul style="list-style-type: none"> • Selects the best sources from library, web-based, and Internet materials for a specific task or to investigate a topic and defends the selection. GLE 3.1.1 Reading <p>Uses Graphical Organizers</p> <ul style="list-style-type: none"> • Generates ideas prior to organizing them and adjusts prewriting strategies accordingly (<i>e.g. brainstorm list, then creates graphic organizer electronically</i>) GLE 1.1.1 Writing • Uses research and analysis tools to collect, organize, synthesize, interpret, and communicate results. (<i>e.g. search engines, word processors, databases, spreadsheets, timelines, charts or graphs, communications, surveys</i>) <p>Uses Search Skills</p> <ul style="list-style-type: none"> • Uses Boolean operators to locate resources when searching library catalog, online resources and the Internet (<i>e.g. “ , AND, OR, NOT</i>) <p>Evaluates Resources</p> <ul style="list-style-type: none"> • Applies search strategies to collect and evaluate online resources that support content learning and project development. (<i>e.g., check the credentials of online source or look for supporting evidence.</i>) 	<p>Uses the Internet</p> <ul style="list-style-type: none"> • Selects and uses appropriate technology tools and information resources to plan, design, develop, and communicate content information, appropriately addressing the target audience and providing accurate citations for sources. <p>Uses Graphical Organizers</p> <ul style="list-style-type: none"> • Selects and uses appropriate technology tools and information resources to plan, design, develop, and communicate content information, appropriately addressing the target audience and providing accurate citations for sources. (<i>e.g. takes notes within a graphic organizer and turns that into an outline to begin writing</i>) <p>Uses Search Skills</p> <ul style="list-style-type: none"> • Knows how to find which Boolean operators are used in different online resources and can use them appropriately when performing searches <p>Evaluates Resources</p> <ul style="list-style-type: none"> • Researches and evaluates the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems. (<i>e.g., check the credentials of the online source or look for supporting evidence.</i>)

Edmonds 7th – 12th Grade Tech Literacy Standards

Learning Outcome: Managing Personally and Socially <ul style="list-style-type: none"> • Manages and directs one's own learning • Works with others to achieve a goal 	
7th Grade	8th Grade and On
<p>Follows Directions</p> <ul style="list-style-type: none"> • Practices responsible use of technology systems, online information, and software. <p>Respects the Property of Others</p> <ul style="list-style-type: none"> • Demonstrates an understanding of intellectual property and copyright law by properly crediting work of self and others. <i>(e.g. Cites sources to substantiate information/argument and avoid plagiarism)</i>GLE 3.1.1 Communication <p>Cooperates with Others</p> <ul style="list-style-type: none"> • Uses technology in a collaborative setting to enhance content area work. 	<p>Follows Directions</p> <ul style="list-style-type: none"> • Understands and abides by the district's <i>Acceptable Use Policy</i> . <p>Respects the Property of Others</p> <ul style="list-style-type: none"> • Shows respect for copyright and the intellectual property of others by demonstrating ethical behaviors for use of personal copyrighted media <i>(e.g., images, music, video, content, language, correctly formatted citations for the copyrighted materials)</i>. • Students identify and develop scenarios or examples that illustrate ethical behaviors for use of personal copyrighted media <i>(e.g., images, music, video, content, language, correctly formatted citations for the copyrighted materials)</i>. <p>Cooperates with Others</p> <ul style="list-style-type: none"> • Work in teams to use hardware and software tools to support learning and creativity in all subject areas.

Edmonds 7th – 12th Grade Tech Literacy Standards

Learning Outcome: Communicating Effectively <ul style="list-style-type: none"> • Communicates clearly and effectively • Listens and Observes 		<ul style="list-style-type: none"> • Demonstrates Interpersonal Communication
7 th Grade	8 th Grade and On	
<p>General Skills</p> <ul style="list-style-type: none"> • Navigates computer systems (<i>e.g. toggle between different applications, use program help and navigation aids.</i>) • Understands basics of file storage, file formats, and networking (<i>e.g., understands the use of "save as" to change file format; backs up files regularly.</i>) • Touch types at a minimum of 20-25 wpm with 90% accuracy <p>Creates Products and Presentations</p> <ul style="list-style-type: none"> • Creates multi-page documents using the writing process steps, word processing skills, and publishing programs. • Creates, publishes, presents products for an assigned project (<i>e.g. create effective PowerPoint or video presentations, post web pages of class work</i>) <p>Revises Work</p> <ul style="list-style-type: none"> • Revises documents using the electronic dictionary, thesaurus, spelling and grammar checker, and editing features to maximize accuracy in development of technology-produced products. <p>Enhances Products</p> <ul style="list-style-type: none"> • Publishes material in appropriate form (<i>e.g. PowerPoint, brochure, postcard</i>) and format (<i>e.g. colors, font, layout, key words and phrases instead of sentences</i>) for visual and dramatic presentations. GLE 1.5.1 Writing • Creates spreadsheets to collect and record data, uses simple formulas, and creates graphs to represent data • Sorts, organizes, interprets and displays information using spreadsheets <p>E-mail</p> <ul style="list-style-type: none"> • Uses technology tools to access or exchange ideas and information (<i>e.g. email a subject-matter expert</i>) 	<p>General Skills</p> <ul style="list-style-type: none"> • Organizes materials in files and folders, on computer, server, and other media, and can easily access materials as needed • Uses touch typing skills to complete assignments and projects <p>Creates Products and Presentations</p> <ul style="list-style-type: none"> • Uses a variety of media and formats to design, develop, publish, and present products that effectively communicate information and ideas about the curriculum to multiple audiences. (<i>e.g., presentations, newsletters, Web pages, video</i>) <p>Revises Work</p> <ul style="list-style-type: none"> • Applies common software features to enhance communication to an audience, promote productivity, and support creativity. (<i>e.g., spellchecker and thesaurus to ensure accuracy in documents; formulas and charts in spreadsheets, and insertion of pictures, movies, sound, and charts in presentations</i>) <p>Enhances Products</p> <ul style="list-style-type: none"> • Enhances documents with graphics, including original work, and with sound, and/or video • Creates spreadsheets to collect and record data, uses formulas, and creates graphs to represent data. • Sorts, organizes, interprets and displays information using spreadsheets and databases <p>E-mail</p> <ul style="list-style-type: none"> • Uses technology tools to exchange ideas and information with peers, experts and other audiences (<i>e.g. email, web pages, discussion groups, web conferencing, sharing and analyzing data</i>) 	

Edmonds 7th – 12th Grade Tech Literacy Standards

Learning Outcome: Thinking Strategically	
<ul style="list-style-type: none"> • Constructs meaning from information • Problem solves creatively 	<ul style="list-style-type: none"> • Investigates issues • Demonstrates decision making skills
7 th Grade	8 th Grade and On
<p>Constructs Meaning</p> <ul style="list-style-type: none"> • Demonstrates understanding of how advances in technology influences society. (e.g. <i>medical technologies, nuclear technologies, picture phone</i>) GLE 3.2.2 Science <p>Solves Problems</p> <ul style="list-style-type: none"> • Uses spreadsheet to create tables, graphs, and charts, and explain the meaning of the data. • Uses technology to locate objects on a two-dimensional grid GLE 1.3.3 Math • Uses Technology to generate graphic representations of linear relationships. 1.5.1 Math • Demonstrates understanding of strategies for identifying, solving, and preventing routine hardware and software problems that occur during everyday technology use. (e.g. <i>can problem-solve when a web page is non-responsive, force-quit a non-responsive program</i>) <p>Investigation Skills</p> <ul style="list-style-type: none"> • Generates a logical plan for, and conducts, a scientific controlled investigation with the following attributes: appropriate materials, tools, and available computer technologies. GLE 2.1.2 Science • Analyzes scientific inquiry and scientific design and understands how science supports technological development and visa versa • Uses content-specific hardware and software to support learning, research, productivity, and creative thinking. (e.g. <i>environmental probes, graphing calculators, exploratory environments, simulations, Web tools</i>) <p>Makes Decisions</p> <ul style="list-style-type: none"> • Selects and uses appropriate tools and technology resources to accomplish a variety of tasks. (e.g. <i>word processor, database, spreadsheet, charts or graphs, multi-media, communication, drawing, concept-mapping, simulations</i>) 	<p>Constructs Meaning</p> <ul style="list-style-type: none"> • Identifies how they currently use technology and predict how they may use and benefit from its use in their future (e.g. <i>identify technological skills needed for school success and careers.</i>) <p>Solves Problems</p> <ul style="list-style-type: none"> • Integrates data-gathering instruments (e.g. <i>probes, electronic calculators, handheld devices</i>) into spreadsheets, and uses data analysis tools within the spreadsheet to analyze the data, graph results, and inform conclusions drawn from the data. • Uses technology to generate linear and non-linear relationships. GLE 1.5.1 Math • Selects and justifies appropriate strategies and tools (e.g. <i>mental computation, estimation, calculators, and paper and pencil</i>) to compute in a problem situation. GLE 1.1.7 math • Uses technology to help develop a table or graph form an iterative definition (e.g. <i>the number of cells double every hour starting with one cell at noon.</i>) GLE 1.5.2 Math <p>Investigation Skills</p> <ul style="list-style-type: none"> • Generates a logical plan for, and conducts, a scientific controlled investigation with the following attributes: appropriate materials, tools, and available computer technologies. GLE 2.1.2 Science • Defines real world problems or essential questions, develops a solution or strategy, uses content-specific technological tools to collect data or conduct investigations, and presents the data and conclusions (e.g. <i>access primary source data to refute or support an original hypothesis, create and conduct surveys and analyze results</i>) • Describes how a scientifically designed solution to a human problem can lead to new tools that generate further inquiry (e.g. <i>microscopes, telescopes, and computers</i>) GLE 3.2.2 Science • Uses content-specific tools, software, and simulations to support thinking and learning. (e.g. <i>environmental probes, exploratory environments, web tools, Inspiration</i>) <p>Makes Decisions</p> <ul style="list-style-type: none"> • Identifies, evaluates and selects appropriate technology tools to solve problems or create products (e.g. <i>based upon a desired end-product, some students select MovieMaker to create a video presentation while others select Publisher to create a brochure.</i>)

Appendix A

Edmonds Learning Outcomes

1. Using Information Resourcefully

Information Management

- Use reading, writing, speaking and listening, and observing to gather and interpret information
- Define the task prior to beginning a search for information
- Use information-seeking strategies
- Know the location of information and how to access it
- Examine information for errors in reasoning
- Use information appropriately
- Synthesize information from many different sources
- Evaluate own information-gathering process and determine whether it was successful in relationship to the task
- Cite resources appropriately

The Edmonds Research Process

- Define the task: write the central question(s)
- Prepare for the search: identify all possible information sources and keywords
- Locate and evaluate relevant information sources: find useful and reliable information and record bibliographic data
- Interpret, evaluate, and record relevant information: paraphrase and take notes
- Construct meaning by synthesizing and organizing information from multiple sources
- Apply finding and present the information to an audience
- Evaluate both the research process and the final product
- Reflect on the research process and the product

2. Managing Personally and Socially

Manage and direct one's own learning in the process of solving a problem

- Learn from models
- Use high quality standards to evaluate and improve own performance
- Demonstrate perseverance

Work with others as a team to achieve a goal in the process of solving a problem

- Participate in the establishment of self-directed work teams
- Plan actions that contribute to the success of the team
- Take specific actions that contribute to the success of the team

3. Communication Effectively

Communicate Clearly and Effectively

- Communicate clearly
- Develop content and ideas
- Use effective delivery
- Use effective language and style
- Use effective action, sound, and/or images
- Analyze and evaluate presentations

Listening and Observing

- Focus attention
- Observe and listen
- Check for understanding
- Analyze mass communication

Interpersonal Communication

- Use language to interact effectively and responsibly
- Participate in discussions

4. Thinking Strategically

Construct meaning from Information

- Select and interpret information from a variety of resources to construct meaning, solve problems, and perform tasks

Creatively Problem Solve

- Develop an effective solution to a realistic complex problem, using creative problem-solving strategies

Investigation Skills

- Design and employ an appropriate process for investigating issues or questions and accurately interpret findings

Decision-Making Skills

- Identify barriers, criteria, information, insights, and values in making appropriate choice from among feasible alternatives

Systems Analysis and Design Skills

- Explain clearly how a complex system is impacted by change to its parts and design a sustainable functional system.

Appendix B

OSPI Technology Literacy Tiers for Students 8th Grade Expectations

All 8th graders should be able to use technology for personal and educational purposes.

- At the lowest level (Tier 1) students use basic technologies for personal use and completing simple assignments.
- At Tier 2, students begin to create products and give presentations to show their understanding in a content area.
- At Tier 3, the highest level, students can select appropriate technologies to demonstrate their knowledge, connect with the world at large, and work collaboratively to solve problems and create new solutions.

Students are considered to be at a Tier 1 level, if they can do any of the Tier one items. A student must be able to do at least 50% of the items in Tier 2 or Tier 3 in order to be considered at that level.

Starting this spring, Edmonds will begin to develop a plan for assessing our 8th graders in these areas next year, so that this can be reported to the State.

See Tiers, next 2 pages.