



Information Technology Curriculum

Sant'Anna International School

Kindergarten

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about basic technology components using developmentally appropriate and accurate terminology.	a) Use vocabulary related to the use of technology (e.g., mouse, keyboard, monitor, toolbar, menu). b) Identify the components of a computer (e.g., mouse, keyboard, monitor, printer).
2. Use input devices and output devices to successfully operate technologies.	a) Use devices to complete a task (e.g., mouse, keyboard).

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Work cooperatively and collaboratively when using technology in the classroom.	a) Demonstrate respect for other students while using technology (e.g., taking turns, share resources). b) Demonstrate socially appropriate behavior.
2. Practice responsible use of technological devices.	a) Operate equipment to ensure that all devices are unharmed. b) Recognize that damaging school equipment is destroying school property. c) Recognize that changing someone's work without permission is unacceptable.

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned programs.

Content	Skills (Students know and are able to do the following)
1. Use technology drawing tools for communicating and illustrating.	a) Using a drawing program, create a picture story with support from the teacher, family members, or student partners. b) Using a drawing program, add name and letters to illustrations.

Grade 1

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Apply basic vocabulary related to the internal operations of the technology (e.g., disks, drives, etc.)
2. Demonstrates functional operation of technology components.	a) Demonstrate correct ergonomic use of technology (e.g., correct posture) b) Use multimedia resources (e.g., educational software) c) Access information sources (e.g., encyclopedias, websites)
3. Use developmentally appropriate technology resources to access information and communicate electronically.	a) Operate keyboard and other common input and output devices. <ul style="list-style-type: none">• Use devices in response to software (e.g., point and click, arrow, and enter/return keys).• Introduce effective keyboard use. b) Retrieve and save information. c) Print documents, test, or image. d) Understand how to “log on” and “log off”.

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usage.
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules. b) Describe and practice legal and ethical behaviors when using technology. c) Demonstrate and practice safe and correct security procedures (e.g., protect password)

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
1. Use prescribed technology tools for publishing and presenting information.	a) Use a pre-designed template or stationary to publish a document (e.g., newsletter, greeting card, certificate)

Standard 4: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of resources.

Content	Skills (Students know and are able to do the following)
1. Recognize electronic information sources.	a) Identify potential sources of information about a topic. b) Locate information in a resource selected by the teacher.

Grade 2

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Apply basic vocabulary related to the internal operations of the technology (e.g., disks, drives, etc.).
2. Demonstrates functional operation of technology components.	a) Demonstrate correct ergonomic use of technology (e.g., correct posture). b) Use multimedia resources (e.g., educational software). c) Access information sources (e.g., encyclopedias, websites, CD-ROMS, pre-bookmarked websites).
3. Use developmentally appropriate technology resources to access information and communicate electronically.	a) Operate keyboard and other common input and output devices. <ul style="list-style-type: none">• Use devices in response to software (e.g., point and click, arrow, and enter/return keys).• Use keyboard effectively. b) Retrieve and save information. c) Print documents, test, or image. d) Know how to save using storage devices (e.g. flash drives)

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usage.
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules. b) Describe and practice legal and ethical behaviors when using technology. c) Demonstrate and practice safe and correct security procedures (e.g., protect password)

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
1. Use prescribed technology writing or drawing tools for communicating and illustrating.	a) Use presentation software to create a document and, where developmentally appropriate, use editing tools and introduce shortcuts. b) Insert a graphic into a presentation document.
2. Use prescribed technology for data collection and basic analysis.	a) Use a spreadsheet and database application to perform simple data analysis (e.g., graphs and charts)
3. Use prescribed technology tools for publishing and presenting information.	a) Use a pre-designed template or stationary to publish a document (e.g., newsletter, greeting card, certificate). b) Create a multimedia product with support from teachers, family, or student partners (e.g., slide show).

Standard 4: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of resources.

Content	Skills (Students know and are able to do the following)
1. Recognize electronic information sources.	a) Identify potential sources of information about a topic. (e.g., webpages, CD-ROMs) b) Locate information in a resource selected by the teacher.

Grade 3

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Apply basic vocabulary related to the internal operations of the technology (e.g., disks, drives, etc.).
2. Demonstrates functional operation of technology components.	a) Demonstrate correct ergonomic use of technology (e.g., correct posture). b) Use multimedia resources (e.g., educational software). c) Access information sources (e.g., encyclopedias, websites, CD-ROMS, pre-bookmarked websites).
3. Use developmentally appropriate technology resources to access information and communicate electronically.	a) Operate keyboard and other common input and output devices. <ul style="list-style-type: none">• Use devices in response to software (e.g., point and click, arrow, and enter/return keys).• Use keyboard effectively. b) Retrieve and save information. c) Print documents, test, or image. d) Know how to save using storage devices (e.g. flash drives)

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usage.
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules. b) Describe and practice legal and ethical behaviors when using technology. c) Demonstrate and practice safe and correct security procedures (e.g., protect password)

<p>3. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide.</p>	<p>a) Describe three to five uses of technology in daily life. b) Discuss the positive and negative impact of technologies such as television and computers on daily life related to their age group (e.g., negative health impact, safe internet use, such as knowing what information is safe to share when using e-mail, “talking” to strangers).</p>
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Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
<p>1. Use prescribed technology writing or drawing tools for communicating and illustrating.</p>	<p>a) Use word processing to create a document and, where developmentally appropriate, use editing tools and use shortcuts. b) Insert a graphic into a word processing document.</p>
<p>2. Use prescribed technology for data collection and basic analysis.</p>	<p>a) Use a spreadsheet and database application to perform simple data analysis (e.g., graphs and charts)</p>
<p>3. Use prescribed technology tools for publishing and presenting information.</p>	<p>a) Use a pre-designed template or stationary to publish a document (e.g., newsletter, greeting card, and certificate). b) Create a multimedia product with support from teachers, family, or student partners (e.g., slide show).</p>

Standard 4: Technology Communication Tools

Building on productivity tools, students will collaborate, publish, and interact with peers, experts, and other audiences using telecommunications and media.

Content	Skills (Students know and are able to do the following)
<p>1. Use technology tools for individual and collaborative communication activities to share products with audiences inside and outside of the classroom.</p>	<p>a) Plan, design, and present an academic product to classroom community (e.g., slide show, story illustrations)</p>

Standard 5: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Recognize electronic information sources.	a) Identify potential sources of information about a topic (e.g., videos, web pages, CD-ROMs) b) Locate information in a resource selected by the teacher.

Standard 6: Technology as a Tool for Problem Solving and Decision Making

Students use technology to make and support decisions in the process of solving real-world problems.

Content	Skills (Students know and are able to do the following)
1. Use technology resources for problem solving, self-directed learning and extended learning activities.	a) Based on a class defined problem (e.g., science project), use technology to: <ul style="list-style-type: none">• Collect data.• Interpret Data.• Express a solution to the problem. b) Based on a problem selected by the student (e.g., science project), use technology to: <ul style="list-style-type: none">• Collect data.• Interpret Data.• Express a solution to the problem.

Grade 4

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Apply basic vocabulary related to the internal operations of the technology (e.g., FireWire, USB, parallel, serial, scanning, digitizing, OCR, etc.). b) Use basic vocabulary related systems (e.g., network, infrastructure, internet, intranet)
2. Demonstrates increasingly sophisticated operation of technology components.	a) Use touch-typing strategies to strive toward a minimum of 20 words per minute with accuracy. b) Retrieve and save information remotely (e.g., network servers, internet, intranet, peripheral devices)

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usages (e.g., do not post inappropriate or harmful material; do not reveal personal information; follow district Acceptable Use Policy).
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules for deciding when permission is needed for using the work of others (e.g., some sites specify whether permission is required or not, some work is in public domain). b) Obtain permission to use the work of others. c) Provide complete citations from electronic media (e.g., use age-level appropriate, district developed standardized reference formats for citing source of information). d) Explain copyright laws and “fair use” guidelines (e.g., in relationship to print, video, computer software, multimedia project, music). e) Describe copyright guidelines for multimedia creation and internet development. f) State personal consequences (e.g., fines, loss of privileges, grade reduction, academic probation) related to violations of: <ul style="list-style-type: none"> • Copyright (e.g., sheet music, prerecorded music, print, video, images) • Password Security • Privacy (e.g., students files saved on a network, floppy disk, and hard drive)

	<ul style="list-style-type: none"> • Internet usage (e.g., inappropriate postings, accessing inappropriate material) <p>g) Discuss the negative impact on unauthorized intrusions into networked data and describe actions to prevent them.</p>
3. Demonstrate knowledge of current changes in technologies and the effect those changes have on the workplace and society.	<p>a) Compare information technologies from past to present and describe the implications of increasing computer power (e.g., size, speed, cost).</p> <p>b) Discuss the positive and negative impact of technologies such as television and computers on daily life (e.g., negative health impact, safe internet use, such as knowing what information is safe to share when using e-mail, “talking” to strangers)</p>

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
1. Use formatting capabilities of technology tools for communicating and illustrating.	<p>a) Use word processing editing tools to revise a document (e.g., cut and paste, tabs and margins, font size, font style, delete and undo, selecting, spell check, click and drag, keyboard shortcuts).</p> <p>b) Design a word processing document with graphical elements (e.g., clip art, digital photographs, symbols, using text wrap, cropping, sizing, drawing tools).</p> <p>c) Start using and creating documents using ABNT Standards.</p>

Standard 4: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Locate information from electronic resources.	<p>a) Identify electronic research resources</p> <p>b) Define subject searching and devise a search strategy to locate information using electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, grade level appropriate Internet resources)</p> <p>c) Explain the difference between subject and keyword searching.</p> <p>d) Construct keyword searched including basic Boolean logic using available electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, and grade level appropriate internet resources).</p> <p>e) Identify the author, copyright date, and publisher of information located in electronic resources.</p>

Grade 5

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology using developmentally appropriate and accurate terminology.	a) Use basic vocabulary related to technology (e.g., FireWire, USB, parallel, serial, scanning, digitizing, OCR, etc.). b) Use basic vocabulary related systems (e.g., network, infrastructure, internet, intranet, LAN, WAN, Ethernet, firewall, server, TCP/IP)
2. Demonstrates increasingly sophisticated operation of technology components.	a) Use touch-typing strategies to strive toward a minimum of 20 words per minute with accuracy. b) Retrieve and save information remotely (e.g., network servers, internet, intranet, peripheral devices)

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usages (e.g., do not post inappropriate or harmful material; do not reveal personal information; follow district Acceptable Use Policy). c) Describe and practice “netiquette” when using the internet and electronic mail (e.g., publish photographs of people only with their permission).
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules for deciding when permission is needed for using the work of others (e.g., some sites specify whether permission is required or not, some work is in public domain). b) Obtain permission to use the work of others. c) Provide complete citations from electronic media (e.g., use age-level appropriate, district developed standardized reference formats for citing source of information). d) Explain copyright laws and “fair use” guidelines (e.g., in relationship to print, video, computer software, multimedia project, music). e) Describe copyright guidelines for multimedia creation and internet development. f) State personal consequences (e.g., fines, loss of privileges, grade reduction, academic probation) related to violations of: <ul style="list-style-type: none"> • Copyright (e.g., sheet music, prerecorded music, print, video, images) • Password Security

	<ul style="list-style-type: none"> • Privacy (e.g., students files saved on a network, floppy disk, and hard drive) • Internet usage (e.g., inappropriate postings, accessing inappropriate material) <p>g) Discuss the negative impact on unauthorized intrusions into networked data and describe actions to prevent them.</p>
3. Demonstrate knowledge of current changes in technologies and the effect those changes have on the workplace and society.	<p>a) Compare information technologies from past to present and describe the implications of increasing computer power (e.g., size, speed, cost).</p> <p>b) Discuss the positive and negative impact of technologies such as television and computers on daily life (e.g., negative health impact, safe internet use, such as knowing what information is safe to share when using e-mail, “talking” to strangers)</p>

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
1. Use formatting capabilities of technology tools for communicating and illustrating.	<p>a) Use word processing editing tools to revise a document (e.g., cut and paste, tabs and margins, font size, font style, delete and undo, selecting, spell check, click and drag, keyboard shortcuts).</p> <p>b) Design a word processing document with graphical elements (e.g., clip art, digital photographs, symbols, using text wrap, cropping, sizing, drawing tools).</p> <p>c) Using and understanding ABNT Standards.</p>

Standard 4: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Locate information from electronic resources.	<p>a) Identify electronic research resources</p> <p>b) Define subject searching and devise a search strategy to locate information using electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, grade level appropriate Internet resources)</p> <p>c) Explain the difference between subject and keyword searching.</p> <p>d) Construct keyword searched including basic Boolean logic using available electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, and grade level appropriate internet resources).</p> <p>e) Identify the author, copyright date, and publisher of information located in electronic resources.</p>

Grade 6

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Use basic vocabulary related to systems (e.g., network, infrastructure, internet, intranet, firewall, server)
2. Demonstrates increasingly sophisticated operation of technology components.	a) Communicate electronic, under teacher-supervision (e.g., video, audio, e-mail)
3. Demonstrate an understanding of hardware, software, and connectivity problem solving processes, when a system is not working properly.	a) Use troubleshooting strategies to solve application problems (e.g., file management strategies, online help strategies, documentation, and collaboration with others).

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usages (e.g., do not post inappropriate or harmful material; do not reveal personal information; follow district Acceptable Use Policy). c) Describe and practice “netiquette” when using the internet and electronic mail (e.g., publish photographs of people only with their permission).
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules for deciding when permission is needed for using the work of others (e.g., some sites specify whether permission is required or not, some work is in public domain). b) Obtain permission to use the work of others. c) Provide complete citations from electronic media (e.g., use age-level appropriate, district developed standardized reference formats for citing source of information). d) Explain copyright laws and “fair use” guidelines (e.g., in relationship to print, video, computer software, and others).

<p>3. Demonstrate knowledge of current changes in technologies and the effect those changes have on the workplace and society.</p>	<p>a) Compare information technologies from past to present and describe the implications of computer power doubling every 18 months (Moore’s Law) (e.g., size, speed, cost).</p> <p>b) Discuss the positive and negative impact of technologies such as television and computers on daily life (e.g., negative health impact, safe internet use, such as knowing what information is safe to share when using e-mail, “talking” to strangers)</p>
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Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
<p>1. Use a variety of technology tools for data collection and analysis.</p>	<p>a) Create and use a spreadsheet to analyze data (e.g., use formulas, create charts and graphs).</p> <p>b) Create a database with multiple fields to manipulate data in a variety of ways (e.g., sort, merge, list, and report).</p>
<p>2. Publish and present information using technology tools.</p>	<p>a) Design and create a multimedia presentation or Web Page using multiple digital sources (e.g., from camera, video, scanner, CD-ROM, internet)</p> <p>b) Publish or present the above production.</p>

Standard 4: Technology Communication Tools

Building on productivity tools, students will collaborate, publish, and interact with peers, experts, and other audiences using telecommunications and media.

Content	Skills (Students know and are able to do the following)
<p>1. Use telecommunications efficiently and effectively to access remote information and communicate with others in support of facilitated and independent learning.</p>	<p>a) Communicate independently via e-mail, internet, and/or video conference with people in a remote location.</p>
<p>2. Use technology tools for individual and collaborative writing, communication, and publishing activities to create curricular related products for audiences inside and outside the classroom.</p>	<p>a) Plan, design, and present an academic product using technology tools (e.g., multimedia authoring, presentation software, digital cameras, scanners, projection devices).</p>
<p>3. Collaboratively use telecommunications and online resources.</p>	<p>a) Request collaborative exchanges among people in local and/or remote locations (e.g., e-mail, online discussions, web environments).</p>

Standard 5: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Locate information from electronic resources.	a) Identify electronic research resources b) Define subject searching and devise a search strategy to locate information using electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, grade level appropriate Internet resources) c) Explain the difference between subject and keyword searching.
2. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.	a) Create citations for electronic research sources following a prescribed format. b) Gather research from a variety of electronic sources and identify the most appropriate information for answering the research question. c) Identify the components of a URL to determine the source of the information.

Grade 7

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Communicate about internal technology operations using developmentally appropriate and accurate terminology.	a) Use basic vocabulary related to systems (e.g., network, infrastructure, internet, intranet, firewall, server, Ethernet, LAN, WAN, TCP-IP)
2. Demonstrates increasingly sophisticated operation of technology components.	a) Demonstrate functional operation fo technology devices (e.g., presentation devices, digital cameras, scanners, document cameras, scientific probes) b) Communicate electronically, under teacher-supervision (e.g., video, audio, blogging, and e-mail).
3. Demonstrate an understanding of hardware, software, and connectivity problem solving processes when a system is not working properly.	a) Use troubleshooting strategies to solve applications problems (e.g., file management strategies, online help strategies, documentation, and collaboration with others). b) Use troubleshooting strategies to solve basic hardware problems (e.g., use online help, use documentation, collaboration with others).

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use.	a) Explain the purpose of an Acceptable Use Agreement/Policy and the consequences of inappropriate use. b) Describe and practice safe internet/Intranet usages (e.g., do not post inappropriate or harmful material; do not reveal personal information; follow district Acceptable Use Policy). c) Describe and practice “netiquette” when using the internet and electronic mail (e.g., publish photographs of people only with their permission).
2. Exhibit legal and ethical behaviors when using technology and information and discuss consequences of misuse.	a) Follow the rules for deciding when permission is needed for using the work of others (e.g., some sites specify whether permission is required or not, some work is in public domain). b) Obtain permission to use the work of others. c) Provide complete citations from electronic media (e.g., use age-level appropriate, district developed standardized reference formats for citing source of information).

	<p>d) Explain copyright laws and “fair use” guidelines (e.g., in relationship to print, video, computer software, and others).</p> <p>e) Describe copyright guidelines for multimedia creation and internet development.</p> <p>f) State personal consequences (e.g., fines, loss of privileges, grade reduction, and academic probation) related to violations of:</p> <ul style="list-style-type: none"> • Copyright (e.g., sheet music, prerecorded music, print, video, images) • Password Security • Privacy (e.g., students files saved on a network, floppy disk, and hard drive) • Internet usage (e.g., inappropriate postings, accessing inappropriate material) <p>g) Discuss the negative impact of unauthorized intrusions into networked data and describe actions to prevent these intrusions.</p>
<p>3. Demonstrate knowledge of current changes in technologies and the effect those changes have on the workplace and society.</p>	<p>a) Compare information technologies from past to present and describe the implications of computer power doubling every 18 months (Moore’s Law) (e.g., size, speed, cost).</p> <p>b) Discuss the positive and negative impact of technologies such as television and computers on daily life (e.g., negative health impact, safe internet use, such as knowing what information is safe to share when using e-mail, “talking” to strangers)</p>

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
<p>1. Use a variety of technology tools for data collection and analysis.</p>	<p>a) Use technology device(s) to collect and record data (e.g., science probe, graphing calculator, PDA [personal digital assistant], alternative keyboards, webcams, GPS, and internet).</p> <p>b) Create and use a spreadsheet to analyze data (e.g., use formulas, create charts and graphs)</p> <p>c) Create database with multiple fields to manipulate data in a variety of ways (e.g., sort, merge, list, and report)</p>
<p>2. Publish and present information using technology tools.</p>	<p>a) Design and create a multimedia presentation or Web Page using multiple digital sources (e.g., from camera, video, scanner, CD-ROM, internet)</p> <p>b) Publish or present the above production.</p>
<p>3. Use technology tools to support system analysis and modeling.</p>	<p>a) Manipulate several variables in a computer simulation to reach a desired outcome (e.g., simulation software, web-based simulation, textbook support software)</p>

Standard 4: Technology Communication Tools

Building on productivity tools, students will collaborate, publish, and interact with peers, experts, and other audiences using telecommunications and media.

Content	Skills (Students know and are able to do the following)
1. Use telecommunications efficiently and effectively to access remote information and communicate with others in support of facilitated and independent learning.	a) Communicate independently via e-mail, internet, and/or videoconference with people in remote location.
2. Use technology tools for individual and collaborative writing, communication, and publishing activities to create curricular related products for audiences inside and outside the classroom.	a) Plan, design, and present an academic product using technology tools (e.g., multimedia authoring, presentation software, digital cameras, scanners, projection devices).
3. Collaboratively use telecommunications and online resources.	a) Request collaborative exchanges among people in local and/or remote locations (e.g., e-mail, online discussions, web environments). b) Communicate electronically to collaborate with experts, peers, and others to analyze data and/or develop an academic product (e.g., e-mail, discussion groups, and video conference) c) Present an academic product to share data and/or solutions (e.g., web site, multimedia presentation, and video).

Standard 5: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Locate information from electronic resources.	a) Identify electronic research resources b) Define subject searching and devise a search strategy to locate information using electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, grade level appropriate Internet resources) c) Explain the difference between subject and keyword searching. d) Construct keyword searched including basic Boolean logic using available electronic research resources (i.e., electronic card catalog, online or CD-ROM reference sources, and grade level appropriate internet resources). e) Identify the author, copyright date, and publisher of information located in electronic resources, internet resources).
2. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.	a) Create citations for electronic research sources following a prescribed format. b) Gather research from a variety of electronic sources and identify the most appropriate information for answering the research question. c) Identify the components of a URL to determine the source of the information.

- | | |
|--|--|
| | d) Obtain permission, when appropriate, to use the work of others.
e) Identify the author of the information found from electronic resources and determine whether the author is an authority, displays bias, and is a primary or secondary source. |
|--|--|

Standard 6: Technology as a Tool for Problem Solving and Decision-Making

Students use technology to make and support decisions in the process of solving real-world problems.

Content	Skills (Students know and are able to do the following)
1. Determine when technology is useful and select and use the appropriate tools and technology resources to solve problems.	a) Based on a problem selected by the student, identify and use appropriate technology tools to: <ul style="list-style-type: none"> • Collect Data (e.g., counting versus using a probe, book index versus online index) • Internet Data (e.g., use a spreadsheet instead of a graphic organizer) • Develop a solution for the problem (e.g., creating a model versus using a spreadsheet) • Present findings (e.g., create a poster versus and electronic presentation)

Grade 8

Standard 1: Fundamentals Operations and Concepts

Students understand the operations and functions of technology systems and are proficient in the use of technology.

Content	Skills (Students know and are able to do the following)
1. Use the appropriate technology device to complete a task.	<ul style="list-style-type: none">a) Select the applied technology device/system/resource/service to complete task given by the teacher.b) The student will be able to select the best application software to complete tasks given by the teacher.c) Set up/manage complex systems, for example, network, e-mail system, homework hotline.d) The student will manage a password protected set of directories on the school LAN.
2. Make informed choices among technology systems, resources, and services.	<ul style="list-style-type: none">a) Create criteria for choosing productivity tools.b) The student will demonstrate and informed choice when selecting which resources and services to use to complete the data base/internet class project.

Standard 2: Social Ethical and Human Issues

Understand the social, ethical, and human issues related to using technology in their daily lives and demonstrate responsible use of technology systems, information, and software.

Content	Skills (Students know and are able to do the following)
1. Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services.	<ul style="list-style-type: none">a) Make informed choices among technology systems, resources and services in regard to cost, security, productivity, communication, transferability into the workplace and its long-term impact and obsolescence.
2. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole.	<ul style="list-style-type: none">a) Demonstrate the legal and ethical along with liability issues related to security systems/filtering/hacking/pirating/viruses to protect technologies.b) Analyze each item listed above.

Standard 3: Technology Productivity Tools

Students use technology tools to enhance learning, to increase productivity and creativity, and to construct technology-enhanced models, prepare publications, and produce other creative works using assigned software.

Content	Skills (Students know and are able to do the following)
1. Communicate to a variety of audiences using professional level technology tools.	a) Use technology tools to enhance learning, increase productivity and creativity. b) Create and format a document with hyperlinks. c) Students will create a spreadsheet that has a hyperlink to a word document, PowerPoint presentation that has hyperlinks to internet sites.
2. Use a variety of technology tools for data collection and analysis to support a decision.	a) Use technology for data collection and analysis, publication and modeling. b) Students will work in a four member group to collect information from the internet to analyze the cost of a city tour based on revenue and costs calculate the expected profit. Students will design a brochure to publish their tour.
3. Use technology tools to support system analysis and modeling.	a) Manipulate several variables in a computer simulation to reach a desired outcome (e.g., simulation software, web-based simulation, textbook support software)

Standard 4: Technology Communication Tools

Students will use technology to routinely and efficiently gather information and develop presentations to disseminate information (internet, e-mail).

Content	Skills (Students know and are able to do the following)
1. Routinely and efficiently use online information resources to meet needs for collaboration and communications.	a) Students will work in a four member group to collect information from the internet to analyze the cost of a city tour and based on revenue and costs calculate the expected profit. Students will design a brochure to publish their tour. The group will give a PowerPoint presentation to the class about their planned city tour. b) Work on group solving skills using technology tools.

Standard 5: Technology Research Tools

Students will utilize technology-based research tools to locate and collect information pertinent to the task as well as evaluate and analyze information from a variety of sources.

Content	Skills (Students know and are able to do the following)
1. Develop a research strategy to find accurate, relevant, appropriate electronic information sources.	a) Use technology research tools to locate, collect, evaluate and analyze information using directories, search engines and data bases. b) Learn how to use the internet in a correct manner which will find accurate, relevant and appropriate information sources so that students will be able to collect information from the internet to analyze the cost of a city tour based on revenue and cost to calculate the expected profit.
2. Present research findings from electronics using academic models for citations and format.	a) Present research finding using academic module for citations and format. b) Students will type a business report with correct formatting and use of citations. c) Using citations in ABNT Standards.

Standard 6: Technology as a Tool for Problem Solving and Decision-Making

Students use technology to make and support decisions in the process of solving real-world problems.

Content	Skills (Students know and are able to do the following)
1. Investigate technology-based options, including distance and distributed education for lifelong learning.	a) Use technology to make and support decision and solve real world problems, including use in careers and use within a hobby as well as lifelong learning.

Computer Literacy Glossary

Acceptable Use Agreement/Policy (AUA or AUP)

A form that is signed by an individual and, when appropriate, legal guardian/parents, that acknowledges responsible behavior and use for the technology provided by the district, including the legal implication of the use of the Internet.

Adaptive Devices

Devices that help people with visual impairments, hearing losses, severe speech impairments, physical disabilities and/or severe learning disabilities cope with demands that are placed upon them from their environment. (See also Assistive Technology)

Assistive Technology

Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities. (Federal Register, August 19, 1991, p. 41272.) (See also Adaptive Devices)

Alternative Keyboard

A self-contained word processing device with full-size keyboard and memory that allows editing, printing, or direct transfer to a computer for storage and manipulation (brand names, e.g., AlphaSmart, Dream Writer).

Bit

A contraction of binary digit. It is the smallest unit of storage in a computer. The bit is represented by a zero (0) or one (1) for information; instructions and data may be represented by sets of bits. Compare byte.

Bookmark

A marker that allows a user to identify a site on the Internet to allow rapid access. Also, a marker that allows a user to mark a place in a word processing document.

Boolean (also Boolean Operator)

A system of logic that, when applied to searches, modifies search terms with the "operators" AND, OR, and NOT. Boolean operators allow you to broaden or narrow the range of your search.

Browser

An application that allows people to scan and interact with a network. Netscape and Internet Explorer are examples of browsers.

Byte

A set of bits, typically eight, that comprises the smallest accessible unit in computer memory. It is the equivalent of one letter or one digit from 0 to 9.

CD (Compact Disc – Player/Reader)

A device attached to a computer that provides access to information such as encyclopedias, dictionaries, databases, or music. These are devices that allow users to store or write to a CD.

CD-ROM (Compact Disc – Red Only Memory)

A CD-ROM format used to store large amounts of information. A flat round disc that is used to store digital data. The disc is read by a laser. You can only read information on a CD. You cannot record information on a CD.

Click

To press and release a mouse or trackball button once while the cursor is stationary.

Clip Art

Graphics that can be cut and pasted electronically into documents. Clip art can be photographs, diagrams, maps, illustration, or cartoons.

Clipboard

A special file or memory area (buffer) where data is stored temporarily before being copied to another location. In Microsoft Windows and the Apple Macintosh operating systems, the clipboard can be used to copy data from one application to another. The Macintosh uses two types of clipboards. The one it calls the Clipboard can hold only one item at a time and is flushed when you turn off the computer. The other, called the Scrapbook, can hold several items at once and retains its contents from one working session to another.

Copyright guidelines

Intellectual Property Rights (copyright) are guaranteed by the U.S. Constitution and Federal law. These protect the individual who produces creative works from the theft of their work by others. Within the U.S. (not necessarily a part of any international Copyright agreements), Fair Use Guidelines provide limited privileges to educators. Legal citation: <http://lcweb.loc.gov/>. There are a number of additional sites that have helpful information on this topic, including:

<http://literacy.kent.edu/Oasis/Workshops/copytoc.html>.

CPU (Central Processing Unit)

The CPU is the brains of the computer. Sometimes referred to simply as the processor or central processor, the CPU is where most calculations take place. In terms of computing power, the CPU is the most important element of a computer system.

Cropping

Used in computer graphics, cropping is a method used to cut off the sides of an image to make it the proper size or to remove unwanted parts. Most graphics applications allow you to crop images with a clip feature.

Cut

- 1) Removes highlighted item and place a copy of it on the clipboard;
- 2) A process of replacing a video picture with another instantaneously, or making an abrupt change of image or sound.

Database

A collection of data arranged into categories. These can then be manipulated by the user to create reports.

Delete

Removing a character, word, line, paragraph, or other specified amount of text from a document.

Digital Camera

A hardware product that captures an image and send it to a computer.

Digital Photo

An image that is stored in bits and bytes on a computer. It can be manipulated and displayed on a computer screen.

Disc

A term used when referring to a compact disc or laser disc on which information is stored optically.

Disk

Media that stores computer information. There are two basic types: hard disks (or drives) and floppy disks.

Document

A file created by a program.

Drag

To hold down a mouse button while moving the mouse. It is a way to move objects, resize borders and objects, or select text in blocks.

Drive

Any device that reads and writes information, such as a hard drive, floppy drive, CD ROM drive, or tape drive.

Drawing Tools/Program

Software used to create any type of drawing, from a simple line sketch to a magnificent full-color poster. Drawing programs are used by graphic artists and designers.

E-mail (Electronic Mail)

The electronic transmission of letters, documents, messages, and memos from one computer to another over a network.

Electronic Card Catalog

A computer-based version of the traditional library card catalog. A patron uses a computer to type in or select pre-determined search strategies to access items in a library's holdings.

Encryption Software

Encryption software puts data into a secret code so it is unreadable, except by authorized users. The most common form is public encryption, which is a way of encrypting messages in which each user has a public key and a private key. Messages are sent encrypted with the receiver's public key; the receiver decrypts them using the private key. Using this method, the private key never has to be revealed to anyone other than the user.

Enter Key/Return Key

A key located at the right end of the third row from the bottom on a keyboard. Pressing the Enter key performs a typed or highlighted command. In word processing, the Enter key starts a new paragraph.

Erase Disk

On the Macintosh, the term for formatting or initializing a disk.

Ergonomics

Science of body positioning to reduce physical, mental and emotional stress on the individual.

Ethernet

The most commonly used technology for networking computers.

Fair Use Guidelines

Support for educators and educational institutions within compliance of U.S. Intellectual Property Rights laws (copyright), Fair Use is an agreement between industry (copyright holders), education and the government allowing limited use without purchase of materials. <http://fairuse.stanford.edu/>

Filter

A device or program that separates data or signals in accordance to specific criteria. Currently, educational institutions are required to have some form of filter between students and the Internet. Compare to firewall.

Firewall

A system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both, and are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria. There are several types of firewall techniques: packet filters, application gateways, circuit level gateways, and proxy servers.

FireWire

Industry standard. A “bus” (device) that can move large amounts of data between computers and peripheral devices. Manufacturers of multimedia devices use this technology because it speeds up the movement of multimedia data and large files and enables the connection of digital devices (e.g., digital camcorders, digital video tapes, and music systems) directly to a personal computer.

Floppy Disk Drive

A device used to write and read data to a floppy disk and transfer the information to the computer’s memory.

Floppy Disk

A 3.5 inch removable disk that’s flexible (although it’s protected by a hard plastic case). Also called a diskette. Compare disk.

Flow Chart

A flow chart is a graphical representation of a computer program or order of operations. The process of flow charting includes defining the project, determining the steps in the project, creating a graphical representation and testing assumptions about the project (or process).

Folder

In graphical user interfaces such as Windows and the Macintosh environment, a folder is an object that can contain multiple documents. Folders are used to organize information.

Font

A single style of typeface and size (e.g., Times New Roman, 12pt).

Format/Formatting

- 1) (noun) The layout, presentation or arrangement of data on a screen or paper.
- 2) (verb) The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with initialization. Compare Erase Disk.

FTP (File Transfer Protocol)

A method of transferring files between computers connected to the Internet.

GPS (Global Positioning System)

A system of satellites that transmit continually, which make it possible to identify each location through a receiving unit, by triangulation.

Graphic Calculator

A calculator that allows the user to program in a formula to present data visually in graph or chart form.

Graphic Organizer

Software that visually organizes the thought or creative process. Also known as storyboard software, these combine both icons (graphics) and text to give structure and logic to a project or presentation.

GUI (Graphical User Interface)

A program interface that takes advantage of the computer’s graphics capabilities to make the program easier to use.

Hacking

Attempts to gain unauthorized entry into a computer system or network.

Hard Drive

The primary storage device for your computer. Also called hard disk. It is where applications, utilities, and files are stored.

HTML (HyperText Markup Language)

A programming language for creating pages on the World Wide Web.

Hyperlink, Hypermedia, Hyperstack

Hyper – multi-dimensional. Media – text, graphics, sound, animation and video.

Hypermedia was originally coined to describe how different forms of information can be linked in a nonlinear fashion. Users move from one group of information to another by clicking on text or graphics on a computer screen. These “hyperlinks” allow users to individualize the way they move through and process the information being presented to them.

Initialization

The process whereby a disk is made ready for storing data by organizing the surface into tracks and sectors. Synonymous with formatting. Compare Erase Disk.

Input Device

A machine through which data and instructions are entered into the computer’s main memory. A mouse, a graphics tablet, and detachable keyboards are examples of input devices.

Intelligent Agents

Programs, used extensively on the Web, that perform tasks such as retrieving and delivery information and automating repetitive tasks. Agents are designed to make computing easier. Currently they are used as Web browsers, news retrieval mechanisms and shopping assistants. By specifying certain parameters, agents will “search” the Internet and return the results directly back to the user’s PC. Some intelligent agents are also used as tools to track Web behavior; they can even “watch” as the user surfs the ‘Net and record how often he/she visits a certain site. Later, they can be used to automatically download the user’s favorite sites, letting the user know when a favorite site has been updated, and even tailing specific pages to suit the user’s tastes.

Interactive

Refers to an application or system that provides information in response to the user’s input.

Internet

A global communications network that is a collaborative effort among educational institutions, government agencies, various commercial and nonprofit organizations, and individual users. The Internet allows three primary functions: communications (e-mail and news), retrieval of information, and transferring files (FTP).

Intranet

The term used for the implementation of Internet technologies (communications protocol/mail/file transfer/Web browsing/user interfaces/terminal emulation) within an organization, to enhance the organization’s operation, efficiency, and development by providing all organizational resources to each employee’s desktop with minimal cost and time. Intranets connect the different types of computers on a network, thus providing for open standards which allow flexibility.

Keyboard

The main input device for computers. Keyboards are derived from the typewriter, but have additional keys that enhance their function.

Keyword Searching

A keyword is a predefined word or set of words that identifies a specific record or document. A keyword search uses these keywords to locate information in a database or on the Internet.

LAN (Local Area Network)

Programs, storage, and graphic devices at multiple computer workstations over relatively small geographic areas for rapid communication. Compare WAN.

Menu

A list of commands or options from which choices are made. Most applications now have menu-driven components.

Merge

In word processing, when information from a table or database is inserted into a document. In a spreadsheet, the combining of more than one cell to create a single cell.

Monitor

A screen used to display the data received from a processor, or data transmitted to the processor. A computer monitor does not have facilities to receive broadcast signals or process sound. A video monitor can receive broadcast signals and process sound.

Mouse

A pointing device for moving the cursor on the screen.

Netiquette

The rules of etiquette on the Internet.

Network

A collection of computers that are linked together for the purpose of sharing information.

OCR (Optical Character Recognition)

OCR involves reading text from paper and translating the images into a form that the computer can manipulate (for example, into ASCII codes). An OCR system enables the scanning of a book or a magazine article, feeding it directly into an electronic computer file, and then editing the file using a word processor.

Online

A common term used to refer to being connected to the Internet.

Output Device

A peripheral through which information from the computer is communicated to the outside world; for example, a display screen, printer, or speakers.

Password

A code word of letters and/or numbers that allows a user to gain access to a secured system or piece of information. Compare to PIN.

Paste

A command that inserts text or graphics from the clipboard to the document at the location of the cursor. Requires that an item first be placed on the clipboard using Copy or Cut commands.

Peripheral

A device that can communicate directly with a computer, such as printers, scanners, cameras, CD-ROMs, and laserdisc players.

PDA (Personal Digital Assistant)

A pocket-sized personal computer. PDAs usually can store phone numbers, appointments, and to-do lists. Some PDAs have a small keyboard, others have only a special pen that is used for input and output. A PDA can also have a wireless fax modem. Files can be created on a PDA which are later entered into a larger computer.

PIN (Personal Identification Number)

A privileged code that allows a user to gain access to a secured system or piece of information. May be assigned by the system operator or selected by the user. Compare Password.

Point and Click

A method of interacting with a computer using the mouse. The user moves a cursor on the screen based on the corresponding movement of the mouse. When the mouse is over the desired graphic or text on the computer screen, the mouse button is pressed or "clicked" to start a desired action.

Port

An interface on a computer used to connect a device. Personal computers have various types of ports. Internally, there are several ports for connecting disk drives, display screens, and keyboards. Externally, personal computers have ports for connecting modems, printers, mice, and other peripheral devices.

Preference

The selecting of one thing over another. In computer terms, it is a section of the operating system or software application that can be set as a "default."

Presentation Device

One of several devices that can be connected to a computer to display information to an audience. The most common devices are video projection units and video converters for television monitors.

Probe/Probeware

Probe: A variety of devices that can be connected to a computer or graphing calculator to collect data. Probeware: The software that allows the probe or probes to interface with the computer or calculator.

RAM (Random Access Memory)

Memory used to run the operating system and applications in a computer. The more RAM a computer has, the more applications it can run simultaneously. The operating system and other software are *stored* on the computer's hard disk, but they *run* in RAM. Data stored in RAM is lost when the computer is turned off.

Remote Control

A wireless device used to control a piece of electronic equipment such as a television, tape or CD player, stereo, or video camera.

ROM (Read Only Memory)

System memory not available to user, but used by the operating system. This memory is programmed only once by the manufacturer and cannot be changed.

Scanner

A device for converting text or graphics displayed on a sheet of paper into a digital image you can display on your computer screen and use with certain applications.

Scientific Probe/Science Probe

See probe/probeware

Search Engines

A program that searches documents for specified keywords and returns a list of the documents where the keywords were found. Although *search engine* is really a general class of programs, the term is often used to specifically describe systems like Alta Vista and Excite that enable users to search for documents on the World Wide Web and USENET newsgroups. Typically, a search engine works by sending out a spider to fetch as many documents as possible. Another program, called an indexer, reads these documents and creates an index based on the words contained in each document. Each search engine uses a proprietary algorithm to create its indices such that, ideally, only meaningful results are returned for each query.

Serial

One-by-one. Serial data transfer refers to transmitting data one bit at a time. The opposite of serial is parallel, in which several bits are transmitted concurrently.

Server

A computer that provides shared, centralized resources (such as files, e-mail, databases, modems, and printers) to other computers on the network.

Simulation

An electronic imitation. SimCity is a game in which a simulation of a real city is created on a computer.

Software

The instructions that tell a computer what to do.

Sort

To place, separate, or arrange according to common characteristics.

Spam

Unsolicited, unwanted junk e-mail with wide distribution.

Spell Check

A feature built into many applications that allows the user to check for spelling errors or look for synonyms.

Spreadsheet

Spreadsheet applications (sometimes referred to simply as spreadsheets) are computer programs that let you create and manipulate spreadsheets electronically. In a spreadsheet application, each value sits in a cell. Data can be defined in each cell and how different cells depend on one another. The relationships between cells are called formulas, and the names of the cells are called labels.

Streaming (Web Streaming)

Playing audio or video immediately as it is downloaded from the Internet, rather than storing it in a file on the receiving computer first. Streaming is accomplished by way of Web browser plug-ins, which decompress and play the file in real time; a fast computer and fast connection are necessary.

TCP-IP (Transmission Control Protocol/Internet Protocol)

The suite of communications "rules" used to connect hosts on the Internet.

Text

The letters or words of a written work.

Text Support Software

Materials available from a textbook publisher that support, supplement, or replace print content for students. These may be on-line, in disk, or CD-ROM format.

Text Wrap

A feature supported by many word processors that enables you to surround a picture or diagram with text. The text wraps around the graphic. Text wrap is also called text flow.

Undo

A command within many applications that reverses the most recent thing you did in the application.

URL (Uniform Resource Locator)

The global address of documents and other resources on the World Wide Web. The first part of the address indicates what protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

USB (Universal Serial Bus)

A personal computer bus which can support up to 127 peripheral devices in a daisy chain configuration, and has a total bandwidth of 1.5 megabytes per second. It uses inexpensive cable, which can be up to 5 meters long.

VCR

An analog video tape player and recorder which is usually connected to a television monitor to record or play tapes. Onehalf inch (1/2") video tape is the most commonly used format.

Video

A visual recording of information.

Videoconferencing

Conducting a conference between two or more participants at different sites by using computer networks to transmit audio and video data. For example, a *point-to-point* (two person) videoconferencing system works much like a video telephone. Each participant has a video camera, microphone, and speakers mounted on his/her computer. As the two participants speak to one another, their voices are carried over the network and delivered to the other's speakers and whatever images appear in front of the video camera appear in a window on the participant's monitor. *Multipoint* videoconferencing allows three or more participants to sit in a virtual conference room and communicate as if they were sitting right next to each other.

Visualization

A variety of software packages that allows students to create a model of a real world system. These models are often three-dimensional in nature.

Virus

A program that infects and replicates itself in computer files, spreading from computer to computer. Some viruses can be relatively harmless, simply displaying a message on the screen. Other viruses can be extremely damaging, crashing the hard drive so all data is lost.

WAN (Wide Area Network)

A network that spans geographically separated areas, usually by using models and dedicated, high-speed telephone lines. Compare LAN.

Web Page

One page of a document on the World Wide Web. A Web page is usually a file written in Hypertext Markup Language (HTML), stored on a server. A Web page usually has links to other Web pages. Each web page has its own address, called a Uniform Resource Locator (URL) in the form: <http://www.name.com/directory/page.htm>.

Web Site

A site (location) on the World Wide Web. Each Web site contains a home page, which is the first document users see when they enter the site. The site might also contain additional documents and files. Each site is owned and managed by an individual, company, or organization.

Wizard

A Microsoft term for pre-designed elements of a software package. Will "ask questions" and assist in the design of a document. For example, a "letter wizard," within a word processing application, would lead the user through the steps of producing different types of correspondence. (May also refer to an outstanding programmer or a system administrator.) Compare to Assistant in Macintosh.

Word Processor

Software that allows you to enter, edit, and format text. Some software will allow the use of graphics.

Web or WWW (World Wide Web)

A global hypertext network that is part of the Internet. It is usually viewed through a browser that provides a Graphical User Interface.

Note: Many of these definitions were found at

<http://webopedia.internet.com>.