K-12 Technology
Philosophy

We are part of an information age that requires students to use skills other than those dictated by an industrial society. Technology must be an integral tool in the learning experience of all students. Using technology as a tool to gather, process and present information is essential for functioning in today's world. Students must be prepared to deal with change because technology is continually changing their world. They must learn to be flexible, adaptable, and effective in using the tools that generate change. Technology empowers students to take command of their learning and motivates them to be life-long learners.

TECHNOLOGY
Draft Standards, Rationale,
Supporting Goals, and Benchmarks

1. Students understand and appropriately use a variety of technology tools including hardware and system software.

Rationale

Technology tools are an integral part of students' learning and are widely used in education, the workplace, and everyday life. Technology systems are comprised of a variety of interconnected hardware components and software. By understanding these components and their interaction, students will be able to apply technology in an appropriate and productive manner.

Supporting Goals

In order to meet this standard, students will:
- identify and use the hardware components of technology systems.
- understand and use system software.

Benchmarks
K-2

In grades K-2, what the students know and/or are able to do includes:
- identifying and using hardware components;
- basic keyboarding skills;
- demonstrating proper care and safe use of hardware;
- basic troubleshooting skills
- entering and exiting applications programs and using on screen cues; and
- an awareness of ethical issues in technology.

3-5

As students in 3-5 extend their knowledge, what they know and/or are able to do includes:
- demonstrating competent keyboarding skills using the touch type method;
- identifying and using hardware components as appropriate to curricular tasks;
- demonstrating proper care and safe use of hardware;
- expanding troubleshooting skills;
- understanding and operating system software to start the computer, open a software application, create a file, save a file, retrieve a file, quit a software application and shut down the computer;
- selecting and using hardware appropriately; and
- an awareness of ethical issues in technology.

6-8

As students in 6-8 extend their knowledge, what they know and/or are able to do includes:
- proficiency in keyboarding skills using the touch type method;
- identifying and using hardware components as appropriate to curricular tasks;
- demonstrating proper care and safe use of hardware;
- expanding troubleshooting skills;

- understanding and operating system software to manage storage devices, files, and system memory;
- selecting and using hardware and system software appropriately; and
- an awareness of ethical issues in technology.

9-12

As students in 9-12 extend their knowledge, what they know and are able to do includes:
- understanding and operating system software appropriate to the curricular task;
- identifying and using hardware components as appropriate to curricular tasks;
- demonstrating proper care and safe use of hardware;
- troubleshooting ;
- an awareness of ethical issues in technology; and
- demonstrating keyboarding skills in the use of software applications.

2. Students appropriately select and utilize a variety of software applications to enhance, facilitate and improve learning and productivity.

Rationale

In all curricular areas, the use of appropriate software applications can be an effective and efficient means for meeting individual needs, motivating diverse learners and stimulating critical thinking and creativity.

Supporting Goals

In order to meet this standard, students will:
- use software applications which are specific to curricular areas.
- use software that supports critical thinking and problem solving.
- use productivity software to support curriculum related tasks.

Benchmarks
K-2

In grades K-2, what the students know and are able to do includes:
- using software to support learning of new concepts and skills including critical thinking and problem solving;
- an awareness of ethical issues associated with software;
- using appropriate electronic resources;
- creating documents using word processing software; and
- creating and/or using graphics, tables, graphs and charts.

3-5

As students in 3-5 extend their knowledge, what they know and are able to do includes:
- using software to support learning of new concepts and skills including critical thinking and problem solving;
- as awareness of ethical issues associated with software;
- using electronic resources;
- creating word processing/publishing documents which combine graphics and text;
- editing documents;
- exploring the use of electronic spell checker/thesaurus;
- using databases to search for information; and
- exploring the use of spreadsheets.

6-8

As students in 6-8 extend their knowledge, what they know and are able to do includes:
- using software to support learning of new concepts and skills including critical thinking and problem solving;
- an awareness of ethical issues associated with software;
- using electronic resources;
- formatting documents;
- using spell check/thesaurus;
- designing, building and searching a database;
- constructing a spreadsheet using formulas and graphs;
- using application software to create electronic presentations; and
- creating and using graphics to enhance a document.

9-12

As students in 9-12 extend their knowledge, what they know and are able to do includes:
- using software to support learning of new concepts and skills including critical thinking and problem solving;
- an awareness of ethical issues associated with software;
- using electronic resources;
- composing a document at the keyboard using word processing skills and the writing process steps; and
- using application software to create quality products and electronic presentations.

3. Students use and understand technology to communicate and access information electronically.

Rationale

Technology has facilitated efficient and more varied means of communication. It is increasingly important to obtain timely and relevant information from appropriate sources and to exchange such information throughout the world.

Supporting Goals

In order to meet this standard, students will understand and use electronic communication tools to:
- send and receive relevant data and information.
- access relevant data and information specific to curricular areas.

Benchmarks

K-2

In grades K-2, what the students know and are able to do includes:
- an introduction to electronic communication and
- an introduction to global information access.

3-5

As students in 3-5 extend their knowledge, what they know and are able to do includes:
- accessing relevant information from global electronic sources through teacher-guided activities and
- using electronic communication tools to send and receive relevant data and information through teacher-guided activities.

6-8

As students in 6-8 extend their knowledge, what they know and are able to do includes:
- using electronic communication tools to share, send and receive relevant data and information and
- using search strategies to retrieve relevant global electronic information.

9-12

As students in 9-12 extend their knowledge, what they know and are able to do includes:
- using a variety of electronic communication systems to share, send and receive relevant data and information and
- using search strategies to retrieve relevant global electronic information.

Standard One   **Students understand and appropriately use a variety of technology tools including hardware and system software.**

In order to meet this standard, students will	Connections	K	1	2	3	4	5	6	7	8	9	10	11	12
identify and use the hardware components of technology systems;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
identify and use basic hardware components, such as mouse, keyboard, monitor, and printer;	-	I	D	D	D	D	-	-	-	-	-	-	-	-
select and use hardware appropriately as related to current tasks, such as selecting a printer, scanner, camera, or graphics tablet;	-	-	-	-	-	-	I	I	D	D	D	E	E	E
demonstrate basic keyboard skills by identifying and using special function keys, such as return, delete, space, shift, power button, and left/right hand use;	-	-	I	D	D	-	-	-	-	-	-	-	-	-
demonstrate keyboarding skills by using correct home row finger placement and reaches;	-	-	-	-	-	I	D	-	-	-	-	-	-	-
demonstrate proficiency using the touch type method at 20 words/minute with 85% accuracy;	-	-	-	-	-	-	-	I	D	D	D	E	E	E
demonstrate proper care and safe use of hardware;	-	I	D	D	D	D	D	D	D	D	D	E	E	E
identify basic computer problems, such as electrical and peripheral (keyboard, mouse, printer, network, monitor) connections;	-	-	-	I	D	D	D	-	-	-	-	-	-	-
recognize and troubleshoot computer problems, such as camera plug-ins, SCSI devices, printer and network connections;	-	-	-	-	-	-	-	I	D	D	E	E	E	E
understand and use system software;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demonstrate the ability to enter and exit a variety of software applications;	-	-	I	I	D	D	D	-	-	-	-	-	-	-
recognize and respond to on-screen cues by using mouse or keyboard;	-	-	I	I	D	-	-	-	-	-	-	-	-	-
demonstrate the ability to start and shut down a computer;	-	-	-	-	I	D	D	-	-	-	-	-	-	-
demonstrate the ability to create, save and retrieve a file;	-	-	-	-	I	D	D	-	-	-	-	-	-	-
understand and use the menu bar for a variety of tasks, such as using Open, New, Find, Put Away, and Eject Disk;	-	-	-	-	I	D	D	D	D	D	E	E	E	E
demonstrate file and disk management, such as formatting disks, saving to a desired location, backing up files, deleting files;	-	-	-	-	-	I	I	D	D	E	E	E	E	E
demonstrate the ability to manage the basic operating system, such as memory, folders, desktop;	-	-	-	-	-	-	-	I	D	D	E	E	E	E
understand the ethical issues in technology.	-	I	I	I	D	D	D	D	D	D	D	D	D	D

Standard Two   Students appropriately select and utilize a variety of software applications to enhance, facilitate and improve learning and productivity.

In order to meet this standard, students will:	Connections	K	1	2	3	4	5	6	7	8	9	10	11	12
use software applications which are specific to curricular areas;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
see district database for recommended programs;	-	E	E	E	E	E	E	E	E	E	E	E	E	E
use software that supports critical thinking and problem solving;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
see district database for recommended programs;	-	E	E	E	E	E	E	E	E	E	E	E	E	E
use productivity software to support curriculum related tasks;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
create graphics (drawing & painting);	-	-	-	-	I	I	I	D	D	E	-	-	-	-
use graphics to communicate meaning and enhance documents;	-	-	-	-	-	-	I	D	D	E	E	E	E	E
create and use tables to gather, interpret, present information;	-	-	-	-	-	I	I	D	D	E	E	E	E	E
create and use charts/graphs (pie, bar, line, etc.) to gather, interpret, present information;	-	-	-	-	-	-	-	I	I	D	E	E	E	E
use electronic resources to gather information (CD-ROMS, Internet, Databases, etc.)	-	-	-	-	I	D	D	D	D	D	D	E	E	E
interpret information gathered from electronic resources;	-	-	-	-	-	I	D	D	D	D	D	E	E	E
present information from electronic resources;	-	-	-	-	-	-	I	D	D	D	D	E	E	E
create word processed documents (to supplement handwriting);	-	-	-	-	-	I	I	I	I	D	D	E	E	E
create word processing/publishing documents which combine graphics and text (to supplement handwriting);	-	-	-	-	-	I	I	I	I	D	D	E	E	E
edit documents;	-	-	-	-	-	I	I	I	I	D	D	E	E	E
use spell checker and thesaurus;	-	-	-	-	-	-	-	I	D	-	-	-	-	-
use spreadsheets to create tables of information/ata;	-	-	-	-	-	-	I	D	-	-	-	-	-	-
construct spreadsheets using formulas and graphs;	-	-	-	-	-	-	-	-	I	D	D	-	-	-
format documents;	-	-	-	-	-	-	-	-	-	-	-	-	-	-
page setup & printing options & print preview;	-	-	-	-	-	-	-	I	D	D	D	-	-	-
line and word spacing;	-	-	-	-	-	I	D	D	D	D	D	-	-	-
alignment (left, center, right, justified);	-	-	-	-	-	I	D	D	D	D	D	-	-	-
set margins, tables, indents;	-	-	-	-	-	-	-	I	D	D	D	E	E	E
outline;	-	-	-	-	-	-	-	-	-	I	D	E	E	E
text attributes & appropriate use (font, size, styles, text color);	-	-	-	-	-	I	I	D	D	-	-	-	-	-
create a database;	-	-	-	-	-	-	I	I	I	D	D	-	-	-
create electronic presentations;	-	-	-	-	-	I	I	D	D	D	D	-	-	-
compose documents at the keyboard.	-	-	-	-	-	-	-	-	I	D	D	D	D	E

Standard Three   Students use and understand technology to communicate and access information electronically.

In order to meet this standard, students will:	Connections	K	1	2	3	4	5	6	7	8	9	10	11	12
send and receive relevant data and information	-	-	-	-	-	-	-	-	-	-	-	-	-	-
participate in global on-line projects (pen-pals, scientific data collection and submission, etc.)	-	-	-	I	D	D	D	E	E	E	E	E	E	E
use electronic communication tools to collaborate on local school projects	-	-	-	-	I	D	D	D	D	D	D	D	D	D
transfer files over a network	-	-	-	-	-	-	-	I	D	D	D	E	E	E
access relevant data and information specific to curriculum areas	-	-	-	-	-	-	-	-	-	-	-	-	-	-
use a browser to access on-line information	-	-	-	-	-	-	-	-	-	-	-	-	-	-
access on-line information single site identified by the teacher	-	-	-	I	I	D	D	-	-	-	-	-	-	-
access on-line information selecting from various sites identified by the teacher	-	-	-	-	-	-	-	I	D	D	E	E	E	E
access on-line information by searching, identifying and evaluating sites for relevance to the assigned task	-	-	-	-	-	-	-	-	-	I	I	D	D	D
use hyperlinks to navigate through an on-line site	-	-	-	I	D	D	D	-	-	-	-	-	-	-
be able to return to a previous on-line site	-	-	-	-	-	-	-	I	D	E	E	E	E	E