Technology 2017

Prepared by:
Stanton Community Schools
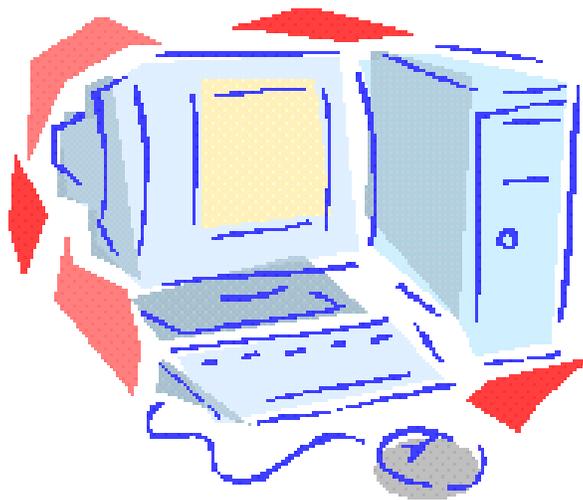
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Acknowledgements

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District Mission Statement

The Stanton Community Schools exist to create, foster, and provide a positive learning environment in which all students can become responsible and productive members of the United States of America through academic, physical, social, vocational, technical, and emotional growth.

Goals

The students will:

1. Engage in a 21st century learning environment by
   a. Exceeding learning standards in the core curricular areas of Language Arts, Mathematics, Science and Social Science.
   b. Acquiring lifelong learning skills such as self-direction, adaptability, and higher-order thinking/problem solving. Also, included in these learning skills are researching information & reporting results, developing inter-personal & cross cultural relationships, and utilizing the student's curiosity & creativity.
   c. Utilizing learning technologies to explore & investigate concepts; access, manage, analyze, & synthesize information; and communicate & produce quality products.
2. Be prepared to compete in a global society following graduation.
3. Develop respect and a positive attitude for themselves and others.
4. Assume civic responsibility as a member of a family, community, nation, and world.
5. Develop an appreciation for the visual and performing arts.
6. Be provided with vocational and technological skills.
7. Have the knowledge and skills needed to maintain healthy and fit bodies throughout their lives.
8. Be provided an environment that stimulates emotional growth.
9. Assume responsibility and ownership for their education.

Stanton Technology Mission Statement

Students completing Technology curriculum will be able to apply technology in the real world. The student will develop proficiency in a variety of computer and technology applications.

Technology Curriculum Guides

Middle School Keyboarding

Purpose Statement   The student will demonstrate good keyboarding techniques and procedures as well as utilize a variety of computer applications to personal and workplace projects.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome T.KEY.1   Students will demonstrate proper keyboarding techniques necessary to operate a keyboard by touch. (LA 8.1.1, 8.1.3, MA 8.1.1)

T.KEY.1.1	Key alphabetic keyboard by touch.
T.KEY.1.2	Key punctuation marks by touch.
T.KEY.1.3	Key number row by touch.
T.KEY.1.4	Use service and computer keys.
T.KEY.1.5	Key numeric keypad by touch.

Outcome T.KEY.2   Students will demonstrate an understanding of the operation of computer systems. (LA 8.4.1, 8.4.2)

T.KEY.2.1	Demonstrate proper procedures for logging on and logging off.
T.KEY.2.2	Save files to a primary source and to a secondary source.
T.KEY.2.3	Distinguish between acceptable and unacceptable use of computer and Internet policies.

Outcome T.KEY.3   Students will utilize operating system software and applications software to perform a variety of tasks. (SCI 8.1.3 MA 8.1.1 LA 8.2.1, 8.2.2 8.4.1)

T.KEY.3.1	Create reports, letters, memos, and tables with tabs using word processing software.
T.KEY.3.2	Utilize spreadsheet software to create simple table using SUM, AVERAGE and charts.
T.KEY.3.3	Complete presentation using presentation software.
T.KEY.3.4	Complete a simple project using desktop publishing software.
T.KEY.3.5	Search Internet using simple and advanced search techniques.

Recovery Keyboarding Curriculum

(Ninth grade students <u>without</u> keyboarding skills or upperclassmen <u>without</u> keyboarding skills.)

*This course will count as their Computer Applications course requirement.

Purpose Statement   The student will demonstrate good keyboarding techniques and procedures as well as utilize a variety of computer applications to personal and workplace projects.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome T.REK.1   Students will demonstrate proper keyboarding techniques necessary to operate a keyboard by touch. (LA 10.1.1, 10.1.3 MA 11.1.1)

T.REK.1.1	Key alphabetic keyboard by touch.
T.REK.1.2	Key punctuation marks by touch.
T.REK.1.3	Key number row by touch.
T.REK.1.4	Use service and computer keys.
T.REK.1.5	Key numeric keypad by touch.

Outcome T.REK.2   Students will demonstrate an understanding of the operation of computer systems. (SCI 12.1.3)

T.REK.2.1	Define terms and identify workstation components.
T.REK.2.2	Analyze the ways in which a computer processes information.
T.REK.2.3	Demonstrate appropriate operation of computer equipment.

Outcome T.REK.3 Students will utilize operating system software and applications software to perform a variety of tasks. (LA 10.1.1, 10.1.6, 10.2.1, 10.2.2 MA 11.1.1 SCI 12.1.3)

T.REK.3.1 Define terms.
T.REK.3.2 Efficiently utilize the operating system.
T.REK.3.3 Create a variety of documents utilizing word processing software.
T.REK.3.4 Create an organized collection of information using a database program.
T.REK.3.5 Utilize spreadsheet software to organize and analyze data.
T.REK.3.6 Complete a project using presentation software.
T.REK.3.7 Complete a project using desktop publishing software.
T.REK.3.8 Appropriate and efficient use of Internet for research purposes.
T.REK.3.9 Create a web page and display using a browser.

Outcome T.REK.4 Students will research requirements for a career using technology skills, opportunities that exist for employment and evaluate their interests that career. (SCI 12.1.3, LA 10.1.6, 10.4.1)

T.REK.4.1 Students will explain how skills and worker requirements have been affected by technology.
T.REK.4.2 Students will research and report on technology careers and current and predicted needs.

Outcome T.REK.5 Students will identify and demonstrate ethical practices in using of technology. (LA 10.4.2)

T.REK.5.1 Define terms.
T.REK.5.2 Differentiate between ethical and unethical practices.

Computer Applications I

This course is required for graduation.

Purpose Statement   The student will utilize a variety of computer applications to complete personal and workplace projects.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome T.CAI.1   Students will demonstrate an understanding of the operation of computer systems. (LA 10.1.1, 10.1.6)

T.CAI.1.1	Define terms and identify workstation components.
T.CAI.1.2	Analyze the ways in which a computer processes information.
T.CAI.1.3	Demonstrate appropriate operation of computer equipment.

Outcome T.CAI.2   Students will utilize operating system software and applications software to perform a variety of tasks. (SCI 12.1.3, LA 10.1.1, 10.1.6, 10.2.2, MA 11.1.1)

T.CAI.2.1	Define terms.
T.CAI.2.2	Efficiently utilize the operating system.
T.CAI.2.3	Create a variety of documents utilizing word processing software.
T.CAI.2.4	Create an organized collection of information using a database program.
T.CAI.2.5	Utilize spreadsheet software to organize and analyze data.
T.CAI.2.6	Complete a project using presentation software.
T.CAI.2.7	Complete a project using desktop publishing software.
T.CAI.2.8	Appropriate and efficient use of Internet for research purposes.
T.CAI.2.9	Create a web page and display using a browser.

Outcome T.CAI.3   Students will research requirements for a career using technology skills, opportunities that exist for employment and evaluate their interests that career. (SCI 12.1.3, LA 10.1.6, 10.4.1)

      T.CAI.3.1   Students will explain how skills and worker requirements have been affected by technology.
      T.CAI.3.2   Students will research and report on technology careers and current and predicted needs.

Outcome T.CAI.4   Students will identify and demonstrate ethical practices in using of technology. (LA 10.4.1 10.4.2)

      T.CAI.4.1   Define terms.
      T.CAI.4.2   Differentiate between ethical and unethical practices.
      T.CAI.4.3   Identify their digital footprint.

Computer Applications II

This course is required for graduation. Prerequisite is Computer Applications I.

Purpose Statement   The student will develop proficiency in a variety of computer and technology applications and explore related career fields.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome T. CAII.1   Students will use advanced features of common application software. (SCI 12.1.3, MA 11.1.1, LA 10.2.1)

T. CAII.1.1   Explore advanced features of spreadsheet software.
T. CAII.1.2   Explore advanced features of word processing software.
T. CAII.1.3   Explore advanced features of database software.

Outcome T. CAII.2   Students will identify various operating systems, environments and utilities. (SCI 12.1.3, LA 10.1.6)

T. CAII.2.1   Select operating systems appropriate for specific hardware, software, and tasks.
T. CAII.2.2   Compare and contrast the functions and limitations of different operating systems, environments, features, software and utilities.

Outcome T. CAII.3   Students will perform tasks related to the creation, installation, management, and security of a network system. (SCI 12.1.3)

T. CAII.3.1   Students will define networking terminology as it relates to a network environment.
T. CAII.3.2   Identify network devices, including network connectivity hardware, and describe its functions.
T. CAII.3.3   Distinguish between local area network and wide area network topologies, protocols and wireless technologies.
T. CAII.3.4   Diagnose and repair problems on the network.
T. CAII.3.5   Install and configure network application software, plug-ins, printing, file system management, login scripts, and effective network security.

Outcome T. CAII.4   Students will identify and demonstrate ethical digital citizenship practices. (LA 10.4.1, 10.4.2)

    T. CAII.4.1   Examine and adhere to acceptable uses of computer application software and hardware.
    T. CAII.4.2   Discuss federal and state laws pertaining to computer use (e.g., computer crime and abuse, copyright infringement, plagiarism).
    T. CAII.4.3   Follow safety and security policies (e.g., school acceptable use polity, web page policy, student information policy).

Outcome T. CAII.5   Students will use a variety of media to communicate information and ideas effectively. (LA 10.1.1, 10.1.6,10.2.1, 10.2.2 10.4.1)

    T. CAII.5.1   Develop and deliver interactive, multimedia projects.
    T. CAII.5.2   Assess and explain web site validity and credibility of content.
    T. CAII.5.2   Demonstrate and apply knowledge of web page development.

Outcome T. CAII.6   Students will design, develop, test, and implement computer programs. (SCI 12.1.3, LA 10.4.2 MA 11.1.1)

    T. CAII.6.1   Identify and explain the function of common programming structures.
    T. CAII.6.2   Test and debug code.
    T. CAII.6.3   Perform quality assurance tasks to produce effective programs.
    T. CAII.6.4   Describe common tasks, career paths, and educational requirements in the field of computer programming.

Outcome T. CAII.7   Students will explore career paths and educational requirements in the field of computer technology. (SCI 12.1.3, LA 10.1.6)

    T. CAII.7.1   Identify and recognize the benefits of industry certifications in the various fields.
    T. CAII.7.2   Discuss common tasks, career paths, and educational requirements in the areas of word processing, spreadsheet, database, desktop publishing, presentation and electronic communication.

PC Systems Maintenance and Repair

This course is an elective. Prerequisite is instructor approval.

Purpose Statement   The students will become proficient in trouble shooting and repairing common hardware and software problems.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska State standards.

**Outcome
T-PCSMR.1**   Characterize terms and concepts of computer systems. (LA 12.1.1, 12.1.3, 12.1.6, MA 12.1.1)

T-PCSMR.1.1 Describe the different computer system, programs, and computer types.
T-PCSMR.1.2 Identify and navigate the Windows desktop environment.
T-PCSMR.1.3 Explain the basic functions performed by the different hardware components of a PC.
T-PCSMR.1.4 Understand the actions of the boot sequence that initializes and tests system hardware.
T-PCSMR.1.5 Distinguish the features and functions of hard drives, sound cards, motherboards, RAM, optical drives, processors, wireless cards, network interface card etc.
T-PCSMR.1.6 Identify common peripheral ports, cabling, and connectors.

**Outcome
T-PCSMR.2**   Perform procedures for installing and configuring system components and peripheral devices. (SCI 12.1.3)

T-PCSMR.2.1 Prepare the hard drive for OS installation.
T-PCSMR.2.2 Install drives and cards.
T-PCSMR.2.3 Format and Partition the hard drive.
T-PCSMR.2.4 Install Windows OS and Linux OS.
T-PCSMR.2.5 Locate and install appropriate hardware bios and updates.

Outcome
T-PCSMR.3   Relate the operating system's functions and major system files.
                     (LA 12.1.6, 12.2.1,12.2.2, 12.4.1)

    T-PCSMR.3.1 Understand the advantages and disadvantages of different
                            Windows operating systems.
    T-PCSMR.3.2 Describe and demonstrate how the registry works.
    T-PCSMR.3.3 Manage and organize drives and files in Windows.
    T-PCSMR.3.3 Complete procedures for loading/adding and configuring device
                            drivers.
    T-PCSMR.3.4 Employ the Device Manager to see missing drivers.
    T-PCSMR.3.5 Explore the Windows CD to install drivers.
    T-PCSMR.3.6 Search the manufacturers' website to download and install device
                            drivers.

Outcome
T-PCSMR.4   Recognize common symptoms/problems and determine how to
                     resolve them. (SCI 12.1.3, LA 12.4.1)

    T-PCSMR.4.1 Perform preventative maintenance of computer components.
    T-PCSMR.4.2 Run antivirus and software utilities to maintain system integrity.
    T-PCSMR.4.3 Isolate hardware problems from software problems.
    T-PCSMR.4.4 Recognize system error messages and their remedies.
    T-PCSMR.4.5 Work as a member of a team to complete class projects.
    T-PCSMR.4.6 Disassemble and assemble a desktop computer.
    T-PCSMR.4.7 Evaluate each member of the team.

Outcome
T-PCSMR.5   Students will demonstrate digital citizenship by applying ethical
                     practice and behaviors (LA 12.4.1, 12.4.2)

    T-PCSMR.4.1 Demonstrate a positive online presence.
    T-PCSMR.4.2 Demonstrate their digital footprint.
    T-PCSMR.4.3 Identify ways your identity can be stolen.
    T-PCSMR.4.4 Identify online communication netiquette
    T-PCSMR.4.5 Evaluate for fraudulent online communication.

PC System Maintenance and Repair Lab

This course is the Lab experience for PC Systems Maintenance and Repair.

Purpose Statement   The students will utilize the knowledge from PCSMR in a lab on environment.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome
T-PCSMRL.1   Characterize terms and concepts of computer systems. (LA 12.1.1, 12.1.6, 12.2.1)

T-PCSMRL1.1 Describe the types of physical memory housed on the system board and expansion cards.
T-PCSMRL1.2 Explain how data is stored on a flash drive.
T-PCSMRL1.3 Identify various types of hard drives and their characteristics.
T-PCSMRL1.4 Explain how to protect self, hardware, and software while troubleshooting.
T-PCSMRL1.5 Describe the fundamental workings of Multimedia technology.
T-PCSMRL1.6 Contrast features of different operating systems.

Outcome
T-PCSMRL.2   Describe the functions performed by the different hardware components of a PC. (SCI 12.1.3, LA 12.2.1, 12.2.2)

T-PCSMRL.2.1 Identify the functions performed by different hardware components of a microcomputer.
T-PCSMRL.2.2 Explain in detail what happens when the computer first turns on.
T-PCSMRL.2.3 Perform hardware and software protection schemes.
T-PCSMRL.2.4 Describe how the system board transports data, and coordinates the timing and execution of processing tasks.
T-PCSMRL.2.5 Distinguish how XP and Windows Vista, 8 uses memory.
T-PCSMRL.2.6 Verbalize the operation of a hard drive.
T-PCSMRL.2.7 Explain the operation of common computer peripherals.
T-PCSMRL.2.8 Demonstrate how a computer system can be protected from power fluctuations.

Outcome

T-PCSMRL.3   Assemble and disassemble a computer system. (SCI 12.1.3, LA 12.1.6)

T-PCSMRL.3.1 Identify physical components on a system board.
T-PCSMRL.3.2 Set the CPU and system frequency for the system board.
T-PCSMRL.3.3 Perform memory upgrades on a computer.
T-PCSMRL.3.4 Install or replace a removable drive.
T-PCSMRL.3.5 Take a computer apart and put it back together.
T-PCSMRL.3.6 Identify and label peripheral ports on a desktop and laptop.
T-PCSMRL.3.7 Identify and label cables in a desktop computer.
T-PCSMRL.3.8 Identify and label connectors on a component and power supply.

Outcome

T-PCSMRL.4   Perform procedures for installing/configuring system components and peripheral devices. (SCI 12.1.3)

T-PCSMRL.4.1 Use Windows commands to manage a disk.
T-PCSMRL.4.2 Optimize hard drive performance.
T-PCSMRL.4.3 Configure and install a hard drive.
T-PCSMRL.4.4 Employ standard resources on a computer system when installing add-on devices.
T-PCSMRL.4.5 Diagnose and replace a defective power supply.

Outcome

T-PCSMRL.5   Install operating systems and relate the OS's functions and major system files. (SCI 12.1.3, LA 12.4.1, MA11.1.1)

T-PCSMRL.5.1 Install and customize a Windows OS.
T-PCSMRL.5.2 Manage Windows Resources.
T-PCSMRL.5.3 Optimize Windows performance.
T-PCSMRL.5.4 Complete procedures for loading/adding and configuring device drivers.
T-PCSMRL.5.5 Resolve resource conflicts.
T-PCSMRL.5.6 Install a new device on a computer.
T-PCSMRL.5.7 Support Plug and Play devices.

Outcome

T-PCSMRL.6   Recognize common failure symptoms/problems and determine
                   how to resolve them. (SCI 12.1.3, LA 12.1.6)

T-PCSMRL.6.1 Use various types of diagnostic software.
T-PCSMRL.6.2 Recover lost data on a mass storage device.
T-PCSMRL.6.3 Perform hard drive troubleshooting skills.
T-PCSMRL.6.4 Use tools needed to support personal computers.
T-PCSMRL.6.5 Isolate computer problems and devise a course of action.
T-PCSMRL.6.6 Support Multimedia Devices.
T-PCSMRL.6.7 Determine voltage and power output of a power supply.

Digital Media

This course is an elective.

Purpose Statement   The student will demonstrate how to use technology to effectively communicate a message in a personal, educational, and professional setting.

Crosswalk to Nebraska Academic Standards   The outcomes of this course address the following Nebraska Standards.

Outcome T-DM.1   Create movies to share with an audience. (SCI 12.1.3, 12.2.1, 12.4.1)

T-DM.1.1	Capture video using a digital video camera.
T-DM.1.2	Download the video to a computer.
T-DM.1.3	Incorporate the finished video into a project or presentation.
T-DM.1.4	Render the finished video to a camera, memory card, CD-R or DVD.
T-DM.1.5	Use Adobe Premiere and Premiere Elements to edit video.
T-DM.1.6	Cut and trim video.
T-DM.1.7	Add effects such as titles, transitions and sound effects.

Outcome T-DM.2   Shoot video with correct technique. (SCI 12.3.1, LA 12.1.5)

T-DM.2.1	Students will compose shots using the rule of thirds.
T-DM.2.2	Students will create videos using the seven basic shot types.
T-DM.2.3	Incorporate good audio and lighting techniques.
T-DM.2.4	Students will be able to stabilize audio levels.
T-DM.2.5	Students will be able to light a scene using 3-point lighting, reflectors and shading.
T-DM.2.6	Create storyboards to plan shooting and scene order.

Outcome T-DM.3   Design and manipulate digital media for film. (LA 12.4.1, 12.4.2)

T-DM.3.1	Capture video on a green screen background.
T-DM.3.2	Incorporate motion and still backgrounds.
T-DM.3.3	Edit music and sound effects for Appropriate use copyright law.
T-DM.3.4	Incorporate video effects.
T-DM.3.5	Overlay multiple videos.

Outcome T-DM.4 Utilize Copyright Laws and Fair Use guidelines (LA 12.4.1, 12.4.2)

  T-DM.4.1 Demonstrate copyright laws as pertaining to video and audio.
  T-DM.4.2 Define Fair Use for education in video and audio presentations.
  T-DM.4.3 Create a presentation for Fair Use and Copyright Laws
  T-DM.4.4 Search online for examples of Fair Use and Copyright Laws for audio and video.