

Why Use Information Technology for Learning?

Shelburne Community School

What is information technology?

A simple explanation is any technology that allows for the access, creation, management, and communication of information.

Today, computers are considered the primary example of technology. Yet information technology also includes video, instructional TV, telephones, calculators, and music synthesis.

What is the vision of the Shelburne Community School on the use of information technology?

In the school's strategic and information technology plans, a vision exists that ALL students will have access to information technologies. In this vision, access implies that information technologies are a set of tools that children use in the support of their learning.

How does information technology relate to children's lives at the Shelburne Community School?

The world of a child is woven with a wide array of technologies. Information technology is a part of their lives and will continue to be a part of their lives. Children must understand the wise use of information technologies. They should recognize the potential for positive and negative uses of any technology. Schools have a vital role in the development of this understanding.

Why use information technology at an early age?

Children develop their general values and beliefs at an early age, this includes the Kindergarten, 1st, and 2nd grade years. Exposure to information technologies coupled with positive modeling and guidance by adults provides a foundation for future learning.



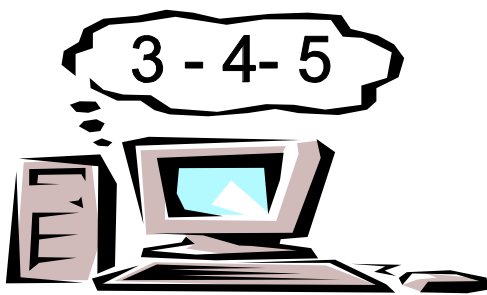
How do the K, 1st and 2nd grade teams use information technology?

- Students are introduced to basic computer skills such as using a mouse and proper care of equipment.
- Writing is strengthened and remediated through word processing.
- Reading skills are reinforced including pre-reading, sound to letter correspondence, letter recognition and reading comprehension assessment programs.
- Math skills are reinforced with computer assisted instruction including counting, grouping, addition and subtraction.
- Enrichment with science and research occur through the guided use

K-1-2

of the Internet and online encyclopedias.

- Foreign language is reinforced with the use of a French CD-ROM program.
- Multimedia computer programs enrich ideas through multiple senses, inspire creative thinking and imaginative processes via the use of drawing/painting programs and art history CD-ROM's.
- MIDI technology (electronic piano keyboards) and computers enhance the learning of music composition and history. Students learn to create and share music with other students at SCS and outside the school via interactive video and the Internet.
- Video tapes and computer programs help motivate some students to understand challenging activities.
- Adaptive technologies assist students with physical disabilities such as Braille writers, text-to-speech computer programs, and audio amplification devices.

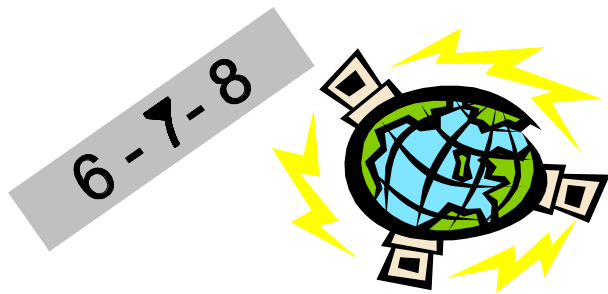


How do the 3rd, 4th and 5th grade teams use information technology?

- Writing is strengthened and remediated through word processing. Desktop publishing is introduced in creating documents that support units of

study.

- Presentation of projects are done via the use of multimedia programs including graphics, audio, and simple animations.
- Image capturing devices, such as still digital cameras and scanners, are used for research projects.
- Keyboarding skills are introduced.
- Math skills are reinforced with computer assisted instruction including the use of simple spreadsheet and graphing programs.
- Enrichment with science and research occur through the guided use of the Internet and online encyclopedias.
- Multimedia computer programs enrich ideas through multiple senses, inspire creative thinking and imaginative processes via the use of drawing/painting programs and art history CD-ROM's.
- In music, research, reports and advanced theory software are used in addition to MIDI technology (electronic keyboards) for composing and performance purposes. The Internet is used to review and critique other student compositions.
- Presentations are recorded via the use of video tape.
- Adaptive technologies assist students with physical disabilities such as Braille writers, text-to-speech computer programs, and audio amplification devices.



How do the 6th, 7th and 8th grade teams use information technology?

- Students integrate the use of information technology in their content learning areas.
- All written work is completed via the use of a word processor or desktop publishing program.
- Math, science and social studies utilize spreadsheet and database applications to collect, manipulate, and display data.
- Research, collaboration, communication, and presentation skills are strengthened through the use of multimedia presentation software and video display devices (such as through computer-to-TV signal converters or LCD projector-to-computer systems).
- Digital cameras and scanners are used to capture images for presentations and projects in all subject areas.
- Graphic design is supported in the Library/Media Center lab with large groups.
- Information gathering skills and discrimination between accurate and non-accurate data are reinforced via Internet work.
- Adaptive technologies assist students with physical disabilities such as Braille writers, text-to-speech computer programs, and audio amplification devices.
- Foreign language is reinforced with the use of a French CD-ROM program.

gram.

What do outside sources say?

- From the Vermont Institute for Science, Math, and Technology:

“Technology in the classroom is not a game or an ‘add-on’. Technology brings essential tools that students need to learn skills and gain knowledge. Students today - even those in primary grades - use technology to collect, share, and analyze information in ways that were impossible 10 years ago.” (1)

- From the Harvard Graduate School of Education, Educational Technology Center (ETC), on the importance of computer technology for all students (K-12):

“... the work of ETC is motivated by the potential of technology to provide powerful interactive learning environments and to present dynamic visual representations that can help students construct their own mental models of abstract or inaccessible concepts and phenomena. By promoting deeper understanding through active inquiry, this way of using technology expands the meaning of ‘educational productivity’.” (2)

- From an article written by Megan Murray and Marlene Kliman, Education Research Collaborative in Science and Mathematics for the Eisenhower National Clearinghouse on the impact of computer programs on girls (K - 4):

“Why should educators care about the development of computer games? Because these games have the potential to significantly affect girls' experience with and attitudes toward technology. Girls remain at a serious disadvantage to boys in their relationship with technology. Although access to computers at home is becoming more equal (Vail, 1997), girls enter school with less technological experience, use computers less outside of school, and show consistently less confidence in their computer abilities than boys.” (3)

- From the “National Association for the Education of Young Children” (NAEYC) Position Statement: Technology and young children - Ages three through eight:

“The potential benefits of technology for young children's learning and development are well documented (Wright & Shade, 1994). As technology becomes easier to use and early childhood software proliferates, young children's use of technology becomes more widespread. Therefore, early childhood educators have a responsibility to critically examine the impact of technology on children and be prepared to use technology to benefit children.” (4)



References

- (1) Vermont Institute for Science, Math, and Technology (1998). *A VISMT parent and community guide. Technology in the classroom: Computers and instruction in Vermont's schools.* Montpelier, VT: Vermont Department of Education. Also available online: <http://www.vismt.org/pub/TechGuide.pdf>
- (2) Harvard Graduate School [1999]. *Making Sense of the future.* Retrieved April 2000, from the World Wide Web: http://gseweb.harvard.edu/~etc/materials/making_sense.html
- (3) Kliman, M., Murray, M. (1999). *Beyond point and click: The search for gender equity in computer games.* Retrieved April, 2000, from the World Wide Web: <http://www.enc.org/focus/topics/edtech/articles/a04/index.htm>
- (4) National Association for the Education of Young Children (1996, September). “NAEYC Position Statement: Technology and young children - Ages three through eight.” *Young Children.* p. 11

For questions, contact the Shelburne Community School at: (802) 985-3331 or visit our Internet webpage at: <http://shelburne.k12.vt.us>

Compiled by Greg Thweatt with assistance from the faculty and staff of the Shelburne Community School.
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