

Standard 2 Information Systems

Information Systems

Students will: use access, generate, process, and transfer information using appropriate technologies.

Key Ideas:

1. Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.
2. Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.
3. Information technology can have positive and negative impacts on society, depending upon how it is used.

Key Idea: 1. Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.

Performance Indicators--Students will:

Elementary

- use a variety of equipment and software packages to enter, process, display, and communicate information in different forms using text, tables, pictures, and sound
- telecommunicate a message to a distant location with teacher help
- access needed information from printed media, electronic data bases, and community resources

Intermediate

- use a range of equipment and software to integrate several forms of information in order to create good quality audio, video, graphic, and text-based presentations
- use spreadsheets and data-base software to collect, process, display, and analyze information. Students access needed information from electronic data bases and on-line telecommunication services
- systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals
- collect data from probes to measure events and phenomena
- use simple modeling programs to make predictions

Commencement

- understand and use the more advanced features of word processing, spreadsheets, and data-base software
- prepare multimedia presentations demonstrating a clear sense of audience and purpose
- access, select, collate, and analyze information obtained from a wide range of sources such as research data bases, foundations, organizations, national libraries, and electronic communication networks, including the Internet
- students receive news reports from abroad and work in groups to produce newspapers reflecting the perspectives of different countries
- utilize electronic networks to share information
- model solutions to a range of problems in mathematics, science, and technology using

Key Idea: 2. Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.

Performance Indicators--Students will:

Elementary	Intermediate	Commencement
<ul style="list-style-type: none"> • describe the uses of information systems in homes, schools, and businesses • understand that computers are used to store personal information • demonstrate ability to evaluate information 	<ul style="list-style-type: none"> • understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry • identify advantages and limitations of data-handling programs and graphics programs • understand why electronically stored personal information has greater potential for misuse than records kept in conventional form 	<ul style="list-style-type: none"> • explain the impact of the use and abuse of electronically generated information on individuals and families • evaluate software packages relative to their suitability to a particular application and their ease of use • discuss the ethical and social issues raised by the use and abuse of information systems

Key Idea: 3. Information technology can have positive and negative impacts on society, depending upon how it is used.

Performance Indicators--Students will:

Elementary	Intermediate	Commencement
<ul style="list-style-type: none"> • describe the uses of information systems in homes, schools, and businesses • demonstrate ability to evaluate information 	<ul style="list-style-type: none"> • use graphical, statistical, and presentation software to presents project to fellow classmates • describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community • explain the impact of the use and abuse of electronically generated information on individuals and families 	<ul style="list-style-type: none"> • work with a virtual community to conduct a project or solve a problem using the network • discuss how applications of information technology can address some major global problems and issues • discuss the environmental, ethical, moral, and social issues raised by the use and abuse of information technology