Standard 2—Information Systems
Elementary

Information Systems

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

Students:
- ¥- 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. •

This is evident, for example, when students:
- s• use the newspaper or magazine index in a library to find information on a particular topic.
- s• invite local experts to the school to share their expertise.

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

Students:
- ¥- 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.

This is evident, for example, when students:
- s• look for differences among species of bugs collected on the school grounds, and classify them according to preferred habitat.

> **Key ideas are identified by numbers (1).**
> **Performance indicators are identified by bullets (•).**
> **Sample tasks are identified by triangles (s).**

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

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

Students:
- ¥- describe the uses of information systems in homes and schools.
- ¥- demonstrate ability to evaluate information critically.

Standard 2ÑInformation Systems
Intermediate

Information Systems

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

Students:
- ¥- 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.

This is evident, for example, when students:
- s• compose letters on a word processor and send them to representatives of industry, governmental agencies, museums, or laboratories seeking information pertaining to a student project.
- s• acquire data from weather stations.
- s• use a software package, such as Science Tool Kit, to monitor the acceleration of a model car traveling down a given distance on a ramp.
- s• use computer software to model how plants grow plants under different conditions.

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

Students:
- ¥- 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.•

> Key ideas are identified by numbers (1).•
> Performance indicators are identified by bullets (¥).•
> Sample tasks are identified by triangles (s   ).•

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

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

Students:
- ¥- 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.

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

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

Students:
- ¥ 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.