

# **COMPUTER SCIENCE**

## **High School Standards**

### **CONTENT STANDARD 1**

#### **1. Components Of A Computer System**

##### **Performance Indicators**

- 1.HS.1 Demonstrate the ability to store data on a variety of storage media, i.e., floppy, hard drive, Digital Audio Tape (DAT), removable high storage cartridge.
- 1.HS.2 Demonstrate an understanding of computer components and their functions.
- 1.HS.3 Recognize the difference between stand-alone systems, local area network (LAN) and wide area network (WAN)
- 1.HS.4 Demonstrate correct disassembly and assembly of a computer system and/or vice versa

### **CONTENT STANDARD 2**

#### **2. Keyboarding Techniques**

##### **Performance Indicators**

- 2.HS.1 Not Applicable

### **CONTENT STANDARD 3**

#### **3. Social And Ethical Issues**

##### **Performance Indicators**

- 3.HS.1 Exploring the features and uses computerized desktop publishing, students will design i.e., brochures, newsletter, advertisements and analyze how different publishing techniques affects readers' overall reaction to the created document
- 3.HS.2 Investigate research, reports, and editorials on social technological issues regarding i.e. software and hardware piracy, virus, government, military, education, business personal uses

- 3.HS.3 Read, discuss and write about the social ramifications of copyright laws applying to i.e., software user licenses, books, and videos
- 3.HS.4 Elaborate research on privacy, adaptable use policies, etc. how they compare in school, business, government, industry and on the World Wide Web
- 3.HS.5 Listen and inter-act with guest speakers involving technology applications and issues
- 3.HS.6 Give written and/or oral critiques of speeches to supplement the learning activity

## **CONTENT STANDARD 4**

### **4. Software Applications**

#### **Performance Indicators**

- 4.HS.1 Demonstrate the ability to access network resources and data files.
- 4.HS.2 Apply skills to effectively operate commonly used (industry standard) operating systems
- 4.HS.3 Explain how computer applications can be used in a variety of situations i.e., learning, business, government, personal, etc.
- 4.HS.4 Develop and promote an appreciation for the possibilities of distance learning (learning activities that go beyond the confines of the traditional classroom)
- 4.HS.5 Demonstrate the ability to access instructions from a remote school site or source
- 4.HS.6 Prepare digital storage media by formatting or initializing
- 4.HS.7 Comprehend the rational and procedures for performing backups i.e., disk, file, hard drive.
- 4.HS.8 Create and collect digital files i.e., document files, graphic files and audio files
- 4.HS.9 Demonstrate an understanding of computer systems, data input and output

- 4.HS.10 Use technology to experiment with the manipulation of data, graphic and audio files to determine how the general public will react to projects students create/generate
- 4.HS.11 Name, relate, operate, illustrate, apply and analyze the use of various operating systems, and applications for development and retrieval of documents and multimedia(presentation) projects
- 4.HS.12 Plan, research, composes, edits, and evaluates projects produced with business and personal productivity programs i.e., word processors, database, spreadsheet, desktop publishing, presentation, multimedia, web publishing, drawing, digital imaging, animation, etc.
- 4.HS.13 Use tutorial software to improve learning
- 4.HS.14 Use computer simulations for a meaningful enhancement of desired learning
- 4.HS.15 Demonstrate how technology can be integrated into other content areas to reinforce the use of the technology as a practical learning tool
- 4.HS.16 Develop and maintain web pages for school as a means of making information available for local and global distribution

## **CONTENT STANDARD 5**

### **5. Problem Solving Skills**

#### **Performance Indicators**

- 5.HS.1 Provide software resources that will allow students to evaluate the strengths and weaknesses of commercial programs verses student developed programs.
- 5.HS.2 Demonstrate knowledge to execute troubleshooting techniques related to i.e., file formats, data type, compatibility and hardware
- 5.HS.3 Demonstrate an understanding to use appropriate hardware and software to integrate learning in Computer Education and other content areas.
- 5.HS.4 Evaluate computer documents for accuracy, validity, clarity, mail ability etc.
- 5.HS.5 Analyze, discuss and resolve problems caused by i.e., software, hardware, human error

- 5.HS.6 Use simulations and problem-solving software
- 5.HS.7 Relate computer use to real-life, problem solving situations at the level of students' understanding
- 5.HS.8 Justify consumer decisions regarding hardware and software purchases
- 5.HS.9 Identify routine procedures involving daily care, proper usage and trouble shooting techniques to reduce the amount of unnecessary down time
- 5.HS.10 Analyze the accuracy and usefulness of retrieve information

## **CONTENT STANDARD 6**

### **6. Historical Perspectives On Technology**

#### **Performance Indicator**

- 6.HS.1 Explore modern technology and its effects on society both locally and globally

## **CONTENT STANDARD 7**

### **7. Jobs Related To Computers**

#### **Performance Indicators**

- 7.HS.1 Prepare for careers that use technological skills
- 7.HS.2 Demonstrate positive work habits (i.e., reliability, responsibility, cooperation and willingness to work) while producing timely documents with accuracy, pride, and conciseness.
- 7.HS.3 Develop an understanding and appreciation of careers that require technology skills
- 7.HS.4 Compile listing of careers requiring computer skills
- 7.HS.5 Communicate ideas to justify position, procedures and polices that in turns promotes leadership skills
- 7.HS.6 Contribute to group effort to promote team spirit of cooperation and leadership training.
- 7.HS.7 Rationalize the significance of technology for daily living life-long learning and employment possibilities

- 7.HS.8 Rationalize ideas verbally and/or in writing, to justify position statements, policies and procedures to develop and promote leadership skills
- 7.HS.9 Understand the importance and types of academic courses prerequisite required for a variety of computer-careers
- 7.HS.10 Apply technology to research career options, requirements availability and income levels

## **CONTENT STANDARD 8**

### **8. Networking Concepts**

#### **Performance Indicators**

- 8.HS.1 Demonstrate a basic understanding of network components, network types, communications components and software
- 8.HS.2 Apply data processing skills necessary to access remote network resources i.e., file server, printer, scanner, E-mail (electronic mail) www (World-Wide-Web -- Internet)
- 8.HS.3 Navigate on the information super highway (Internet) for real time communication and remote database access
- 8.HS.4 Using on-line services, locate and acquire desired information
- 8.HS.5 Complete research projects through data collection accessed from the information super highway (Internet)
- 8.HS.6 Identify E-mail as a viable alternative to the traditional postal system
- 8.HS.7 Demonstrate ability in the use of different connectivity procedures

## **CONTENT STANDARD 9**

### **9. Programming Concepts**

#### **Performance Indicators**

- 9.HS.1 Develop a basic understanding of computer program languages, i.e., Basic, Pascal
- 9.HS.2 Develop simple programs using, i.e., Basic, Pascal
- 9.HS.3 Construct a flow chart, illustrating data processing from input to output phase(s) and rationalize the schematics, components, etc.