

# Massachusetts Recommended PreK-12 Instructional Technology Standards

This document is an informational reference guide, created by Sun Associates, intended to summarize the recommended indicators and standards that are provided in full by the Massachusetts Department of Education, accessible through <http://www.doe.mass.edu/edtech/standards.html>. Although specific phrasing from the document is used in this summary, it should not, at any time, be considered a replacement for the actual document.

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## Instructional Technology Standards

**Standard 1. Demonstrate proficiency in the use of computers and applications as well as an understanding of concepts underlying hardware, software, and connectivity.**

**Standard 2. Demonstrate responsible use of technology and an understanding of ethics and safety issues in using electronic media.**

**Standard 3. Demonstrate ability to use technology for research, problem-solving, and communication. Students locate, evaluate, collect, and process information from a variety of electronic sources. Students use telecommunications and other media to interact or collaborate with peers, experts, and other audiences.**

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## Technology Performance Indicators

### Pre K - 4 - Exploratory Concepts and Skills

In the elementary grades, technology should not replace the manipulatives, pencil-and-paper, and other manual methods through which children acquire basic skills. Instead of listing "performance indicators," as in the two higher grade spans, the competencies listed for PreK-4 are "exploratory concepts and skills." These are skills that will be introduced in the elementary grades and mastered in middle and high school.

#### Specific tools mentioned:

- Multimedia encyclopedias or teacher-previewed web sites
  - Interactive books
  - Graphic organizers and writing assistants
  - Mathematical and scientific tools
  - Multi-sensory software
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## **Grades 5 - 8 Performance Indicators**

Students should demonstrate basic to intermediate-level competencies in using several applications, and they should be able to select the appropriate tool for a task. They should understand the concepts of networking, and be able to identify various components of a computer system. They will be expected to practice good file management skills and to operate peripheral equipment independently. Students will have had ample opportunity to apply technology tools for research, problem-solving, and communication across all curriculum areas.

### **Specific tools mentioned:**

- Word processing
- Database
- Spreadsheet
- Browser
- Multimedia presentation software
- Graphics software
- Desktop-published reports
- Other electronic media

### **Internet skills mentioned:**

- Effective search strategies
- Use multiple sites, and validate those sites
- Know when to look for information offline
- Understand legal, ethical, and safety issues concerning the use of e-mail and the Internet

## **Grades 9 - 12 Performance Indicators**

Students should demonstrate more advanced levels of proficiency in their use of technology. They should gain more experience with hardware, applications, and file management skills, such as converting data from one file format to another, link data between applications and resolve error messages. Students will develop an appreciation for the capabilities of technology resources toward lifelong learning.

### **Specific tools mentioned:**

- More advanced capabilities in database and spreadsheet
- Specialized tools for problem solving: i.e. simulation software, geographic information systems, computer-aided design