

Vineland Board of Education  
Technology Plan  
July 1, 2007 through June 30, 2010

**HELP - Goals and Objectives**

**Horizontal Design for Technological Literacy**

**IV. B.3  
Introduction**

In the development of curriculum, three approaches are generally used. One method is vertical alignment. This means that content and skills are arranged so that they build on one another; that they align with the general sequence of cognitive development. In developing the New Jersey Core Curriculum Content Standards (CCCS) for Technological Literacy, a vertical approach was taken so cumulative progress indicators (CPIs) were developed under a strand title at the fourth, eighth, and 12<sup>th</sup> grade levels; however, the numbering of the CPIs did not necessarily follow in order from grade level to grade level.

A second approach is horizontal organization which relates to scope and sequence or side-by-side organization of the elements. The document that follows uses a horizontal approach to organize the technological literacy strands and CPIs. Because the original strands and CPIs were not developed in a horizontal fashion, there are arrows used. The arrows indicate instruction in the area should continue and reinforcement activities would be necessary once a skill is developed at a higher grade level if no CPI exists. In addition, districts/schools may choose to add additional indicators at specific grade levels according to the needs of students. At the time of the development of the CCCS, a parallel effort was underway to develop preschool learning expectations. The document that follows includes expectations for pre-school learners, and how it relates to the K-12 CPIs. In a "spiral curriculum," concepts may be introduced on a simple level in the early grades, then revisited with more and more complexity and application later on. Principles of sequencing include 1) simple to complex; 2) determining prerequisites; 3) whole to part learning; and 4) chronological sequencing (historical).

The horizontal design that follows is a guide for teachers and curriculum developers to use in developing local curriculum. Local curriculum should include the CCCS and the related CPI skills, instructional activities developed by teachers, a listing of resources for use in the classroom, guiding questions, and assessment strategies that measure the progress of students in meeting the CPI skills. Neither the horizontal design, nor the CCCS are a curriculum. Districts/schools are responsible for taking the information to develop a relevant standards-based curriculum and instructional lessons for the learners. Sample

framework lessons are posted on the New Jersey Department of Education website.

A third approach is integration which describes the connections between and among the content and learning experiences in the curriculum. Recent emphasis on integration in the various school reform efforts has been brought about as a way to help improve learning outcomes and to provide more authentic and relevant learning experiences for the learner. The State Board of Education has indicated the technological literacy standards are to be integrated into all curricular areas. In the joined cells of the horizontal design document, other related CCCS area CPIs are indicated. The Office of Educational and Informational Technology of NJDOE supports the integration model. In New Jersey, framework activities that have or are being developed help to show integration. An issue with many teachers is “How do I cover all the materials in the CCCS?” The focus needs to be on “essential concepts,” “big ideas,” and “less is more” as teachers and curriculum developers work to achieve a curriculum balance. Looking at curriculum themes, project-based learning, and curriculum mapping are approaches to consider.

<p><b>STANDARD 8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.</b></p>
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Descriptive Statement: Using computer applications and technology tools students will conduct research, solve problems, improve learning, achieve goals, and produce products and presentations in conjunction with standards in all content areas, including career education and consumer family, and life skills. They will also develop, locate, summarize, organize, synthesize, and evaluate information for lifelong learning.

NOTE: Preschool learning environments contains:

Physical Environment

Provides learning centers that encourage integration of multiple content areas (e.g., in the library center there will be big books, picture books, read aloud books, books representing a broad range of topics, headsets with audiotapes, stories on the computer; in the block center there will be large unit blocks, hollow blocks, cardboard vehicles, audio tapes, pencil, paper and architectural magazines).

Creates a literacy-rich environment through a variety of sources for print, audio, video and non-print media.

Daily Routines

Include the use of technology, such as computers with age-appropriate software, to enhance the development of critical thinking skills.