

**Florida Department of Education  
CURRICULUM FRAMEWORK**

**Program Title:** Orientation to Technology  
**Occupational Area:** Technology Education  
**Program Numbers:** 8600110  
**CIP Number:** 0821.0111OR  
**Grade Level:** Secondary 6-9, & 30, 31  
**Standard Length:** .5 Credits  
**Facility Design Code:** 240, Related 808, 849, 851, 852  
**CTSO:** Florida Technology Student Association (FL-TSA)  
**Certification:** INDUS ARTS @4 @6  
 METALS @4  
 I ART-TEC 1 @2  
 WOODWORK @4  
 GEN SHOP @4

- I. **MAJOR CONCEPTS/CONTENT:** The purpose of this course is to orient students to the concepts that underlie technological systems and the influence of technological systems at home, school, and the world of work. Emphasis is placed on the fact that people must develop and control technology responsibly; also, that people have the capabilities to determine how technology can be applied to their benefit. This program focuses on transferable skills and stresses understanding and demonstration of the technological tools, machines, instruments, materials, processes and systems in business and industry.

Laboratory activities revolving around traditional and modern technological tools, machines, and devices will provide students with "design and construct" experiences.

The content includes, but is not limited to, the study of technology with emphasis on its development and control, desirable and undesirable impacts, input-process-output systems model, and possibilities and limitations. Special skills, safety, and leadership are also included.

- II. **LABORATORY ACTIVITIES:** Instruction and learning activities are provided in a laboratory setting using hands-on exploratory experiences with the tools and materials related to the content.

- III. **SPECIAL NOTE:** The Florida Technology Student Association (FL-TSA) is the appropriate Career and Technical Student Organization for providing leadership training experiences and reinforcing specific vocational skills. Career and Technical Student Organizations, shall be an integral part of the vocational instructional program, and the activities of such organizations are defined as part of the curriculum in accordance with Rule 6A-6.065, FAC. FL-TSA information can be obtained from the web site at <<http://www.florida-tsa.net>>.

When a secondary student with a disability is enrolled in a vocational class with modifications to the curriculum framework, the particular outcomes and student performance standards which the student shall master to earn credit must be specified on an individual basis in each student's Individual Educational Plan (IEP).

- IV. **INTENDED OUTCOMES:** After successfully completing this course, the student will be able to:

- 01.0 Demonstrate proper and safe procedures while working with technological tools, apparatus, equipment, systems and materials.
- 02.0 Exhibit positive human relations and leadership skills.
- 03.0 Demonstrate computer application and literacy.
- 04.0 Apply basic skills in communications, mathematics, and science appropriate to technological content and learning activities.
- 05.0 Demonstrate and apply design/problem-solving processes.
- 06.0 Demonstrate technological literacy.
- 07.0 Display an understanding and appreciation for the dignity and worth of honest labor.
- 08.0 Discuss individual interests and aptitudes as they relate to a career.
- 09.0 Demonstrate the use of technological systems in processing resources.
- 10.0 Utilize various controls for technological systems.
- 11.0 Discuss the outputs of technology on society and the environment.
- 12.0 Select appropriate resources for technological decision making.
- 13.0 Identify kinds and levels of work common to technology.

**Florida Department of Education  
STUDENT PERFORMANCE STANDARDS**

**Program Title:** Orientation To Technology  
**Secondary Number:** 8600110  
**Postsecondary Number:**

- 01.0 DEMONSTRATE PROPER AND SAFE PROCEDURES WHILE WORKING WITH TECHNOLOGICAL TOOLS, APPARATUS, EQUIPMENT, SYSTEMS, AND MATERIALS--The student will be able to:
- 01.01 Follow laboratory safety rules and procedures.
  - 01.02 Demonstrate good housekeeping at work station within total laboratory.
  - 01.03 Conduct laboratory activities and equipment operations in a safe manner.
  - 01.04 Exercise care and respect for all tools, equipment, and materials.
  - 01.05 Identify color-coding safety standards.
  - 01.06 Safely use hand tools and power equipment.
  - 01.07 Explain fire prevention and safety precautions and practices for extinguishing fires.
  - 01.08 Identify harmful effects/potential dangers of familiar hazardous substances/devices to people and the environment.
- 02.0 EXHIBIT POSITIVE HUMAN RELATIONS AND LEADERSHIP SKILLS--The student will be able to:
- 02.01 Perform roles in a student personnel system or in the Florida Technology Student Association (FL-TSA).
  - 02.02 Work cooperatively with others.
- 03.0 DEMONSTRATE COMPUTER APPLICATION AND LITERACY--The student will be able to:
- 03.01 Define terms related to computer parts and usage.
  - 03.02 List ways in which computer are used in technology.
  - 03.03 Discuss advantages and disadvantages in the use of computers.
  - 03.04 Demonstrate the application of a computer.
- 04.0 APPLY BASIC SKILLS IN COMMUNICATIONS, MATHEMATICS, AND SCIENCE APPROPRIATE TO TECHNOLOGICAL CONTENT AND LEARNING ACTIVITIES--The student will be able to:
- 04.01 Use the features of books and reference materials, such as table of contents, preface, introduction, titles and subtitles, index, glossary, appendix, bibliography.
  - 04.02 Read and follow complex written directions.
  - 04.03 Find, understand, and apply information from a variety of sources (books, manuals, newspapers, periodicals, directories, reference works, computer printouts, and other printed matter or electronic sources such as video display terminals).
  - 04.04 Use and expand general and specialized vocabulary (including abbreviations, acronyms, and concepts) as appropriate to subject areas studied at the grade level.
  - 04.05 Write Standard English sentences with correct:
    - sentence structure;
    - verb forms;
    - punctuation, capitalization, possessives, plural forms, and other matters of mechanics;

- word choice and spelling.
- 04.06 Answer and ask questions coherently and concisely, and follow spoken instructions.
- 04.07 Identify and comprehend the main and subordinate ideas in lectures and discussions, ask questions to clarify information heard, and report accurately what others have said.
- 04.08 Perform with accuracy the computations of addition, subtraction, multiplication, and division using natural numbers, fractions, decimals and integers.
- 04.09 Make and use measurements in both traditional and metric units.
- 04.10 Formulate and solve problems in mathematical terms, selecting appropriate approaches and tools (mental computation, trial and error, paper-and-pencil techniques, calculator, and computer).
- 04.11 Solve work-related problems involving the basic arithmetic operations using whole numbers, fractions, decimals, and percents.
- 04.12 Describe the role of observation and experimentation in the development of scientific theories.
- 04.13 Gather scientific information through skills in laboratory, field and library work.
- 04.14 Draw conclusions or make inferences from data.
- 04.15 Apply basic scientific/technical solutions to the appropriate problems.
  
- 05.0 DEMONSTRATE AND APPLY DESIGN/PROBLEM-SOLVING PROCESSES--The student will be able to:
  - 05.01 Describe and explain steps in the design/problem-solving process.
  - 05.02 Propose solutions to given problems.
  - 05.03 Design and implement the optimal solution to a given problem.
  
- 06.0 DEMONSTRATE TECHNOLOGICAL LITERACY--The student will be able to:
  - 06.01 Outline major historical technological developments or events.
  - 06.02 Identify recent advances in technology.
  - 06.03 Explain problem-solving roles of technology.
  - 06.04 Forecast a technological decision.
  - 06.05 Make a technological decision.
  - 06.06 Define technology.
  
- 07.0 DISPLAY AN UNDERSTANDING AND APPRECIATION FOR THE DIGNITY AND WORTH OF HONEST LABOR--The student will be able to:
  - 07.01 Form an understanding and appreciation for work after listening to or observing technology workers.
  - 07.02 Form an understanding and appreciation for work after participating in a simulated technology group project in the laboratory.
  - 07.03 Form an understanding and appreciation for the roles and work of co-workers.
  
- 08.0 DISCUSS INDIVIDUAL INTERESTS AND APTITUDES AS THEY RELATE TO A CAREER--The student will be able to:
  - 08.01 Describe individual strengths and weaknesses.
  - 08.02 Discuss individual interests related to a career.
  - 08.03 Identify careers within specific areas of technology.
  - 08.04 Explore careers within specific areas of interest.

- 09.0 DEMONSTRATE THE USE OF TECHNOLOGICAL SYSTEMS IN PROCESSING RESOURCES--  
The student will be able to:
- 09.01 Identify four types of materials conversion.
  - 09.02 Identify the types, sources, and conversions of energy.
  - 09.03 Identify the steps in processing information.
  - 09.04 Construct a product using the materials conversion processes.
  - 09.05 Construct a product that converts energy.
  - 09.06 Use a computer to process information.
- 10.0 UTILIZE VARIOUS CONTROLS FOR TECHNOLOGICAL SYSTEMS--The student will be able to:
- 10.01 Identify various control sub-systems.
  - 10.02 Identify components of various control sub-systems.
  - 10.03 Construct sub-system controls.
  - 10.04 Demonstrate the use of sub-system controls.
- 11.0 DISCUSS THE OUTPUTS OF TECHNOLOGY ON SOCIETY AND THE ENVIRONMENT--The student will be able to:
- 11.01 Discuss the outputs of technology, now and in the future.
  - 11.02 Discuss the impacts of technology on work, job opportunities, and careers.
  - 11.03 Identify the scope of technological impacts.
  - 11.04 Identify means of controlling the world impacts of technology.
  - 11.05 Discuss how technology can solve and/or create problems.
  - 11.06 Discuss expected and unexpected outputs of technology.
  - 11.07 Discuss desired and undesired outputs of technology.
- 12.0 SELECT APPROPRIATE RESOURCES FOR TECHNOLOGICAL DECISION MAKING--The student will be able to:
- 12.01 Identify goals, processes available, constraints and limitations for utilizing the resources.
  - 12.02 Discuss the optimization, compromises and trade-off for wise use of resources.
  - 12.03 Identify the properties of various materials.
  - 12.04 Select appropriate computer software for graphics and special applications.
- 13.0 IDENTIFY KINDS AND LEVELS OF WORK COMMON TO TECHNOLOGY--The student will be able to:
- 13.01 Identify kinds of work related to technology.
  - 13.02 Identify semiskilled, skilled, and professional levels of work in technology.