

Grade Six – Technology Education

This course is a required exploratory course for all sixth grade students. The course is divided into two 6-week segments. Part I, entitled “Introduction to Technology and Careers,” provides an introduction to the modular technology lab and the 7th grade exploratory class. Part II, entitled “Introduction to Manufacturing and Construction,” provides a “hands-on” dirty lab experience for all students and is a prerequisite to the 8th grade “Manufacturing and Construction” elective.

Grade Six Part I: Introduction to Technology and Careers

The students will explore technology for six weeks in a computer modular lab setting. The AES introduction module and aerospace modules will give the students the knowledge and experiences needed to be successful when they enter the seventh grade class “Technology and Careers.”

	Technology Education Benchmarks
	The student will:
	Standard 1: Demonstrate competence in reading and gathering information of a technical nature.
6 I-1a.	Locate specific data on a technology using resource center materials.
6 I-1b.	Organize and evaluate technical data.
6 I-1c.	Be able to read and understand technical texts and diagrams.
6 I-1d.	Read and describe technical material and software.
	Standard 2: Demonstrate competence in organizing and writing technical reports.
6 I-2a.	Keep and present an organized notebook.
6 I-2b.	Use compiled notes and diagrams to complete projects.
6 I-2c.	Refer to notes and compiled diagrams to complete projects.
	Standard 3: Understand energy types, sources, and conversions.
6 I-3a.	Evaluate the conversion of energy types.
6 I-3b.	Discuss the types of energy uses in our technical world.
	Standard 4: Understand the interaction of science, technology, and society.
6 I-4a.	Define the terms relative to the study of science, technology, and society.

Technology Education Benchmarks	
6 I-4b.	Discuss the ramifications of science and technology upon society.
6 I-4c.	Debate the positive and negative effects science and technology have in their lives.
	Standard 5: Know how to apply complex reasoning and design processes in a technological environment.
6 I-5a.	Use the seven-step problem solving method to find a solution for a technical problem.
6 I-5b.	Make a design folder for a technical problem.
6 I-5c.	Use reasoning skills and design processes as they progress from a simple solution to a given problem to a more advanced solution.
	Standard 6: Understand the general nature and use of mathematics.
6 I-6a.	Use math skills and knowledge to solve and analyze technical problems.
6 I-6b.	Use measuring skills to evaluate the success of completed projects.
6 I-6c.	Use math and measuring skills to predict the changes that will occur in an experimental setting before actually making the changes in their experiments.
	Standard 7: Understand the nature and use of communications technology in our society.
6 I-7a.	Use the computer as a tool to help solve technical problems.
6 I-7b.	Be able to explain orally and in writing how they solved a problem.
6 I-7c.	Use design charts to illustrate the inputs and outputs they experimented with as they completed a design chart.
6 I-7d.	Demonstrate basic sketching techniques to communicate ideas.
	Standard 8: Understand the nature and use of construction technology in our society.
6 I-8a.	Describe how construction technology has affected their lives.
6 I-8b.	Discuss the use of construction technology as it relates to their own lives.
	Standard 9: Understand the nature and use of manufacturing technology in our society.
6 I-9a.	Describe how manufacturing technology has affected their lives.
6 I-9b.	Discuss the use of manufacturing technology as it relates to their own lives.

	Technology Education Benchmarks
	Standard 11: Demonstrate competence in life skills relating to a technological environment.
6 I-11a.	Demonstrate appropriate knowledge when using technologies.
6 I-11b.	Demonstrate appropriate safe and proper techniques when dealing with varied technologies.
6 I-11c.	Demonstrate and model proper organization of technical tools and share in the effort needed to maintain a neat and orderly work area.
	Standard 12: Display competence in using employability skills.
6 I-12a.	Follow written and oral directions.
6 I-12b.	Complete assigned tasks on time.
6 I-12c.	Have an acceptable attendance record.
6 I-12d.	Interact positively and respect peers and teachers in and out of the school environment.
6 I-12e.	Demonstrate a positive and helpful demeanor in and out of the school environment.

Grade Six Part II: Introduction to Manufacturing and Construction

The students will explore technology for six weeks using hands-on experiences in this introductory class. The safe use of tools and responsible use of materials will be demonstrated. The student will develop an appreciation for what technology has done and can do for mankind and that it has positive and negative effects on individuals, society, and the environment.

	Technology Education Benchmarks
	The student will:
	Standard 1: Demonstrate competence in reading and gathering information of a technical nature.
6 II-1a.	Record specific data on technologies.
6 II-1b.	Sketch and label correctly technology related materials.
	Standard 2: Demonstrate competence in organizing and writing technical reports.
6 II-2a.	Assemble and collect data from class notes and related readings.
	Standard 4: Understand the interaction of science, technology, and society.
6 II-4a.	Describe how individuals, society, and the environment are affected by science and technology.
	Standard 5: Know how to apply complex reasoning and design processes in a technological environment.
6 II-5a.	Know the seven-steps of the technological problem-solving model.
6 II-5b.	Apply the technological problem solving method for a technical problem.
	Standard 6: Understand the general nature and use of mathematics.
6 II-6a.	Use math skills and previous knowledge to solve and analyze technical problems.
	Standard 7: Understand the nature and use of communications technology in our society.
6 II-7a.	Demonstrate basic drawing and sketching techniques to communicate technical ideas.
	Standard 9: Understand the nature and use of manufacturing technology in our society.
6 II-9a.	Define custom and mass production technology.
6 II-9b.	Use a set of criteria to evaluate a product or project.
6 II-9c.	Demonstrate the safe use of hand and power tools.

Technology Education Benchmarks	
	Standard 11: Demonstrate competence in life skills relating to a technological environment.
6 II-11a.	Identify and demonstrate the use of technologies to solve everyday problems or tasks.
6 II-11b.	Predict the impacts of using technologies and choose appropriate technologies to solve a technical problem.
	Standard 12: Display competence in using employability skills.
6 II-12a.	Listen and follow directions.
6 II-12b.	Complete tasks on time.
6 II-12c.	Have an acceptable attendance record.
6 II-12d.	Interact positively and respect peers and teachers in and out of the school environment.