Delaware Technology Education

Grades K, 1, 2

Adopted 2007

Methodology of Technology Education

M1. Students will recognize The Nature, Impacts, and Evolution of Technology as they relate to the chronological human presence on Earth, as well as recognize the consequential influence of inventions and innovations that extend human capabilities. M1

01. Develop a nascent awareness of the technological world in which they live. M1.01

    01. Share ideas with peers and reflect on how technology affects their view of the world in which they live. M1.01.01

    07. Understand the difference between a world with technology and a world without technology. M1.01.07

    08. Develop a nascent awareness of technology existing as part of the past, present, and future. M1.01.08

M2. Students will effectively communicate technological solutions by using Technology Education as an Interdisciplinary and Technological Link. M2

01. Begin to use skills and knowledge from various content areas to solve problems. M2.01

    01. Demonstrate an awareness that various content areas can be used during the design process. M2.01.01

    03. Begin to integrate the problem-solving process with areas of daily life. M2.01.03

M3. Students will develop and apply a practical understanding of The Use and Management of Technological Resources and Systems. M3

01. Begin to identify the resources and systems available to solve technological problems. M3.01

    01. Recognize that a variety of technological resources (e.g., people, information, materials, tools and machines, energy, capital, and time) are used to solve problems. M3.01.01

    02. Explore the use of appropriate materials for a specific challenge. M3.01.02

    03. Understand that people plan in order to accomplish tasks. M3.01.03

    05. Begin to realize the ways things work and that different materials are used to manufacture things. M3.01.05

    06. Identify differences between natural and man-made resources, renewable and nonrenewable resources, and natural and man-made systems. M3.01.06

    08. Begin to name hand tools and use them correctly and safely. M3.01.08

    09. Recognize and use everyday symbols. M3.01.09

M4. Students will demonstrate technological problem solving by applying The Design Process and The Systems Model. M4

01. Begin to solve technological challenges using available resources. M4.01

    01. Use pictures, symbols, models, and words to communicate ideas. M4.01.01

    02. Brainstorm, build, test, and evaluate their models against specific criteria, understanding that all products and systems are subject to failure. M4.01.02

    03. Begin to question and make observations and identify and research sources of information (e.g., peers, teachers and school staff, parents, literature, educational video, electronic media, the Internet, and the library media center). M4.01.03

    04. Solve technological challenges by using simple design briefs. M4.01.04

M5. Students will develop an operational awareness of Technological Concepts through focused invention and subsequent innovation. M5

01. Begin to identify technological concepts. M5.01

    01. Build an awareness of technological concepts through hands-on exploration. M5.01.01

    02. Demonstrate technological concepts through hands-on activities. M5.01.02

    04. Identify technological concepts present in daily life. M5.01.04

M6. Students will explore technology-related skills, leadership skills, personal growth, and careers through opportunities provided by Active Participation in the Technology Student Association (TSA). M6

01. Begin to explore technology applications through TSA activities. M6.01
    01. Engage in activities designed to show how modern technology makes it easier to accomplish everyday tasks. M6.01.01

Technical and Practical Application of Technology Education

TPA1. Students will develop an understanding of The Design Process and be able to apply and transfer the related knowledge and skills to solve technological problems. TPA1

01. Realize that everyone can design solutions to technological process TPA1.01
    01. Design is a creative process. TPA1.01.01
    04. The engineering design process includes identifying a problem, searching for ideas, and developing and sharing solutions. TPA1.01.04
    05. Expressing ideas verbally and through sketches and models is an important part of the design process. TPA1.01.05
    08. Asking questions and making observations helps a person to figure out how things work. TPA1.01.08
    09. All products and systems are subject to failure but many can also be fixed. TPA1.01.09

TPA2. Students will develop an understanding of Agricultural, Bio-related, and Medical Technologies and be able to apply and transfer the related knowledge and skills. TPA2

01. Begin to identify and recognize the differences between agricultural, bio-related, and medical technologies. TPA2.01
    01. The use of agricultural technology makes it possible for food to be available year round. TPA2.01.01
    03. Many different tools and materials are necessary to make up and control an ecosystem and its components. TPA2.01.03
    08. Vaccinations protect people from contracting certain diseases, while medicines help people who are sick get better. TPA2.01.08

TPA3. Students will develop an understanding of Information and Communication Technologies and be able to apply and transfer the related knowledge and skills. TPA3

01. Begin to identify and recognize the differences between information and communication technologies. TPA3.01

    01. Data that has been organized is information. TPA3.01.01

    02. Information sent via technological systems can travel over a long distance. TPA3.01.02

    03. Symbols are a message of communication technology. TPA3.01.03

TPA4. Students will develop an understanding of Drafting, Design, and CADD and be able to apply and transfer the related knowledge and skills. TPA4

01. Begin to identify and recognize the differences between Drafting, Design, and CADD. TPA4.01

    01. There is a set of primary design components. TPA4.01.01

    02. Geometric shapes can be put together to form various objects. TPA4.01.02

    03. There are size differences between objects. TPA4.01.03

TPA5. Students will develop an understanding of Energy, Power, and Transportation Technologies and be able to apply and transfer the related knowledge and skills. TPA5

01. Begin to identify and recognize the differences between Energy, Power, and Transportation Technologies. TPA5.01

    01. Energy comes in many forms. TPA5.01.01

    02. Energy should not be wasted. TPA5.01.02

    06. A transportation system has many parts, which work together to help people travel. TPA5.01.06

    07. Vehicles move people and goods from place to place, for instance, across the land or water or through the air or space. TPA5.01.07

TPA6. Students will develop an understanding of Construction and Manufacturing Technologies and be able to apply and transfer the related knowledge and skills. TPA6

01. Begin to identify and recognize the differences between Construction and Manufacturing Technologies. TPA6.01

    01. Construction and manufacturing and construction systems change the form of natural materials in order to make those materials useful. TPA6.01.01

    03. Constructed and manufactured products are designed. TPA6.01.03

    07. People live, work, and attend school in different types of buildings. TPA6.01.07

    08. The type of structure determines how the parts of the structure are assembled. TPA6.01.08