Rhode Island Engineering and Technology

Grades 7, 8

Adopted 2011

Engineering and technology impacts the world and humankind. ET1

1 (5-8). Compare, contrast, and provide evidence of how technology influences history and impacts society. ET1.1 (5-8)

1 (5-6). Students demonstrate an understanding of the impact of technology by: ET1.1 (5-6)

1a. researching and displaying how technological advancements have inspired historical events (e.g. Cold War/Sputnik, slavery/cotton gin)

1b. listing and describing the importance of technology in daily life and its trade-offs

1c. evaluating the many and varying uses of technology within different geographic regions (e.g. geothermal, tidal, and wind power

1 (7-8). Students demonstrate an understanding of the impact of technology by: ET1.1 (7-8)

1a. describing how technological advances affect society (e.g. horse drawn carriages to automobiles)

1b. comparing and contrasting the social and economic concerns that arise for the individual, the family, and/or the community as a result of technological advancements

1c. analyzing the use of technology within various cultures (e.g. Amish, Japanese

2 (5-8). Describe and demonstrate the effects of technological systems on humankind in terms of a national scale. ET1.2 (5-8)

2 (7-8). Students demonstrate an understanding of the outcomes of technology by: ET1.2 (7-8)

2a. designing a technological product and explaining how it may impact society. (e.g. television, cell phones, jumbo jets, water purification systems)

2b. associating and illustrating the effects of particular technological systems over a period of time (e.g. waste disposal systems, potable water systems)

Effective design through en tec

1 (5-8). Utilize the attributes of a design process to solve a real world problem. ET2.1 (5-8)

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outcome of a problem solving process involving the application of content knowledge, acquired skills, and creativity. ET2

1 (7-8). Students demonstrate an understanding of the attributes of a design process by: ET2.1 (7-8)

1a. defining a problem that addresses a scenario by identifying its criteria and constraints.

1b. selecting and justifying an appropriate design solution for a given scenario or task.

1c. explaining what makes an effective design team and working together to achieve a desired result.

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2 (5-8). Use and maintain technological products and systems, as well as their tools. ET2.2 (5-8)

2 (7-8). Students demonstrate an understanding of technological products and systems by: ET2.2 (7-8)

2a. safely using the required tools and organizing and explaining information resources for a specific task.

2b. incorporating information, proper materials and tool selection throughout the design process.

2c. using tools to diagnose, adjust, and repair problems that arise in the course of the design process.

2d. interpreting and evaluating the accuracy of information for the purpose of developing possible solutions.

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3 (5-8). Utilize processes (i.e. research and development, invention and innovation, experimentation, and troubleshooting) in designs that use criteria and constraints leading to useful products and systems. ET2.3 (5-8)

3 (7-8). Students demonstrate an understanding of effective designs of products and systems by: ET2.3 (7-8)

3a. independently develop and utilize a process to solve a real world problem.

3b. presenting documentation, revisions, and final working model to their peers using a variety of technological tools.

The designed world community selects and uses appropriate technologies. ET3

1 (5-8). Explore the various areas in engineering and technology and their interconnections. ET3.1 (5-8)

1 (7-8). Students demonstrate an understanding of the areas of engineering and technology by: ET3.1 (7-8)

1a. researching and defining the requirements of a particular engineering / technological discipline.

1b. evaluating the connections within the areas of engineering and technology as they apply to an assigned product.

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-8). Compare and contrast tools to measure, design, and implement specific technologies. ET3.2 (5-8)

2 (7-8). Students demonstrate an understanding of selecting appropriate tools by: ET3.2 (7-8)

2a. researching and explaining the evolution of key tool(s) used in specific technologies (e.g. the evolution of the microscope in the medical area).

2b. researching and selecting the optimal tool for a student-selected task in a specific area of technology.