

Nature of Technology	Technology and Society Interaction	Technology for Productivity Applications	Technology and Communication Applications
<p><i>Students develop an understanding of technology, its characteristics, scope, core concepts* and relationships between technologies and other fields.</i></p> <p><i>*The core concepts of technology include systems, resources, requirements, optimization and tradeoffs, processes and controls.</i></p> <p>What is technology? What makes technology useful?</p> <ol style="list-style-type: none"> 1. Synthesize, evaluate, and make decisions about technologies. 2. Apply technological knowledge decision-making. 3. Examine the synergy between and among technology and other disciplines when solving technological problems. 	<p><i>Students recognize interactions among society, the environment and technology, and understand technology's relationship with history. Consideration of these concepts forms a foundation for engaging in responsible and ethical use of technology.</i></p> <p>How does technology affect society? What are right and wrong ways to use technology?</p> <ol style="list-style-type: none"> 4. Benchmark A: Interpret and practice responsible citizenship relative to technology. 5. Benchmark B: Demonstrate the relationship among people, technology, and the environment. 6. Benchmark C: Interpret and evaluate the influence of technology throughout history, and predict its impact on the future. 7. Benchmark D: Analyze ethical and legal technology issues and formulate solutions and strategies that foster responsible technology usage. 8. Benchmark E: Forecast the impact of technological products and systems. 	<p><i>Students learn the operations of technology through the usage of technology and productivity tools.</i></p> <p>How do technology tools affect learning?</p> <ol style="list-style-type: none"> 9. Integrate conceptual knowledge of technology systems in determining practical applications for learning and technical problem-solving. 10. Apply technology tools and resources to produce creative works and to construct technology-enhanced models. 	<p><i>Students use an array of technologies and apply design concepts to communicate with multiple audiences, acquire and disseminate information and enhance learning.</i></p> <p>Is technology an effective way to communicate? What effect does media format have on our ability to communicate?</p> <ol style="list-style-type: none"> 11. Apply appropriate communication design principles in published and presented projects 12. Create, publish, and present information, utilizing formats appropriate to the content and audience. 13. Use technology to publish information in printed and electronic version, and select appropriate publication format. 14. Identify communication needs, select appropriate communication tools and design collaborative interactive projects and activities to communicate with others, incorporating emerging technologies.

Technology and Information Literacy

Design

Designed World

Students engage in information literacy strategies, use the Internet, technology tools and resources, and apply information-management skills to answer questions and expand knowledge.

Students apply a number of problem-solving strategies demonstrating the nature of design, the role of engineering and the role of assessment.

Students understand how the physical, informational and bio-related technological systems of the designed world are brought about by the design process. Critical to this will be students' understanding of their role in the designed world: its processes, products, standards, services, history, future, impact, issues and career connections.

What makes a person information literate? What makes a resource reliable? What makes information relevant?

How can the design process aid in understanding? How does design influence use? How does use influence design?

Do people drive systems or do systems drive people? How do people drive progress and innovation?

15. Determine and apply an evaluative process to all information sources chosen for a project.

19. Identify and produce a product using a design process, evaluate the final solution and communicate the findings.

22. Classify, demonstrate, examine, and appraise energy and power, transportation, manufacturing, construction, information, communication, biotech, and agri-science technologies.

16. Apply a research process model to conduct research and meet information needs.

20. Recognize the role of teamwork in engineering design and of prototyping in the design process.

17. Formulate advanced search strategies, demonstrating and understanding of the strengths and limitations of the Internet, and evaluate the quality and appropriate use of Internet resources.

21. Understand and apply research, development and experimentation to problem-solving.

18. Evaluate choices of electronic resources and determine their strengths and limitations.

