

INDEPENDENT SCHOOL DISTRICT 196  
Rosemount-Apple Valley-Eagan Public Schools  
*Educating our students to reach their full potential*

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Title   **Technology, Engineering and Manufacturing Beliefs and Goals**  

1. **Beliefs** – We believe Technology, Engineering and Manufacturing ...
  - 1.1 Are essential life skills for all students at all grade levels, abilities and backgrounds, so they may confidently use, manage, assess and understand technology.
  - 1.2 Provide the fundamental knowledge and technical skills needed to participate in society.
  - 1.3 Enhance the opportunity for students to develop college and career readiness skills with direct and significant employment opportunities.
  - 1.4 Provide for academic, technical and social growth utilizing industry standard tools, machines, materials and processes and technological systems.
  - 1.5 Provide an understanding of how technology is changing the human-made world and the natural environment.
  - 1.6 Develop pride in accomplishments that benefits personal, community and global quality of life.
  - 1.7 Require qualified educators with a desire for excellence and innovation.
  - 1.8 A quality Technology, Engineering and Manufacturing program requires support for instructional resources, ongoing professional development and districtwide communication.
  
2. **Goals** – “**Technology** is how people modify the natural world to suit their own purposes. From the Greek word techne, meaning art or artifice or craft, technology literally means the act of making or crafting, but more generally it refers to the diverse collection of processes and knowledge that people use to extend human abilities and to satisfy human needs and wants.” (ITEEA *Standards for Technological Literacy*, p. 2.)
  - 2.1 The Nature of Technology - Students will develop an understanding of the following:
    - 2.1.1 The characteristics and scope of technology.
    - 2.1.2 The core concepts of technology.
    - 2.1.3 The relationships among technologies and the connections between technology and other fields of study.

- 2.2 Technology and Society - Students will develop an understanding of the following:
  - 2.2.1 The cultural, social, economic and political effects of technology.
  - 2.2.2 The effects of technology on the environment.
  - 2.2.3 The role of society in the development and use of technology.
  - 2.2.4 The influence of technology on history.
- 2.3 Design - Students will develop an understanding of the following:
  - 2.3.1 The attributes of design.
  - 2.3.2 Engineering design.
  - 2.3.3 The role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- 2.4 Abilities for a Technological World - Students will develop abilities to do the following:
  - 2.4.1 Apply the design process.
  - 2.4.2 Use and maintain technological products and systems.
  - 2.4.3 Assess the impact of products and systems.
- 2.5 The Designed World - Students will develop an understanding of and be able to select and use the following:
  - 2.5.1 Energy and power technologies.
  - 2.5.2 Information and communication technologies.
  - 2.5.3 Transportation technologies.
  - 2.5.4 Manufacturing technologies.
  - 2.5.5 Construction technologies.

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**References:** - - ITEA *Standards for Technological Literacy*, 2007 – p. 2.