

6 Tech: Nature of Technology

Content Area: **Technology**
Course(s): **Technology Education 6**
Time Period: **Marking Period 3**
Length: **10 days**
Status: **Published**

Established Goals/Standards

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| TEC.5-8. | Technological products and systems are created through the application and appropriate use of technological resources. |
| TEC.5-8.8.2.8 | All students will develop an understanding of the nature and impact of technology, engineering, technological design and the designed world as they relate to the individual, global society, and the environment. |
| TEC.5-8.8.2.8.A | Nature of Technology: Creativity and Innovation |
| TEC.5-8.8.2.8.A.1 | Explain the impact of globalization on the development of a technological system over time. |
| TEC.5-8.8.2.8.F | Resources for a Technological World |
| TEC.5-8.8.2.8.F.1 | Explain the impact of resource selection and processing in the development of a common technological product or system. |
| TEC.5-8.8.2.8.F.2 | Explain how the resources and processes used in the production of a current product can be modified to have a more positive impact on the environment (e.g., recycled metals, alternate energy sources) and the economy. Technology is created through the application and appropriate use of technological resources. Technology systems impact every aspect of the world in which we live. |

Essential Questions

- Can a system continue to operate with a missing or malfunctioning component?
- Can we control the pace at which technology is created? Should we, even if we can?
- How does technology extend human capabilities?
- Is it always beneficial to use the most economical material for production of a technological product?
- Should technologies that produce negative impact continue to be used?
- What are the positive and negative consequences of technology?
- When are sophisticated tools required and when are simplest tools best?

Enduring Understanding

- A system has interrelated components designed to collectively achieve a desired goal.
- All technological activities use resources that include tools / machines, materials, information, energy, capital, energy, time and people.
- Technological outcomes have the potential for anticipated and unanticipated positive and negative results.

- Technology evolves at an ever accelerating pace based on the needs / wants of society and is influenced by cultural, political, and environmental values and constraints.
- The design process is fundamental to technology and engineering.

Content

- Demonstrate the importance of teamwork through a group activity.
- Describe engineering and explain how engineers participate in or contribute to the invention and innovation of products
- Describe impacts that technology has on society.
- Differentiate between invention and innovation.
- Discuss different engineering careers
- Discuss the importance of technology in day to day living
- Explain the relationship among STEM: Science, Technology, Engineering and Math. Discuss application to real-world examples.
- Research a technological artifact of the past and present.

Resources

- Engineering textbook
- Various websites