Unit 1: Introduction to Technology

Content Area: **Applied Technology**
Course(s):
Time Period: **Marking Period 1**
Length: **5 days**
Status: **Published**

Summary

Introduction:

In this unit, students are provided with an overview of the definition of technology, its history, its various areas, and the ways that this discipline affects their lives. Students will make connections to what is covered in the classroom and what they experience in their daily lives, as well as the many ways that technology has developed and changed over time. At its culmination, students will have the opportunity to work through the Engineering Design Process, documenting the steps taken as they work to solve a design problem.

Revision Date: June 2026

L.SS.6.1	Demonstrate command of the system and structure of the English language when writing or speaking.
TECH.K-12.1.1.d	understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
L.KL.6.2	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
TECH.K-12.1.4.a	know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
5.2	Utilize positive communication and social skills to interact effectively with others
TECH.K-12.1.4.b	select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
TECH.K-12.1.4.c	develop, test and refine prototypes as part of a cyclical design process.
TECH.K-12.1.4.d	exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
8.2.8.ED.2	Identify the steps in the design process that could be used to solve a problem.
8.2.8.ED.3	Develop a proposal for a solution to a real-world problem that includes a model (e.g., physical prototype, graphical/technical sketch).
8.2.8.ED.6	Analyze how trade-offs can impact the design of a product.
8.2.8.ETW.2	Analyze the impact of modifying resources in a product or system (e.g., materials, energy, information, time, tools, people, capital).

Essential Questions/Enduring Understandings

Essential Questions:

What makes something a technology?

How does technology impact the way we live?

Enduring Understandings:

Technology is created to solve problems and to meet our wants and needs.

Technology has both positive and negative effects on our lives, planet, and environment.

Objectives

Students will know that technology is the human quest for solutions to problems and needs.

Students will know that technology does not need to be digital or electronic.

Students will know that technology evolves in response to human wants and needs.

Students will know that there are different areas and categories of technology.

Students will be skilled at identifying technologies present in our world.

Students will be skilled at classifying technologies into different areas of technology.

Learning Plan

Definition of Technology: The teacher will use a Smart Board or similar presentation method to introduce the concept of technology through a presentation titled What Is Technology? The presentation will include the definition of technology, which the teacher will explain while checking for student understanding through questioning and class discussion. Following the presentation, students will participate in activities that require them to identify technologies found in the classroom, at home, at school, and throughout the world. Students may demonstrate their understanding through matching activities, think-pair-share discussions, classification activities, or guided research tasks.

Areas of Technology: The teacher will use a Smart Board or similar presentation method to display a presentation featuring images representing the six areas of technology. Students will first brainstorm independently to identify each area based on the images. The teacher will then guide students through the presentation, discussing each area of technology and its characteristics while students

complete a corresponding graphic organizer or table. The teacher will facilitate a discussion about examples of technologies and related careers within each category. Students will then work with a partner to complete an activity in which they identify the definition, an example, and a career associated with each of the six areas of technology. The lesson will conclude with a whole-class discussion in which students share and compare their responses.

Technology Alphabet Challenge: After reviewing the first two lessons, the teacher will introduce the Technology Alphabet Challenge. Students will be asked to brainstorm and identify at least 26 technologies, one for each letter of the alphabet. Students may work independently or with a partner to complete the challenge. To encourage critical thinking and a deeper understanding of technology, students will be challenged to avoid using brand names, company names, or websites in their responses. Upon completion, students may share and discuss their answers with the class.

Introduction to the Engineering Design Process: The teacher will introduce students to the concept that technology is developed through a process of identifying problems, generating ideas, testing solutions, and making improvements. Through discussion, presentations, and classroom activities, students will explore how designers and engineers use an iterative process to create and improve technologies. Students may apply these concepts through brainstorming activities, design challenges, or analysis of existing technologies.

Applying the Engineering Design Process: Working individually or in small groups, students will complete two short, paper-based design challenges to apply the Engineering Design Process to problem-solving tasks. These one period activities will guide students through the steps of the Engineering Design Process in a structured, hands-on format. The first challenge will be a paper stand challenge, and the second will be a paper chain challenge. Both activities are brief, introductory experiences designed to reinforce the steps of the process and prepare students for more complex design challenges later in the course.

Assessment

Formative Assessments:

Google Forms

Guided notes

Class discussions

Summative Assessment:

Unit quiz

Design challenge documentation

Benchmark Assessments:

Design process documentation

Design challenge prototype

Alternative Assessments:

Checklist

Reflection responses

Exit tickets

Materials

Guided note packets/Google Docs (teacher developed)

Technology (student & teacher laptops, SmartBoard, document camera)

Google Slides/PowerPoints

Worksheets/notes

YouTube links

Safety Equipment

Meter stick

Ruler

Paper

Integrated Accommodation and Modifications, Spec Ed Students, ELL, At-Risk, G&T, 504's

See attached document:

https://docs.google.com/spreadsheets/d/1elkfGwG4CoxIRxyxZ6eem_INsnuGIXXiG4CkOug9_wg/edit?usp=sharing