

04 Orthographic and Isometric Drawings

Content Area: **Technology**
Course(s):
Time Period: **Full Year**
Length: **3 Week**
Status: **Published**

General Overview, Course Description or Course Philosophy

This full-year course continues to emphasize the application of integrated STEM (Science, Technology, Engineering and Mathematics) principles and the design method introduced in the 1st year technology course. This course is taught on the foundations of technology education having students invent solutions to real-world problems through robotic applications. Students will identify problems, research, design and fabricate solutions. Problem solving, critical thinking and design skills are taught through various activities. Hands-on themes include structural and robotic systems, as well as system control technology. This course provides all students with valuable skills such as: problem solving, design, creative thinking, systems thinking, teamwork, documentation, programming, and computer applications.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Ideas, work, and progress must be categorized and documented.

CONTENT AREA STANDARDS

TECH.8.2.12.D.3	Determine and use the appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software) in the design, development and creation of a technological product or system.
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RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
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STUDENT LEARNING TARGETS

Declarative Knowledge

- How to use Google Slides in order to create and share a log.

- List the items that should be included in the daily log.
- State the proper formatting techniques.

Procedural Knowledge

Students will be able to:

- Generate a shared Google Slide
- Properly format a daily log.
- Create and share an Engineering Log in Google Slides
- Properly document daily work.
- Properly format an Engineering Log
- Plan out daily work goals

EVIDENCE OF LEARNING

Formative Assessments

Observation of log setup/sharing of log with teacher

Weekly Log grades and progress checks.

Summative Assessments

Final project logs and reflective analysis section.

RESOURCES (Instructional, Supplemental, Intervention Materials)

Teacher notes on Engineering Logs.

Former student log examples.

Panasonic Challenge Engineering Log notes and examples.

INTERDISCIPLINARY CONNECTIONS

Educational Technology: Use of Google resources

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.