

Blackhawk School District

CURRICULUM

Course Title:	Technical Design
Course Number:	1029
Grade Level(s):	9-12
Length of Course:	1 semester
Credits:	.5
Faculty Author(s):	Dale Moll
Date:	January 2010

COURSE DESCRIPTION:

In this course the students will Analyze and interpret technical designs and learn appropriate drafting terminology. Student will apply standard sketching, drafting, and problem solving techniques to solve engineering graphic problems. Emphasis will be placed on in class projects using manual drafting and freehand sketching. Projects will include (but not limited to) technical drawings, packaging design, and cardboard chairs.

COURSE OUTLINE	OBJECTIVES (PA standard)	PROPOSED TIME / ACTUAL TIME	RESOURCES	LESSON REFLECTION (for future revisions)
<p>Intro/Overview of Class</p> <p>Review of Measuring using the 16 scale</p> <p>Introduction to drafting tools, types of lines, and grading criteria</p> <p>Orthographic Drawing and Sketching (3 Drawings)</p> <ul style="list-style-type: none"> • Orthographic View • Object Lines • Hidden Lines • Title Blocks <p>Orthographic drawing and dimensioning (2 Drawings)</p> <ul style="list-style-type: none"> • Orthographic View • Object Lines • Hidden Lines • Title Blocks • Extension Lines • Dimension Lines • Arrowheads <p>Orthographic Drawing and Sectioning</p> <ul style="list-style-type: none"> • Orthographic View • Object Lines • Hidden Lines • Title Blocks • Extension Lines • Dimension Lines • Arrowheads • Section Lines <p>Isometric Drawing (2 Drawings)</p>	<p>3.4.12.A2. Describe how management is the process of planning, organizing, and controlling work.</p> <p>3.4.12.A3. Demonstrate how technological progress promotes the advancement of science, technology, engineering and mathematics (STEM).</p> <p>3.4.10.B2. Demonstrate how humans devise technologies to reduce the negative consequences of other technologies.</p> <p>3.4.10.B3.Compare and contrast how a number of different factors, such as advertising, the strength of the economy, the goals of a company and the latest fads, contribute to shaping the design of and demand for various technologies.</p> <p>3.4.10.B4. Recognize that Technological development has been evolutionary, the result of a series of refinements to a basic invention.</p> <p>3.4.12.B1. Analyze ethical, social, economic, and cultural considerations as related to the development, selection, and use of technologies.</p> <p>3.4.10.C1. Apply the components of the technological design process.</p> <p>3.4.12.C2. Apply the concept that engineering design is influenced by personal characteristics, such as creativity, resourcefulness, and the ability to visualize and think abstractly.</p> <p>3.4.12.C3. Apply the concept that many technological problems</p>	<p>1 Day</p> <p>1 Day</p> <p>4Days</p> <p>9Days</p> <p>8 Days</p> <p>8 Days</p> <p>4 Days</p>	<p>Promethean board projector and computer</p> <p>Drafting tools and paper</p> <p>Poster Board Adhesives</p>	

