

## Drafting:

DRAFTING –TECHNICAL/MECHANICAL Year/1 credit 10th - 12th grade

Drafting board sketching, lettering, geometrical construction, multi-view projection, dimensioning, etc. will be demonstrated. Students will draw gears, cams and structural drawings. Students will be introduced to architectural construction, blueprinting, and CAD (Computer Assisted Drafting).

## Course Resource:

Basic Technical Drawing. McGraw-Hill 2004

## Course Outcomes:

Students have a basic understanding of drafting vocabulary.

Students will be able to create basic technical drawings.

Students will be able to understand various types of drawings.

Students will be able to accurately measure down to thousandths of inch.

## Pa State Standards to be addressed.

Standard - 3.4.10.A2 Interpret how systems thinking applies logic and creativity with appropriate comprises in complex real-life problems.

Standard - 3.4.12.A2 Describe how management is the process of planning, organizing, and controlling work.

Standard - 3.4.12.A3 Demonstrate how technological progress promotes the advancement of science, technology, engineering and mathematics (STEM).

Standard - 3.4.10.B4 Recognize that technological development has been evolutionary, the result of a series of refinements to a basic invention.

Standard - 3.4.12.B2 Illustrate how, with the aid of technology, various aspects of the environment can be monitored to provide information for decision making.

Standard - 3.4.10.C1 Apply the components of the technological design process.

Standard - 3.4.10.C2 Analyze a prototype and/or create a working model to test a design concept by making actual observations and necessary adjustments.

Standard - 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.

Standard - 3.4.10.D1 Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Standard - 3.4.10.E6 Illustrate how manufacturing systems may be classified into types such as customized production, batch production, and continuous production.

Standard - 3.4.10.E7 Evaluate structure design as related to function, considering such factors as style, convenience, safety, and efficiency.