

<b>Title:</b> Drafting Skills
<b>Curriculum Area:</b> Industrial Technology
<b>Teacher:</b>
<b>School:</b>
<b>Grade Level:</b> 9, 10, 11 & 12
<b>Career Cluster:</b> Architecture & Construction
<b>Lesson Objective(s):</b>  This lesson is to develop the student's drafting skills. While creating this part they will learn and apply such concepts as: line functions, trim/extend functions, auto shaping, arc functions, measuring functions, and editing functions.
<b>Performance Task (Include Teacher &amp; Student Instructions):</b>  "Monkey See, Monkey Do"  The teacher will present and explain the lesson to the students. Then, the teacher will hand each student a tape measure and an oblong trailer light bracket. The students will then measure the bracket and draft the part to scale on their computer using the Bob Cad V21 software.
<b>Evaluation &amp; Scoring:</b>  The students will print off their drawings, which includes the measurements then cut the image out with scissors. The picture must match the given part correctly. There will be points deducted from their grades for any infractions.
<b>Extension/Modification and/or Instructional Methodology:</b>  The techniques for completing the lesson will be demonstrated. The students will then individually apply what they have learned to draw their given part.
<b>SCAN Skills:</b>  Reading; Arithmetic / Mathematics; Listening; Speaking; Creative Thinking; Decision Making; Problem Solving; Seeing things in the mind's eye; Reasoning Responsibility; Self Management

**Exit Level TAKS Objectives:**

Objective: 3. Demonstrate an understanding of linear functions.

Objective 5: Demonstrate an understanding of quadratic and other nonlinear functions.

Objective 6: Demonstrate an understanding of geometric relationships and spatial reasoning.

Objective 7: Demonstrate an understanding of two and three dimensional representations of geometric relationship and shapes.

Objective 8: Demonstrate an understanding of the concepts and uses of measurement and similarity.

**TEKS Competencies:**

TEKS: 123.43 Manufacturing Systems (One-Half to One Credit)

(3) The student designs a product using appropriate design processes and techniques. The student is expected to:

A. describe the design process and techniques used in manufacturing:

B. develop or improve a product that meets specified objectives: and

C. identify areas where quality, reliability, and safety can be designed into a product system.

**Team Project, Guest Speaker, or Field Trip:**

We will visit Priefert as a class and tour their facilities. While we are there we will speak with their draftsmen and engineers about job responsibilities and duties, as well as, education requirements.

**Resources:**

Bob Cad-Cam Video Training Professor