

Teacher Name : Joseph Chicales
Building:HACC

Subject :Precision Machine

Start Date(s): 4/20-24 Grade Level (s): 2

HAZLETON AREA SCHOOL DISTRICT



DISTRICT UNIT/LESSON PLAN

Unit Title: an educational unit title summarizes content across several lessons that establishes and reinforces certain skills and essential knowledge for grade levels and content areas.

807 Demonstrate the use of digital indexing procedures.
 808 Demonstrate use of digital readout.
 809 Demonstrate use of edge finder.
 810 Demonstrate climb and conventional milling.
 811 Demonstrate use of adjustable boring head.
 812 Calculate speeds and feeds.
 813 Install and remove cutting tool holding devices properly.
 814 Select appropriate cutter for various milling operations.
 815 Demonstrate how to "square" a part to prepare it for milling.

(Choose Standards)
 1-2-3-4-5-6

NOTE:
Refer to the Common Career Technical Core Standards booklet if you wish to add more Career Pathways to meet the needs of your local Area.

multistep procedure, etc.
CRAFT & STRUCTURE GRADES 9-10-11-12
Standard CC.3.5.9-10. D
Standard CC.3.5.11-12.D
 Determine the meaning of symbols, key terms, and other domain specific words.
Standard CC.3.5.9-10.E
Standard CC.3.5.11-12.E
 Analyze the structure of the relationships among concepts in a text, etc.
Standard CC.3.5.9-10.F
Standard CC.3.5.11-12.F
 Analyze the author's purpose in providing an explanation, describing a procedure...and Analyze the structure of the relationships among concepts in a text.
INTEGRATE KNOWLEDGE & IDEAS GRADES 9-10
Standard CC.3.5.9-10.G
 Translate quantitative or technical information expressed in a text into visual form (e.g. a table or chart).
Standard CC.3.5.9-10. H
 Assess the reasoning in a text to support the author's claim for solving a technical problem.
Standard CC.3.5.9-10. I
 Compare and contrast findings presented in a text to those from

processes, etc.
PRODUCTION & DISTRIBUTION OF WRITING GRADES 9-10-11-12
Standard CC.3.6.9-10.C
Standard CC.3.6.11-12 C
 Produce clear and coherent writing...appropriate to task, purpose, and audience.
Standard CC.3.6.9-10 D
Standard CC.3.6.11-12.D
 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
Standard CC.3.6.9-10.E
Standard CC.3.6.11-12.E.
 Use technology, including the internet, to produce, publish, and update individual or shared writing products.
RESEARCH GRADES 9-10-11-12
Standard CC.3.6.9-10.F
Standard CC.3.6.11-12.F
 Conduct short and more sustained research to answer a question or solve a problem.
Standard CC.3.6.9-10.G.
Standard CC.3.6.11-12.G
 Gather relevant information from multiple authoritative

multistep problems.
Standard 2.1.HS.F.5
 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
Standard 2.1.HS.F.6
 Extend the knowledge of arithmetic operations and apply to complex numbers.
ALGEBRA
Standard 2.2.HS.D.1 Interpret the structure of expressions to represent a quantity in terms of its context.
Standard 2.2.HS.D.2
 Write expressions in equivalent forms to solve problems.
Standard 2.2.HS.D.3
 Extend the knowledge of arithmetic operations and apply to polynomials.
Standard HS.D.4 Demonstrate the relationship between zeros and polynomials to make generalizations about functions and their graphs.
Standard 2.2.HS.D.5
 Use polynomial identities to solve problems.
Standard 2.2.HS.D.6
 Extend the knowledge of rational functions to rewrite in equivalent forms.
Standard 2.2.HS.D.7

Examples - Building Complete Sentences

Essential Questions: Essential questions are concept in the form of questions. Questions suggest inquiry. Essential questions are organizers and set the focus for the lesson or unit. Essential questions are initiators of creative and critical thinking. Essential questions are conceptual commitments focusing on key concepts implicit in the curriculum

Examples - What must a scientist do in order to research something?
 What is the role of geometry in advertising, architecture, or fabric design?

Teacher Name : Joseph Chicales
 Building:HACC

Subject :Precision Machine

Start Date(s): 4/20-24 Grade Level (s): 2

Do stories need a beginning, middle, and end? Why?
 How do people express themselves through art today?

Unit Plan

Standards: PA Core Standards, PA Academic Standards/Anchors (based on subject)

Summative Unit Assessment :

Summative Assessment Objective	Assessment Method (check all that apply)
Students will-(Level I) Identify the components of the vertical milling machine. Explain the function of the components of the vertical milling machine. Perform Job Duty 2.8 for NIMS certifications (Level II) Introduction into CNC programming G and M codes and program format. (Level III)	<input type="checkbox"/> Rubric <input checked="" type="checkbox"/> Checklist <input checked="" type="checkbox"/> Unit Test <input type="checkbox"/> Group <input checked="" type="checkbox"/> Student Self-Assessment <input checked="" type="checkbox"/> Performance Assessment <input checked="" type="checkbox"/> Other (explain) Each student must complete the NIMS Layout project a per print

DAILY PLAN

Day DT	Objective (s)	DOK Level	Activities / Teaching Strategies	Grouping	Materials / Resources	Assessment of Objective (s)
M 1	Tasks: 807,808,809,810,812,813,814,815, 502,503,504,505,506,507,508, 801,808,812		Perform all listed tasks for Nims Job Duty print #2.8 Introduction to CNC codes Continue with CNC code format Continue with step plate DWG. #3.4 Working on plaques for car show (CNC machine)		Tooling necessary to complete tasks. Print Job Duty 2.8 PMT text Section 6 Unit 1	Formative- Summative- Student Self – Assessment-

Teacher Name : Joseph Chicales
 Building:HACC

Subject :Precision Machine

Start Date(s): 4/20-24 Grade Level (s): 2

T 2	<p>Tasks: 807,808,809,810,812,813,814,815, 502,503,504,505,506,507 801,808,812</p>	<p>Students will use an edge finder for locating the holes for this project. Students will learn the proper procedures for center drilling and spot drilling. Students will calculate drill tip length by using the proper formula for a 118 degree drill bit.</p> <p>Continue with project step plate DWG. # 3.4 Working on car show plaques (CNC machine)</p>	<p>Nims print Job Duty 2.8 Milling Machine w/DRO Tooling necessary to complete listed tasks Tap types Files Layout dye Hand tools PMT text Section 6 Unit 1</p>	<p>Formative- Summative- Student Self - Assessment-</p>
W 3	<p>Tasks: 807,808,809,810,812,813,814,815, 502,503,504,505,506,507,801,808, 812</p>	<p>Students will be calculating feeds and speeds for drilling operations, reaming operations, counter-bore operations and counter-sinking</p> <p>Introduction to commonly used M codes. G00, G01, G02, G03</p> <p>Introduce new project Dice Working on car show plaques (CNC machine)</p>	<p>Nims Job Duty print #2.8 Milling machine w/DRO Tooling</p> <p>PMT text Section 6 Unit 1</p>	<p>Formative- Summative- Student Self - Assessment-</p>
T H 4	<p>Tasks: 807,808,809,810,812,813,814,815 502,503,504,505,506,507,801,808, 812</p>	<p>Students will be performing the following operations: spot drilling, drilling, countersinking, counter-boring.</p> <p>Introduction into CNC program start up blocks.</p> <p>Continue with project Dice Working on car show plaques (CNC machine)</p>	<p>Nims Job Duty print #2.8 Milling machine w/DRO Tooling</p> <p>PMT text Section 6 Unit 1</p>	<p>Formative- Summative- Student Self - Assessment-</p>
F 5	<p>Tasks: 807,808,809,810,812,813,814,815 502,503,504,505,506,507,801,808, 809,812</p>	<p>Students will be performing the following operations: spot drilling, drilling, countersinking, counter-boring, tapping as per print.</p> <p>CNC program end blocks (G28, G91, G53)</p> <p>Continue with project dice Working on car show plaques (CNC machine)</p>	<p>Nims Job Duty #2.8 Milling Machine Tooling</p> <p>PMT text Section 6 Unit 1</p>	<p>Formative- Summative- Student Self - Assessment-</p>