

# SCHUYLKILL

# **TECHNOLOGY CENTER**

### "TECHNOLOGY IS OUR MIDDLE NAME!"

STC North Campus 101 Technology Drive Frackville, PA 17931

Phone: 570-874-1034

STC South Campus 15 Maple Avenue Mar Lin PA 17951 Phone: 570-544-4748 STC Airport Campus 240 Airport Road Pottsville, PA 17901 Phone: 570-544-4904

COURSE TITLE:

CIP code # - and local course title

Danielson: 1a, 1d, 1e, 4b, 4d

Include the local title for the program approved by the Pennsylvania Bureau of Career and Technical Education. Approved programs follow a state curriculum called a Program Of Study (POS) task list. Instructors are required to maintain student records on task completion and promote the opportunity to earn college credit by completing a POS.

Current CIP Code and POS tasks can be found at the SOAR (STUDENTS OCCUPATIONALLY AND ACADEMICALLY READY) website. SOAR website link

POS TASK NUMBERS:

POS task #(s) - and task description(s)

Danielson: 1a, 1c, 1d, 1e, 4b

Include task(s) covered in a learning guide. To qualify for college credit, students are required to successfully complete 100% of the tasks; therefore, completion of a learning guide is also a way to track task completion.

Effective learning guide design starts with deciding how many tasks to include in a guide. Review textbooks or similar resources and make decisions on the complexity and length of the content. If content is complex or lengthy, it may be advisable to limit the guide to just one task. When including content for several tasks enhances understanding, follow that strategy.

**PURPOSE:** 

Explanation Paragraph(s)

Danielson: 1c, 1e, 3a

Include a brief description of what is covered in the learning guide lessons and why it is important in the profession.

#### NOCTI:

Danielson: 1d, 3a, 4d, 4f,

NOCTI – Identify and emphasize NOCTI content that is included in the guide. Student performance cannot be improved without knowing where NOCTI written and performance content is included. Use Blueprints, Study Guides, Pre-Tests and Task Level reports to identify the written and performance content that match the content of the learning guide. Modify content or instructional strategies when test results indicate a need to improve instruction.

## Pennsylvania Core

#### Standards:

Danielson: 1d, 3d

Core Standard #(s), description(s), explanation(s) of how they will be taught/reinforced

Ability to read, comprehend data, write effectively or use math is no less important for CTE students than other students. It can be argued that CTE theory is more challenging, given the technical nature and reading level of many texts. The PA Core Standards help students improve vocabulary, the ability to summarize, interpret and analyze data or use mathematics; all skills that improve comprehension of the technical lesson.

Review the Informational Outline section of the learning guide to identify opportunities to improve theory comprehension by adding literacy/math strategies.

Go to the SAS (Standards Aligned System) website. SAS website link, click on Standards, click on PA Core Standards and select a standard from either Writing for Science and Technology, Reading for Science and Technology, or Mathematics that best represents the literacy or numeracy strategy you are teaching or reinforcing. Identify the standard by number and description with a brief explanation on how you will provide instruction. If you use graphic organizers like KWL, Venn Diagrams, Anticipation Guides or similar instruction sheets, simply identify the PA Core Standard on the sheet and attach to the guide.

To identify the Career Education & Work Standards that you will teach in the guide or portfolio projects, use the Pa Career Standards website which is an excellent site or toolkit to develop limitless opportunities for engaging students. It also provides access to online portfolio development, career search guides, and also postsecondary educational opportunities.: PA Career Standards website link. You can also access the SAS website from this resource and get connected to numerous curriculum resources. Follow the same documentation procedures for CEW Standards as followed for PA Core Standards.

**Revision Date:** 

Date

Danielson:

Include the date of the latest change.

Directions and

Procedures:

List of student directions and/or procedures

Danielson: 1b, 1e, 2d, 3a, 3c

Include a list of steps that lead a student through the learning guide. The list is sequential starting with the first student activity, proceeding through additional activities until assessments have been implemented. It is crucial to identify page numbers, web sites, titles, materials, tools, equipment, safety and **checkpoints for Instructor help**. Provide clear directions for use of software and step-by-step instructions for access to websites. Test clarity with students prior to implementation and be advised that special learners need instruction on reading and following directions and/or additional supports.

Objectives:

Performance Objective(s)

Danielson: 1a, 1c, 3a, 3d

What is the student able to do after completion of the learning guide?

Describe the instruction used to teach the POS task(s) to meet a level of performance required in the workplace. The description includes three components that provide clarity and consistency:

- 1.Learning Conditions, brief description of the significant learning strategies and resources used to teach the task
- 2. Performance, restatement of the POS task(s)
- 3. Criteria, a list of measureable statements describing how well the task must be performed in the workplace.

(A performance checklist or rubric can be attached if the list of criteria is extensive)

Safety:

Safety procedures / directions / content

Danielson: 2b, 2c, 2e

Include directions or instructional content on safety procedures, use of safety guards or devices, use of personal safety equipment such as eyewear and footwear, OSHA certification content, location and use of MSDS, following safety signage on floors, walls and machinery, standard precautions, legal and ethical considerations etc. recommended by the OAC or industry. Include safety descriptors on performance checklists or use assessments to document that every student has attained 100% competency on safe practices.

#### Student

#### Accommodations:

Danielson: 1b, 2a, 2b, 3e

**PLEASE NOTE:** The following may not apply to all students and student privacy must be maintained. Keep individual student accommodations in a secure file separate from the learning guide. Please refer to the IEP for the students' individual accommodations, which typically fall under the following categories:

Presentation Accommodations—Allow students to access print information in alternate ways such as enlarged print, sign language, auditory, braille, etc.

Response Accommodations—Allow students to complete activities and assessments in different ways or to solve or organize problems using some type of assistive device or organizer such as visual/graphic organizers, audio recorders, word processors, calculation devices, etc.

Setting Accommodations—Change the location in which a test or assignment is given to reduce distractions or the conditions of the setting such as a smaller group.

Timing/Scheduling Accommodations—Increase the allowable length of time to complete an assessment or assignment and perhaps change the way the time is organized such as multiple test sessions or frequent breaks.

#### References:

Danielson: 1d, 2c, 4a

Text, reference(s), periodical(s), handouts, NOCTI resources, worksheets, literacy/numeracy materials such as MAX strategies and graphic organizers, workbook(s), AV, software, websites, YouTube visuals etc.

Include all resources used in the learning guide and that have been identified in the Direction/Procedures section. Provide title, author, publisher, edition and page numbers if applicable. Titles and page numbers must be consistent between the Directions section, the Reference section and the handout itself. Attach materials to the learning quide

#### **Equipment & Supplies:**

Equipment, tools, materials, supplies

Danielson 1d

Include major pieces of equipment, accessories, attachments, hand tools / power tools, special materials and supplies that will be used by the students to practice or complete projects to achieve task proficiency.

#### Pre-Test:

Pre-Test

Danielson: 3a, 3c, 3d, 3e, 4a, 4b

Prepare and attach a formative assessment which may, or may not be graded; however, it provides the information needed to differentiate and adjust instruction to meet individual student needs. Review the Objectives and prepare questions that identify the essential content contained in those objectives. Refer to Bloom's Taxonomy or Depth of Knowledge to prepare questions at higher levels of learning. Use pre-test results to adjust focus and support for individual students as they proceed through the learning quide.

#### Vocabulary:

Danielson: 1a, 3c, 3d, 3e

Trade Terms, PA Core Standard related to vocabulary, Strategy to develop vocabulary skills

Include new trade terms found in the learning guide. A variety of instructional strategies are implemented to develop vocabulary skills – word walls, crossword puzzles, journaling, games, etc.

#### Informational Outline:

Theory Lesson Outline, or PowerPoint

Danielson 1a, 1c, 1e, 3a, 3c

Include a detailed list of essential theory topics (bullet points) and supporting facts to develop a knowledge base. What does the learner need to know to safely and correctly perform the task? Theory is the knowing behind the doing.

Use facts and data to help the learner implement the Objectives. Select topics to explain task characteristics, similarities, differences, decisions, consequences, applications or other essential content needed to perform the task correctly and safely.

Organize topics into small steps to enhance understanding. Outline the content in sufficient detail to use as lecture notes or create a power point to enhance visual impact. Use software, Smart Boards or Student engagement strategies like "Pair-Share" to increase student involvement.

#### Assignment

Sheet: Assignment Sheet, comprehend technical content

Danielson: 1b, 1d, 1e, 1f, 3a, 3b, 3c, 3d, 4a

Include instruction sheet(s) to elicit student responses to statements; questions or problems related to theory topics. Require students to read, analyze, summarize, paraphrase, evaluate or make predictions based on content. Helps process information and develops higher-level skills.

Poorly designed assignment sheets include questions for which answers are clearly found in the reading. Students scan the text to find answers and never comprehend what they have read. Use research proven engagement strategies from MAX Teaching or other resources to direct inquiry in a manner that forces higher level thinking including: collaboration, analysis, evaluation. These strategies engage students, improve the focus on technical content and also improve literacy.

#### Literacy Numeracy

#### Assignment:

Danielson: 1a, 1d, 3a, 3c, 3d,

Assignment Sheet, improve literacy/numeracy

Include instruction sheets similar to the ones described above. The instruction sheet or strategy may look the same; however, the instructional intent is somewhat different. In the Assignment Sheet section the primary purpose is to help students comprehend technical content to support task performance. In the Literacy Numeracy section the primary purpose is to reinforce or teach PA Core Standards that improve literacy or numeracy skills, also essential to workplace success. Refer to the MAX text for a complete listing of strategies. MAX Teaching website link

#### Job Sheet:

Job Sheet, perform task (If preferred, can be included in a supplementary packet.)

Danielson: 1a, 1c, 1d, 2b, 2c, 2e, 3a, 3c

Include instruction sheet(s) to provide directions, supplies, equipment, materials and safety for practice assignments, jobs or projects incorporating task performance. Always include Guided Practice, the "**We do**" step is an opportunity for students to demonstrate their grasp of the task, or a crucial step within the task, by working through it under Instructor supervision. Conclude with Independent Practice, the "**You do**" step that is the reinforcement that guarantees task performance will not be forgotten.

Rubric, Written

Assignment:

Rubric, written theory assignments (If applicable)

Danielson: 1f, 3a, 3d, 3e

Include rubrics to describe what it looks like when a theory assignment is completed correctly. A rubric assessment includes criteria for an assignment and a description of characteristics expected for several levels of performance. Identify assignment characteristics; describe what the best example of each characteristic looks like; describe the worst acceptable example of the characteristic; determine what would be acceptable. You now have three levels of assessment: you can develop other levels in between the three if you think they will give you meaningful information.

Rubric, Task

Performance: Rubric, task performance

Danielson: 1f, 3a, 3d, 3e

Include performance checklists or rubrics to assess task performance. Use criteria or measureable statements describing how well the task must be performed to match workplace requirements.

Performance criteria are obtained from valid occupational analysis material such as NIMS, ASE, O\*NET, or commercial products, and should always be reviewed and approved by the Occupational Advisory Committee. Simply use performance criteria as a checklist or create a rubric by following the steps described in the section above.

Post Test:

Post-test

Danielson: 1f, 3b, 3d, 4a

A post-test is given after completion of the learning guide to determine what the students have learned. Questions or problems are prepared to measure how well the objectives and informational outline have been mastered.

Certification:

Industry certification supported by this learning guide

Danielson: 1c, 1d, 3e, 4d, 4f