



**Schuylkill Technology Center  
Unit Plan**

**FOUNDATIONS AND CONCRETE**

<b>Course Title:</b> Carpentry	<b>CIP Code:</b> 46.0201	<b>Grade/Level:</b> 9 <sup>th</sup> -10 <sup>th</sup> Level 1
<b>Instructor:</b> Mr. Phil Kintzel		<b>Timeline:</b> (# of school days) School Days
<b>Objectives:</b>		
<p>Construct forms for footings, slabs, walks, and driveways.            Construct concrete forms for foundation walls.            Lay out and build concrete forms for stairs.            Explain techniques used for the proper placement and curing of concrete.            Describe the composition of concrete and factors affecting its strength, durability, and workability.            Explain the reasons for making a slump test.            Explain the reasons for reinforcing concrete and describe the materials used.            Estimate quantities of concrete.</p>		
<b>PA Core Standards:</b> (List <u>ALL</u> standards you will address during this unit.)		
<p>Math:</p> <p>CC.2.1.HS.F.1            Apply and extend the properties of exponents to solve problems with rational exponents.            A1.1.1.1.1, A1.1.1.1.2, A1.1.1.3.1, A2.1.2.1.1, A2.1.2.1.2, A2.1.2.1.3, A2.1.2.1.4</p> <p>CC.2.1.HS.F.2            Apply properties of rational and irrational numbers to solve real world or mathematical problems.            A1.1.1.1.1, A1.1.1.1.2, A1.1.1.3.1</p> <p>CC.2.1.HS.F.3            Interpret the structure of expressions to represent a quantity in terms of its context.            A1.1.1.5.1, A1.1.1.5.2, A1.1.1.5.3, A2.1.2.2.1, A2.1.2.2.2</p>		
<b>POS Duty/Task Numbers:</b> (List <u>ALL</u> Tasks you will teach and assess during this unit.)		
<p>600 FOOTINGS AND FOUNDATIONS</p> <p>601 Demonstrate how to determine footer type.            602 Demonstrate proper use of leveling instruments.            603 Demonstrate and establish footer lines and elevations.            604 Demonstrate layout and construct forms.            605 Demonstrate layout and construct footers.            606 Demonstrate layout foundations.            607 Demonstrate layout and construct forms for concrete slabs.            608 Demonstrate knowledge of how to properly install reinforcing bars.            609 Demonstrate knowledge of how to properly erect vertical and horizontal framework.</p>		

**Instructional Procedures and Strategies:** (Include all learning guides, strategies (MAX and other), procedures, etc. that will be used during this unit.)

Learning Guides:

600-1 Footing and Foundations

Theory in the classroom

Stump the Teacher (MAX)

Demonstrations by the instructor

Guided Practice

**Resources:** (List all equipment and supplies necessary to complete the unit)

Appropriate Module

Pencil

Notebook Paper

Textbook (RCA Carpentry)

Carpenter Shop or Job Site

Appropriate Job-Sheets Packet

Performance Assessment Packet

Portable Power Tools

Concrete Pins

2x4x8'

2x6x8'

Symons Panels and Accessories

Concrete tools

Concrete

**Differentiation/Accommodations:**

Students who are in need of accommodations will receive the following:

Presentation accommodations

Setting accommodations

Response accommodations

Timing/Scheduling accommodations

**Assessments:** (Formative and Summative)

Both graded and non-graded job assignments relating to the mastery of the POS tasks

KWL literacy assignments

Written unit test

Performance assessments to rate the students' competency of the POS tasks