

DELAWARE VALLEY SCHOOL DISTRICT

PLANNED INSTRUCTION

A PLANNED COURSE FOR:

Building Construction Occupations Levels 1-3

Grade Level:10-12

Date of Board Approval:June 2025

Curriculum Map

1. Level One – Overview with time range in days:

Building Trades

177 days

Level One -Goals:

Understanding of:

DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

Demonstrate knowledge of OSHA and its mission of safety in the work place.

Demonstrate knowledge of hazard communications.

Describe and demonstrate the use of personal protective equipment. Follow rules and regulations for fire protection.

Safely handle and store construction materials. Perform safe operations with hand and power tools.

Demonstrate and follow procedures that protect workers from falling from elevated structures.

Demonstrate safe use of ladders and scaffolding.

DEMONSTRATE PROPER USE OF HAND TOOLS

Identify and follow all basic safety rules for using hand tools

Identify and demonstrate the proper use of layout tools

Identify and demonstrate the proper use cutting tools

Identify and demonstrate the proper use shaping tools

Identify and demonstrate the proper use fastening tools

Identify and demonstrate the proper use dismantling tools

OPERATE PORTABLE POWER TOOLS AND EQUIPMENT

- Operate a circular saw safely and accurately
- Operate battery and electric drills safely and accurately
- Operate belt and hand sanders safely and accurately
- Operate reciprocating saws safely and accurately
- Operate routers safely and accurately
- Operate a pneumatic nailer safely and accurately
- Operate a power miter box safely and accurately
- Operate a table saw safely and accurately
- Operate an electric planer safely and accurately

PERFORM SITE AND BUILDING LAYOUT

- Use a builder's level, transit and/or laser level to determine site and building elevations.
- Square a building

DEMONSTRATE SKILL IN FRAMING FLOORS

- Identify different types of framing materials and systems
- Describe how to install girders and sills
- Demonstrate and perform layout of floor joists and openings
- Demonstrate how to install various floor joists and band joists
- Demonstrate how to install various types of bridging
- Demonstrate how to install various types of columns and supports
- Demonstrate how to install various types of subfloor materials

DEMONSTRATE SKILL IN WALL FRAMING

- Describe and demonstrate how to install various components of interior and exterior walls.
- Describe and demonstrate how to install various ceiling joists
- Describe and demonstrate how to install various steel framing components.

DEMONSTRATE SKILL IN ROOF FRAMING

Describe how to identify various roof types

Describe how to install various roof components for gable roofs

Describe how to install various types of roof trusses.

Describe how to install various types of roof sheathing materials.

Estimate various roof component materials.

INSTALL ROOF COVERINGS

Describe how to install various types of asphalt shingles.

Describe and demonstrate how to install various types of underlayment materials.

Describe how to install various types of flashing.

Estimate various roof covering materials.

APPLY EXTERIOR FINISHES

Describe how to install various types of horizontal sidings.

Describe how to install various types of vertical sidings.

Describe how to install various types of cornices.

Estimate various exterior finish materials

Identify how to install various types of windows.

Identify how to install various types of exterior doors.

Describe how to install various types of soffit and fascia/windows and doors.

KNOWLEDGE AND SKILL IN WALL INTERIOR FINISHES

Describe how to install various wall surfaces.

Describe and demonstrate how to install various interior moldings.

Estimate various materials for wall surfaces.

Estimate various types of interior moldings

2. Level Two – Overview with time range in days:

Building Trades

177 days

Level Two -Goals:

Understanding of:

DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

- Work with hazardous materials.
- Follow Electrical Safety Procedures.
- Differentiate between struck-by and caught-in-between hazards.
- Follow excavation site safety procedures.
- Follow concrete and masonry safety procedures.
- Follow safety procedures for working in confined spaces.

STUDENTS WILL SAFELY OPERATE POWER TOOLS

- Operate miter saw.
- Operate a table saw.
- Operate an electric planer.
- Operate a grinder.

STUDENTS WILL DEMONSTRATE KNOWLEDGE OF PLANS AND BLUEPRINTS

- Interpret building codes, zoning regulations, and permits.
- Interpret plans, sketches and blueprints.
- Interpret standard abbreviations and symbols.
- Estimate material from a print.
- Use Architect scale.
- Identify structural components.
- Interpret Americans with disabilities act (ADA) regulations.
- Identify mechanical fasteners, hangers and devices.

DEMONSTRATE SKILL IN PLACING CONCRETE

- Describe modern concrete materials and renewal methods

Associate trade terms with the appropriate concrete finishing processes and equipment.

Estimate the amount of concrete needed for footers and slabs

Lay out and build concrete forms

Describe the use of equipment and tools for placing concrete

Describe the process of depositing, spreading, consolidating, and striking off concrete.

Describe and demonstrate the basic concrete finishing processes

Describe the tools used to edge, groove, and cut concrete

LAY BLOCK AND BRICK MASONRY UNITS

Describe the most common types of masonry units Identify concrete block by size and type

Estimate masonry units needed for block construction

Demonstrate masonry cutting techniques

Lay out and construct a block laying project to specifications

Describe various masonry positions and bonds

Lay block to a line

Describe the function of wall ties

Describe installation of anchor bolts

Mix mortar to proper proportions and consistency

Describe different mortar types and applications

Demonstrate proper brick and block laying techniques

Demonstrate the installation of lintels in block or brick walls

INSTALL INSULATION MATERIALS

Describe how to install various types of insulation and ventilation.

Estimate quantities of insulation and ventilation materials.

INSTALL BASIC PLUMBING

Describe and demonstrate plumbing hand tools and basic safe use.

Identify and demonstrate plumbing power tools and basic safe use.

Identify various types of pipe

Identify various types of fittings.

Describe how to install various types of valves and devices.

Describe how to install faucets and drain assemblies.

Describe how to install various appliances.

Describe how to interpret blueprints and specifications.

Describe how to install water distribution systems.

Describe how to correctly size drain, waste and vent systems.

Describe how to install fixtures and equipment.

Describe how to troubleshoot and repair various common plumbing problems.

INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS

Identify electrical hazards and practice electrical safety.

Apply the National Electric Code (NEC) to common residential installations.

Read and interpret electrical drawings.

Understand and apply electrical theory.

Describe basic electrical circuits.

Describe and identify various wire types and sizes.

Identify and use electrical tools.

Identify and install ground fault circuit interrupters.

Identify and install arc fault circuit interrupters.

Identify and install over current protection devices.

Install a junction box.

Rough in a ceiling fan box.

Install light fixtures.

Install various receptacle circuits.

Install various switch circuits.

Install a 220-volt circuit.

Install a recessed light.

Trim out and finish electrical circuits.

Describe service entrance installation.

Describe low voltage electrical circuits.

Describe panel installation.

DEMONSTRATE KNOWLEDGE OF INTERIOR FINISHES

Describe how to apply different types of paints and their uses.

Describe how to apply different paints and stains to different surfaces.

Clean painting tools.

Describe and apply various types of caulking.

Describe and demonstrate how to install ceramic tile

3 Level Three -Overview with time range in days:

Building Trades

177 days

Level Three -Goals:

Understanding of:

DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

Demonstrate knowledge of OSHA and its mission of safety in the work place.

Demonstrate knowledge of hazard communications.

Describe and demonstrate the use of personal protective equipment.

Follow rules and regulations for fire protection.

Safely handle and store construction materials.

Perform safe operations with hand and power tools.

Demonstrate and follow procedures that protect workers from falling from elevated structures.

Demonstrate safe use of ladders and scaffolding

Work with hazardous materials.

Follow Electrical Safety Procedures.

Differentiate between struck-by and caught-in-between hazards.

Follow excavation site safety procedures.

Follow concrete and masonry safety procedures.

Follow safety procedures for working in confined spaces.

DEMONSTRATE PROPER USE OF HAND TOOLS

- Identify and follow all basic safety rules for using hand tools
- Identify and demonstrate the proper use of layout tools
- Identify and demonstrate the proper use cutting tools
- Identify and demonstrate the proper use shaping tools
- Identify and demonstrate the proper use fastening tools
- Identify and demonstrate the proper use dismantling tools

OPERATE PORTABLE POWER TOOLS AND EQUIPMENT

- Operate a circular saw safely and accurately
- Operate battery and electric drills safely and accurately
- Operate belt and hand sanders safely and accurately
- Operate reciprocating saws safely and accurately
- Operate routers safely and accurately
- Operate a pneumatic nailer safely and accurately
- Operate a power miter box safely and accurately
- Operate a table saw safely and accurately
- Operate an electric planer safely and accurately
- Operate miter saw.
- Operate a table saw.
- Operate an electric planer.
- Operate a grinder.

STUDENTS WILL DEMONSTRATE KNOWLEDGE OF PLANS AND BLUEPRINTS

- Interpret building codes, zoning regulations, and permits.
- Interpret plans, sketches and blueprints.
- Interpret standard abbreviations and symbols.
- Estimate material from a print.
- Use Architect scale.
- Identify structural components.
- Interpret Americans with disabilities act (ADA) regulations.
- Identify mechanical fasteners, hangers and devices.

PERFORM SITE AND BUILDING LAYOUT

Use a builder's level, transit and/or laser level to determine site and building elevations.

Square a building

DEMONSTRATE SKILL IN PLACING CONCRETE

Describe modern concrete materials and renewal methods

Associate trade terms with the appropriate concrete finishing processes and equipment.

Estimate the amount of concrete needed for footers and slabs

Lay out and build concrete forms

Describe the use of equipment and tools for placing concrete

Describe the process of depositing, spreading, consolidating, and striking off concrete.

Describe and demonstrate the basic concrete finishing processes

Describe the tools used to edge, groove, and cut concrete

LAY BLOCK AND BRICK MASONRY UNITS

Describe the most common types of masonry units

Identify concrete block by size and type

Estimate masonry units needed for block construction

Demonstrate masonry cutting techniques

Lay out and construct a block laying project to specifications

Describe various masonry positions and bonds

Lay block to a line

Describe the function of wall ties

Describe installation of anchor bolts

Mix mortar to proper proportions and consistency

Describe different mortar types and applications

Demonstrate proper brick and block laying techniques

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DEMONSTRATE SKILL IN FRAMING FLOORS

Identify different types of framing materials and systems

Describe how to install girders and sills

Demonstrate and perform layout of floor joists and openings

Demonstrate how to install various floor joists and band joists

Demonstrate how to install various types of bridging

Demonstrate how to install various types of columns and supports

Demonstrate how to install various types of subfloor materials

DEMONSTRATE SKILL IN FRAME WALL

Describe and demonstrate how to install various components of interior and exterior walls.

Describe and demonstrate how to install various ceiling joists

Describe and demonstrate how to install various steel framing components.

DEMONSTRATE SKILL IN ROOF FRAMING

Describe how to identify various roof types

Describe how to install various roof components for gable roofs.

Describe how to install various types of roof trusses.

Describe how to install various types of roof sheathing materials.

Estimate various roof component materials.

INSTALL ROOF COVERINGS

Describe how to install various types of asphalt shingles.

Describe and demonstrate how to install various types of underlayment materials.

Describe how to install various types of flashing.

Estimate various roof covering materials.

INSTALL INSULATION MATERIALS

Describe how to install various types of insulation and ventilation. Estimate quantities of insulation and ventilation materials.

APPLY EXTERIOR FINISHES

Describe how to install various types of horizontal sidings.

Describe how to install various types of vertical sidings.

Describe how to install various types of cornices.

Estimate various exterior finish materials

Identify how to install various types of windows.

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KNOWLEDGE AND SKILL IN WALL INTERIOR FINISHES

Describe how to install various wall surfaces.

Describe and demonstrate how to install various interior moldings.

Estimate various materials for wall surfaces.

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INSTALL BASIC PLUMBING

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Identify and demonstrate plumbing power tools and basic safe use.

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Describe how to install faucets and drain assemblies.

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Describe how to interpret blueprints and specifications.

Describe how to install water distribution systems.

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Describe how to install fixtures and equipment.

Describe how to troubleshoot and repair various common plumbing problems.

INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS

Identify electrical hazards and practice electrical safety.

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Read and interpret electrical drawings.

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Describe basic electrical circuits.

Describe and identify various wire types and sizes.

Identify and use electrical tools.

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Identify and install arc fault circuit interrupters.

Identify and install over current protection devices.

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Rough in a ceiling fan box.

Install light fixtures.

Install various receptacle circuits.

Install various switch circuits.

Install a 220-volt circuit.

Install a recessed light.

Trim out and finish electrical circuits.

Describe service entrance installation.

Describe low voltage electrical circuits.

Describe panel installation.

DEMONSTRATE KNOWLEDGE OF INTERIOR FINISHES

Describe how to apply different types of paints and their uses.

Describe how to apply different paints and stains to different surfaces.

Clean painting tools.

Describe and apply various types of caulking.

Describe and demonstrate how to install ceramic tile

INSTALL STAIRS

Describe various types of stairways and components.

Calculate, layout and cut stair stringers

STATEWIDE ARTICULATION TRAINING

Will examine web-based information related to articulated college

Will review the requirements to obtain advanced college credit

Will investigate SOAR concepts and other PDE resources

INVESTIGATING POS ARTICULATION AGREEMENTS

Examine web-based information related to articulated college credit,

Review the requirements to obtain advanced college credit,

Will investigate SOAR concepts, and other PDE resources

COMPLETING THE ARTICULATION AGREEMENT COVER SHEET

Examine web-based information related to articulated college credit,

Review the requirements to obtain advanced college credit,

Investigate SOAR concepts and other PDE resources

Course: Construction Trades

Unit Name: DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

Number: 100 Days: 15

Description/Objectives:

Students will have knowledge of safety in the workplace.

Tasks:

PA101 - Follow Occupational Safety and Health Administration (OSHA) standards.

PA102 - Evaluate Safety Data Sheets (SDS).

PA104 - Use personal protective equipment (PPE).

PA105 - Follow rules and regulations for fire protection.

PA106 - Handle and store construction materials.

PA111 - Follow working from heights safety procedures.

PA115 - Use of ladders and scaffolding.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter.
- Read the summary information first.
- Checking for Comparative Knowledge.
- Read, listen, share, and question in a small group.
- Oral reading.
- Questioning while reading.

- Demonstrate what was learned.
- Test question list.

Skills:

- Students will complete SP-2 construction safety online course.
- Students will complete worksheets on the history of OSHA, OSHA standards as they relate to the construction industry.
- Students will complete SDS activity.
- Students will receive safety glasses, gloves, and hearing protection. Students will use required PPE while in the shop.
- Students will be trained on the proper use of fire extinguishers and will complete fire prevention.
- Students will properly store and handle construction materials.
- Students will safely erect and use ladders and scaffolding materials.
- Students will complete a worksheet working from heights.
- Students will complete a safety project of their own choosing and design.

Special Adaptations:

- Extended Time (assignments and/or testing).
- Graphic Organizer.
- Chunking of Assignments/Material.
- Preferential Seating.
- Directions/Comprehension Check (frequent checks for understanding).
- Provide Verbal and Written Directions.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.

- Teacher evaluating if PA Program or Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Teacher evaluating a student media presentation.
- Peer evaluation of individual student.
- Student self-assessment.

WORK ETHIC

- Determine if students follow the daily plan as laid out at the start of class.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Evaluate if students are prepared for class each day.
- Evaluate if students are wearing appropriate clothing when necessary.
- Evaluate if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.
- Alternate assessment-project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 2, The Carpenter's Workplace
- Various shop tools and equipment
- Instructor created worksheet
- SP2 Construction Safety Course, <https://store.certus.com/S-P2-Construction-Bundle-School-Credential-Edition>

Course: Construction Trades

Unit Name: DEMONSTRATE PROPER USE OF HAND TOOLS

Number: 200 **Days:** 20

Description/Objectives:

Students will identify and use basic hand tools.

Tasks:

PA201 - Use and maintain hand tools.

PA202 - Use and maintain layout and measuring tools.

PA203 - Use and maintain cutting tools.

PA205 - Use and maintain fastening tools.

PA206 - Use and maintain dismantling tools.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

Literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete "The Big Inch" worksheet.

Students will complete layout tools worksheets.

Students will complete layout project using tape measure, combination square and speed square.

Students will complete cutting tools worksheets.

Students will fabricate "block project" using tape measure, combination square, hand saw, and block plane.

Students will complete fastening tools worksheets.

Students will construct the "countersink project" with drill drivers, countersinks, and screwdriver.

Students will demonstrate the safe use of a hammer in various shop activities.

Students will complete dismantling tools worksheet.

Students will demonstrate the safe use of various dismantling tools in shop activities.

Special Adaptations:

- Extended Time (assignments and/or testing).
- Graphic Organizer.
- Chunking of Assignments/Material.
- Preferential Seating.
- Directions/Comprehension Check (frequent checks for understanding).
- Study Guide.
- Directions and/or Tests Read Aloud.
- Teacher Modeling.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring students on use of appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.

- Teacher evaluating if PA Program or Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.

Resources/Equipment:

- Modern Carpentry Chapter 4, Hand Tools
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: OPERATE PORTABLE POWER TOOLS AND EQUIPMENT

Number: 300 Days: 20

Description/Objectives:

Students will safely operate power tools.

Tasks:

- PA301 - Operate a circular saw.
- PA302 - Operate battery and electric drills and drivers.
- PA303 - Operate belt and hand sanders.
- PA304 - Operate reciprocating and oscillating saws.
- PA305 - Operate routers.
- PA306 - Operate a pneumatic and battery-operated nailers.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete safety circular saw safety worksheet.

Students will take circular saw performance test.

Students will construct and complete trimmer board project.

Students will complete the countersink project using drills, driver and countersinks.

Students will complete sander worksheet.

Students will demonstrate safe and accurate use of belt and orbital sanders.

Students will complete reciprocating saw worksheet.

Students will complete router worksheet.

Students will safely operate a laminate router on trimmer board project.

Students will demonstrate the safe use of cordless and pneumatic nail guns.

Special Adaptations:

- Extended Time (assignments and/or testing).
- Graphic Organizer.
- Chunking of Assignments/Material.
- Preferential Seating.
- Directions/Comprehension Check (frequent checks for understanding).
- Study Guide.
- Directions and/or Tests Read Aloud.
- Teacher Modeling.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.

- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.

Resources/Equipment:

- Modern Carpentry, Chapter 5, Power Tools
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: PERFORM SITE AND BUILDING LAYOUT

Number: 500 Days: 5

Description/Objectives:

Students will demonstrate knowledge of site and building layout.

Tasks:

PA501 - Use a builder's level, transit and/or laser level to determine site and building elevations.

PA502 - Square a building using the pythagorean theorem and diagonals.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will do article review of "How to use a builders level".

Students will use the builders level to shoot grades in the builders level activity.
Students will demonstrate knowledge of squaring up using a 3,4,5 triangle.
Students will "Square up" sample floor and wall frames using the pythagorean theorem.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.

- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 5, Building Layout
- Various shop tools and equipment
- Instructor created worksheet
- <https://www.johnsonlevel.com/News/WhatisaBuildersLevelHowdo#HowToUse>

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN FRAME FLOORS

Number: 800 Days: 15

Description/Objectives:

Students will demonstrate skill in floor framing.

Tasks:

- PA801 - Identify framing materials and systems.
- PA802 - Install girders and sills.
- PA803 - Perform layout of floor joists and openings.
- PA804 - Install various floor joists and band joists.
- PA805 - Install bridging.
- PA806 - Install columns and supports.
- PA807 - Install subfloor materials.
- PA 808 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
- CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete chapter 8 floor framing skeleton notes using the textbook and following along with lecture.

Students will complete Mud Sills Worksheet.

Students will complete Layout Floor Joists worksheet.

Students will complete install floor joists worksheet.

Students will complete bridging and blocking worksheet.

Students will complete install subfloor worksheet.

Working in small groups students will use diagonals and Pythagorean to square up a sample floor frame.

Students will layout floor joists for their dog house project.

Students will install floor joists for their dog house project.

Students will square up the framed floor of their dog house project.

Students will install subfloor on their dog house project.

Students will work as a group to perform all aspects of floor framing on the class construction project.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.

- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 8, Floor Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN WALL FRAMING

Number: 900 Days: 20

Description/Objectives:

Students will demonstrate skill in wall framing.

Tasks:

PA901 - Install components of interior and exterior walls.

PA902 - Install ceiling systems.

PA903 - Install steel framing components.

PA 904 - Identify framing materials and systems.

PA 905 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading

- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

- Students will complete chapter 9 wall framing skeleton notes using textbook and class lecture.
- Students will complete chapter 9 ceiling framing skeleton notes using textbook and class lecture.
- Students will complete steel framing worksheet.
- Students will complete acoustical ceiling worksheet.
- Students will complete exterior wall headers worksheet.
- Students will frame and sheath wood framed walls on their dog house project.
- Students will frame and sheath metal stud wall on their dog house project.
- Students will install acoustical ceilings in work booth.
- Students will complete the Cut A Stud activity.
- Students will frame and sheath walls as a class on class project.
- Students will frame wood framed ceilings as a class on class project.
- Students will complete various worksheets identifying framing members of a stud wall.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.

- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 9, Wall and Ceiling Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: ROOF FRAMING

Number: 1000 **Days:** 20

Description/Objectives:

Students will demonstrate skill in roof framing.

Tasks:

PA1001 - Identify Framing materials and systems.

PA1002 - Install roof components for gable roofs.

PA1003 - Install roof trusses.

PA1004 - Install roof sheathing materials.

PA1006 - Calculate, Layout and Cut Rafters.

PA 1007 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

CC.2.3.HS.A.1 Use geometric figures and their properties to represent transformations in the plane.

CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.

CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete 10.1 - 10.5 roof framing skeleton notes using textbook and lecture.

Students will complete 10.6 - 10.8 roof framing skeleton notes using textbook and lecture.

Students will complete 10.8 - 10.26 roof framing skeleton notes using textbook and lecture.

Students will complete dormer styles article review worksheet.

Students will complete sizing a birdsmouth article review worksheet.

Students will perform rafter calculate, layout and cut activity.

Students will complete various worksheets on roof styles, rafter vocabulary, roof framing components and truss styles.

Students will calculate, layout, cut and install rafters for their dog house project.

Students will calculate, layout, cut and install rafters, and sheathing for class project.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.

- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 10, Roof Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: ROOF COVERINGS

Number: 1100 Hours: 20

Description/Objectives:

Students will demonstrate knowledge of roof coverings.

Tasks:

PA1101 - Install asphalt shingles.

PA1102 - Install underlayment materials.

PA1103 - Install flashing.

PA1104 - Identify roof covering materials and systems.

PA 1105 - Estimate roof coverings materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

- Demonstrate what was learned

Skills:

- Students will complete roofing skeleton notes using the textbook and class lecture.
- Students will complete BUR worksheet.
- Students will complete Cobravent worksheet.
- Students will complete flat roofing worksheet.
- Students will complete installing asphalt roofing shingles worksheet.
- Students will complete metal roofing worksheet.
- Students will select and install appropriate underlayment.
- Students will cut and install aluminum drip edge on their dog house project.
- Students will layout and install asphalt 3 tab shingles on their dog house project.
- Students will install various roofing products on class projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes – multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.

- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 12, Roofing Materials and Methods
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: APPLY EXTERIOR FINISHES

Number: 1300 Days: 22

Description/Objectives:

Students will apply exterior finishes.

Tasks:

PA1301 - Install horizontal sidings.

PA1302 - Install vertical sidings.

PA1304 - Identify exterior finish materials.

PA1305 - Install windows.

PA1306 - Install exterior doors.

PA1307 - Install soffit and fascia.

PA 1308 - Install house wrap.

PA 1309 - Estimate exterior finish materials.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will install vinyl siding on dog house project.

Students will install various siding products on class projects.

Students will complete exterior window trim worksheet.

Students will complete horizontal siding worksheet.

Students will complete rain screen and skip siding worksheet.

Students will complete vertical siding worksheet.

Students will complete vinyl siding worksheet during lecture.

Students will install exterior doors and windows on class projects.

Students will install house wrap on dog house project.

Students will install soffits and fascia on class projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).

- Matching with groups or no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 14, Exterior Wall Finish
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

Number: 100 Days: 10

Description/Objectives:

Students will have knowledge of safety in the workplace.

Tasks:

- PA103 - Work with hazardous materials.
- PA109 - Follow Electrical Safety Procedures.
- PA110 - Differentiate between struck-by and caught-in-between hazards.
- PA112 - Follow excavation site safety procedures.
- PA114 - Follow concrete and masonry safety procedures.
- PA116 - Follow safety procedures for working in confined spaces.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Read the summary information first
- Checking for Comparative Knowledge
- Read, listen, share, and question in a small group
- Oral reading
- Questioning while reading
- Demonstrate what was learned
- Test question list

Skills:

- Students will complete SP-2 construction safety online course.
- Students will complete worksheet describing the safe use, handling and storage of hazardous materials.
- Students will receive safety glasses, gloves, and hearing protection. Students will use required PPE while in the shop.
- Students will be trained on the proper use of fire extinguishers and will complete fire prevention.
- Students will complete a worksheet on electrical hazards in construction.
- Students will complete a worksheet on struck-by and caught-in-between hazards.
- Students will complete an excavation safety worksheet.
- Students will safely handle and use concrete and masonry materials.
- Students will complete a confined spaces worksheet.

Special Adaptations:

- Extended Time (assignments and/or testing)
- Graphic Organizer
- Chunking of Assignments/Material
- Preferential Seating
- Directions/Comprehension Check (frequent checks for understanding)
- Provide Verbal and Written Directions

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Teacher evaluating a student media presentation.

- Peer evaluation of individual student.
- Student self-assessment.

WORK ETHIC

- Determine if students follow the daily plan as laid out at the start of class.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Evaluate if students are prepared for class each day.
- Evaluate if students are wearing appropriate clothing when necessary.
- Evaluate if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.
- Alternate assessment-project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 2, The Carpenter's Workplace
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: OPERATE PORTABLE POWER TOOLS AND EQUIPMENT

Number: 300 **Days:** 10

Description/Objectives:

Students will safely operate power tools.

Tasks:

PA307 - Operate miter saw.

PA308 - Operate a table saw.

PA309 - Operate an electric planer.

PA 310 - Operate a grinder.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete Miter saw worksheet.

Students will take Miter Saw performance test.

Students will complete table saw safety worksheet.

Students will take table saw performance test.
Students will complete planer worksheet.
Students will complete angle grinder worksheet.
Students will demonstrate safe use of the angle grinder.

Special Adaptations:

- Extended Time (assignments and/or testing)
- Graphic Organizer
- Chunking of Assignments/Material
- Preferential Seating
- Directions/Comprehension Check (frequent checks for understanding)
- Study Guide
- Directions and/or Tests Read Aloud
- Teacher Modeling

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.

- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.

Resources/Equipment:

- Modern Carpentry Chapter 5, Power Tools
- Various shop tools and equipment
- Instructor created worksheet

Description/Objectives:

Students will demonstrate knowledge of plans, blueprints.

Tasks:

PA401 - Interpret building codes, zoning regulations, and permits.

PA403 - Interpret plans, sketches and blueprints.

PA404 - Interpret standard abbreviations and symbols.

PA405 - Estimate material from a print.

PA406 - Use Architect scale.

PA407 - Identify structural components.

PA 408 - Interpret Americans with disabilities act (ADA) regulations.

PA 409 - Identify mechanical fasteners, hangers and devices.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete architects scale worksheet.

Students will complete codes and permits skeleton notes.

Students will complete plans and specs skeleton notes.

Students will complete the article review of "Types of Blueprints".

Students will generate a set of architectural drawings for a 12' X 20' tiny house including: floor plan, electrical plan, and building section. Drawing will be to 1/2" : 1' scale.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.

- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 3, Plans, Specifications, and Codes
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN PLACING CONCRETE

Number: 600 Days: 18

Description/Objectives:

Students will demonstrate knowledge of and skill in placing concrete.

Tasks:

- PA601 - Use modern concrete materials.
- PA602 - Determine appropriate concrete finishing processes and equipment.
- PA603 - Estimate the amount of concrete needed for footers and slabs.
- PA604 - Lay out and build concrete forms.
- PA605 - Use equipment and tools for concrete.
- PA606 - Prep and place concrete.
- PA607 - Perform basic concrete finishing processes.
- PA608 - Use tools to edge, groove, and cut concrete.
- PA609 - Identify the uses of admixtures and sealers.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

- Complete concrete basics article review worksheet.
- Complete broom finishing worksheet.
- Complete trowel finishing worksheet.
- Complete towel estimating concrete worksheet.
- Complete concrete tools worksheet.
- Complete form concrete walls worksheet.
- Complete pour concrete walls worksheet.
- Complete prep and place concrete worksheet.
- Form small sample slab in lab.
- Mix and place redimix concrete in sample slab.
- Trowel finish and broom finish concrete sample slab.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.

- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 7, Footings and Foundations
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: LAY BLOCK AND BRICK MASONRY UNITS

Number: 700 Days: 30

Description/Objectives:

Students will lay block and brick masonry.

Tasks:

- PA701 - Identify common types of masonry units.
- PA702 - Identify concrete block by size and type.
- PA703 - Estimate masonry units needed for block construction.
- PA704 - Use masonry cutting techniques.
- PA705 - Lay out and construct a block laying project.
- PA706 - Perform masonry positions and bonds.
- PA707 - Lay block to a line.
- PA708 - Install masonry fasteners.
- PA710 - Mix mortar to proper proportions and consistency.
- PA711 - Compare mortar types and applications.
- PA712 - Perform proper brick and block laying techniques.
- PA713 - Install block or brick walls.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

CC.2.3.HS.A.3 Verify and apply geometric theorems as they relate to geometric figures.

CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Complete identify CMU's by size and shape worksheet.

Complete masonry cutting techniques worksheet.

Complete build corner lead worksheet.

Complete masonry bonds worksheet.

Complete lay block to a line worksheet.

Complete speed lead poles worksheet.

Complete pointing up worksheet.

Complete types of mortar article review worksheet.

Students will construct a masonry lead using 8" CMUs.

Students will install brick veneer on CMU block and wood walls using brick ties.

Students will demonstrate cutting CMUs with cold chisel, angle grinder and demo saw.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.

- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 7, Footings and Foundations
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL INSULATION MATERIALS

Number: 1200 **Days:** 8

Description/Objectives:

Students will demonstrate knowledge of insulation materials.

Tasks:

PA1201 - Install insulation and ventilation.

PA1202 - Identify insulation and ventilation materials.

PA 1203 - Estimate insulation and ventilation materials.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

Skills:

- Students will complete types of insulation materials worksheet.
- Students will calculate R Value of all assemblies given different cavity depth and insulation material.
- Students will complete Hot Roof / Cold Roof worksheet.
- Students will install fiberglass insulation in framed wall cavity.
- Students will do a cost benefit analysis of different insulation materials.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.

- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 15, Thermal and Sound Insulation
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL BASIC PLUMBING

Number: 1400 **Days:** 35

Description/Objectives:

Students will install basic plumbing.

Tasks:

- PA1401 - Use and maintain basic plumbing tools.
- PA1403 - Identify pipes and fittings.
- PA1405 - Install pipes, fittings, valves and devices.
- PA1406 - Install faucets and drain assemblies.
- PA1409 - Install water supply systems.
- PA1410 - Install drain, waste and vent systems.
- PA1411 - Install fixtures and equipment.
- PA1412 - Troubleshoot and repair common plumbing problems.
- PA 1413 - Estimate pipes and fittings.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

- Demonstrate what was learned

Skills:

Students will complete plumbing skeleton notes during lecture.

Students will complete chapter 29 plumbing worksheet using textbook.

Students will complete Rigid 535 pipe threader worksheet.

Students will complete black iron pipe threading project.

Students will complete sealing threaded connections worksheet.

Students will complete compression fittings worksheet.

Students will complete copper pipes and fittings worksheet.

Students will complete flare fitting worksheet.

Students will complete soldering copper worksheet.

Students will complete copper soldering project.

Students will complete PEX intro worksheet.

Students will complete installing PEX worksheet.

Students will complete trunk and branch vs manifold worksheet.

Students will complete PEX project.

Students will complete Vent systems worksheet.

Students will complete PVC pipe worksheet.

Students will complete PVC pipe project.

Students will complete DWV worksheet.

Students will complete Types of Valves worksheet.

Students will rough in PEX plumbing in work booth.

Students will rough in PVC waste lines with work booth.

Students will set a sink and install lav fixture in work booth.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.

- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 29, Plumbing Systems
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS

Number: 1500 **Days:** 35

Description/Objectives:

Students will install residential electrical circuits and components.

Tasks:

- PA1501 - Identify electrical hazards and practice electrical safety.
- PA1502 - Apply the National Electric Code (NEC) to common residential installations.
- PA1503 - Interpret electrical drawings.
- PA1504 - Apply electrical theory.
- PA1505 - Construct electrical circuits.
- PA1506 - Install residential wire.
- PA1507 - Use electrical tools.
- PA1508 - Install ground fault circuit interrupters.
- PA1509 - Install arc fault circuit interrupters.
- PA1510 - Install over current protection devices.
- PA1511 - Install electrical boxes.
- PA1513 - Install light fixtures.
- PA1514 - Install receptacle circuits.
- PA1515 - Install switch circuits.
- PA1516 - Install a 220-volt circuit.
- PA1518 - Trim out and finish electrical circuits.
- PA1519 - Install service entrance.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.
- CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

- Students will complete electrical hand tools worksheets 1 and 2.
- Students will complete electrical power tools worksheet.
- Students will complete MC vs Romex worksheet.
- Students will complete running wires worksheet.
- Students will complete electrical theory skeleton notes from electrical theory powerpoint presentation.
- Students will complete laying out circuits worksheet.
- Students will complete Watts Law worksheet.
- Students will complete parts of an electrical panel worksheet.
- Students will complete hot, neutral, ground worksheet.
- Students will complete receptacle tester, multimeter worksheet.
- Students will complete running wire in EMT worksheet.
- Students will complete wiring a receptacle worksheet.
- Students will complete half hot receptacle worksheet.
- Students will complete 3 way, 4 way switch worksheet.
- Students will use the textbook to complete Chapter 28 worksheet.
- Students will complete 120V vs 240 V worksheet.
- Students will complete various electrical wiring projects in the shop.
- Students will draw wiring diagrams for each of their electrical wiring projects.
- Students will construct a receptacle circuit and a lighting circuit in their project booth.
- Students will trim out receptacle and lighting circuits in their project booth.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.

- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 28, Electrical Wiring
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INTERIOR FINISHES

Number: 1700 Days: 10

Description/Objectives:

Students will apply interior finishes.

Tasks:

PA1701 - Identify paints, stains and their uses.

PA1702 - Apply paints and stains.

PA1703 - Clean painting tools.

PA1705 - Apply caulking.

PA1706 - Install ceramic tile.

PA1707 - Estimate paints and stains.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.E Justify the selection of a career.

13.3.11.E Evaluate time management strategies and their application to both personal and work situations.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will complete intro to paint worksheet.

Students will complete types of caulk worksheet.

Students will complete staining worksheet.

Students will complete types of paint worksheet.

Students will complete wall covering worksheet.

Students will complete cutting in worksheet.

Students will complete airless sprayer worksheet.

Students will complete installing ceramic tile worksheet.

Students will caulk, fill nail holes and sand moldings and drywall in their trimmer board project to prep for paint.

Students will apply semi gloss latex paint on moldings and trim in order to achieve a quality finish.

Students will apply eggshell latex paint on drywall in order to achieve a quality finish.

Students will apply various stains and polyurethanes to projects.

Students will clean their own painting tools.

Students will install ceramic tile in their project booth.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 21, Painting, Finishing, and Decorating
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SAFETY RULES FOR THE CONSTRUCTION TRADES

Number: 100 **Days:** 5

Description/Objectives:

Students will have knowledge of safety in the workplace.

Tasks:

PA101 - Follow Occupational Safety and Health Administration (OSHA) standards.

PA102 - Evaluate Safety Data Sheets (SDS).

PA103 - Work with hazardous materials.

PA104 - Use personal protective equipment (PPE).

PA105 - Follow rules and regulations for fire protection.

PA106 - Handle and store construction materials.

PA109 - Follow electrical safety procedures.

PA110 - Differentiate between struck-by and caught-in-between hazards.

PA111 - Follow working from heights safety procedures.

PA112 - Follow excavation site safety procedures.

PA114 - Follow concrete and masonry safety procedures.

PA115 - Use of ladders and scaffolding.

PA116 - Follow safety procedures for working in confined spaces.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Read the summary information first
- Checking for Comparative Knowledge
- Read, listen, share, and question in a small group
- Oral reading
- Questioning while reading
- Demonstrate what was learned
- Test question list

Skills:

Students will complete SP-2 construction safety online course.

Students will review previous safety topics to prepare for the NOCTI assessment.

Special Adaptations:

- Extended Time (assignments and/or testing)
- Graphic Organizer
- Chunking of Assignments/Material
- Preferential Seating
- Directions/Comprehension Check (frequent checks for understanding)
- Provide Verbal and Written Directions

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Teacher evaluating a student media presentation.

- Peer evaluation of individual student.
- Student self-assessment.

WORK ETHIC

- Determine if students follow the daily plan as laid out at the start of class.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Evaluate if students are prepared for class each day.
- Evaluate if students are wearing appropriate clothing when necessary.
- Evaluate if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.
- Alternate assessment-project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 2, The Carpenter's Workplace
- Various shop tools and equipment
- Instructor created worksheet
- SP2 Construction Safety Course, <https://store.certus.com/S-P2-Construction-Bundle-School-Credential-Edition>

Course: Construction Trades

Unit Name: DEMONSTRATE PROPER USE OF HAND TOOLS

Number: 200 **Days:** 5

Description/Objectives:

Students will identify and use basic hand tools.

Tasks:

PA201 - Use and maintain hand tools.

PA202 - Use and maintain layout and measuring tools.

PA203 - Use and maintain cutting tools.

PA205 - Use and maintain fastening tools.

PA206 - Use and maintain dismantling tools.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

Literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multi-step procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review previous knowledge of hand tools to prepare for the NOCTI assessment.

Special Adaptations:

- Extended Time (assignments and/or testing)
- Graphic Organizer
- Chunking of Assignments/Material
- Preferential Seating
- Directions/Comprehension Check (frequent checks for understanding)
- Study Guide
- Directions and/or Tests Read Aloud
- Teacher Modeling

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring students on use of appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.

- Extended time to complete the assessment.

Resources/Equipment:

- Modern Carpentry Chapter 4, Hand Tools
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: OPERATE PORTABLE POWER TOOLS AND EQUIPMENT

Number: 300 Days: 10

Description/Objectives:

Students will safely operate power tools.

Tasks:

- PA301 - Operate a circular saw.
- PA302 - Operate battery and electric drills and drivers.
- PA303 - Operate belt and hand sanders.
- PA304 - Operate reciprocating and oscillating saws.
- PA305 - Operate routers.
- PA306 - Operate a pneumatic and battery-operated nailers.
- PA307 - Operate a miter saw.
- PA308 - Operate a table saw.
- PA309 - Operate an electric planer.
- PA310 - Operate a grinder.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

- Demonstrate what was learned

Skills:

Students will review the safe and proper use of power tools to prepare for the NOCTI assessment.

Special Adaptations:

- Extended Time (assignments and/or testing)
- Graphic Organizer
- Chunking of Assignments/Material
- Preferential Seating
- Directions/Comprehension Check (frequent checks for understanding)
- Study Guide
- Directions and/or Tests Read Aloud
- Teacher Modeling

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring students on use of appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a calculator.
- Tests read aloud.
- Extended time to complete the assessment.

Resources/Equipment:

- Modern Carpentry Chapter 5, Power Tools
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: READ PLANS AND BLUEPRINTS

Number: 400 Days: 7

Description/Objectives:

Students will demonstrate knowledge of plans, blueprints.

Tasks:

- PA401 - Interpret building codes, zoning regulations, and permits.
- PA403 - Interpret plans, sketches and blueprints.
- PA404 - Interpret standard abbreviations and symbols.
- PA405 - Estimate material from a print.
- PA406 - Use Architect scale.
- PA407 - Identify structural components.
- PA 408 - Interpret Americans with Disabilities Act (ADA) regulations.
- PA 409 - Identify mechanical fasteners, hangers and devices.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.1 Apply and extend the properties of exponents to solve problems with rational exponents.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review plans and blueprints to prepare for the NOCTI assessment.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.

- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 3, Plans, Specifications, and Codes
- Various shop tools and equipment
- Instructor created worksheet
- ADA Regulations: <https://www.ada.gov/law-and-regs/design-standards/>

Course: Construction Trades

Unit Name: PERFORM SITE AND BUILDING LAYOUT

Number: 500 **Days:** 5

Description/Objectives:

Students will demonstrate knowledge of site and building layout.

Tasks:

PA501 - Use a builder's level, transit and/or laser level to determine site and building elevations.

PA502 - Square a building using the pythagorean theorem and diagonals.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will demonstrate knowledge of squaring up using a 3,4,5 triangle during construction of various projects.

Students will "Square up" sample floor and wall frames using the pythagorean theorem during various projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 5, Building Layout
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN PLACING CONCRETE

Number: 600 Days: 10

Description/Objectives:

Students will demonstrate knowledge of and skill in placing concrete.

Tasks:

- PA601 - Use modern concrete materials.
- PA602 - Determine appropriate concrete finishing processes and equipment.
- PA603 - Estimate the amount of concrete needed for footers and slabs.
- PA604 - Lay out and build concrete forms.
- PA605 - Use equipment and tools for concrete.
- PA606 - Prep and place concrete.
- PA607 - Perform basic concrete finishing processes.
- PA608 - Use tools to edge, groove, and cut concrete.
- PA609 - Identify the uses of admixtures and sealers.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review concrete materials to prepare for the NOCTI assessment.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.

- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 7, Footings and Foundations
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: LAY BLOCK AND BRICK MASONRY UNITS

Number: 700 Days: 10

Description/Objectives:

Students will lay block and brick masonry.

Tasks:

- PA701 - Identify common types of masonry units.
- PA702 - Identify concrete block by size and type.
- PA703 - Estimate masonry units needed for block construction.
- PA704 - Use masonry cutting techniques.
- PA705 - Lay out and construct a block laying project.
- PA706 - Perform masonry positions and bonds.
- PA707 - Lay block to a line.
- PA708 - Install masonry fasteners.
- PA710 - Mix mortar to proper proportions and consistency.
- PA711 - Compare mortar types and applications.
- PA712 - Perform proper brick and block laying techniques.
- PA713 - Install block or brick walls.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

CC.2.3.HS.A.3 Verify and apply geometric theorems as they relate to geometric figures.

CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review masonry materials to prepare for the NOCTI.
Students will install brick masonry projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.

- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 7, Footings and Foundations
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN FRAME FLOORS

Number: 800 Days: 10

Description/Objectives:

Students will demonstrate skill in floor framing.

Tasks:

- PA801 - Identify framing materials and systems.
- PA802 - Install girders and sills.
- PA803 - Perform layout of floor joists and openings.
- PA804 - Install various floor joists and band joists.
- PA805 - Install bridging.
- PA806 - Install columns and supports.
- PA807 - Install subfloor materials.
- PA 808 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
- CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will frame floors for various shop projects (dugouts, sheds, etc.).

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.

- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 8, Floor Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: DEMONSTRATE SKILL IN WALL FRAMING

Number: 900 Days: 10

Description/Objectives:

Students will demonstrate skill in wall framing.

Tasks:

PA901 - Install components of interior and exterior walls.

PA902 - Install ceiling systems.

PA903 - Install steel framing components.

PA 904 - Identify framing materials and systems.

PA 905 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading

- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review wall framing material to prepare for NOCTI assessment.
Students will frame walls for various shop projects (Dugouts, Sheds, Etc).

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.

- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 9, Wall and Ceiling Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: ROOF FRAMING

Number: 1000 Days: 15

Description/Objectives:

Students will demonstrate skill in roof framing.

Tasks:

PA1001 - Identify Framing materials and systems.

PA1002 - Install roof components for gable roofs.

PA1003 - Install roof trusses.

PA1004 - Install roof sheathing materials.

PA1006 - Calculate, Layout and Cut Rafters.

PA 1007 - Estimate framing materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

CC.2.3.HS.A.1 Use geometric figures and their properties to represent transformations in the plane.

CC.2.3.HS.A.7 Apply trigonometric ratios to solve problems involving right triangles.

CC.2.3.HS.A.14 Apply geometric concepts to model and solve real world problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review roof framing materials to prepare for NOCTI assessment.
Students will frame roofs for various shop projects (dugouts, sheds, etc).

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.

- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 10, Roof Framing
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: ROOF COVERINGS

Number: 1100 Hours: 15

Description/Objectives:

Students will demonstrate knowledge of roof coverings.

Tasks:

- PA1101 - Install asphalt shingles.
- PA1102 - Install underlayment materials.
- PA1103 - Install flashing.
- PA1104 - Identify roof covering materials and systems.
- PA 1105 - Estimate roof coverings materials and systems.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.
- CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review roof covering to prepare for NOCTI assessment.

Students will install asphalt shingles on various shop projects (dugouts, sheds, etc).

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.

- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 12, Roofing Materials and Methods
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL INSULATION MATERIALS

Number: 1200 Days: 5

Description/Objectives:

Students will demonstrate knowledge of insulation materials.

Tasks:

PA1201 - Install insulation and ventilation.

PA1202 - Identify insulation and ventilation materials.

PA 1203 - Estimate insulation and ventilation materials.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.D Evaluate school-based opportunities for career awareness/preparation, such as, but not limited to: career days, career portfolio, community service, cooperative education, graduation/senior project, internship, job shadowing, part-time employment, registered apprenticeship and school based enterprise.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

- Demonstrate what was learned

Skills:

Students will review insulation materials to prepare for the NOCTI assessment.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.

- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 15, Thermal and Sound Insulation
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: APPLY EXTERIOR FINISHES

Number: 1300 Days: 15

Description/Objectives:

Students will apply exterior finishes.

Tasks:

PA1301 - Install horizontal sidings.

PA1302 - Install vertical sidings.

PA1304 - Identify exterior finish materials.

PA1305 - Install windows.

PA1306 - Install exterior doors.

PA1307 - Install soffit and fascia.

PA 1308 - Install house wrap.

PA 1309 - Estimate exterior finish materials.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review exterior finishes to prepare for NOCTI assessment.

Students will install various siding products on shop projects (dugouts, sheds, etc).

Safety:

- Safety glasses must be worn in the Building Shop.

- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 14, Exterior Wall Finish
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL BASIC PLUMBING

Number: 1400 Days: 15

Description/Objectives:

Students will install basic plumbing.

Tasks:

- PA1401 - Use and maintain basic plumbing tools.
- PA1403 - Identify pipes and fittings.
- PA1405 - Install pipes, fittings, valves and devices.
- PA1406 - Install faucets and drain assemblies.
- PA1409 - Install water supply systems.
- PA1410 - Install drain, waste and vent systems.
- PA1411 - Install fixtures and equipment.
- PA1412 - Troubleshoot and repair common plumbing problems.
- PA 1413 - Estimate pipes and fittings.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

- CC.3.5.11-12.B Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

- CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.
- CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.
- CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

- 13.1.11.A Relate careers to individual interests, abilities, and aptitudes.
- 13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.
- 13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.
- 13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning

- Demonstrate what was learned

Skills:

Students will review plumbing materials to prepare for the NOCTI assessment.
Students will perform basic plumbing repairs in the shop.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).

- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 29, Plumbing Systems
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INSTALL RESIDENTIAL ELECTRIC CIRCUITS AND COMPONENTS

Number: 1500 Days: 15

Description/Objectives:

Students will install residential electric circuits and components.

Tasks:

- PA1501 - Identify electrical hazards and practice electrical safety.
- PA1502 - Apply the National Electric Code (NEC) to common residential installations.
- PA1503 - Interpret electrical drawings.
- PA1504 - Apply electrical theory.
- PA1505 - Construct electrical circuits.
- PA1506 - Install residential wire.
- PA1507 - Use electrical tools.
- PA1508 - Install ground fault circuit interrupters.
- PA1509 - Install arc fault circuit interrupters.
- PA1510 - Install over current protection devices.
- PA1511 - Install electrical boxes.
- PA1513 - Install light fixtures.
- PA1514 - Install receptacle circuits.
- PA1515 - Install switch circuits.
- PA1516 - Install a 220-volt circuit.
- PA1518 - Trim out and finish electrical circuits.
- PA1519 - Install service entrance.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and

goals.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review electric materials to prepare for the NOCTI assessment.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 28, Electrical Wiring
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: Wall Components

Number: 1600 **Days:** 10

Description/Objectives:

Students will install wall components.

Tasks:

PA1601 - Install Drywall.

PA1602 - Install interior moldings.

PA1603 - Identify Drywall Materials.

PA1604 - Identify interior molding.

PA1605 - Estimate drywall materials.

PA1606 - Estimate interior moldings.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.C Analyze how the changing roles of individuals in the workplace relate to new opportunities within career choices.

13.1.11.E Justify the selection of a career.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review wall components for the NOCTI assessment.

Students will install and repair wall components for various shop projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes – multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.

- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 16, Interior Wall and Ceiling
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: INTERIOR FINISHES

Number: 1700 **Days:** 10

Description/Objectives:

Students will apply interior finishes.

Tasks:

PA1701 - Identify paints, stains and their uses.

PA1702 - Apply paints and stains.

PA1703 - Clean painting tools.

PA1705 - Apply caulking.

PA1706 - Install ceramic tile.

PA1707 - Estimate paints and stains.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.D Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.2 Apply properties of rational and irrational numbers to solve real world or mathematical problems.

CC.2.1.HS.F.3 Apply quantitative reasoning to choose and Interpret units and scales in formulas, graphs and data displays.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

13.1.11.E Justify the selection of a career.

13.3.11.E Evaluate time management strategies and their application to both personal and work situations.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review interior finishes to prepare for the NOCTI assessment.

Students will apply various finishes on shop projects and various school projects.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:**THEORY EVALUATION**

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.

- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 21, Painting, Finishing, and Decorating
- Various shop tools and equipment
- Instructor created worksheet

Course: Construction Trades

Unit Name: STAIRWAYS

Number: 1800 Days: 5

Description/Objectives:

Students will install stairways.

Tasks:

PA1801 - Identify stairways and components.

PA1802 - Calculate, layout and cut stair stringers.

PA 1803 - Install stairways and components.

Standards / Assessment Anchors

Focus Anchor/Standard #1:

literacy

Supporting Anchor/Standards:

CC.3.5.11-12.C Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

CC.3.5.11-12.G Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Focus Anchor/Standard #2:

math/science

Supporting Anchor/Standards:

CC.2.1.HS.F.4 Use units as a way to understand problems and to guide the solution of multi-step problems.

CC.2.1.HS.F.5 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

CC.2.3.HS.A.3 Verify and apply geometric theorems as they relate to geometric figures.

Connecting Anchor/Standard:

CEW

Supporting Anchor/Standards:

13.1.11.A Relate careers to individual interests, abilities, and aptitudes.

13.1.11.B Analyze career options based on personal interests, abilities, aptitudes, achievements and goals.

Instructional Activities:

- Read the questions at the end of the chapter
- Questioning while reading
- Small Group Oral Reading/Questioning
- Demonstrate what was learned

Skills:

Students will review stairway material to prepare for the NOCTI assessment.

Safety:

- Safety glasses must be worn in the Building Shop.
- A work uniform must be worn at all times in the Building Shop.
- Work shoes must be worn at all times in the Building Shop.
- Students will follow the safety rules as they apply to each tool or piece of equipment.
- Students will conduct themselves in a safe and professional manner.

Assessment:

THEORY EVALUATION

- Traditional Tests – multiple choice, matching, true/false, short answer completion.
- Traditional Quizzes - multiple choice, matching, true/false, short answer completion.
- Graded Writing assignments.
- Graded Math practice assignments.
- Graded Reading assignments.
- Completed and Turned-in Make Up work.
- Class oral responses.
- Business and Industry Credentialing Tests.
- Exit Slips/time cards.
- Textbook Computer Generated Tests.

SKILL EVALUATION

- Scores on projects when they are completed.
- Teacher observing and scoring each step of the process as a job is being completed.
- Teacher observing and recording the quality of work being done on an assigned job.
- Teacher checking and scoring as each part of an activity is being done correctly.
- Teacher observing and scoring as a job is done within a timeframe.
- Teacher checking and scoring that students use the appropriate terminology for particular jobs.
- Teacher determining if the student has the skills to work independently on an assigned job.
- Teacher evaluating if PA Program of Study tasks are being achieved as expected.
- Teacher evaluating student class participation.
- Peer evaluation of individual student.
- Evaluate the student's ability to work within a team when teamwork is necessary.
- Evaluate the student's responsibility to complete work logs as expected.
- Determine and evaluate if students adhere to all safety procedures.
- Evaluate if students work without hindering other students' progress.
- Evaluate if students stay on task in accordance with the job expectation.
- Account if students are prepared for class each day.
- Account if students are wearing appropriate clothing when necessary.
- Account if students make up missed assignments in the established time limit.

SPECIAL NEEDS ASSESSMENT ADAPTATIONS

- Study guides provided prior to tests.
- Use of a scribe.
- Use of a calculator.
- Multiple Choice will include 3 choices instead of 4.
- Matching with groups of no more than 10 (depends on IEP).
- Matching with groups of no more than 5.
- Tests read aloud.
- Word bank with no more than 10 options.
- Word bank with no more than 5 options.
- Extended time to complete the assessment.
- Alternate assessment - project or presentation instead of written assessment.

Resources/Equipment:

- Modern Carpentry Chapter 18, Stair Construction
- Various shop tools and equipment
- Instructor created worksheet

