

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT

CONSTRUCTION 2 – IB / MYP

Date: January 2016

Proposed Grade Level(s): 10-12

Grading: A – F / 1-7 (MYP)

Subject Area: Building and Construction Trades Design

Course Length: 1 year

Number of Credits: 5 per Semester

CTE Sector / Pathway: Building and Construction Trades / Residential and Commercial Construction

Prerequisites: Passing grade of a C- or better in Construction 1, or Instructor approval

COURSE DESCRIPTION:

Construction 2 is the second in a series of construction related courses in the building and construction trades sector. The objective of this course is to build upon a foundation of construction related skills and building code elements that were established in Construction 1. As with all construction courses, the basics of tool/equipment safety within the workplace, as per Occupational Safety and Health Administration (OSHA) standards, will be emphasized throughout the course. Upon completion of this course, students will be able to complete a tiny playhouse project which includes all aspects of a functioning residential structure, beginning with a foundation, through to the finish work. Lastly, students will acquire the math skills necessary to cut, measure, design, and calculate proper dimensions required for all aspects of building the structure, as well as the critical thinking skills needed to revise, redesign, read prints, and evaluate the integrity of the finished product.

GENERAL GOALS/ESSENTIAL QUESTIONS:

This competency-based course is the second in a sequence of three designed for construction work. It is designed to provide students with technical skills, practical experience in basic residential and light commercial construction using sustainable and green technology.

The activities and resources in this course support student acquisition of the skills and knowledge to meet Common Core standards by:

- Providing engaging and relevant activities that allow students to develop the essential skills needed for success.
- Providing a framework for students to see writing as a process with the end goal of articulating their ideas into words.
- Developing literacy strategies that can be applied to Design Build environment.
- Designing the program around evidence of what works in the classroom: research-based practices such as designing instruction with the end in mind, scaffolding activities to prepare students for increasing levels of rigor, integrating strategies that help students “learn how to learn”.

According to the writing strand in the Common Core Standards for English Language Arts, Literacy in History/Social Studies, Science, and Technical Subjects, students should demonstrate increasing

sophistication in all aspects of Language use, from vocabulary, to syntax, to the development and organization of ideas.

Upon successful completion of this course, the student will be able to discuss and describe:

- What constitutes a safe construction job site and practices on that site?
- What is the California Building Codes (CBC) and why are standards important?
- How will measuring/calculating incorrectly cause a waste of time and resources?
- When is it acceptable to deviate from the approved plans of the project?
- What level of tolerance is acceptable in finish work?
- What are the benefits of designing and building with Green Construction principles and aiming for Leadership in Energy & Environmental Design (LEED) certification?
- What forces need to be considered and controlled in a stable roofing system?
- What soft skills are needed to secure and retain a construction job?

CCSS READING COMPONENT:

Reading Standards for Informational Text – RSIT

11-12.2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

Reading Standards for Literacy in Science and Technical Subjects – RLST

11-12.2. 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.

11-12.3. 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.

11-12.4. 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.

11-12.7. 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

11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

11-12.10. By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.

CCSS WRITING COMPONENT:

Writing Standards – WS

11-12.7. Conduct short, as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHSST

11-12.7. Conduct short, as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

11-12.9. Draw evidence from informational texts to support analysis, reflection, and research.

CCSS SPEAKING AND LISTENING COMPONENT:

Oral proficiency activities combine all the elements in the units of study -functions, topics, vocabulary, and structures in the context of role-playing, discussion, debate, partner and group activities. These activities give students a chance to integrate what they have learned in real communication with others and to improve their abilities to clearly communicate their thoughts and opinions.

CTE INDUSTRY SECTOR/PATHWAY/STANDARDS: (if applicable)

Building and Construction Trades Pathway Standards

D. Residential and Commercial Construction Pathway

D1.0 Recognize the impact of financial, technical, environmental, and labor trends on the past and future of the construction industry.

D1.2 Understand the environmental regulations that influence residential and commercial design.

D1.3 Demonstrate knowledge of the California Environmental Quality Act (CEQA) and Environmental Impact Review (EIRs) impacts on residential and commercial construction.

D2.0 Apply the appropriate mathematical calculations used in the construction trades.

D2.1 Apply formulas to determine area, volume, lineal, board, and square feet.

D2.2 Apply the Pythagorean Theorem to calculate pipe offsets, roof slope, and check for square.

D2.3 Estimate the materials needed to complete a specific task.

D2.4 Determine the total developed length of the water supply piping system.

D2.9 Calculate the load on an electrical system from general lighting and small and large appliances.

D3.0 Interpret and apply information from technical drawings, schedules, and specifications used in the construction trades.

D3.1 Identify the elements used in technical drawings, including types of lines, symbols, details, and views.

D3.2 Identify and interpret the elements of technical drawings, including plan, elevation, section, and detail views. D3.3 Interpret technical drawings specifications.

D3.4 Identify plumbing, electrical, and mechanical symbols and other abbreviations used in construction drawings.

D3.5 Interpret and scale dimensions from a set of plans using an architect's scale.

D3.6 Interpret sectional and detail drawings to determine construction details such as corners, rough openings, stairs, and roof systems.

D3.7 Understand the sequencing and phases of residential and commercial construction projects.

D4.4 Check site layout for square using the diagonal method.

D5.0 Demonstrate foundation layout techniques to include setting forms, placing reinforcements, and placing concrete according to construction drawings, specifications, and building codes.

D6.0 Demonstrate carpentry techniques for the construction of a single-family residence.

D6.3 Lay out, cut, and install joist supports, rim joists, and floor joists as specified on construction plans.

D6.4 Install a subfloor.

D6.5 Demonstrate wall and plate layout, including rough openings.

D6.6 Measure, cut, and assemble wall components using appropriate tools and fasteners.

D6.7 Demonstrate the ability to square wall systems and install wall bracing and shear panels according to code.

D6.8 Stands, squares, plumbs, and braces walls.

D6.9 Describe the applications and uses of metal stud framing.

D6.10 Lay out, cuts, and installs ceiling joists and common and jack rafters.

D6.11 Frame and erect shed and gable roof systems.

D6.12 Lays out and installs trusses “on-center” with specified hardware.

D6.13 Install appropriate blocking, bracing, lookouts, fascia, and drip edge.

D6.14 Frame for roof penetrations and attic access.

D6.15 Apply roof sheathing and install appropriate flashings.

D6.16 Understand different roofing materials and methods of application.

D7.0 Demonstrate proper installation techniques of interior finish materials and protective finishes.

D7.1 Identifies types and uses of wall finishing materials.

D7.2 Cut, fit, and install gypsum wallboard onto a framed wall using appropriate fasteners.

D7.3 Describe the finishes and textures for gypsum wallboard.

D7.4 Properly prepares walls to receive protective finishes.

D7.5 Apply finishes according to specifications and industry standards.

D7.6 Identifies types and applications of finish flooring materials.

D7.7 Install pre-hung interior doors.

D7.8 Install interior trim and case work.

D8.0 Demonstrate the application of exterior finish materials and protective finishes in building construction.

D8.3 Install wood, vinyl, and/or manufactured siding.

D8.4 Demonstrate preparation techniques for applying exterior paint and stain.

D8.5 Apply exterior paint and stain according to specifications.

D8.6 Describe various types and uses of doors and windows used in building construction.

D8.7 Install pre-hung windows and doors using appropriate flashing and trim.

D8.8 Caulk and seal joints to prevent air and moisture infiltration and increase energy efficiency.

D8.9 Install vents for efficient attic and crawl space ventilation.

D8.10 Install various types of floor, wall, and ceiling thermal insulation.

D8.11 Describe mold-prevention techniques.

D9.0 Understand, integrate, and employ sustainable construction practices in the building trades.

D9.1 Identify design and energy solutions for improving building energy efficiency.

D9.2 Identify materials used in building construction to increase energy efficiency and sustainability.

D9.3 Calculate energy requirements and loads for buildings and structures.

D9.4 Demonstrate the application of constructing materials intended to improve building efficiency and sustainability.

D9.5 Analyze and evaluate buildings for energy efficiency and performance.

D9.6 Develop solutions to improve building energy performance and efficiency.

D11.0 Demonstrate skills necessary to complete an electrical system in a single-family residence in accordance with accepted industry standards.

D11.1 Determine whether or not an electrical circuit is “live.”

D11.2 Prepare rough framing for the installation of electrical cables and conduit.

D11.3 Lay out components to the tolerances indicated on the construction drawings, specifications, and government codes.

D11.4 Install typical devices, junction boxes, and panels.

D11.5 Install lighting and ceiling fan support boxes according to the National Electrical Code (NEC).

D11.6 Install conduit typical of residential construction and pull conductors through conduit as required by the NEC. D11.7 Splice and tap conductors for the installation of fixtures and devices.

D11.8 Install low voltage control and communication cables.

D11.9 Demonstrate grounding techniques for all electrical boxes, cabinets, and enclosures.

D11.10 Terminate electrical connections to receptacles, switches, lighting fixtures, large appliances, and other devices.

D11.11 Select receptacles and switches based on load requirements.

D11.12 Terminate equipment grounding and neutral conductor at the electrical service.

D11.13 Terminate communication and control wiring.

DETAILED UNITS OF INSTRUCTION:

Units have been designed based on the International Baccalaureate Middle Years Program Unit Planner and incorporate the International Baccalaureate Learner Profile (LP)

IB Learners strive to be:

- Inquirers
- Knowledgeable
- Thinkers
- Communicators
- Principled
- Open-minded
- Caring
- Risk-takers
- Balanced
- Reflective

Unit Title	Global Context	Inquiry Questions	Contents
Introduction & Safety <i>What constitutes a safe construction job site and</i>	Personal and Cultural Expression	What will I be learning in this course? Why are safe practices important?	<ul style="list-style-type: none">• The scope and purpose of this course is to provide students with technical instruction and practical experience.• This unit includes the classroom policies and procedures, as well as class/workplace emergency procedures.

<i>practices on that site?</i>			<ul style="list-style-type: none"> • Special emphasis is placed on Cal/OSHA standards for the construction industry, as well as personal responsibility in the work place. • Also, proper and safe use of tools and equipment.
Resource Management <i>Why are the California Building Codes (CBC) and standards important?</i>	Globalization and Sustainability	How will good time management skills assist me in timely completing a project?	<ul style="list-style-type: none"> • Career exploration in the construction industry as well as examining issues that address gender/equity issues. • Define the proper use of time, personnel and materials as it relates to a typical residential construction project. • Students to learn that through effective resource and personnel management, there is a direct economic effect on a typical build project. • Describe the ecological benefits of responsible material and personnel management.
Trade Mathematics <i>How will measuring / calculating incorrectly cost a waste of time and resources?</i>	Globalization and Sustainability	Why is 'measure twice and cut once' a time tested expression?	<ul style="list-style-type: none"> • Students will demonstrate the practical applications of math in the construction trade. • Typical use of whole number, fractions, mixed fractions, and decimals for measurements and calculations typical to all dimensioning phases of a residential construction project. • Geometric concepts of slope and volume are used to calculate various construction phases. • Students will use critical thinking skills to solve various mathematical problems while continuing to develop a sense of the various phases encountered during a typical construction build.

<p>Frame Carpentry</p> <p><i>When is it acceptable to deviate from the approved plans of the project?</i></p>	<p>Orientations in space and time</p>	<p>Why is spacing of structural member critical to building integrity?</p>	<ul style="list-style-type: none"> • Students will lay-out and frame typical wall segments as well as join the walls as a typical rectangular room construction. • All plates to be marked correctly with proper “stud” dimensioning and “special” layout for doors and window openings. • Double top plate installed correctly for exterior and interior wall intersections. • Students to lay-out and frame typical gable roof to tie room construction together as a completed project. • Students will cut and place ridge board while laying out, cutting and placing rafter boards. • All blocking is placed according to proper layout with rafter boards aligning with wall studs. • Nailing according to code specifications.
<p>Finish Carpentry</p> <p><i>What level of tolerance is acceptable in finish work?</i></p>	<p>Orientations in space and time</p>	<p>Will the finished product truly reflect your level of quality craftsmanship?</p>	<ul style="list-style-type: none"> • Students will demonstrate use of finishing nails in various “finish” carpentry situations. • Proper use of the miter saw while demonstrating the cutting and application of varied types of typical residential moldings. • Student will use a variety of finish carpentry techniques while properly installing both upper and lower kitchen and bath cabinets. • Proper installation of both doors and windows using a variety of carpentry tools.
<p>Green Technology / Renewable Energy</p>	<p>Scientific and technical innovation</p>	<p>How will you’re selections of components for this project impact the environment?</p>	<ul style="list-style-type: none"> • Examination of the impact of EPA legislation on industry practices as well as the proper disposal of hazardous materials.

<p><i>What are the benefits of designing and building with Green Construction principles and aiming for LEED certification?</i></p>	<p>Globalization and Sustainability</p>		<ul style="list-style-type: none"> • The role of LEED Green Building Rating System in the major implementation of technical instruction and practical experience in residential and commercial construction using sustainable and green technology. • Students will be exposed to and learn the basic knowledge in the renewable energy industry which will include Photovoltaic (solar), Wind Energy, Geothermal Energy, Tidal Power, and Hydro Electric Power, all these to include theory and practices as it applies to planning and installation, service, and maintenance of renewable energy equipment and related hardware.
<p>Roofing</p> <p><i>What forces need to be considered and controlled in a stable roofing system?</i></p>	<p>Orientations in space and time</p>	<p>Will the roofing system stand the test of time, weather and loads?</p>	<ul style="list-style-type: none"> • In this unit students will learn about and be able to explain the necessity for safe conditions on roof jobs. • Students will learn about the planning, estimating, and ordering of material as well as the different applications of the various types of roofing. • Building code requirements as well as energy efficient weather-stripping will be taught and demonstrated. • Students will engage in proper nailing and material installation in a typical roof section that includes a valley and ridge. Student will engage in further “green building” exploration while examining LEED materials vs. standard roofing materials and will perform an overview of “green” solar installation.
<p>Employability Skills</p> <p><i>What soft skills are</i></p>	<p>Globalization and Sustainability</p>	<p>Do you know what it takes to both secure a job and keep the job?</p>	<ul style="list-style-type: none"> • Students will be able to successfully use the Internet to access valuable career information. • Students will be able to articulate the employ-ability traits that are most

<i>needed to secure and retain a construction job?</i>	Identities and Relationships		<p>desirable in today's job market.</p> <ul style="list-style-type: none"> • Students to understand common resume and job application mistakes while successfully filling one out. • Students will also demonstrate job interview techniques and at the same time articulate the common errors in this process. • Students will write appropriate cover letters and also demonstrate follow up interview techniques.
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TEXTBOOK AND RESOURCES:

Carpentry, Koel, Leonard, 4th Edition American Technical Publishers, Inc. 2004

SUBJECT AREA CONTENT STANDARDS TO BE ADDRESSED:

Building and Construction Trade Pathway Standards

D. Residential and Commercial Construction Pathway

The Residential and Commercial Construction pathway provides learning opportunities for students interested in preparing for careers in construction and building design, performance, and sustainability. The standards focus on the manner in which residential and commercial structures are designed and built. The pathway includes instruction in the way in which these structures are built (Class B California License).

D2.0 Apply the appropriate mathematical calculations used in the construction trades.

D2.1 Apply formulas to determine area, volume, lineal, board, and square feet.

D2.2 Apply the Pythagorean Theorem to calculate pipe offsets, roof slope, and check for square.

D2.8 Apply Ohm's Law to calculate resistance, current flow, and voltage in series, parallel, and combination circuits.

D2.9 Calculate the load on an electrical system from general lighting and small and large appliances.

D3.0 Interpret and apply information from technical drawings, schedules, and specifications used in the construction trades.

D3.1 Identify the elements used in technical drawings, including types of lines, symbols, details, and views.

D3.2 Identify and interpret the elements of technical drawings, including plan, elevation, section, and detail views.

D3.3 Interpret technical drawings specifications.

D3.4 Identify plumbing, electrical, and mechanical symbols and other abbreviations used in construction drawings.

D3.5 Interpret and scale dimensions from a set of plans using an architect's scale.

- D3.6 Interpret sectional and detail drawings to determine construction details such as corners, rough openings, stairs, and roof systems.
- D4.0 Demonstrate techniques for proper site preparation.
- D4.1 Use leveling devices to check for elevation, level, and plumb.
- D5.0 Demonstrate foundation layout techniques to include setting forms, placing reinforcements, and placing concrete according to construction drawings, specifications, and building codes.
- D5.4 Develop a material take-off in accordance with construction drawings and specifications.
- D6.0 Demonstrate carpentry techniques for the construction of a single-family residence.
- D6.3 Lay out, cut, and install joist supports, rim joists, and floor joists as specified on construction plans.
- D6.4 Install a subfloor.
- D6.5 Demonstrate wall and plate layout, including rough openings.
- D6.6 Measure, cut, and assemble wall components using appropriate tools and fasteners.
- D6.7 Demonstrate the ability to square wall systems and install wall bracing and shear panels according to code.
- D6.8 Stand, square, plumb, and brace walls.
- D6.9 Describe the applications and uses of metal stud framing.
- D6.10 Lay out, cut, and install ceiling joists and common and jack rafters.
- D6.11 Frame and erect shed and gable roof systems.
- D6.12 Lay out and install trusses “on-center” with specified hardware.
- D6.13 Install appropriate blocking, bracing, lookouts, fascia, and drip edge.
- D6.14 Frame for roof penetrations and attic access.
- D6.15 Apply roof sheathing and install appropriate flashings.
- D6.16 Understand different roofing materials and methods of application.
- D7.0 Demonstrate proper installation techniques of interior finish materials and protective finishes.
- D7.1 Identify types and uses of wall finishing materials.
- D7.2 Cut, fit, and install gypsum wallboard onto a framed wall using appropriate fasteners.
- D7.3 Describe the finishes and textures for gypsum wallboard.
- D7.4 Properly prepare walls to receive protective finishes.
- D7.5 Apply finishes according to specifications and industry standards.
- D7.6 Identify types and application of finish flooring materials.
- D7.7 Install pre-hung interior doors.
- D7.8 Install interior trim and case work.
- D8.0 Demonstrate the application of exterior finish materials and protective finishes in building construction.
- D8.4 Demonstrate preparation techniques for applying exterior paint and stain.
- D8.5 Apply exterior paint and stain according to specifications.
- D8.6 Describe various types and uses of doors and windows used in building construction.
- D8.7 Install pre-hung windows and doors using appropriate flashing and trim.
- D8.8 Caulk and seal joints to prevent air and moisture infiltration and increase energy efficiency.
- D8.10 Install various types of floor, wall, and ceiling thermal insulation.

D8.11 Describe mold-prevention techniques.

D9.0 Understand, integrate, and employ sustainable construction practices in the building trades.

D9.1 Identify design and energy solutions for improving building energy efficiency.

D9.2 Identify materials used in building construction to increase energy efficiency and sustainability.

D9.3 Calculate energy requirements and loads for buildings and structures.

D9.4 Demonstrate the application of constructing materials intended to improve building efficiency and sustainability.

D9.5 Analyze and evaluate buildings for energy efficiency and performance.

D9.6 Develop solutions to improve building energy performance and efficiency.

D11.0 Demonstrate skills necessary to complete an electrical system in a single-family residence in accordance with accepted industry standards.

D11.1 Determine whether or not an electrical circuit is “live.”

D11.2 Prepare rough framing for the installation of electrical cables and conduit.

D11.3 Layout components to the tolerances indicated on the construction drawings, specifications, and government codes.

D11.4 Install typical devices, junction boxes, and panels.

D11.5 Install lighting and ceiling fan support boxes according to the National Electrical Code (NEC).

D11.6 Install conduit typical of residential construction and pull conductors through conduit as required by the NEC.

D11.7 Splice and tap conductors for the installation of fixtures and devices.

D11.8 Install low voltage control and communication cables.

D11.9 Demonstrate grounding techniques for all electrical boxes, cabinets, and enclosures.

D11.10 Terminate electrical connections to receptacles, switches, lighting fixtures, large appliances, and other devices.

D11.11 Select receptacles and switches based on load requirements.

COMMON CORE STANDARDS TO BE ADDRESSED:

CCSS READING COMPONENT

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades.

CCSS ELA standards supported by this course include:

Language Standards – LS

11-12.6. Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression

Reading Standards for Informational Text – RSIT

11-12.2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis;

provide an objective summary of the text

11-12.10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently

Reading Standards for Literacy in Science and Technical Subjects – RLST

11-12.2. 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.

11-12.3. 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.

11-12.4. 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.

11-12.7. 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.

11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible

11-12.10. By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently

Writing Standards – WS

11-12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHSST

11-12.7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

11-12.9. Draw evidence from informational texts to support analysis, reflection, and research

MATHEMATICS

Algebra – A-CED Create equations that describe numbers or relationships

1. Create equations and inequalities in one variable including ones with absolute value and use them to solve problems in and out of context, including equations arising from linear functions. 1.1 Judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step. (CA Standard Algebra II - 11.2)

4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R .

DISTRICT ESLRs TO BE ADDRESSED:

Students will be:

- **Self-Directed Learners:** who take responsibility for their learning as they learn construction terminology.
- **Effective Communicators:** who speak, write, and read and listen using construction terms.
- **Constructive Thinkers:** who apply learned vocabulary and concepts to attain mastery of the language and terminology used in the construction sector.
- **Collaborative Workers:** who work well with peers in small and large group activities in order to practice the use of construction concepts.
- **Quality Producers/Performers:** who take pride in the work they complete as they continually work toward mastery of construction standards.
- **Responsible Citizens:** who attend class regularly in order to contribute to not only their own, but also their peers' learning of the construction trade.

The Folsom Cordova Unified School District prohibits discrimination, intimidation, harassment (including sexual harassment) or bullying based on a person's actual or perceived ancestry, color, disability, race or ethnicity, religion, gender, gender identity or gender expression, immigration status, national origin, sex, sexual orientation, or association with a person or group with one or more of these actual or perceived characteristics. **For concerns/questions or complaints, contact the Title IX Coordinator(s) and Equity Compliance Officer(s): Curtis Wilson, cmwilson@fcusd.org (grades K-5) and Jim Huber, ED. D., jhuber@fcusd.org (grades 6-12), 1965 Birkmont Drive, Rancho Cordova, CA 96742, 916-294-9000 ext.104625**