

# Construction

Students understand and apply measurement systems in the planning and layout process used in the residential construction industry. [CON1](#)

- 1 Identify design solutions for residential construction problems. [CON1.1](#)
- 2 Calculate required materials for residential construction applications. [CON1.2](#)
- 3 Convert scaled blueprint drawing measurements to full dimensions for a given construction project. [CON1.3](#)
- 4 Apply conventional construction measurement processes accurately (geometric and trigonometric functions). [CON1.4](#)
- 5 Know the use of conventional construction formulas to determine production requirements. [CON1.5](#)

Students understand the safe and appropriate use of hand tools common to the residential and commercial construction industry. [CON2](#)

- 1 Use the common hand tools of the trade, such as hammers, torches, pliers, wire cutters, pipe cutters, saws, chisels (wood and concrete) and wrenches, safely and properly. [CON2.1](#)
- 2 Maintain and care for hand tools used in residential and commercial construction. [CON2.2](#)

Students understand the safe and appropriate use of portable power tools that are common to the residential construction industry and are appropriate to the individual student's level. [CON3](#)

- 1 Use portable power tools, such as circular saws, table saws, saber saws, drills, planers and sanders, safely and properly. [CON3.1](#)
- 2 Use portable pneumatic tools, such as rough framing nail guns, interior finishing and brad nail guns, hammers, impact wrenches, drills and compressors, safely and appropriately. [CON3.2](#)
- 3 Maintain and care for portable power tools and portable pneumatic tools. [CON3.3](#)

Students understand project management procedures and processes as they occur in a construction project. [CON4](#)

- 1 Interpret and use residential construction blueprints and specifications. [CON4.1](#)
- 2 Understand how to estimate materials from blueprints and specifications. [CON4.2](#)
- 3 Understand the sequencing of events for specific construction projects. [CON4.3](#)
- 4 Solve common residential construction problems, such as framing, plumbing and electrical, by using the official codes. [CON4.4](#)

---

**5 Understand industry conventions for the creation and maintenance of construction logs.** CON4.5

---

**6 Understand customer service/relations as applied to project management and wholesale and retail sales.** CON4.6

---

**Students understand the value and necessity of practicing occupational safety in the construction industry facility and job site.** CON5

---

**1 Understand the safe use of electrical connection methods and electrical wiring procedures.** CON5.1

---

**2 Know the safety procedures and practices in various work environment settings pertaining to residential and commercial construction.** CON5.2

---

**Students understand the variety of building phases, systems and techniques used in residential and commercial construction.** CON6

---

**1 Develop building plans and schedules by using processes common to residential and commercial construction.** CON6.1

---

**2 Understand the processes and materials (e.g., structural, electrical, mechanical, finish) appropriate to the architectural design and residential construction.** CON6.2

---

**3 Prepare the site layout and the site, including the grading and engineering of the building pad.** CON6.3

---

**4 Complete the phases of residential and commercial construction.** CON6.4

---

**Students understand the impact of financial, technical, environmental and labor trends on the past and future of the construction industry.** CON7

---

**1 Understand significant historical trends in the construction industry.** CON7.1

---

**2 Develop plans for construction projects.** CON7.2

---

**3 Understand the environmental regulations that influence residential and commercial.** CON7.3

---