**Lesson Information**

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| Lesson: (2 of 4) Math Length: 90 minutes  Unit: (1 of 3) Job Skills  Course: Core |

**Content Assumptions**

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| Prior to this class, students have taken the previous class, “Drawings.” |

**Essential Questions**

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| 1. How is math used in the construction trades? |

**Objectives Assessments**

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| After completing this lesson, students will be able to:   1. Solve design problems using mathematical models. 2. Calculate material amounts based on construction drawings. | 1. Materials estimate — rubric 2. Materials estimate — rubric |

**Activities/Instruction**

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| **Show and Tell** (45 minutes)  Using a variety of construction drawings for simple residences (as listed in the Materials section), Instructor explains how key ideas (e.g., scale ratios, trigonometric functions, etc.) are used to determine real lengths/areas of materials. The use of construction calculators may be demonstrated as well (see Materials section for supplemental instruction).  **Critical Math** (45 minutes)  Using their construction drawings from the previous lesson (and construction calculators, if desired), students estimate the materials needed for accomplishing the task or tasks set by Instructor (e.g., wall framing, wall sheathing, running electrical conduit, etc.). |

**Materials**

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| For students:   * Construction drawings of a simple residence (see previous lesson, “Drawings”) * Construction calculators, if desired   For Instructor:   * A variety of construction drawings for simple residences (see previous lesson, “Drawings”) * http://www.youtube.com/CalculatedIndustries/ (Tutorial videos for construction calculators) * [Materials Estimate Rubric] |