**Lesson Information**

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| Lesson: (1 of 4) Thermal and Moisture Protection Length: 90 minutes  Unit: (3 of 4) Weatherproofing  Course: Carpentry |

**Content Assumptions**

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| Prior to this class, students have taken a communications course. |

**Essential Questions**

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| 1. Why is it necessary to protect buildings from moisture, air infiltration, and thermal exchange? 2. How is building protection best accomplished? |

**Objectives Assessments**

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| After completing this lesson, students will be able to:   1. Demonstrate knowledge of the terms and concepts associated with structure insulation. 2. Evaluate different types of materials used to weatherproof structures and argue their respective advantages and disadvantages. | 1. Class discussion — Instructor observation 2. Group presentations — rubric |

**Activities/Instruction**

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| **Show…** (30 minutes)  Instructor presents samples of insulating materials and describes them to students. Instructor provides background information for each sample, including how it is installed and how it meets building code regulations. After all materials have been presented, Instructor checks for understanding by asking students in turn to name the samples and/or describe their uses.  **…and Tell** (60 minutes)  Instructor divides class into three groups and assigns each of them a different type of building protection (i.e., from moisture, from air infiltration, or from thermal exchange). Each group is to spend 30 minutes planning a presentation on why that type of protection is important and how it is best accomplished. Then, each group gives a 3-minute presentation (total presentation time should be 15 minutes with transitions). Instructor facilitates classroom discussion and guides students to an ultimate conclusion on how best to protect a building from moisture, air infiltration, and thermal exchange (15 minutes). |

**Materials**

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| For Instructor:   * Samples of insulating material, vapor barriers, etc. * International Energy Conservation Code® book * [PRESENTATION RUBRIC] |