**Lesson Information**

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| Lesson: (1 of 3) Advanced Laying Length: 90 minutes  Unit: (3 of 3) Specialized Technique  Course: Masonry |

**Content Assumptions**

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**Essential Questions**

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| 1. How are masonry structures protected from damage due to gravity and elements? 2. How do masonry units work together in different masonry structures? |

**Objectives Assessments**

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| After completing this lesson, students will be able to:   1. Explain the structural principles of masonry. 2. Demonstrate their knowledge of a variety of masonry structures. | 1. Tour map — rubric 2. Tour map — rubric |

**Activities/Instruction**

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| **Guided Tour** (45 minutes)  Instructor distributes photo-taking equipment to students and instructs them to take photos of the following as they tour the school building:   * Each type of masonry wall (at Instructor’s discretion) * Control joints in flooring/sidewalks * Expansion joints in flooring/sidewalks * Semicircular and jack arches   Instructor guides students around the school building, pointing out structural features of masonry and explaining the functions of each and how the different parts work together to create the building. Students take notes.  Alternately, if not all masonry features are present in the school building, Instructor may take students on a tour of another building in the community or on a virtual tour (like those found in the Materials section).  **Tour Map** (45 minutes)  Using the photos and notes they took during the tour, students are to re-create their experience on paper, developing a written and pictorial guide of the school building. These “tour maps” are to include all of the features pointed out on the tour and all information related to the structural principles discussed on the tour. |

**Materials**

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| For students:   * Equipment to take and print photos   For Instructor:   * [TOUR MAP RUBRIC] * Virtual tours: * http://www.vatican.va/various/cappelle/sistina\_vr/index.html (The Sistine Chapel) * http://www.vatican.va/various/basiliche/san\_giovanni/vr\_tour/index-en.html (St. John’s Basilica) * www.smith.edu/about-smith/visiting-smith/virtual-tour (Smith College) |