**Lesson Information**

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| Lesson: (4 of 4) Floors and Stairs Length: 90 minutes  Unit: (2 of 4) Concrete and Framing  Course: Carpentry |

**Content Assumptions**

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| Prior to this class, students have taken math and construction drawing courses. |

**Essential Questions**

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| 1. How are floor and stair systems designed according to function (i.e., load requirements)? 2. What are the steps involved in framing floor and stair systems? |

**Objectives Assessments**

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| After completing this lesson, students will be able to:   1. Demonstrate their knowledge of the terms and concepts associated with floor and stair framing. 2. Translate specifications into a construction drawing. 3. Translate information from a construction drawing into a written process for construction. | 1. Labeling diagram(s) — key 2. Construction drawing — rubric 3. Construction process — checklist |

**Activities/Instruction**

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| **Show…** (35 minutes)  Using diagrams such as those listed in the Materials section, Instructor introduces students to the terms and concepts associated with floor and stair systems and how they are framed. Instructor also explains the processes associated with floor and stair systems (i.e., how the components are sized to fit load and span data, and how the system is laid out, cut, and assembled).  **…and Tell** (10 minutes)  Students label blank versions of the diagrams (such as those listed in the Materials section).  **Plan…** (30 minutes)  Instructor divides the class into two groups and assigns each of them one of the following types of stair/floor system combinations:   * A common floor system with a post-to-post staircase (Instructor may choose to add parameters, such as required dimensions, loads, or turns) * A raised floor system with an over-the-post staircase (Instructor may choose to add parameters, such as required dimension, loads, or turns)   Students are to spend 30 minutes making construction drawings of their assigned systems, including all information normally found on a construction drawing.  **…and Process** (15 minutes)  Instructor tells students to switch drawings, so that each group now has the drawing of the other group. Students are to spend 15 minutes writing the process steps for framing the floor and stair systems represented in the drawings they now have. |

**Materials**

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| For Instructor:   * http://www.hometips.com/how-it-works/floor-subflooring.html * http://www6.homedepot.com/stairparts/gallery.html * [CONSTRUCTION DRAWING RUBRIC] * [CONSTRUCTION PROCESS CHECKLIST] |