

DWV design and installation

	Advanced (4)	Competent (3)	Developing (2)	Elementary (1)	Score
Identify	<ul style="list-style-type: none"> <li>Identified all fixture locations.</li> <li>Identified all vent requirements.</li> <li>Identified all potential obstacles.</li> </ul>	<ul style="list-style-type: none"> <li>Identified all fixture locations.</li> <li>Identified most vent requirements.</li> <li>Identified major potential obstacles.</li> </ul>	<ul style="list-style-type: none"> <li>Identified majority of fixture locations.</li> <li>Identified most vent requirements.</li> <li>Identified some potential obstacles.</li> </ul>	<ul style="list-style-type: none"> <li>Missed locations of majority of fixture locations.</li> <li>Missed locations of most vent requirements.</li> <li>Failed to recognize potential obstacles.</li> </ul>	
Gather	<ul style="list-style-type: none"> <li>Gathered all necessary building measurements (including possible obstacles).</li> <li>Correctly identified flow/demand requirements for all fixtures.</li> <li>Gathered rough-in data</li> </ul>	<ul style="list-style-type: none"> <li>Gathered most necessary building measurements.</li> <li>Gathered most fixture flow/demand requirements.</li> <li>Gathered rough-in data</li> </ul>	<ul style="list-style-type: none"> <li>Identified building sewer location and some necessary building measurements.</li> <li>Gathered some fixture flow/demand requirements.</li> <li>Gathered rough-in data</li> </ul>	<ul style="list-style-type: none"> <li>Identified building sewer location and some necessary building measurements.</li> <li>Gathered rough-in data</li> <li>Failed to determine flow/demand requirements.</li> </ul>	
Examine	<ul style="list-style-type: none"> <li>Identified best routing for pipe</li> <li>Identified best grouping of fixtures for venting</li> <li>Determine elevations for horizontal runs</li> <li>Determine location for all cleanouts</li> </ul>	<ul style="list-style-type: none"> <li>Identified possible routing for pipe</li> <li>Grouped some fixtures for venting</li> <li>Determined terminal elevations, but not all horizontal runs</li> <li>Determine location for a cleanout.</li> </ul>	<ul style="list-style-type: none"> <li>Identified possible routing for pipe</li> <li>Individually vented all fixtures.</li> <li>Determined terminal elevations, but missed horizontal runs</li> <li>Failed to identify location for a cleanout.</li> </ul>	<ul style="list-style-type: none"> <li>Identified possible routing for pipe.</li> <li>Individually vented all fixtures.</li> <li>Failed to identify proper elevations for slope.</li> <li>Failed to identify location for a cleanout.</li> </ul>	
Formulate	<ul style="list-style-type: none"> <li>Piping layout uses minimal fittings and is straightest shortest runs possible.</li> <li>Material takeoff is complete.</li> <li>Piping layout meets or exceeds code requirements</li> </ul>	<ul style="list-style-type: none"> <li>Piping layout is relatively straight, but longer than optimal.</li> <li>Material takeoff is nearly complete.</li> <li>Piping layout meets most code requirements</li> </ul>	<ul style="list-style-type: none"> <li>Piping layout is complete but missed not economical.</li> <li>Material takeoff is not complete.</li> <li>Piping fails to meet most code requirements.</li> </ul>	<ul style="list-style-type: none"> <li>Piping layout missed some fixtures.</li> <li>Material takeoff is not complete.</li> <li>Piping fails to meet most code requirements.</li> </ul>	
Apply	<ul style="list-style-type: none"> <li>Runs installed straight and at proper elevation.</li> <li>Joints clean and neat</li> <li>Pipe properly supported</li> </ul>	<ul style="list-style-type: none"> <li>Runs installed mostly straight and at proper elevation.</li> <li>Joints clean and neat (some drip of glue or solder)</li> <li>Pipe supports in correct location, but loose.</li> </ul>	<ul style="list-style-type: none"> <li>Runs installed with some dips, but slope incorrect.</li> <li>Joints sloppy (drips of glue or solder)</li> <li>Pipe supports missing.</li> </ul>	<ul style="list-style-type: none"> <li>Runs installed with some dips, but slope incorrect.</li> <li>Joints sloppy (drips of glue or solder)</li> <li>Pipe supports missing.</li> </ul>	
Evaluate	<ul style="list-style-type: none"> <li>Students plan addressed all obstacles.</li> <li>Student worked well with other trades.</li> <li>System passed pressure test</li> </ul>	<ul style="list-style-type: none"> <li>Student properly adjusted plan to meet unforeseen obstacles.</li> <li>Student worked well with other trades.</li> <li>System passed pressure test</li> </ul>	<ul style="list-style-type: none"> <li>Student need help to overcome unforeseen obstacles.</li> <li>Student's work interfered with other trades.</li> <li>System passed pressure test</li> </ul>	<ul style="list-style-type: none"> <li>Student need help to overcome unforeseen obstacles.</li> <li>Student's work interfered with other trades.</li> <li>System did not pass pressure test</li> </ul>	