

**Goodheart-Willcox Publisher**  
**Correlation of**  
***Architecture: Residential Drafting and Design ©2018***  
**to Maryland Department of Education**  
**Course: Architecture Design & Development Grades 9-14**



Standard	Correlating Textbook Pages
<b>Standard 1: Understand, Demonstrate, and Apply Mathematics and Measuring Skills.</b>	
Demonstrate and apply related mathematics.	143, 602, 784, 786, 796, 824
• Add, subtract, multiply, and divide whole numbers.	78, 337, 600–601
• Add, subtract, multiply, and divide fractions.	103, 404
• Add, subtract, multiply, and divide decimals.	76, 103, 337
<b>Convert fractions/decimals.</b>	
• Convert fractions to decimal equivalents.	446
• Convert decimal values to nearest fractional equivalent.	446
Demonstrate an ability to make and record basic measurements.	
Use scales, measuring tapes, and other techniques to take measurements.	73, 76–78, 429
Make and use measurements using fraction, foot---inch, and decimal---foot scales.	76–77, 104, 337
Record measurements using Cartesian and polar coordinates, as well as absolute and relative distances.	105–106
<b>Standard 2: Understand and Demonstrate Drawing Techniques.</b>	
Demonstrate proper sketching techniques.	
Create freehand sketches using paper, pencil, and an eraser (without the benefit of a straightedge, compass, or template) which is neat, clear, and smudge-free.	337, 381, 390, 655, 719
Understand and demonstrate the use of the alphabet of lines. Demonstrate the use of lines as they are drawn according to the alphabet of lines.	87, 108
Produce a one-view sketch of an object using proportional relationships.	78, 382
Use letters and numerals that conform to an architectural style.	80, 89, 91–92, 386
Demonstrate how words and letters are to be evenly spaced.	80
Understand and demonstrate the use of perspective views.	146, 634, 644, 652–653
Understand and use accepted dimensioning practices for sketches.	71, 88, 107, 116, 122
Demonstrate an ability to create architectural drawings to a professional standard.	



Standard	Correlating Textbook Pages
Demonstrate exactness when producing drawing geometry.	72, 116, 125, 280
Drawing elements are accurate and drawn to scale.	111, 684, 794
Use and know correct geometric construction techniques.	39, 121
Construct lines as defined by the alphabet of lines.	87, 108
Understand and correctly use object, hidden, and center lines.	88
Understand and correctly use dimension lines, extension lines, and leader lines.	88–89
Identify border lines, phantom lines, and section lines and know their uses.	87–89
Know and follow accepted architectural dimensioning standards to apply the appropriate dimensions to drawings.	71
<ul style="list-style-type: none"><li>Understand and choose the best location for dimensions.</li></ul>	58
<ul style="list-style-type: none"><li>Apply appropriate spacing between the object and the first dimension.</li></ul>	332–336
<ul style="list-style-type: none"><li>Apply uniform spacing between dimension lines.</li></ul>	166, 332–336
<ul style="list-style-type: none"><li>Demonstrate an ability to fully dimension the object.</li></ul>	332–336
<ul style="list-style-type: none"><li>Demonstrate the correct use of leaders and notes.</li></ul>	89, 111, 118, 298, 335
<ul style="list-style-type: none"><li>Use appropriate angles for leaders.</li></ul>	89
<ul style="list-style-type: none"><li>Use appropriate leader line terminators.</li></ul>	89
Apply the appropriate notes to drawings.	
Understand the placement and use of title block information.	82, 111
Understand the placement and use of general notes.	755
Use the correct text height.	111, 336, 389
Use architectural style letters and numerals.	87–92
<b>Standard 3: Develop and Demonstrate an Ability to Use Computer Software to Create Architectural Drawings.</b>	
Know how to save, open, rename, and move data files using common computer operating system software.	
Create a new drawing setup to support architectural standards.	111–112, 290–291
Create drawing setups for different sizes of drawing formats.	111–112, 290–291
Revise existing architectural drawings using 2D or 3D computer-	99



Standard	Correlating Textbook Pages
aided design software features.	
Produce hard copies of drawings using correct printer/plotter settings.	102–103, 298
Print/plot drawings using the appropriate scale settings.	99–100, 102–103, 111
Print/plot drawings with correct line widths.	107–108
<b>Standard 4: Understand Architectural Design Fundamentals.</b>	
Identify the historical influences that contributed to current home styles.	3–23
Recognize and describe the design elements of contemporary dwellings.	3–23
Discuss current trends in architecture.	28–29
List family needs that should be considered when planning a dwelling.	135–141
Discuss accessibility requirements for good functional utility.	141–142, 155–157, 159
<b>Standard 5: Understand and Apply Architectural Room Planning for the Sleeping, Living, and Service Areas.</b>	
Discuss factors important in the design of bedrooms, bathrooms, and closets. Apply those design elements to sketches and drawings.	185–202
Discuss factors important in the design of family rooms, living rooms, entryways, foyers, porches, and courts. Apply those design elements to sketches and drawings.	155–181
Discuss factors important in the design of kitchens, clothes care centers, and garages. Apply those design elements to sketches and drawings.	205–223
Discuss home construction costs using the cost per square foot. Discuss cost per type of construction, affordability, and the cost of amenities.	823–833
<b>Standard 6: Understand How to Lay Out a Residential Floor Plan.</b>	
Draw a residential floor plan using the accepted symbols and techniques.	327–335, 341–348
List the information required on a typical floor plan.	328–343
Represent typical materials using standard architectural symbols.	328–333, 335, 341–342
Draw the dimensions of a floor plan in a clear and precise manner which complies with architectural standards.	332–337
Recognize the difference between a good and poor drawing of a floor plan.	162–163
<b>Standard 7: Understand How to Analyze, Calculate, and Design Footings and Foundations.</b>	
List the major considerations when designing a footing for a residential foundation.	432–434
Analyze a typical floor plan to determine the appropriate foundation.	433–441



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Standard	Correlating Textbook Pages
<b>Standard 8: Understand How to Lay Out Exterior Elevations.</b>	
List features that should be included on an exterior elevation.	565–573
Identify the dimensions commonly shown on elevations.	570, 572, 576–577
Illustrate symbols that are often found on elevations.	570, 572–574, 576–577
Draw a typical exterior elevation which demonstrates proper techniques.	573–580
<b>Standard 9: Understand How to Lay Out Wall Construction.</b>	
Name the components of a typical frame wall.	485–489
Draw and label a typical wall section and full cross sections.	502, 510, 513, 546–550
<b>Standard 10: Understand How to Complete a Door and Window Schedule.</b>	
Draw a window schedule that would include window size, make, material, and type of glazing.	113–114, 537–541
Draw a door schedule that would include door size, style, type of lock set, special features, and jamb size.	113, 520, 523–526