

# Drawing in the Design Technology Classroom

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Assuming ten 45 minute periods

Day	Drawing Concepts	Procedure	Math Concepts
Day One	<ul style="list-style-type: none"><li>• Technical Drawing</li><li>• Isometric Drawing</li></ul>	<ol style="list-style-type: none"><li>1. Discuss the need for good quality drawings as part of the design process.</li><li>2. Explain the purpose of an isometric drawing.</li><li>3. Draw one isometric box step-by-step, equal proportions.</li><li>4. Draw two other boxes changing lengths of initial lines to change box proportions (e.g. skyscraper, pizza box).</li><li>5. Draw ten boxes, all of different size and proportion.</li><li>6. Add detail to one of the drawn boxes (e.g. a shoebox, a refrigerator, a box of tissues)</li></ol>	<ul style="list-style-type: none"><li>• Parallel lines</li><li>• Right angles</li><li>• Angle measurement</li></ul>
Day Two	<ul style="list-style-type: none"><li>• Isometric Drawing</li><li>• Complex Square and Angled Shapes</li></ul>	<ol style="list-style-type: none"><li>7. Demonstrate “cut-away” method by drawing a set of stairs.</li><li>8. Draw a wedge, then a pyramid using the cut-away method.</li></ol>	<ul style="list-style-type: none"><li>• 3D Geometric Shapes</li><li>• Prism</li><li>• Pyramid</li></ul>
Day Three	<ul style="list-style-type: none"><li>• Isometric Drawing</li><li>• Curved Shapes</li></ul>	<ol style="list-style-type: none"><li>9. Demonstrate isometric ellipse drawing method.</li></ol>	<ul style="list-style-type: none"><li>• 3D Geometric shapes</li><li>• Ellipse</li><li>• Cylinder</li><li>• Cone</li></ul>

Day	Drawing Concepts	Procedure	Math Concepts
Day Four	<ul style="list-style-type: none"> <li>• Isometric Drawing</li> </ul>	10. Draw three practice objects, now on plain white paper (e.g. a camera, a wagon, a bed, a glass with a straw, a radio, a toilet bowl, a flashlight)	
Day Five	<ul style="list-style-type: none"> <li>• Isometric Drawing</li> </ul>	11. Complete one high quality isometric final drawing to be graded.	
Day Six	<ul style="list-style-type: none"> <li>• Orthographic Projection</li> </ul>	12. Explain the purpose of an orthographic drawing. 13. Using graph paper, complete a practice three-view drawing of a set of stairs.	<ul style="list-style-type: none"> <li>• Scale and Proportion</li> </ul>
Day Seven	<ul style="list-style-type: none"> <li>• Orthographic Projection</li> <li>• Hidden Lines</li> </ul>	14. Explain the purpose for hidden lines in a drawing. 15. For practice, complete a sketch of an object that would include hidden lines (e.g. a simple chair).	<ul style="list-style-type: none"> <li>• Perpendicular</li> </ul>
Day Eight	<ul style="list-style-type: none"> <li>• Orthographic Projection</li> <li>• Dimensioning</li> </ul>	16. Explain the purpose for dimensions in an orthographic drawing. 17. Add dimensions to a previously draw object.	<ul style="list-style-type: none"> <li>• Units of Measurement</li> <li>• Decimals</li> <li>• Fractions</li> </ul>
Day Nine	<ul style="list-style-type: none"> <li>• Orthographic Projection</li> </ul>	18. Draw three practice objects, now on plain white paper (e.g. a camera, a desk, a chair, a bed, a sofa)	
Day Ten	<ul style="list-style-type: none"> <li>• Orthographic Projection</li> </ul>	19. Complete one high quality orthographic final drawing to be graded.	

### Reference

Hanks and Belliston (1990). *Rapid Viz: a new method for the rapid visualization of ideas*. Crisp Publications.