



OSSD Scope & Sequence: AGS 3

Scope & Sequence (S&S) is an overview of the skills and content covered in your curriculum at each class/instructional level. It provides an overview of the length of time (scope) and the order (sequence) in which key content will be taught. **Fully developed [curriculum and unit plans](#) will require more detail than the S&S provides.**

Grade Level(s): 11/12

Content Area and/or Course Title: AGS 3

Unit Title	Time/Term	Focus Standards and Unit Outcomes
		Standards from the Vermont Content Areas, Mathematics as presented by Carnegie Learning.
Module 1 Analyzing Structure	41 Sessions Semester 1	<p>Students explore patterns modeled by functions and review the structure of quadratics. They interpret and build polynomial functions of higher degree using key characteristics and transformations.</p> <p>Lesson focus standards and spaced review standards:</p> <p>A.SSE.1a, A.SSE.1b, A.SSE.2, A.APR.1, A.CED.1, A.CED.2, A.REI.4, A.REI.4a, A.REI.4b, A.REI.7, F.IF.4, F.IF.8, F.IF.9, F.BF.1a, N.CN.9(+), A.APR.1, A.APR.3, A.REI.10, A.REI.11, F.IF.4, F.IF.5, F.IF.7a, F.IF.7c, F.BF.1b, F.BF.3, G.GMD.1, G.GMD.3, G.GMD.4, G.MG.1, F.IF.7c, F.BF.3, A.APR.3, F.IF.4, F.BF.1b, A.CED.3, A.REI.11, F.IF.6, F.IF.9, A.APR.1, F.IF.C.9</p>
Module 2 Developing Structural Similarities	36 Sessions Semester 1 and Semester 2	<p>Students focus on interpreting polynomial functions that arise in applications and analyzing them using different representations. They then synthesize their understanding of rational numbers and polynomial functions to investigate rational functions.</p> <p>Lesson focus standards and spaced review standards:</p> <p>A.SSE.1a, A.SSE.2, A.SSE.3a, A.APR.1, A.APR.2, A.APR.3, A.APR.6, A.CED.1, A.CED.3, F.IF.8a P</p>

		A.APR.4, A.APR.5 (+), A.CED.3, F.IF.4, F.IF.5, F.BF.1, S.ID.6a, A.SSE.2, A.APR.6, A.APR.7(+), A.CED.1, A.REI.1, A.REI.2, A.REI.11, F.IF.5, F.IF.7d(+), F.IF.8a, F.BF.3, G.MG.2
Module 3 Inverting Functions	38 Sessions Semester 2	<p>In this module, students learn to invert functions. They invert exponential functions to explore the key characteristics of logarithmic functions. Students then build on their knowledge to solve exponential and logarithmic equations. They apply their understandings to real-world situations, including fractals.</p> <p>Lesson focus standards and spaced review standards:</p> <p>N.RN.1, N.RN.2, A.CED.4, A.REI.2, F.IF.4, F.IF.5, F.IF.7b, F.IF.9, F.BF.1c(+), F.BF.3, F.BF.4a, F.BF.4b(+), F.BF.4c(+), F.BF.4d(+), G.MG.2, G.MG.3, A.SSE.3c, A.REI.11, F.IF.4, F.IF.5, F.IF.7e, F.IF.8b, F.IF.9, F.BF.3, F.BF.4a, F.LE.2, F.LE.5, A.REI.11, F.BF.5(+), F.LE.4, S.ID.6a, A.SSE.1a, A.SSE.4, F.IF.3, F.IF.7, F.BF.1a, F.BF.2</p>
Module 4 Investigating Periodic Functions	15 Day Semester 2	<p>Students express trigonometric functions as coordinate pairs on the unit circle. They model real-world phenomena with trigonometric functions. Students solve trigonometric equations.</p> <p>Lesson focus standards and spaced review standards:</p> <p>N.Q.1, F.IF.4, F.IF.7e, F.BF.3, F.TF.1, F.TF.2, F.TF.3(+), F.TF.4(+), F.TF.5, G.SRT.9(+), G.SRT.10(+), G.SRT.11 (+), A.SSE.2, A.REI.1, F.IF.4, F.BF.1b, F.TF.1, F.TF.2, F.TF.5, F.TF.8</p>
Module 5 Relating Data and Decisions	17 Day Semester 2	<p>Students explore the characteristics of normal distributions. They consider methods of collecting data and then explore specific techniques to select representative samples.</p> <p>Lesson focus standards and spaced review standards:</p> <p>S.ID.1, S.ID.2, S.ID.4, S.MD.6 (+), S.MD.7 (+), S.IC.1, S.IC.2, S.IC.3, S.IC.4, S.IC.5, S.IC.6</p>