

## PROGRAM OVERVIEW

# Standards Correlations

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Each lesson in this program was written specifically to address the North Carolina Standard Course of Study (NCSCOS) for Mathematics. Each unit lists the standards covered in all the lessons, and each lesson lists the standards addressed in that particular lesson. In this section, you'll find a comprehensive list mapping the lessons to the NCSCOS.

As you use this program, you will come across a star symbol (★) included with the standards for some of the lessons and activities. This symbol is explained below.

**Symbol:** ★

**Denotes: Modeling Standards**

Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★).

From <http://www.walch.com/CCSS/00003>

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### NORTH CAROLINA MATH 3 STANDARDS CORRELATIONS

#### Unit 1: Functions and Their Inverses

Lesson	Title	Standard(s)	Pages
1.1	Comparing Properties of Functions Given in Different Forms	F-IF.9, F-LE.3	U1-1
1.2	Graphing Radical Functions	F-IF.7*	U1-34
1.3	Creating Absolute Value Equations and Inequalities in One Variable	A-CED.1*	U1-76
1.4	Absolute Value and Step Functions	F-IF.7*	U1-102
1.5	Creating and Graphing Absolute Value Equations and Inequalities with Two Variables	A-CED.2*, A-CED.3*, A-REL.11*	U1-142
1.6	Piecewise Functions	F-IF.7*	U1-178
1.7	Operating on Functions	F-BF.1b*	U1-210
1.8	Finding Inverse Functions	F-BF.4a	U1-229
1.9	Finding Inverse Functions in Various Forms	F-BF.4c, F-IF.9	U1-249
1.10	Determining Inverses of Quadratic Functions	F-BF.4c	U1-288

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#### Unit 2: Exponential and Logarithmic Functions

Lesson	Title	Standard(s)	Pages
2.1	Creating and Interpreting Exponential Functions	A-CED.1*, A-SSE.1a*	U2-1
2.2	Translating Exponential Functions	F-BF.3	U2-21
2.3	Logarithmic Functions as Inverses	F-BF.4a, F-BF.4c	U2-43
2.4	Graphing Logarithmic Functions	F-LE.4*	U2-67
2.5	Solving Exponential Equations	F-LE.4*	U2-96
2.6	Creating and Solving Exponential Equations from Word Problems	A-CED.1*	U2-123
2.7	Writing Exponential Expressions in Equivalent Forms	A-SSE.3*	U2-147
2.8	Linear, Exponential, and Quadratic Functions	A-CED.2*, F-IF.9	U2-177

#### Unit 3: Polynomial Functions

Lesson	Title	Standard(s)	Pages
3.1	Introduction to Polynomial Functions	A-SSE.1a*	U3-1
3.2	Graphing Quadratic and Cubic Functions	F-IF.7*	U3-17
3.3	Optimization of Volume	G-MG.1*	U3-51
3.4	Describing End Behavior and Turns	F-IF.7*, N-CN.9	U3-81
3.5	The Remainder Theorem	A-APR.2	U3-104
3.6	Zeros of Polynomial Functions	A-APR.3	U3-127
3.7	Building Polynomial Functions	F-BF.1a*	U3-157
3.8	End Behaviors of Functions	F-LE.3*, F-IF.9	U3-185

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#### Unit 4: Modeling with Geometry

Lesson	Title	Standard(s)	Pages
4.1	Proving Theorems About Triangles	G-CO.10	U4-1
4.2	Proving Properties of Parallelograms	G-CO.11	U4-2
4.3	Proving Properties of Special Quadrilaterals	G-CO.11	U4-38
4.4	Two-Dimensional Cross Sections of Three-Dimensional Objects	G-GMD.4	U4-80
4.5	Volumes of Cylinders, Pyramids, Cones, and Spheres	G-GMD.3*	U4-109
4.6	Density	G-MG.1*	U4-136
4.7	Design	G-MG.1*	U4-162
4.8	Proving Centers of Triangles	G-CO.10	U4-198

#### Unit 5: Reasoning with Geometry with Circles

Lesson	Title	Standard(s)	Pages
5.1	Deriving the Equation of a Circle	G-GPE.1, G-CO.14	U5-1
5.2	Similar Circles and Central and Inscribed Angles	G-C.2	U5-40
5.3	Chord Central Angles Conjecture	G-C.2	U5-75
5.4	Defining Radians	G-C.5	U5-96
5.5	Deriving the Formula for the Area of a Sector	G-C.5	U5-119
5.6	Properties of Tangents of a Circle	G-C.2, G-CO.14	U5-134
5.7	Inscribed Angles, Secants, Tangents, and Chords	G-C.2	U5-168

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### NORTH CAROLINA MATH 3 STANDARDS CORRELATIONS

#### Unit 6: Rational Functions

Lesson	Title	Standard(s)	Pages
6.1	Graphing Rational Equations	A-CED.2*	U6-1
6.2	Graphing Rational Functions and Identifying Key Features	A-SSE.1a*, F-IF.4*, F-IF.7*	U6-45
6.3	Structures of Rational Expressions	A-APR.6	U6-78
6.4	Multiplying Rational Expressions	A-APR.7b	U6-104
6.5	Dividing Rational Expressions	A-APR.7b	U6-124
6.6	Adding and Subtracting Rational Expressions	A-SSE.2, A-APR.7a	U6-146
6.7	Solving Rational Equations	A-REL.2	U6-172
6.8	Creating Rational Equations	A-CED.1*	U6-203

#### Unit 7: Trigonometric Functions

Lesson	Title	Standard(s)	Pages
7.1	Radians	F-IF.1, F-TF.1	U7-1
7.2	Special Angles in the Unit Circle	F-TF.2	U7-29
7.3	Periodic Phenomena and Amplitude, Frequency, and Midline	F-TF.5*	U7-64
7.4	Using Trigonometric Functions to Model Periodic Phenomena	F-TF.5*	U7-93

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#### Unit 8: Statistics

Lesson	Title	Standard(s)	Pages
8.1	Identifying Surveys, Experiments, and Observational Studies	S-IC.3*	U8-1
8.2	Other Methods of Random Sampling	S-IC.3*	U8-30
8.3	Differences Between Populations and Samples	S-IC.3*	U8-65
8.4	Designing Surveys, Experiments, and Observational Studies	S-IC.3*	U8-103
8.5	Designing and Simulating Treatments	S-IC.5*	U8-125
8.6	Estimating Sample Proportions	S-IC.4*	U8-148
8.7	Estimating Sample Means	S-IC.4*	U8-179
8.8	Reading Reports	S-IC.6*	U8-203