Mathematics Overarching Statements and Standards

Symbolic Expression (SE): The use and manipulation of symbols and expressions provide a variety of representations for solving problems and expressing mathematical concepts, relationships, and reasoning.		
Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
QR.C.1 QR.C.2 QR.C.4 QR.C.5 QR.C.8 QR.C.9 QR.C.10 AR.C.1 AR.C.2 AR.C.3 AR.C.4 AR.C.5 GR.C.4 SR.C.3 SR.C.4 SR.C.7	QR.EA.1 QR.EA.2 QR.EA.3 AR.EA.1 AR.EA.2 AR.EA.3 AR.EA.5 AR.EA.8 AR.EA.9 GR.EA.1 GR.EA.4	QR.A.1 AR.A.1 AR.A.2 AR.A.7 AR.A.14 AR.A.15 GR.A.13 SR.A.2 SR.A.4

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Mathematics Overarching Statements and Standards

The Nature of Numbers and Operations (NO): Understandings of number - "how many" or "how much" – and number types extend applications of arithmetic properties, operations, and number systems and guide the use of computational strategies and algorithms.

Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
QR.C.1	QR.EA.1	QR.A.1
QR.C.2	QR.EA.2	QR.Q.2
QR.C.3	QR.EA.3	QR.A.3
QR.C.4	QR.EA.4	QR.Q.4
QR.C.5	QR.EA.5	AR.A.1
QR.C.6	QR.EA.6	AR.A.2
QR.C.7	AR.EA.2	AR.A.3
QR.C.8	AR.EA.5	AR.A.5
QR.C.9	AR.EA.6	AR.A.6
QR.C.10	AR.EA.7	AR.A.7
QR.C.11	AR.EA.9	AR.A.8
QR.C.12	GR.EA.1	AR.A.14
AR.C.1	GR.EA.3	AR.A.17
AR.C.2	SR.EA.4	AR.A.21
AR.C.3		GR.A.6
AR.C.4		GR.A.9
AR.C.5		GR.A.12
AR.C.6		SR.A.1
AR.C.8		SR.A.3
GR.C.1		SR.A.4
SR.C.1		SR.A.5
SR.C.2		
SR.C.5		
SR.C.6		
SR.C.7		

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Mathematics Overarching Statements and Standards

Measurement (ME): Measurement attributes, processes, and tools help us quantify, compare, and solve problems involving objects, situations, and events.

Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
SR.C.1	QR.EA.1	QR.A.3
SR.C.4	QR.EA.2	AR.A.9
SR.C.5	QR.EA.5	AR.A.15
SR.C.6	GR.EA.1	GR.A.1
SR.C.7	GR.EA.2	GR.A.5
SR.C.8	GR.EA.3	GR.A.10
	GR.EA.4	GR.A.15
		SR.A.2
		SR.A.4

Patterns, Relations, and Functions (PRF): Patterns, relations, and functions are used to represent and analyze change in various contexts, make predictions and generalizations, and provide models and explanations for real-world phenomena.

Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
QR.C.3	QR.EA.1	AR.A.1
QR.C.5	QR.EA.2	AR.A.2
QR.C.6	QR.EA.3	AR.A.7
QR.C.7	AR.EA.1	AR.A.8
QR.C.8	AR.EA.2	AR.A.9
QR.C.11	AR.EA.3	AR.A.10
QR.C.12	AR.EA.4	AR.A.11
AR.C.1	AR.EA.5	AR.A.14
AR.C.2	AR.EA.7	AR.A.15
AR.C.3	AR.EA.8	AR.A.16
AR.C.4	AR.EA.9	AR.A.17
AR.C.5		AR.A.20
AR.C.6		SR.A.1
AR.C.8		SR.A.2
GR.C.1		SR.A.3
SR.C.1		SR.A.4
SR.C.3		
SR.C.5		
SR.C.6		
SR.C.7		

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Mathematics Overarching Statements and Standards

Geometry (GM): Visualizations, spatial reasoning, and properties of two- and three-dimensional figures can be used to analyze, represent, and model geometric concepts and relationships.		
Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
GR.C.1 GR.C.2 GR.C.3 GR.C.4 SR.C.7	GR.EA.1 GR.EA.2 GR.EA.3 GR.EA.4	GR.A.1 GR.A.2 GR.A.3 GR.A.4 GR.A.5 GR.A.6 GR.A.7

Data Analysis, Probability, and Statistics (DPS): Questions are posed and investigated by collecting data or retrieving existing data, and representing, analyzing, and interpreting data. Investigations, inferences, and predictions are used to make critical and informed decisions.		
Childhood (K-5)	Early Adolescence (6-8)	Adolescence (9-diploma)
QR.C.2 QR.C.3 GR.C.1 GR.C.4 SR.C.1 SR.C.2 SR.C.3 SR.C.5 SR.C.6	SR.EA.1 SR.EA.2 SR.EA.4	SR.A.1 SR.A.2 SR.A.4 SR.A.5

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Mathematics Overarching Statements and Standards

Guiding Principles

A. **A clear and effective communicator:** Students will use written, oral, symbolic, and visual forms of expression to communicate mathematically.

B. **A self-directed and lifelong learner:** Students generate and persevere in solving questions while demonstrating a growth mindset.

C. **A creative and practical problem solver:** Students will pose and solve mathematical problems by using a variety of strategies that connect to real-world examples.

D. **A responsible and involved citizen:** Students make sense of the world around them through mathematics including economic literacy.

E. **An integrative and informed thinker:** Students connect mathematics to other learning by understanding the interrelationships of mathematical ideas and the role math plays in other disciplines and life.

Standards for Mathematical Practice

1. **Make sense of problems and persevere in solving them:** Students will plan strategies to use and persevere in solving math problems.

2. **Reason abstractly and quantitatively:** Students will think about numbers in many ways and make sense of numerical relationships as they solve problems.

3. **Construct viable arguments and critique the reasoning of others:** Students will explain their thinking and make sense of the thinking of others.

4. **Model with mathematics:** Students will use representations to show their thinking in a variety of ways.

5. **Use appropriate tools strategically:** Students will use math tools such as tables, diagrams, and technology to explore and deepen their understanding of concepts.

6. **Attend to precision:** Students will use precise mathematical language and check their work for accuracy.

7. **Look for and make use of structure:** Students will use their current mathematical understandings to identify patterns and structure to make sense of new learning.

8. **Look for and express regularity in repeated reasoning:** Students will look for patterns and rules to help create general methods and shortcuts that can be applied to similar mathematical problems.

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