



Middle School Course Guide

Mathematics Courses

29712 Applied Consumer Skills I (B)

2 Semester(s)

Gr: 6

Ⓢ

Prerequisite: Eligible for A. L. E. program/placement by the ARD Committee.

Description: [Applied Learning Environment (A. L. E.) Course] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 6 and determined by the ARD Committee to be a suitable substitute for Math 6.

28077 Fundamentals of Math 6 (B)

2 Semester(s)

Gr: 6

Ⓢ

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [CAMPUS BASED SPECIAL EDUCATION (CBSE) COURSE] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 6 and determined by the ARD Committee to be a suitable substitute for Math 6.

29807 Basic Math 6 (B)

2 Semester(s)

Gr: 6

Ⓢ

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [Base/ABC/PAC]. This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 6 and determined by the ARD Committee to be a suitable substitute for Math 6.

21062 Math 6 (R)

2 Semester(s)

Gr: 6

Prerequisite: None

Description: The primary focal areas in Grade 6 are number and operations; proportionality; expressions, equations, and relationships; and measurement and data. Students use concepts, algorithms, and properties of rational numbers to explore mathematical relationships and to describe increasingly complex situations. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in the other. Students connect verbal, numeric, graphic, and symbolic representations of relationships, including equations and inequalities. Students use geometric properties and relationships, as well as spatial reasoning, to model and analyze situations and solve problems. Students communicate information about geometric figures or situations by quantifying attributes, generalize procedures from measurement experiences, and use the procedures to solve problems. Students use appropriate statistics, representations of data, and reasoning to draw conclusions, evaluate arguments, and make recommendations. While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology.

21063 Math 6 (H)

2 Semester(s)

Gr: 6

Prerequisite: Honors Criteria

Description: The primary focal areas in Grade 6 are number and operations; proportionality; expressions, equations, and relationships; and measurement and data. Students use concepts, algorithms, and properties of rational numbers to explore mathematical relationships and to describe increasingly complex situations. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in the other. Students connect verbal, numeric, graphic, and symbolic representations of relationships, including equations and inequalities. Students use geometric properties and relationships, as well as spatial reasoning, to model and analyze situations and solve problems. Students communicate information about geometric figures or situations by quantifying attributes, generalize procedures from measurement experiences, and use the procedures to solve problems. Students use appropriate statistics, representations of data, and reasoning to draw conclusions, evaluate arguments, and make recommendations. While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology. At an honors or preAP level, this course addresses the essential knowledge and skills for grade 6 in greater depth with a broader scope and a faster pace along with higher expectations for student performance.

NOTE: All courses may not be offered on every campus.



Middle School Course Guide

Mathematics Courses

21063 Math 6 Accelerated (H)

2 semesters

Gr: 6

Prerequisite: Honors criteria including competitive percentile rank on national norm-referenced assessments

Description: [Available on middle school campuses that will offer Geometry (h) for 8th grade students.] Students in Math 6 Accelerated (H) work with numerical concepts such as number and operations; proportionality; expressions, equations, and relationships; and measurements and data. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in other.

21061 MST Math 6 (H)

2 Semester(s)

Gr: 6

Prerequisite: Admission to the MST Magnet Program

Description: [Math-Science-Technology magnet course offered only at Jackson Technology Center] MST Math 6 will address the essential knowledge and skills and focal areas for grades 6 and 7. Students in this magnet class will utilize advanced classroom tools such as concrete manipulatives, graphing calculators, data collection probeware, and interactive multimedia software applications.

21065 Math 6 (EH)

2 Semester(s)

Gr: 6

Prerequisite: Enriched Honors Criteria

Description: [Enriched Honors course offered only at Austin Academy] Students in Enriched Honors Math 6 will work with numerical concepts such as adding and subtracting integers, decimals, fractions, order relations, and number theory. The concepts of probability and statistics will be explored, as well as geometry and measurement. The students will be given an opportunity to apply reasoning skills. Math 6 (EH) addresses all the essential knowledge and skills for grade 6 and prepares the students for Math 7 (EH).

21051 Math Lab 6 (R)

1 Semester(s)

Gr: 6

21052 Math Lab 6 (R)

2 Semester(s)

Gr: 6

Prerequisite: Sixth grade students who did not pass the STAAR Math exam in grade 5 may be required to take Mathematics Lab 6 in place of an elective.

Description: This course can be taken in addition to Math 6 to provide additional time for students to develop and reinforce the math concepts and problem-solving skills needed to pass the state assessment.

29713 Applied Consumer Skills II (B)

2 Semester(s)

Gr: 7

Ⓢ

Prerequisite: Eligible for A. L. E. program/placement by the ARD Committee.

Description: [Applied Learning Environment (A. L. E.) Course] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 7 and determined by the ARD Committee to be a suitable substitute for Math 7.

28078 Fundamentals of Math 7 (B)

2 Semester(s)

Gr: 7

Ⓢ

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [CAMPUS BASED SPECIAL EDUCATION (CBSE) COURSE] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 7 and determined by the ARD Committee to be a suitable substitute for Math 7.

29808 Basic Math 7 (B)

2 Semester(s)

Gr: 7

Ⓢ

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [Base/ABC/PAC]. This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 7 and determined by the ARD Committee to be a suitable substitute for Math 7.

NOTE: All courses may not be offered on every campus.



Middle School Course Guide

Mathematics Courses

21072 Math 7 (R)

2 Semester(s)

Gr: 7

Prerequisite: Math 6

Description: The primary focal areas in Grade 7 are number and operations; proportionality; expressions, equations, and relationships; and measurement and data. Students use concepts, algorithms, and properties of rational numbers to explore mathematical relationships and to describe increasingly complex situations. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships, including number, geometry and measurement, and statistics and probability. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in the other. Students connect verbal, numeric, graphic, and symbolic representations of relationships, including equations and inequalities. Students use geometric properties and relationships, as well as spatial reasoning, to model and analyze situations and solve problems. Students communicate information about geometric figures or situations by quantifying attributes, generalize procedures from measurement experiences, and use the procedures to solve problems. Students use appropriate statistics, representations of data, and reasoning to draw conclusions, evaluate arguments, and make recommendations. While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology.

21073 Math 7 (H)

2 Semester(s)

Gr: 7

Prerequisite: Honors Criteria

Description: The primary focal areas in Grade 7 are number and operations; proportionality; expressions, equations, and relationships; and measurement and data. Students use concepts, algorithms, and properties of rational numbers to explore mathematical relationships and to describe increasingly complex situations. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships, including number, geometry and measurement, and statistics and probability. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in the other. Students connect verbal, numeric, graphic, and symbolic representations of relationships, including equations and inequalities. Students use geometric properties and relationships, as well as spatial reasoning, to model and analyze situations and solve problems. Students communicate information about geometric figures or situations by quantifying attributes, generalize procedures from measurement experiences, and use the procedures to solve problems. Students use appropriate statistics, representations of data, and reasoning to draw conclusions, evaluate arguments, and make recommendations. While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology. At an honors or preAP level, this course addresses the essential knowledge and skills for grade 7 in greater depth with a broader scope and a faster pace along with higher expectations for student performance. This course is designed to prepare students for Algebra 1 (Honors/PreAP) in grade 8.

21071 MST Math 7 (H)

2 Semester(s)

Gr: 7

MST

Prerequisite: Admission to the MST Magnet Program

Description: [Math-Science-Technology magnet course offered only at Jackson Technology Center] MST Math 7 will address the essential knowledge and skills and focal areas for grades 7 and 8. Students in this magnet class will utilize advanced classroom tools such as concrete manipulatives, graphing calculators, data collection probeware, and interactive multimedia software applications.

21075 Math 7 (EH)

2 Semester(s)

Gr: 7

EH

Prerequisite: Math 6 Enriched Honors or Math 6 Honors with recommendation of teacher and/ or counselor

Description: [Enriched Honors course offered only at Austin Academy] This is a preparatory course for 8th grade Algebra I Enriched Honors. Students explore in depth the concepts of equation solving, graphs and data, proportions, probability, and geometry. Advanced topics include an introduction to factoring polynomials and an in depth study of exponents and their properties.

NOTE: All courses may not be offered on every campus.



Middle School Course Guide

Mathematics Courses

21070	Math Lab 7 (R)	1 Semester(s)	Gr: 7
21076	Math Lab 7 (R)	2 Semester(s)	Gr: 7

Prerequisite: Students who did not pass the STAAR Math exam in grade 6 may be required to take Mathematics Lab 7 in place of an elective.

Description: This course can be taken in addition to the regular grade-level mathematics course to offer students additional instructional time to develop and reinforce the math concepts and problem-solving skills needed to pass STAAR.

29714	Applied Consumer Skills III (B)	2 Semester(s)	Gr: 8
--------------	--	----------------------	--------------

(SE)

Prerequisite: Eligible for A. L. E. program/placement by the ARD Committee.

Description: [Applied Learning Environment (A. L. E.) Course] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 8 and determined by the ARD Committee to be a suitable substitute for Math 8.

20069	Fundamentals Math Lab 8 (B)	2 Semester(s)	Gr: 8
--------------	------------------------------------	----------------------	--------------

(SE)

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [CAMPUS BASED SPECIAL EDUCATION (CBSE) COURSE] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 8 and determined by the ARD Committee to offer students additional time for mathematics instruction.

28079	Fundamentals of Math 8 (B)	2 Semester(s)	Gr: 8
--------------	-----------------------------------	----------------------	--------------

(SE)

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [CAMPUS BASED SPECIAL EDUCATION (CBSE) COURSE] This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 8 and determined by the ARD Committee to be a suitable substitute for Math 8.

29809	Basic Math 8 (B)	2 Semester(s)	Gr: 8
--------------	-------------------------	----------------------	--------------

Prerequisite: Mathematics required by ARD as denoted on ARD Schedule Page.

Description: [Base/ABC/PAC]. This is a locally designed course aligned with the Texas Essential Knowledge and Skills for Math 8 and determined by the ARD Committee to be a suitable substitute for Math 8.

21083	Math 8 (R)	2 Semester(s)	Gr: 8
--------------	-------------------	----------------------	--------------

Prerequisite: Math 7

Description: The primary focal areas in Grade 8 are proportionality; expressions, equations, relationships, and foundations of functions; and measurement and data. Students use concepts, algorithms, and properties of real numbers to explore mathematical relationships and to describe increasingly complex situations. Students use concepts of proportionality to explore, develop, and communicate mathematical relationships. Students use algebraic thinking to describe how a change in one quantity in a relationship results in a change in the other. Students connect verbal, numeric, graphic, and symbolic representations of relationships, including equations and inequalities. Students begin to develop an understanding of functional relationships. Students use geometric properties and relationships, as well as spatial reasoning, to model and analyze situations and solve problems. Students communicate information about geometric figures or situations by quantifying attributes, generalize procedures from measurement experiences, and use the procedures to solve problems. Students use appropriate statistics, representations of data, and reasoning to draw conclusions, evaluate arguments, and make recommendations. While the use of all types of technology is important, the emphasis on algebra readiness skills necessitates the implementation of graphing technology.

NOTE: All courses may not be offered on every campus.

21080	Math Lab 8 (R)	1 Semester(s)	Gr: 8
21090	Math Lab 8 (YR)	2 Semester(s)	Gr: 8

Prerequisite: Students who did not pass the STAAR Math exam in grade 7 may be required to take Mathematics Lab 8 in place of an elective.

Description: This course can be taken in addition to the regular grade-level mathematics course to offer students additional instructional time to develop and reinforce the math concepts and problem solving skills needed to pass STAAR.

21086	Algebra 1 PreAP (H)	2 Semester(s)	Gr: 7-8
--------------	----------------------------	----------------------	----------------



Prerequisite: Math 8 or its equivalent. This course gives high school credit and will count toward high school GPA.

Description: The primary focus for students in this course is developing logical reasoning by making and justifying generalizations based on their experiences with fundamental algebraic concepts, especially functional relationships and problem solving in real situations. Linear and quadratic functional relationships are examined in a variety of problem situations, and these functions form the basis for the study of equations and the development of algebraic skills. Students use a variety of representations (concrete, numerical, algorithmic, graphical) and tools as well as having regular access to technology that allows function plotting, coordinate graphing, algebraic analysis, and computation. At an honors or PreAP level, this course addresses the essential knowledge and skills for first-year algebra at greater depth with a broader scope and a faster pace along with higher expectations for student performance. ***This course is designed for students who plan to take an advanced placement (AP) mathematics course in high school.***

21081	MST Algebra 1 PreAP (H)	2 Semester(s)	Gr: 7-8
--------------	--------------------------------	----------------------	----------------

MST

Prerequisite: Math 8 or its equivalent and admission to the MST Magnet Program. This course gives high school credit and will count toward high school GPA.

Description: [Math-Science-Technology magnet course offered only at Jackson Technology Center] MST Algebra I will address all of the essential knowledge and skills for Algebra I and will focus on linear and quadratic relationships and problem solving in real situations thus allowing students to develop logical reasoning by making and justifying generalizations based on their experiences with fundamental algebraic concepts. Students in this magnet class will utilize advanced classroom tools such as concrete manipulatives, graphing calculators, data collection probeware, and interactive multimedia software applications.

21091	Algebra I (IntH)	2 Semester(s)	Gr: 7-8
--------------	-------------------------	----------------------	----------------



Prerequisite: Math 8 or its equivalent and International Honors Criteria. This course gives high school credit and will count toward high school GPA.

Description: [International Honors course offered only at Austin Academy] Algebra I topics are presented in a "skills plus applications" format with an emphasis on applications. Topics covered include linear equations and systems, radicals, and quadratic and rational functions. Symbolic logic is introduced following completion of the Algebra I objectives to prepare students for proofs in advanced high school geometry. Successful completion of Math 7 EH is a prerequisite for this course. Students earning credit for this course will receive International Honors level grade points on their high school transcript, if they attend Garland High School. Students receiving credit for this course and choosing to attend any other high school in GISD will receive Honors grade points for this course.

21094	PreAP Geometry (H)	1 credit	Gr: 8
--------------	---------------------------	-----------------	--------------



Prerequisite: Algebra 1. This course gives high school credit and will count toward high school GPA.

Description: This course addresses the components of the basic structure of geometry such as dimensionality, congruence, and similarity through the study of size, location, and direction relationships. Connections to algebra and to the world outside of school are generated through a variety of applications and settings. Students use a variety of representations (concrete, numerical,

NOTE: All courses may not be offered on every campus.

algorithmic, graphical) as well as having regular access to technology that allows geometric constructions, coordinate graphing, algebraic analysis, and computation. At an honors or pre AP level, this course addresses the essential knowledge and skills for geometry at greater depth with a broader scope and a faster pace along with higher expectations for student performance. This course is an excellent preparation for college entrance examinations (SAT, ACT, etc.) and further study in mathematics and is designed for students who plan to take an advanced placement (AP) mathematics course in high school. *Pre AP courses address learning objectives at greater depth and faster pace along with higher expectations for student performance.

21095 Geometry (IntH)**2 Semester(s)****Gr: 8**

Prerequisite: Algebra 1 IntH. This course gives high school credit and will count toward high school GPA.

Description: [International Honors course offered only at Austin Academy] This course addresses the components of the basic structure of geometry such as dimensionality, congruence, and similarity through the study of size, location, and direction relationships. Connections to algebra and the world outside of school are generated through a variety of applications and settings. Students use a variety of representations (concrete, numerical, algorithmic, and graphical) as well as having regular access to technology that allows geometric construction, coordinate graphing, algebraic analysis, and computation. At an international honors level, this course addresses the essential knowledge and skills for geometry at greater depth with a broader scope and a faster pace along with higher expectations for student performance. Students earning credit for this course will receive International Honors level grade points on their high school transcript, if they attend Garland High School. Students receiving credit for this course and choosing to attend any other high school in GISD will receive Honors grade points for this course.