

**Van Buren Community Schools
Math Curriculum 7-12
2005-2006**

Developed Summer of 2005

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ACKNOWLEDGEMENT

In the spring of 2005 a committee was formed of 12 elementary teachers and 7 secondary teachers to develop a Mathematics curriculum with a K-12 continuum. On June 1, 2000 the committee members joined together with their unique competencies and interests in a joint effort to develop this curriculum, which is the result of interactions and idea exchanges among the committee members, from teachers and administrators within the school system.

This curriculum should assist teachers in determining the expected concept and performance level at the various grades. It is not designed to restrict or limit the creativity or imagination of the teachers. The guide serves as a springboard for the development of additional concepts and master of skills, depending on the ability and interests of each student.

This project was successfully completed in the summer of 2005, because of the dedication and consistent efforts of the committee members who participated in this project: Secondary - Vicki Shepard, Dave Atwood, Carole Snook, Kristin Marshall, Sherry Peck, Heath Teeter, Jason Marshall; Elementary - Linda Golden, Jolene Davis, Marnie Starnes, Ann Skaggs, Carol Alvis, Teri Dickinson, Kelly Loeffler, Joyce Ward, Jane Graf, Lori Cochran, Anita Corry and Linda Hinshaw.

We are grateful to these committee members and support and compliment their fine efforts.

It is our wish that by faithful use of this curriculum, all mathematics teachers will be more effective, and through the use of this manual in the effort to give a sound mathematics foundation to our children.

FORWARD

The purpose of this guide is to assist teachers in the organization and instruction of mathematics classes in the Van Buren Community Schools District.

This guide provides direction for teachers of kindergarten through grade twelve, and is adaptable for individual and class needs. It is, however, important that teachers follow the suggested sequence and scope of lesson content to ensure systematic and comprehensive instruction of concepts and skills.

Committee members established basic agreement on the philosophy and goals of mathematics in our school system.

This guide, prepared by classroom teachers for use by classroom teachers provides a scope and sequence for instruction.

Chapter 12

GENERAL ACCREDITATION STANDARDS

The goal for the early childhood through twelfth grade educational system in Iowa is to improve the learning, achievement, and performance of all students so they become successful members of a community and workforce. It is expected that each school and school district shall continue to improve its educational system so that more students will increase their learning, achievement, and performance.

Accreditation focuses on an ongoing school improvement process for schools and school districts. However, general accreditation standards are the minimum requirements that must be met by an Iowa school merged, by the state board of education, with one or more contiguous school districts as required by Iowa Code subsection 256.11(12). A nonpublic school must meet the general accreditation standards if it wishes to be designated as accredited for operation in Iowa.

General accreditation standards are intended to fulfill the state's responsibility for making available an appropriate educational program that has high expectations for all students in Iowa. The accreditation standards ensure that each child has access to an educational program that meets the needs and abilities of the child regardless of race, color, national origin, gender, disability, religion, creed, marital status, geographic location, or socioeconomic backgrounds.

With local community input, school districts and accredited nonpublic schools shall incorporate accountability for student achievement into comprehensive school improvement plans designed to increase the learning, achievement, and performance of all students. As applicable, and to the extent possible, comprehensive school improvement plans shall consolidate federal and state program goal setting, planning, and reporting requirements. Provisions for multicultural and gender fair education, technology integration, global education, gifted and talented students, at-risk students, students with disabilities, and the professional development of all staff shall be incorporated, as applicable, into the comprehensive school improvement plan. See subrules 12.5(8) to 12.5(13), 12.7(1), and 12.8(1).

DIVISION I

GENERAL STANDARDS

281-12.1(256) General standards.

12.1(1) *Schools and school districts governed by general accreditation standards. These standards govern the accreditation of all prekindergarten, if offered, or kindergarten through grade 12 school districts operated by public school corporations and the accreditation, if requested, of prekindergarten or kindergarten through grade 12 schools operated under nonpublic auspices. Each school district shall take affirmative steps to integrate students in attendance centers and courses. Schools and school districts shall collect and annually review district, attendance center, and course enrollment data on the basis of race, national origin, gender, and disability. Equal opportunity in programs shall be provided to all students regardless of race, color, national origin, gender, disability, religion, or creed. Nothing in this rule shall be construed as prohibiting any bona fide religious institution from imposing qualifications based upon religion when such qualifications are related to a bona fide religious purpose.*

12.5(4) Junior high program, grades 7 and 8. The following shall be taught in grades 7 and 8; English-language arts, social studies, **mathematics**, science, health, human growth and development, physical education, music, visual art, family and consumer education, career education, and technology education. Instruction in the following areas shall include the contributions and perspectives of persons with disabilities, both men and women, and persons from diverse racial and ethnic groups, and shall be designed to eliminate career and employment stereotypes.

In implementing the junior high program standards, the following general curriculum definitions shall be used.

c. Mathematics. Mathematics instruction shall include number and number relationships including ration, proportion, and percent; number systems and number theory; estimation and computation; geometry; measurement; statistics and probability; and algebraic concepts of variables, patterns, and functions. This content shall be taught through an emphasis on mathematical problem solving, reasoning, and applications; language and symbolism to communicate mathematical ideas; and connections among mathematical topics and between mathematics and other disciplines. Calculators and computers shall be used in concept development and problem solving.

12.55 High school program, grades 9-12. In grades 9 through 12 a unit is a course or equivalent related components or partial units taught throughout the academic year as defined in subrule 12.5(18). The following shall be offered and taught as the minimum program: English language arts, six units; social studies, five units; **mathematics, six units as specified in 12.5(5)"c"**; science, five units; health, one unit; physical education, one unit; fine arts, three units; foreign language, four units; and vocational education, 12 units as specified in 12.5(5)"i."

In implementing the high school program standards, the following curriculum standards shall be used.

c. Mathematics (six units). Mathematics instruction shall include:

(1) Four sequential units which are preparatory to postsecondary educational programs. These units shall include strands in algebra, geometry, trigonometry, statistics, probability, and discrete mathematics. Mathematical concepts, operations, and applications shall be included for each of these strands. These strands shall be taught through an emphasis on mathematical problem solving, reasoning, and structure; language and symbolism to communicate mathematical ideas; and connections among mathematical topics and between mathematics and other disciplines. Calculators and computers shall be used in concept development and problem solving.

(2) Two additional units shall be taught. These additional units may include mathematical content as identified in, but not limited to, paragraphs 12.5(3)"c," 12.5(4)"c," and 12.5(5)"c"(1). These units are to accommodate the locally identified needs of the students in the school or school district. This content shall be taught through an emphasis on mathematical problem solving, reasoning, and structure; language and symbolism to communicate mathematical ideas; and connections among mathematical topics and between mathematics and other disciplines. Calculators and computers shall be used in concept development and problem solving.

Infusions Law

12.5(7) Career education. (CE) Each school or school district shall incorporate school-to-career educational programming into its comprehensive school improvement plan. Curricular and co-curricular teaching and learning experiences regarding career education shall be provided from the prekindergarten level through grade 12. Career education shall be incorporated into the total educational program and shall include, but is not limited to, awareness of self in relation to others and the needs of society; exploration of employment opportunities, at a minimum, within Iowa; experiences in personal decision making; experiences that help students connect work values into all aspects of their lives; and the development of employability skills. In the implementation of this subrule, the board shall comply with Iowa Code section 280.9.

12.5(8) Multicultural and gender fair approaches to the educational program. (MCGF) The board shall establish a policy to ensure that students are free from discriminatory practices in the educational program as required as required by Iowa Code section 256.11. In developing or revising the policy, parents, student's instructional and non-instructional staff, and community members shall be involved. Each school or school district shall incorporate multicultural and gender fair goals for the educational program into its comprehensive school improvement plan. Incorporation shall include the following:

a. Multicultural approaches to the educational program. These shall be defined as approaches which foster knowledge of, and respect and appreciation for, the historical and contemporary contributions of diverse cultural groups, including race, color, national origin, gender, disability, religion, creed, and socioeconomic background. The contributions and perspectives of Asian Americans, African Americans, Hispanic Americans, American Indians, European Americans, and persons with disabilities shall be included in the program.

b. Gender fair approaches to the educational program. These shall be defined as approaches which foster knowledge of, and respect and appreciation for, the historical and contemporary contributions of women and men to society. The program shall reflect the wide variety of roles open to both women and men to society. The program shall reflect the wide variety of roles open to both women and men and shall provide equal opportunity to both sexes.

12.5(9) Special education. The board of each school district shall provide special education programs and services for its resident children which comply with rules of the state board of education implementing Iowa Code chapters 256, 256B, 273 and 280.

12.5(10) Technology integration. Each school or school district shall incorporate into its comprehensive school improvement plan demonstrated use of technology to meet its student learning goals. As described in Iowa Code section 295.3, progress with the use of technology shall be included in the school district's annual progress report.

12.5(11) Global education. Each school or school district shall incorporate global education into its comprehensive school improvement plan as required by Iowa Code section 256.11. Global education shall be incorporated into all areas and levels of the educational program so students have the opportunity to acquire a realistic perspective on world issues, problems, and the relationship between an individual's self-interest and the concerns of people elsewhere in the world.

12.5(12) Provisions for gifted and talented students. Each school district shall incorporate gifted and talented programming into its comprehensive school improvement plan as required by Iowa Code section 257.43. The comprehensive school improvement plan shall include the following gifted and talented program provisions; valid and systematic procedures, including multiple selection criteria for identifying gifted and talented students from the total student population; goals and performance measures; a qualitatively differentiated program to meet the students' cognitive and affective needs; staffing provisions; and in-service

design; a budget, and qualifications of personnel administering the program. Each school district shall review and evaluate its gifted and talented programming. This subrule does not apply to accredited nonpublic schools.

12.5(13) Provisions for at-risk students. Each school district shall include in its comprehensive school improvement plan the following provisions for meeting the needs of at-risk students: valid and systematic procedures and criteria to identify at-risk students throughout the school district's school-age population, determination of appropriate ongoing educational strategies for alternative options education programs as required in Iowa Code section 280.19A, and review and evaluation of the effectiveness of provisions for at-risk students. This subrule does not apply to accredited nonpublic schools.

Each school district using additional allowable growth for provisions for at-risk students shall incorporate educational program goals for at-risk students into its comprehensive school improvement plan. Provisions for at-risk students shall align with the student learning goals and content standards established by the school district or by school districts participating in a consortium. The comprehensive school improvement plan shall also include objectives, activities, cooperative arrangements with other service agencies and service groups, and strategies for parental involvement to meet the needs of at-risk children. The incorporation of these requirements into a school district's comprehensive school improvement plan shall serve as the annual application for additional allowable growth designated in Iowa Code section 257.38.

Infusions List

Higher Order Thinking Skills (HOTS)
Media Information Skills (MEDIA)
Multi-Cultural Gender Fair (MCGF)
Guidance (GUID)
Learning Skills (LS)
Communication Skills (CS)
Global Studies (GS)
Human Growth and Development (HGD)
Career Education (CE)
Special Education (SPECIAL)

Provisions for list

At-risk (AR)
Talented and Gifted (TAG)
Technology (TECH)

EDUCATIONAL PHILOSOPHY

The Board of Directors of the Van Buren Community School District is committed to the operation of schools whose purpose is to serve by assisting each learner develop into a mature individual and contributing member of society. The goals of education and the goals of democracy are fundamentally the same. The board believes the nature of learning is a continuous experience throughout the life of each individual. This experience is influenced by a variety of factors including the environment surrounding the learner. The board also believes, and recognizes, the nature of a learner requires an awareness of the unique needs of each individual and the various stages of development associated with growth. It is believed all have the capability of learning given appropriate opportunity.

The Board of Directors recognizes the guardianship of public education is a trust and an obligation. Consequently, the board believes that a desirable learning atmosphere must be provided which includes the following: (1) Appropriate facilities; (2) Competent staff; (3) Appropriate educational and instructional materials; (4) Assurance of safety; (5) Recognition of individual dignity and worth; (6) A scope of educational experiences to challenge each student; and (7) Periodic review, revision, and evaluation.

The Board further believes the scope of educational experience should meet the needs of varied learners and include experiences that encompass the intellect and associated basic and developmental skills, as well as aesthetic, physical, civic, social, vocational, multicultural, and technological awareness.

Date of Adoption: May 9, 1990

Date Reviewed: March 9, 2005

Date Revised: November 8, 1995

EDUCATIONAL EQUITY POLICY

1. It is the policy of Van Buren Community School District to provide equal educational and employment opportunities and not to illegally discriminate on the basis of gender, color, national origin, religion, age, marital status or disability in its educational programs, activities or its employment and personnel policies.
2. This district shall provide program activities, a curriculum and instructional resources which will reflect the racial and cultural diversity present in the United States and the variety of careers, roles and life styles open to both men and women in our society. One of the objectives of the district's programs, curriculum, services and teaching strategies is to reduce stereotyping and to eliminate bias on the basis of gender, race, ethnicity, religion, age, marital status and disability. The curriculum, programs and services shall foster respect and appreciation for the cultural diversity found in our country and an awareness of the rights, duties and responsibilities of each individual as a member of a pluralistic society.
3. It is the policy of this district to affirmatively recruit women and men, members of diverse racial/ethnic groups and persons with disabilities for job categories where they are underrepresented. A fair and supportive environment will be provided for all students and employees regardless of their gender, race, national origin, creed, age, marital status or disability. Harassment or discriminatory behavior that denies civil rights or access to equal educational opportunities including comments, name-calling, physical conduct or other expressive behavior directed at an individual or group that intentionally demeans the race, color, national origin, gender, disability, age or religion, made from one employee to another, from an employee to a student or vice versa, and from one student to another creating an intimidating, hostile or demeaning environment is a violation of this policy.
4. The board requires all persons, agencies, vendors, contractors and other persons and organizations doing business with or performing services for the school district to subscribe to all applicable federal and state laws, executive orders, rules and regulations pertaining to contract compliance and equal opportunity.
5. Inquiries regarding compliance of equity policies may be directed to the following:
Title IX - High School Principal; Title VI and Section 504 - Associate Superintendent, Van Buren Jr./Sr. High School, 503 Henry Street, Keosauqua, Iowa 52565, 319-293-3334, to the Director of the Iowa Civil Rights Commission, Des Moines, Iowa, or to the Director of the Region VII Office of Civil Rights, Department of Education, Kansas City, Missouri.
6. The Affirmative Action Coordinator for the district shall be the Superintendent. The Educational Equity Coordinator for the district will be the Associate Superintendent. Inquiries concerning a grievance procedure should be addressed to either coordinator.

Federal and state regulations require that the non-discrimination policy, the identity of the designated local coordinator and notification about the existence of the grievance procedure be disseminated to employees, students and parents on an annual or ongoing basis. This notification must be included in major annual or general publications such as:

<i>Student Handbooks</i>	<i>School Newsletters</i>	<i>Teacher Handbooks</i>
<i>Local Newspapers</i>	<i>Employee (Staff) Handbooks</i>	<i>Employment</i>
<i>Application Forms</i>	<i>Registration Handbook</i>	<i>Program Brochures & Publications</i>
<i>Agreement forms with labor organizations and businesses which hold professional agreements with the school or agency.</i>		

Legal Reference:

- 20 U.S.C. 1221 et seq. (1994)*
- 20 U.S.C. 1681 et seq. (1994)*
- 20 U.S.C. 1701 et seq. (1994)*
- 29 U.S.C. 794 (1994)*
- 42 U.S.C. 12101 et seq. (1994)*
- 34 C.F.R. Pt. 100 (1999)*
- 34 C.F.R. Pt. 104 (1999)*
- Iowa Code 216.9; 256.11, .11A; 280.3 (2001)*
- 281 I.A.C. 12*

Cross Reference:

- 100.2 District Educational Equity Policy*
- 402 Staff Educational Equity Policy*
- 516 Student Educational Equity Policy*

Date of Adoption: May 9, 1990

Date of Review: February 9, 2005

Date of Revision: March 9, 2005

FREEDOM TO TEACH, TO LEARN, AND TO EXPRESS IDEAS IN THE PUBLIC SCHOOLS

The freedom to teach, to learn, and to express ideas without fear of censorship are fundamental rights held by public school teachers and students as well as all other citizens. These freedoms, expressed and guaranteed in the First Amendment to the U.S. Constitution, must be preserved in the teaching/learning process in a society of diverse beliefs and viewpoints and shared freedoms. Public schools must promote an atmosphere of free inquiry and a view of subject matter reflecting a broad range of ideas so that students are prepared for responsible citizenship. However, criticism of educational resources and teaching methods and the advocacy of additional educational resources are also essential First Amendment rights of students, faculty, parents, and other members of the community.

Public school personnel should:

1. Select curriculum, teaching methods, resources, and materials appropriate to the education objectives and the maturity and skill levels of the students based on their professional competence as educators and according to established school board policies and procedures. However, teachers should not be allowed to indoctrinate students with their own personal views.
2. Provide students with access to a broad range of ideas and viewpoints.
3. Encourage students to become decision makers, to exercise freedom of thought, and to make independent judgments through the examination and evaluation of relevant information, evidence, facts, and differing viewpoints.
4. Support students' rights to present their ideas even if some people might find the ideas objectionable.
5. Discuss issues, including those viewed by some as controversial, since such discussion is essential to students' development of critical thinking and other skills which prepare them for full participation as citizens in a democratic society.

Individuals or groups outside the public schools should not be allowed to:

1. Use the public schools to indoctrinate students with particular viewpoints or beliefs.
2. Determine which viewpoints will be presented or avoided in public schools.
3. Require the disciplining of professional staff for including issues or resources considered controversial in their classes if the reasons for including them are educationally sound.

Date of Adoption: August 13, 1986

Date of Review: March 14, 2001

Date of Revision:

Van Buren Community Schools 5- Year Goal for Mathematics:

All students will be proficient in mathematics and meet the annual yearly progress trajectory.

MATHEMATICS PHILOSOPHY

A high-quality mathematics program encourages students to experience mathematics rather than observe it. Students must be actively engaged in their learning. They must be provided with experiences that will cause them to become active, flexible problem-solvers. The program will enable the students to develop confidence in their own ability to use math to broaden their career and economic horizons. In order for students to adapt with the changing times, they must be exposed to modern technology as our society advances in an age of global communications.

The primary focus of the mathematics curriculum is to help students become good problem-solvers. A good problem-solver must first have a good knowledge of the basic facts. These facts are then used as the knowledge base to solve problems. Classroom instruction in problem-solving should provide for a natural learning sequence, which allows for the transition from concrete to symbolic to abstract learning experiences.

Since students comprehend mathematics through various learning strategies, a variety of evaluation techniques must be employed. Assessment of the students' knowledge base and problem-solving ability may take many forms and not be limited to paper and pencil testing.

RATIONALE

Mathematics education is essential in the total educational process. We live in a mathematical and technological society; therefore mathematics must occupy a place of prominence in the total curriculum.

Van Buren students must have a strong foundation in math to enable them to expand their knowledge, to analyze and interpret information, to make reasonable decisions, and to solve increasingly complex problems using various strategies and tools. Mathematics in instruction must reflect and implement these expectations.

Calculators and computers are essential tools at all levels. Through the appropriate use of these tools, students are able to solve realistic problems, investigate patterns, explore procedures, and focus on the steps to solve problems instead of on the computations.

7 – 12 Mathematics Standards & Benchmarks

1. Content Problem Solving

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 1.3. Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) order of magnitude.
- 1.4. Check reasonability of answers by performing operations & rounding.

2. Algebra

- 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
- 2.2. Solve equations and inequalities
- 2.3. Use expressions to model situations solving simple open sentences.
- 2.4. Understand and explore numerical patterns

3. Geometry

- 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
- 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)
- 3.3. Apply concepts of perimeter, area, and volume

4. Measurement

- 4.1. Identify and use appropriate units of measurement (metric, US)
- 4.2. Measure length/distance, time, temperature, weight, mass and volume.
- 4.3. Estimate measurements with appropriate precision (solving problems involving money)

5. Probability Statistics

- 5.1. Apply probability concepts and counting rules to determine probability of simple events.
- 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

SCOPE AND SEQUENCE

Standard & Benchmark	7th		8th	Trans. Math	Cons. Math	Alg I	Alg II	Geom.	Pre-Calc.	Calc.
	Grade	Grade								
1. Content Problem Solving										
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format	D	D	D	D	D	D	D	D	D	D
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations	D	D	D	D	D	D	D	D	D	D
1.3 Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) and order of magnitude	D	D	D	D	D	D	D			
1.4 Check reasonability of answers by performing operations & rounding	D	D	D	D	D	D	D	D	D	D
2. Algebra										
2.1 Use and interpret operations and relational symbols (equal, greater than, less than)	D	D	D	D	D	D	D	D	D	D
2.2 Solve equations and inequalities	I	D	D	D		D	D	D	D	D
2.3 Use expressions to model situations solving simple open sentences	I	D	D	D		D	D	D	D	D
2.4 Understand and explore numerical patterns	D	D	D	D		D	D	D	D	D
3. Geometry										
3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes	D	D	D	D				D	D	
3.2 Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere and polygon)	I	D	D	D				D	D	

SCOPE AND SEQUENCE

[illegible]

7th Grade Math Syllabus

Instructor: Mr. Atwood
Length of class: One Year

In 7th grade math, we will be reinforcing the skills and concepts taught in upper elementary. These will include basic operations with integers, decimals, and fractions, and working with ratios, proportions, and percents. New material covered will include such Algebra topics as, equations, inequalities, patterns and rules, and graphing in the coordinate plane. Geometry will also be covered with topics such as, terms and definitions, constructions, and measuring length, area, and volume. Estimation and reasonableness of results will be emphasized throughout the year as well as mental math.

<u>Unit</u>	<u>Length</u>
1. Decimals and Integers.....	14 Days
2. Algebra: Equations and Inequalities	13 Days
3. Exponents, Factors, and Fractions	11 Days
4. Operations with Fractions	10 Days
5. Ratios, Rates, and Proportions.....	10 Days
6. Percents	13 Days
7. Geometry.....	12 Days
8. Geometry and Measurement	14 Days
9. Algebra: Patterns and Rules.....	15 Days
10. Algebra: Graphing in the Coordinate Plane.....	16 Days
11. Displaying and Analyzing Data.....	14 Days
12. Using Probability	18 Days

Materials

Textbook: Prentice Hall, 2004: Prentice Hall Course 2 Mathematics

White board, coordinate plane board, practice, re-teaching, and enrichment worksheets, various manipulatives (algebra tiles, solid figures, tanagrams, fraction models, etc...), compasses, rulers, protractors, calculators, computers with appropriate software, overhead projector and transparencies, graph paper.

Subject Area: 7th Grade Math – Unit 1

Length of Unit: 14 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
4. Measurement
5. Probability & Statistics

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
1.4. Check reasonability of answers by performing operations & rounding.
4.1. Identify and use appropriate units of measurement (metric, US)
4.3. Estimate measurements with appropriate precision (solving problems involving money)
5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.4 4.3	1-1	Can use a variety of Estimation Strategies.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 1.2	1-2 1-3	Can add, subtract, multiply, and divide decimals. Can use the properties of numbers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.1	1-4	Can use metric units to measure. Can change metric units.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	1-5	Can use a problem solving plan to solve problems.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1	1-6	Can find opposites and absolute values. Can graph and order integers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 5.2	1-7 1-8	Can add, subtract, multiply, and divide integers. Can find the range of numbers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 1.2	1-9	Can use the order of operations to simplify problems. Can use the distributive property.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	1-10	Can find the mean, median, and mode of data sets.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 7th Grade Math – Unit 2

Length of Unit: 13 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
2. Algebra

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
2.2. Solve equations and inequalities
2.3. Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.3	2-1	Can write and evaluate algebraic expressions.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 2.2 2.3	2-2 2-3 2-4 2-5 2-6	Can solve one-step equations using number sense. Can solve adding, subtracting, multiplying, and dividing equations. Can write and evaluate expressions using two operations. Can solve two-step equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 2.3	2-7	Can write equations to solve problems.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 2.3	2-8 2-9 2-10	Can write and graph inequalities. Can solve inequalities by adding, subtracting, multiplying, and dividing.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 7th Grade Math – Unit 3

Length of Unit: 11 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
2. Algebra

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
1.3. Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) order of magnitude.
2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 1.2	3-1 3-2	Can write numbers with exponents. Can simplify expressions with exponents using the order of operations. Can change numbers back and forth between standard form and scientific notation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.3	3-3 3-4	Can use the divisibility rules with numbers. Can find factors and multiples of numbers. Can use prime factorization.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1	3-5 3-6 3-8 3-9 3-10	Can write equivalent fractions. Can simplify fractions. Can compare and order fractions. Can change back and forth between a mixed number and an improper fraction. Can change back and forth between fractions and decimals. Can compare and order rational numbers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	3-7	Can solve problems by combining strategies and looking for a pattern.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 7th Grade Math – Unit 4

Length of Unit: 10 Days

Instructor: Mr. Atwood

Standards:

1. Content Problem Solving
2. Algebra
4. Measurement

Benchmarks:

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 1.4. Check reasonability of answers by performing operations & rounding.
- 2.2. Solve equations and inequalities
- 4.1. Identify and use appropriate units of measurement (metric, US)
- 4.2. Measure length/distance, time, temperature, weight, mass and volume.
- 4.3. Estimate measurements with appropriate precision (solving problems involving money)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 1.4	4-1 4-2 4-3 4-4 4-5	Can estimate sums, differences, products, and quotients of fractions and mixed numbers. Can add, subtract, multiply, and divide fractions and mixed numbers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	4-6	Can solve one-step and two-step equations with fractions.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	4-7	Can solve problems using the guess, check, and revise method. Can solve problems using the working backwards method.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.1 4.2 4.3	4-8 4-9	Can change units of length, capacity, and weight in the customary system. Can find and compare the precision of measurements.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 7th Grade Math – Unit 6

Length of Unit: 13 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	6-1 6-2 6-3	Can write percents using equal ratios. Can change back and forth between fractions, decimals, and percents. Can use percents greater than 100 and less than 1.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	6-4 6-5	Can use a percent to find part of a whole number. Can use estimation and mental math with percents. Can find the percent using proportions. Can find the whole using proportions.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	6-7 6-8	Can find tax. Can find tips. Can find commissions. Can find percent of increase and decrease.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 7th Grade Math – Unit 7

Length of Unit: 12 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 3. Geometry

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 3.2	7-1 7-2 7-3	Can identify segments, rays, and lines. Can measure and describe angles. Can work with pairs of angles. Can construct segment bisectors. Can construct angle bisectors.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1 3.2	7-4 7-5	Can classify triangles by sides and angles. Can find angle measures of triangles. Can classify polygons. Can identify special quadrilaterals.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	7-6	Can solve problems by drawing diagrams. Can solve problems by looking for a pattern.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1 3.2	7-7 7-8 7-9	Can identify and work with congruent figures. Can identify parts of a circle. Can analyze circle graphs. Can construct circle graphs.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 3. Geometry
 4. Measurement

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 3.3. Apply concepts of perimeter, area, and volume
 - 4.1. Identify and use appropriate units of measurement (metric, US)
 - 4.2. Measure length/distance, time, temperature, weight, mass and volume.
 - 4.3. Estimate measurements with appropriate precision (solving problems involving money)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.3 4.1 4.2 4.3	8-1 8-2 8-3 8-4	Can estimate length. Can estimate area. Can find the area of a parallelogram. Can find the area of a triangle. Can find the area of a trapezoid. Can find the area of irregular figures. Can find the circumference and area of a circle.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.1 4.2	8-5 8-6	Can find square roots of numbers. Can classify numbers. Can use the Pythagorean theorem to find missing sides of right triangles.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3 4.1 4.2 4.3	8-7 8-8 8-9	Can identify three-dimensional figures. Can draw three-dimensional figures. Can draw a net for a three-dimensional figure. Can find the surface area of prisms using nets. Can find the surface area of cylinders using nets. Can find the volume of a prism. Can find the volume of a cylinder.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	8-10	Can solve problems by the try, check, and revise method. Can solve problems by writing an equation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE)

Subject Area: 7th Grade Math – Unit 9

Length of Unit: 15 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
2. Algebra

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
2.2. Solve equations and inequalities
2.3. Use expressions to model situations solving simple open sentences.
2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3 2.4	9-1 9-2 9-3 9-4 9-5 9-6	Can make graphs and tables. Can use graphs and tables to identify patterns and make estimates. Can identify and use arithmetic sequences. Can identify and use geometric sequences. Can identify other sequences. Can write function rules and evaluate them. Can graph functions. Can describe a graph and sketch it from a description.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 2.2	9-7 9-8 9-9	Can find simple interest. Can find compound interest. Can solve problems by writing equations. Can solve for a variable.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra
 3. Geometry
 5. Probability & Statistics

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
 - 2.2. Solve equations and inequalities
 - 2.3. Use expressions to model situations solving simple open sentences.
 - 2.4. Understand and explore numerical patterns
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3 2.4	10-1 10-2 10-3 10-4	Can graph points on the coordinate plane. Can find ordered pairs that are solutions of linear equations. Can graph linear equations. Can find and use the slope of a line. Can graph nonlinear equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 5.2	10-5	Can solve problems by making tables. Can solve problems by making graphs.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	10-6 10-7 10-8	Can graph translations. Can write rules for translations. Can identify lines of symmetry. Can graph reflections. Can identify rotational symmetry. Can rotate a figure about a point.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra
 3. Geometry
 5. Probability & Statistics

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
 - 2.2. Solve equations and inequalities
 - 2.3. Use expressions to model situations solving simple open sentences.
 - 2.4. Understand and explore numerical patterns
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3 2.4	10-1 10-2 10-3 10-4	Can graph points on the coordinate plane. Can find ordered pairs that are solutions of linear equations. Can graph linear equations. Can find and use the slope of a line. Can graph nonlinear equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 5.2	10-5	Can solve problems by making tables. Can solve problems by making graphs.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	10-6 10-7 10-8	Can graph translations. Can write rules for translations. Can identify lines of symmetry. Can graph reflections. Can identify rotational symmetry. Can rotate a figure about a point.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
5. Probability & Statistics

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
5.1. Apply probability concepts and counting rules to determine probability of simple events.
5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
5.1 5.2	12-1 12-2	Can find the probability of an event. Can find the complements of events. Can find the odds in favor of and against an event. Can find experimental probability. Can use simulations to find experimental probability.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	12-3	Can solve problems by making an organized list. Can solve problems by simulating them.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1 5.2	12-4 12-5 12-6 12-7	Can find the sample space of an event. Can use the counting principle to find the total number of possible outcomes. Can find the probability of independent events. Can find the probability of dependent events. Can find permutations. Can find combinations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

8th Grade Math Syllabus

Instructor: Mr. Atwood
Length of class: One Year

In 8th grade math, we will be reinforcing the skills and concepts taught in 7th grade math, but at a higher level. We will also be working more with applications of some of the concepts taught previously. More emphasis will be placed on algebra skills and concepts to provide a smooth transition to high school math classes. Estimation and reasonableness of results will be emphasized throughout the year as well as mental math.

<u>Unit</u>	<u>Length</u>
1. Algebra: Integers and Algebraic Expressions.....	14 Days
2. Algebra: Equations and Inequalities	12 Days
3. Algebra: Graphing in the Coordinate Plane.....	15 Days
4. Real Numbers.....	15 Days
5. Applications of Proportions	14 Days
6. Applications of Percent.....	15 Days
7. Exponents and Powers	10 Days
8. Geometry	13 Days
9. Geometry and Measurement.....	14 Days
10. Using Graphs to Analyze Data	11 Days
11. Probability.....	12 Days
12. Algebra: Algebraic Relationships	15 Days

Materials

Textbook: Prentice Hall, 2004: Prentice Hall Course 3 Mathematics

White board, coordinate plane board, practice, re-teaching, and enrichment worksheets, various manipulatives (algebra tiles, solid figures, tanagrams, fraction models, etc...), compasses, rulers, protractors, calculators, computers with appropriate software, overhead projector and transparencies, graph paper.

Subject Area: 8th Grade Math – Unit 1

Length of Unit: 14 Days

Instructor: Mr. Atwood

Standards:

- 1. Content Problem Solving
- 2. Algebra
- 5. Probability & Statistics

Benchmarks:

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 1.3. Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) order of magnitude.
- 1.4. Check reasonability of answers by performing operations & rounding.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 2.1 2.3	1-1	Can write and evaluate algebraic expressions. Can use the order of operations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	1-2	Can develop a plan for solving a problem.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 1.3 1.4	1-3 1-4 1-5	Can find the absolute value of integers. Can compare and order integers. Can add and subtract integers. Can multiply and divide integers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	1-6	Can find measures of central tendency (mean, median, and mode). Can choose the best measure of central tendency.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 2.1 2.3	1-7 1-8	Can write and simplify expressions with exponents. Can use the order of operations with exponents. Can identify and use the properties of numbers.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)				

Subject Area: 8th Grade Math – Unit 2

Length of Unit: 12 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
2. Algebra

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
2.2. Solve equations and inequalities
2.3. Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3	2-1 2-2 2-3 2-4	Can solve equations by adding and subtracting. Can solve equations by multiplying and dividing. Can solve equations using two steps. Can simplify algebraic expressions. Can solve multi-step equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 2.2	2-5	Can solve problems by drawing a diagram. Can solve problems by writing an equation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 2.2 2.3	2-6 2-7 2-8	Can graph and write inequalities. Can solve inequalities by adding and subtracting. Can solve inequalities by multiplying and dividing. Can solve inequalities using two steps.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 3

Length of Unit: 15 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra
 3. Geometry
 4. Measurement

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
 - 2.2. Solve equations and inequalities
 - 2.3. Use expressions to model situations solving simple open sentences.
 - 2.4. Understand and explore numerical patterns
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)
 - 4.2. Measure length/distance, time, temperature, weight, mass and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3 2.4	3-1 3-2 3-3 3-4	Can identify points on the coordinate plane. Can graph points on the coordinate plane. Can solve equations with 2 variables. Can graph equations with 2 variables. Can find the slope of a line. Can graph an equation in slope-intercept form. Can write an equation for a line.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	3-5	Can solve problems by writing an equation. Can solve problems by making a graph.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 2.2 2.3	3-6 3-7	Can graph an equation using the x- and y-intercepts. Can write and graph an equation. Can solve linear systems by graphing.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1	3-8	Can graph translations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	3-9	Can describe translations.		
4.2	3-10	Can graph reflections.		
		Can identify lines of symmetry. Can graph rotations. Can identify rotational symmetry.		

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 4

Length of Unit: 15 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra
 3. Geometry
 4. Measurement

- Benchmarks:**
- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
 - 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 1.3. Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) order of magnitude.
 - 1.4. Check reasonability of answers by performing operations & rounding.
 - 2.2. Solve equations and inequalities
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 4.2. Measure length/distance, time, temperature, weight, mass and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1	4-1	Can identify prime and composite numbers.	Non-directed questioning,	HOTS, SPECIAL,
	4-2	Can find the greatest common factor of 2 numbers.	Informal classroom assessments,	MEDIA, TECH, MCGF,
	4-3	Can simplify fractions.	Daily homework, Practice	GUID, TAG, LS, CS, GS,
		Can change back and forth between fractions and decimals.	worksheets, Quizzes, Unit test,	HGD, CE, AR
		Can compare and order rational numbers.	Accelerated math, Star math,	
			ITBS	
1.1	4-4	Can add and subtract rational numbers.	Non-directed questioning,	HOTS, SPECIAL,
1.2	4-5	Can solve equations using rational numbers.	Informal classroom assessments,	MEDIA, TECH, MCGF,
1.4		Can multiply and divide rational numbers.	Daily homework, Practice	GUID, TAG, LS, CS, GS,
2.2			worksheets, Quizzes, Unit test,	HGD, CE, AR
			Accelerated math, Star math,	
			ITBS	
1.2	4-6	Can use formulas to solve problems.	Non-directed questioning,	HOTS, SPECIAL,
2.2	4-7	Can solve problems by using the try, check, and revise method.	Informal classroom assessments,	MEDIA, TECH, MCGF,
		Can solve problems by working backwards.	Daily homework, Practice	GUID, TAG, LS, CS, GS,
			worksheets, Quizzes, Unit test,	HGD, CE, AR
			Accelerated math, Star math,	
			ITBS	

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 3.1 4.2	4-8 4-9	Can find square roots of numbers Can use the Pythagorean theorem to find missing sides of right triangles and to identify right triangles.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 5

Length of Unit: 14 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra
 3. Geometry
 4. Measurement

- Benchmarks:**
- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
 - 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 2.2. Solve equations and inequalities
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 4.1. Identify and use appropriate units of measurement (metric, US)
 - 4.2. Measure length/distance, time, temperature, weight, mass and volume.
 - 4.3. Estimate measurements with appropriate precision (solving problems involving money)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 4.1 4.2 4.3	5-1 5-2	Can write and express ratios in simplest form. Can find unit rates. Can choose proper units to measure. Can convert between units.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 2.2	5-3	Can solve problems by writing an equation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 2.2 3.1 4.1 4.2 4.3	5-4 5-5	Can solve proportions. Can identify similar figures. Can find unknown lengths in similar figures.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2 4.1 4.2 4.3	5-7 5-8	Can use proportions to solve problems with maps and scale models. Can measure indirectly using proportions and similar triangles.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 3.1	5-9	Can find and use the sine and cosine ratios.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 6

Length of Unit: 15 Days

Instructor: Mr. Atwood

Standards:

- 1. Content Problem Solving
- 2. Algebra
- 5. Probability & Statistics

Benchmarks:

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 2.2. Solve equations and inequalities
- 5.1. Apply probability concepts and counting rules to determine probability of simple events.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 1.2	6-1 6-2 6-3	Can change back and forth between fractions, decimals, and percents. Can estimate with percents. Can use proportions to find part of a whole. Can use proportions to find a whole amount or a percent.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 1.2 2.2	6-4 6-5	Can use equations to find the part of a whole. Can use equations to find the whole amount or a percent. Can find the percent of increase or decrease.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1 1.2 2.2	6-6 6-7	Can solve problems involving markup. Can solve problems involving discount. Can solve problems by writing equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 5.1	6-8 6-9	Can find simple interest. Can find compound interest. Can find the probability of an event. Can find the sample space of an event.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE)

Subject Area: 8th Grade Math – Unit 7

Length of Unit: 10 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1	7-1 7-2	Can write numbers back and forth between standard form and scientific notation. Can order numbers written in scientific notation. Can multiply numbers in scientific notation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1	7-2 7-3 7-4	Can multiply powers with the same base. Can divide powers with the same base. Can use negative or zero exponents. Can raise a power to a power. Can raise a product to a power.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	7-5	Can solve problems involving powers and scientific notation.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 8

Length of Unit: 13 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 3. Geometry
 4. Measurement

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)
 - 3.3. Apply concepts of perimeter, area, and volume
 - 4.1. Identify and use appropriate units of measurement (metric, US)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 3.2 4.1	8-1 8-2 8-3	Can identify and use adjacent and vertical angles. Can identify and use supplementary and complementary angles. Can identify parallel lines. Can find the measures of angles formed by parallel lines. Can identify parts of congruent figures. Can identify congruent triangles.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	8-4	Can solve problems by solving a simpler problem. Can solve problems by looking for a pattern.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1 3.2 4.1	8-5 8-6	Can classify triangles and quadrilaterals. Can find the angle measures of a polygon.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 3.3	8-7 8-8	Can find the areas of various polygons. Can find the circumference of a circle. Can find the area of a circle.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1 3.2	8-9	Can construct congruent segments and angles. Can bisect segments and angles.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 9

Length of Unit: 14 Days

Instructor: Mr. Atwood

- Standards:**
1. Content Problem Solving
 3. Geometry
 4. Measurement
 5. Probability & Statistics

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
 - 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)
 - 3.3. Apply concepts of perimeter, area, and volume
 - 4.1. Identify and use appropriate units of measurement (metric, US)
 - 4.2. Measure length/distance, time, temperature, weight, mass and volume.
 - 4.3. Estimate measurements with appropriate precision (solving problems involving money)
 - 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 3.2	9-1 9-2 9-3	Can name solid figures. Can recognize skew lines. Can draw a base plan. Can draw three views of a solid figure. Can identify nets of solid figures.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3 4.1 4.2 4.3	9-4 9-5	Can find the surface areas of prisms. Can find the surface areas of cylinders. Can find the surface areas of pyramids. Can find the surface areas of cones.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3 4.1 4.2 4.3	9-6 9-7	Can find the volumes of prisms. Can find the volumes of cylinders. Can find the volumes of pyramids. Can find the volumes of cones.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2 5.2	9-8	Can solve problems by drawing a diagram. Can solve problems by making a table.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 10

Length of Unit: 11 Days

Instructor: Mr. Atwood

Standards:

1. Content Problem Solving
4. Measurement
5. Probability & Statistics

Benchmarks:

- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 4.1. Identify and use appropriate units of measurement (metric, US)
- 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2 4.1 5.2	10-1 10-2 10-3 10-4 10-5 10-6 10-7	Can make frequency tables and line plots. Can display data using intervals. Can select an appropriate scale for a graph. Can make and use a stem-and-leaf plot. Can make and use a box-and-whisker plot. Can make and use scatter plots to find trends. Can make and use circle graphs. Can choose an appropriate graph.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	10-8	Can solve problems by drawing a diagram. Can solve problems by using logical reasoning.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 11

Length of Unit: 12 Days

Instructor: Mr. Atwood

Standards: 1. Content Problem Solving
5. Probability & Statistics

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

- 5.1. Apply probability concepts and counting rules to determine probability of simple events.
5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
5.1 5.2	11-1 11-2 11-3 11-4 11-5	Can find the number of outcomes of an event by using tree diagrams and the counting principle. Can find the number of permutations of a set of objects. Can use permutation notation. Can find combinations by using a list. Can use combination notation. Can find experimental probability. Can find the compliments and odds of events. Can find the probability of independent events. Can find the probability of dependent events.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	11-6 11-7	Can solve problems by simulating them. Can solve problems by making an organized list. Can plan a survey. Can determine if a survey question is biased or not.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: 8th Grade Math – Unit 12**Length of Unit:** 15 Days**Instructor:** Mr. Atwood

- Standards:**
1. Content Problem Solving
 2. Algebra

- Benchmarks:**
- 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
 - 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
 - 2.2. Solve equations and inequalities
 - 2.3. Use expressions to model situations solving simple open sentences.
 - 2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 2.2 2.3 2.4	12-1 12-2 12-3 12-4 12-5 12-6	Can identify and describe sequences. Can evaluate algebraic expressions to write sequences. Can represent functions using function notation. Can use a table to graph a function. Can use a rule to graph a function. Can write a rule for a linear function from words. Can write a rule for a linear function from a table of graph. Can interpret and sketch a graph of a situation. Can graph and write quadratic functions and other nonlinear functions.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 2.2	12-7	Can solve problems by writing equations.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 2.2 2.3 2.4	12-8 12-9 12-10	Can write variable expressions. Can simplify polynomials. Can add and subtract polynomials. Can multiply a polynomial by a monomial. Can multiply two binomials together.	Non-directed questioning, Informal classroom assessments, Daily homework, Practice worksheets, Quizzes, Unit test, Accelerated math, Star math, ITBS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Algebra I Syllabus

Instructors: Kristen Marshall/Dave Atwood

Length of class: one year

Algebra I takes general mathematical concepts and applies them to the usage of variable to find unknown solutions. It builds to the ultimate of problem solving. A few of the new concepts to be studied are polynomials, solving equations, coordinate graphing, irrational numbers and a short introduction to geometry. The purpose of this course is to develop mathematical maturity.

<u>Unit:</u>	<u>Length:</u>
I. Tools of Algebra.....	14 days
II. Solving Equations	13 days
III. Solving Inequalities	11 days
IV. Solving and Applying Proportions	10 days
V. Graphs and Functions.....	10 days
VI. Linear Equations and Their Graphs.....	13 days
VII. Systems of Equations and Inequalities.....	12 days
VIII. Exponents and Exponential Functions.....	14 days
IX. Polynomials and Factoring	15 days
X. Quadratic Equations and Functions	16 days
XI. Radical Expressions and Equations.....	14 days
XII. Rational Expressions and Functions.....	18 days

Textbook: Prentice Hall, 2004; Prentice Hall Mathematics: Algebra I.

Whiteboard, overhead projector, transparencies, graph paper, coordinate plane board, graphing calculators, extra practice and study guide worksheets, teacher generated labs and activities, and teaching manipulatives

Subject Area: Algebra I Unit 1: Tools of Algebra

Length of Unit: 14 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.
- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	1-1 Using Variables	To model relationships with variables, equations, and formulas.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	1-2 Exponents and Order of Operations	To simplify and evaluate expressions and formulas.		
	1-3 Exploring Real Numbers	To classify and compare numbers.		
	1-4 Adding Real Numbers	To add, subtract, multiply, and divide real numbers using models and rules.		
	1-5 Subtracting Real Numbers			
	1-6 Multiplying and Dividing Real Numbers			
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representation.	1-9 Graphing Data on the Coordinate Plane	To graph points on the coordinate plane. To analyze data using scatter plots.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	1-7 The Distributive Property	To simplify algebraic expressions using the distributive property.		
	1-8 Properties of Real Numbers	To identify properties.		

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 2: Solving Equations

Length of Unit: 13 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

2. Algebra

Benchmarks:

2.2. Solve equations and inequalities.

Standard:

5. Probability & Statistics

Benchmarks:

5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2 Solve equations and inequalities.	2-1 Solving One-Step Equations	To solve equations using addition, subtraction, multiplication, and division.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	2-2 Solving Two-Step Equations	To solve two-step equations.		
	2-3 Solving Multi-Step Equations	To solve equations involving more than two steps.		
	2-4 Equations With Variables on Both Sides	To solve equations with variables on both sides. To identify equations that are identities or have no solution.		
	2-6 Formulas	To transform literal equations.		
5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.	2-7 Using Measures of Central Tendency	To find mean, median, and mode. To make and use stem-and-leaf plots.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 3: Solving Inequalities

Length of Unit: 11 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

2. Algebra

Benchmarks:

- 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
- 2.2. Solve equations and inequalities.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.1 Use and interpret operations and relational symbols (equal, greater than, less than)	3-1 Inequalities and Their Graphs	To identify solutions of inequalities. To graph and write inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	3-2 Solving Inequalities Using Addition and Subtraction	To use addition, subtraction, multiplication, and division to solve inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	3-3 Solving Inequalities Using Multiplication and Division			
	3-4 Solving Multi-Step Inequalities	To solve multi-step inequalities.		
	3-5 Compound Inequalities	To solve and graph inequalities containing <i>and/or</i> .		
	3-6 Absolute Value Equations and Inequalities	To solve equations and inequalities that involves absolute value.		

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 4: Solving and Applying Proportions

Length of Unit: 10 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

1. Content Problem Solving

Benchmarks:

- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities.

Standard:

5. Probability & Statistics

Benchmarks:

- 5.1 Apply probability concepts and counting rules to determine probability of simple events.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.	4-1 Ratio and Proportion	To find ratios and rates. To solve proportions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	4-2 Proportions and Similar Figures 4-3 Proportions and Percent Equations 4-4 Percent of Change	To find missing measures of similar figures. To write and solve percent equations. To find percent of change and error.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1 Apply probability concepts and counting rules to determine probability of simple events.	4-5 Applying Ratios to Probability 4-6 Probability of Compound Events	To find theoretical and experimental probability. To find the probability of independent and dependent events.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 5: Graphs and Functions

Length of Unit: 10 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.4 Understand and explore numerical patterns.

Standard:

5. Probability & Statistics

Benchmarks:

- 5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	5-2 Relations and Functions	To identify relations and functions. To evaluate functions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4 Understand and explore numerical patterns.	5-4 Writing a Function Rule 5-5 Direct Variation 5-6 Describing Number Patterns	To write a function rule given a table or a real-world situation. To write an equation of a direct variation. To write rules for arithmetic sequences.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.	5-1 Relating Graphs to Events 5-3 Function Rules, Tables, and Graphs	To interpret, sketch, and analyze graphs from situations. To model functions using rules, tables, and graphs.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 6: Linear Equations and Their Graphs

Length of Unit: 13 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

2. Algebra

Benchmarks:

- 2.3. Use expressions to model situations solving simple open sentences.
- 2.4. Understand and explore numerical patterns.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.3 Use expressions to model situations solving simple open sentences.	6-2 Slope-Intercept Form	To write equations in slope-intercept form.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	6-3 Standard Form	To write equations in standard form.		
	6-4 Point-Slope Form and Writing Linear Equations	To graph and write linear equations using point-slope form.		
	6-5 Parallel and Perpendicular Lines	To determine whether lines are parallel and perpendicular.		
	6-7 Graphing Absolute Value Equations	To translate the graph of an absolute value equation.		
2.4 Understand and explore numerical patterns.	6-1 Rate of Change and Slope	To find rates of change from tables and graphs. To find slope.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	6-6 Scatter Plots and Equations of Lines	To write an equation for a trend line and use it to make predictions.		

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 7: Systems of Equations and Inequalities

Length of Unit: 12 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

2. Algebra

Benchmarks:

- 2.3. Use expressions to model situations solving simple open sentences.
- 2.4. Understand explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.3 Use expressions to model situations solving simple open sentences.	7-5 Linear Inequalities	To graph inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4 Understand explore numerical patterns.	7-1 Solving Systems by Graphing 7-2 Solving Systems by Substitution 7-3 Solving Systems Using Elimination 7-6 Systems of Linear Inequalities	To solve systems by graphing. To solve systems using substitution. To solve systems by elimination. To solve systems of linear inequalities by graphing.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS), Special Education (SPECIAL), Media Information Skills (MEDIA), Technology (TECH), Multi-Cultural Gender Fair (MCGF), Guidance (GUID), Talented and Gifted (TAG), Learning Skills (LS), Communication Skills (CS), Global Studies (GS), Human Growth and Development (HGD), Career Education (CE), At-Risk (AR)

Subject Area: Algebra I Unit 8: Exponents and Exponential Functions

Length of Unit: 14 days

Instructor: Kristen Marshall/Dave Atwood

Standard:

1. Content Problem Solving

Benchmarks:

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standard:

4. Measurement

Benchmarks:

- 4.3. Estimate measurement with appropriate precision (solving problems involving money)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	8-1 Zero and Negative Exponents 8-2 Scientific Notation 8-3 Multiplication Properties of Exponents 8-4 More Multiplication Properties of Exponents 8-5 Division Properties of Exponents 8-7 Exponential Functions 8-8 Exponential Growth and Decay	To simplify expressions with zero and negative exponents. To write numbers in scientific and standard notation. To multiply powers. To raise a power to a power. To raise a product to a power. To divide powers with the same base. To raise a quotient to a power. To evaluate exponential functions. To model exponential growth and decay.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.3 Estimate measurements with appropriate precision (solving problems involving money)			chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 9: Polynomials and Factoring**Length of Unit:** 15 days**Instructor:** Kristen Marshall/Dave Atwood**Standard:**

1.1. Content Problem Solving

Benchmarks:

1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.	9-1 Adding and Subtracting Polynomials 9-2 Multiplying and Factoring 9-3 Multiplying Binomials 9-4 Multiplying Special Cases 9-5, 9-6 Factoring Trinomials 9-7 Factoring Special Cases 9-8 Factoring by Grouping	To add and subtract polynomials. To multiply a polynomial by a monomial. To factor a monomial from a polynomial. To multiply trinomials by binomials. To multiply binomials using FOIL. To find the square of a binomial. To find the difference of squares. To factor trinomials. To factor perfect square trinomials. To factor the difference of squares. To factor polynomials with four terms. To factor trinomials by grouping.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Learning Skills (LS); Communication Skills (CS); Global Studies (GS);				Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG);

Subject Area: Algebra I Unit 10: Quadratic Equations and Functions**Length of Unit: 16 days****Instructor: Kristen Marshall/Dave Atwood****Standard:**

1. Content Problem Solving

Benchmarks:

- 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.2. Solve equations and inequalities.
- 2.3. Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.	10-3 Finding and Estimating Square Roots	To find square roots. To estimate and use square roots.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	10-4 Solving Quadratic Equations 10-5 Factoring to Solve Quadratic Equations 10-6 Completing the Square 10-7 Using the Quadratic Formula	To solve quadratic equations by graphing. To solve quadratic equations using square roots. To solve quadratic equations by factoring. To solve quadratic equations by completing the square. To use the quadratic formula when solving quadratic equations.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences.	10-1 Exploring Quadratic Graphs 10-2 Quadratic Functions	To understand graphs of quadratic equations. To graph quadratic functions and inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 11: Radical Expressions and Equations**Length of Unit:** 14 days**Instructor:** Kristen Marshall/Dave Atwood**Standard:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.2. Solve equations and inequalities.
- 2.3. Use expressions to model situations solving simple open sentences.

Standard:

3. Geometry

Benchmarks:

- 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
- 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cubes, spheres, and polygons).

Standard:

4. Measurement

Benchmarks:

- 4.2. Measure length/distance, time, temperature, weight, mass and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.	11-1 Simplifying Radicals	To simplify radicals involving products and quotients.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	11-4 Operations With Radical Expressions	To simplify sums, differences, products, and quotients.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences.	11-5 Solving Radical Equations	To solve equations containing radicals.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	11-6 Graphing Square Root Functions	To graph square root functions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 Identify, classify, and compare geometric figures knowing basic geometric language for shapes.	11-7 Trigonometric Ratios	To find trigonometric ratios.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2 Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cubes, spheres, and polygons).	11-2 The Pythagorean Theorem	To solve problems using the Pythagorean Theorem. To identify right triangles.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.2 Measure length/distance, time, temperature, weight, mass and volume.	11-3 The Distance and Midpoint Formulas	To find the distance between two points on a coordinate plane. To find the coordinates of the midpoint of a line segment.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Algebra I Unit 12: Rational Expressions and Functions**Length of Unit: 18 days****Instructor: Kristen Marshall/Dave Atwood****Standard:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities.
- 2.3 Use expressions to model situations solving simple open sentences.

Standard:

5. Probability Statistics

Benchmarks:

- 5.1 Apply probability concepts and counting rules to determine probability of simple events.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded and exponential format.	12-3 Simplifying Rational Expressions 12-4 Multiplying and Dividing Rational Expressions 12-5 Dividing Polynomials 12-6 Adding and Subtracting Rational Expressions	To simplify rational expressions. To multiply and divide rational expressions. To divide polynomials. To add and subtract rational expressions with like and unlike denominators.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	12-7 Solving Rational Equations	To solve rational equations.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.3 Use expressions to model situations solving simple open sentences.	12-1 Inverse Variation 12-2 Graphing Rational Functions	To solve inverse variations. To graph rational functions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1 Apply probability concepts and counting rules to determine probability of simple events.	12-8 Counting Methods and Permutations 12-9 Combinations	To use the multiplication counting principle. To find permutations. To find combinations. To find probability with counting techniques.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Consumer Math Syllabus

Instructor: Mrs. Snook

Length of class: One year

This course relates of uses in a student's everyday life. Some of the topics to be covered are : basic arithmetic review, consumer loans, taxes, insurance, payroll deductions, comparative shopping and use of math in careers.

<u>Unit:</u>	<u>Chapters:</u>	<u>Length:</u>
I. Basic Math Skills		Three weeks
II. Income.....	1-2	Four weeks
III. Bank Accounts	3-4	Four weeks
IV. Cash and Credit Card Purchases	5-6	Four weeks
V. Loans.....	7.....	Three weeks
VI. Transportation Costs	8.....	Four weeks
VII. Housing Costs	9.....	Three weeks
VIII. Insurance and Investments.....	10.....	Three weeks
IX. Budgeting.....	11.....	Two weeks
X. Business Mathematics.....	12-15	Four weeks

Materials

Textbook: Glencoe McGraw-Hill, 1998: Mathematics with Business Applications Lange, Rousos, Mason

White board, calculators, practice, re-teaching, and enrichment worksheets,

Subject Area: Consumer Math – Basic Math Skills – Unit I

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standards: 1. Content Problem Solving

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
1.4. Check reasonability of answers by performing operations & rounding.

Standards: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1	Workshop 2	Comparing whole numbers and decimals to see which is larger	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	Workshops 1, 3-9	Write numbers as words and words as numbers Perform arithmetic operations on decimals and fractions.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4	Workshops 15-18	Estimate answers using various estimation techniques, including rounding and clustering Solve problems using different methods, including working backwards and guess and check	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	Workshops 12, 13, 23, 28, 29	Read and analyze tables, charts and graphs Construct tables, charts and graphs to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-risk (AR)

Subject Area: Consumer Math – Income Unit II

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standards: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

1.4. Check reasonability of answers by performing operations & rounding.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	1-1, 1-2 1-4, 1-5, 1-6, 1-7	Compute gross income for straight-time and overtime work. Compute pay for salary, piecework and commission work.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE
1.4	2-1, 2-2, 2-3, 2-4 2-5 2-6	Compute the amount of income withheld for federal and state income taxes, Social Security & Medicare taxes Compute deductions for group insurance. Compute net pay for a pay period.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math- Bank Accounts – Unit III

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standards: 1. Content Problem Solving

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
1.4. Check reasonability of answers by performing operations & rounding.

Standards: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1	3-1, 4-1 3-2 4-2	Fill out checking and savings account deposit slips Write a check, using correct form Complete a savings account withdrawal slip	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	3-3, 3-4 4-3, 4-4	Compute the balance in a check register and on a checking account bank statement Compute the balance in a savings account passbook and on a savings account bank statement	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4	3-5 4-5, 4-6	Reconcile a check register with a bank statement Compute simple and compound interest	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	4-7, 4-8	Find compound interest using tables.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Cash & Credit Card Purchases-Unit IV

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standards: 1. Content Problem Solving

Benchmarks: 1.4. Check reasonability of answers by performing operations & rounding.

Standard: 2. Algebra

Benchmarks: 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.4	5-1, 5-2 5-3, 5-4 5-5, 5-6, 5-7	Compute sales tax and total purchase price. Compute unit price to find the best buy. Compute discount and sale price.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1	6-3, 6-4, 6-5	Compute credit card finance charges using different methods	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Loans – Unit V

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	7-1, 7-2, 7-3, 7-4, 7-5 7-7	Compute finance charges, interest payments and new balance on a loan Compute refund if loan is paid off early.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	7-6	Use a table to find the annual percentage rate	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Transportation Costs – Unit VI

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.4. Check reasonability of answers by performing operations & rounding.

Standard: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.4	8-1, 8-2 8-5 8-6, 8-7	Compute sticker price and dealer cost of a new car. Compute cost per mile of operating and maintaining a car. Compute the cost of leasing or renting a car	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	8-3, 8-4	Use tables and guides to find the price of used cars and car insurance	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Housing Costs – Unit VII

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.3. Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) order of magnitude.
1.4. Check reasonability of answers by performing operations & rounding.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.3	9-1, 9-2, 9-3, 9-4 9-5 9-6, 9-7	Compute the costs involved in a mortgage loan. Figure real estate taxes. Compute homeowner's insurance premiums.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4	9-8	Compute total housing cost and compare it with suggested guidelines.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Budgeting – Unit IX

Length of Unit: Two weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.4. Check reasonability of answers by performing operations & rounding.

Standard: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives		Infusions/ Provisions
1.4	11-1, 11-3	Compute average monthly household expenditures	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	11-2	Use records of past expenditures to prepare a monthly budget	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Consumer Math – Insurance & Investments – Unit VIII

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 5. Probability Statistics

Benchmarks: 5.2. Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	10-1, 10-2 10-6, 10-8 10-7, 10-9 10-10	Compute cost of health insurance premiums and amount of deductible/co-insurance costs Compute effective annual yield and dividend of a stock investment Compute cost and profit/loss for a stock investment Figure annual interest and yield of a bond investment	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2	10-3, 10-4 10-5	Use tables to compute premiums for different kinds of life insurance Use tables to figure interest on certificates of deposit (CDs)	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Transition Mathematics Syllabus

Instructor: Kristen Marshall
Length of class: One year

Transition math is designed and sequenced to provide a smooth path from arithmetic to algebra and geometry. The content, approach, and problem solving stress application to real world problems.

<u>Unit:</u>	<u>Length:</u>
I. Algebraic Expressions and Integers	15 days
II. Solving One-Step Equations and Inequalities.....	15 days
III. Decimals and Equations.....	11 days
IV. Factors, Fractions, and Exponents.....	13 days
V. Operations With Fractions	14 days
VI. Ratios, Proportions, and Percents	14 days
VII. Solving Equations and Inequalities	13 days
VIII. Linear Functions and Graphing.....	13 days
IX. Spatial Thinking.....	14 days
X. Area and Volume	13 days
XI. Right Triangles in Algebra	10 days
XII. Data Analysis and Probability.....	14 days
XIII. Nonlinear Functions and Polynomials	11 days

Textbook: Prentice Hall, 2004; Prentice Hall Mathematics: Pre-Algebra.

Whiteboard, overhead projector, transparencies, graph paper, coordinate plane board, graphing calculators, extra practice and study guide worksheets, teacher generated labs and activities, and teaching manipulatives

Subject Area: Transition Math Unit 1: Algebraic Expressions and Integers**Length of Unit: 15 days****Instructor: Kristen Marshall****Standards:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.
- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	1-1 Variables and Expressions 1-4 Integers and Absolute Value 1-5 Adding Integers 1-6 Subtracting Integers 1-9 Multiplying and Dividing Integers 1-10 The Coordinate Plane	To identify variables, numerical expressions, and variables expressions. To represent, graph, and order integers. To find opposites and absolute values. To add, subtract, multiply, and divide integers using rules as a guideline. To name coordinates and quadrants in the coordinate plane. To graph points in the coordinate plane.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4 Check reasonability of answers by performing operations & rounding.	1-2 The Order of Operations 1-3 Evaluating Expressions	To use the order of operations. To evaluate variable expressions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 2: Solving One-Step Equations and Inequalities**Length of Unit:** 15 days**Instructor:** Kristen Marshall**Standards:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.
- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 1.4 Check reasonability of answers by performing operations & rounding.

Standards:

2. Algebra

Benchmarks:

- 2.1 Use and interpret operations and relational symbols (equal, greater than, less than)
- 2.2 Solve equations and inequalities

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	2-3 Simplifying Variable Expressions	To identify and simplify parts of a variable expression.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.	2-1 Properties of Numbers 2-2 The Distributive Property	To identify properties of addition and multiplication. To use the Distributive Property with numerical and algebraic expressions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4 Check reasonability of answers by performing operations & rounding	2-4 Variables and Equations	To check equations using substitution.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 Use and interpret operations and relational symbols (equal, greater than, less than)	2-8 Inequalities and Their Graphs	To write and graph inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2 Solve equations and inequalities	2-5 Solving Equations by Adding or Subtracting 2-6 Solving Equations by Multiplying or Dividing 2-9 Solving One-Step Inequalities by Adding or Subtracting 2-10 Solving One-Step Inequalities by Multiplying or Dividing	To solve one-step equations using addition, subtraction, multiplication, and division. To solve one-step inequalities using addition, subtraction, multiplication, and division.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 3: Decimals and Equations**Length of Unit: 11 days****Instructor: Kristen Marshall****Standards:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standards:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities.

Standards:

4. Measurement

Benchmarks:

- 4.1 Identify and use appropriate units of measurement (metric, US)

Standards:

5. Probability & Statistics

Benchmarks:

- 5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	3-1 Rounding and Estimating 3-2 Estimating Decimal Products and Quotients	To estimate sums, differences, products, and quotients. To round decimals.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities.	3-4 Using Formulas 3-5 Solving Equations by Adding or Subtracting Decimals 3-6 Solving Equations by Multiplying or Dividing Decimals	To substitute into formulas and solve. To solve one-step equations involving adding, subtracting, multiplying, and dividing decimals.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.1 Identify and use appropriate units of measurement (metric, US)	3-7 Using the Metric System	To identify appropriate metric measures. To convert metric units.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.	3-3 Mean, Median, and Mode	To find mean, median, and mode of a set of data. To choose the best measure of central tendency.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 4: Factors, Fractions, and Exponents**Length of Unit: 13 days****Instructor: Kristen Marshall****Standards:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.
- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
- 1.3 Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) and order of magnitude.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	4-2 Exponents 4-7 Exponents and Multiplication 4-8 Exponents and Division	To use exponents. To multiply powers with the same base. To find a power of a power. To divide expressions containing exponents. To simplify expressions with integer exponents.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.	4-4 Simplifying Fractions 4-6 Rational Numbers 4-9 Scientific Notation	To find equivalent fractions. To write fractions in simplest form. To identify and graph rational numbers To write and evaluate numbers in scientific notation.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.3 Classify numbers by divisibility (multiply, divide & classify whole numbers with & without remainders) and order of magnitude.	4-1 Divisibility and Factors 4-3 Prime Factorization and Greatest Common Factor	To use divisibility tests and find factors. To find the prime factorization of a number. To find the greatest common factor of two or more numbers.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 5: Operations With Fractions**Length of Unit: 14 days****Instructor: Kristen Marshall****Standard:**

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities.

Standard:

4. Measurement

Benchmarks:

- 4.1 Identify and use appropriate units of measurement (metric, US).

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	5-1 Comparing and Ordering Fractions 5-2 Fractions and Decimals 5-3 Adding and Subtracting Fractions 5-4 Multiplying and Dividing Fractions 5-9 Powers of Products and Quotients	To find the least common multiple. To compare fractions. To write fractions as decimals. To write terminating and repeating decimals as fractions. To add and subtract fractions. To multiply and divide fractions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	5-7 Solving Equations by Adding or Subtracting Fractions 5-8 Solving Equations by Multiplying Fractions	To solve equations by adding, subtracting, or multiplying fractions.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.1	5-5 Using Customary Units of Measurement	To identify and convert to appropriate customary units.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 6: Ratios, Proportions, and Percents**Length of Unit:** 14 days**Instructor:** Kristen Marshall**Standard:**

1. Content Problem Solving

Benchmarks:

- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities.
- 2.3 Use expressions to model situations solving simple open sentences.

Standard:

3. Geometry

Benchmarks:

- 3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.

Standard:

5. Probability & Statistics

Benchmarks:

- 5.1 Apply probability concepts and counting rules to determine probability of simple events.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.	6-1 Ratios and Unit Rates 6-2 Proportions 6-5 Fractions, Decimals, and Percents 6-6 Proportions and Percents 6-8 Percent of Change	To write and simplify ratios. To find rates and unit rates. To solve proportions and problems involving proportions To convert to and from fractions and decimals to percents. To find a part of a whole and a percent. To find percent increase and decrease.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities	6-7 Percents and Equations	To write and solve percent equations.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences	6-9 Markup and Discount	To find markups and discounts.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.	6-3 Similar Figures and Scales Drawings	To solve problems that involve similar figures or scales drawings.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1 Apply probability concepts and counting rules to determine probability of simple events.	6-4 Probability	To find probability and odds.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 7: Solving Equations and Inequalities**Length of Unit:** 13 days**Instructor:** Kristen Marshall**Standard:**

2. Algebra

Benchmarks:

2.2 Solve equations and inequalities.

2.3 Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2 Solve equations and inequalities.	7-1 Solving Two-Step Equations 7-2 Solving Multi-Step Equations 7-3 Multi-Step Equations With Fractions and Decimals 7-5 Solving Equations With Variables on Both Sides 7-6 Solving Two-Step Inequalities 7-7 Transforming Formulas	To solve two-step equations. To combine like terms to simplify an equation. To use the distributive property to simplify an equation. To solve multi-step equations with fractions or decimals. To solve equations with variables on both sides. To solve two-step inequalities. To solve a formula for a given variable.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences.	7-8 Simple and Compound Interest	To solve simple- and compound-interest problems.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 8: Linear Functions and Graphing

Length of Unit: 13 days

Instructor: Kristen Marshall

Standard:

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standards:

2. Algebra

Benchmarks:

- 2.2 Solve equations and inequalities

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	8-1 Relations and Functions 8-3 Slope and y-intercept 8-4 Writing Rules for Linear Functions 8-5 Scatter Plots	To determine whether a relation is a function. To find the slope of a line. To use slope-intercept form to graph a linear equation. To write a function rule for a word relationship or an analysis of a table or graph. To interpret and draw scatter plots.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2 Solve equations and inequalities	8-2 Equations With Two Variables 8-7 Solving Systems of Linear Equations 8-8 Graphing Linear Inequalities	To find solutions of equations with two variables. To solve systems of linear equations by graphing. To graph linear inequalities and systems of linear inequalities.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 9: Spatial Thinking

Length of Unit: 14 days

Instructor: Kristen Marshall

Standard:

3. Geometry

Benchmarks:

3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.

3.3 Apply concepts of perimeter, area, and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.	9-1 Introduction to Geometry: Points, Lines, and Planes 9-2 Angle Relationships and Parallel Lines 9-3 Classifying Polygons 9-5 Congruence 9-8 Translations 9-9 Symmetry and Reflections 9-10 Rotations	To name basic geometric figures. To identify adjacent and vertical angles. To relate angles formed by parallel lines and a transversal. To classify triangles and quadrilaterals. To identify corresponding parts of congruent triangles. To graph and describe translations. To identify a line of symmetry. To graph a reflection of a geometric figure. To graph rotations. To identify rotational symmetry. To find circumferences.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3 Apply concepts of perimeter, area and volume.	9-6 Circles		chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 10: Area and Volume

Length of Unit: 13 days

Instructor: Kristen Marshall

Standard:

3. Geometry

Benchmarks:

3.3 Apply concepts of perimeter, area and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.3 Apply concepts of perimeter, area and volume.	10-1 Area: Parallelograms	To find areas of rectangles and parallelograms.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
	10-2 Area: Triangles and Trapezoids	To find areas of triangles and trapezoids.		
	10-3 Area: Circles	To find areas of circles.		
	10-4 Space Figures	To identify common space figures.		
	10-5 Surface Area: Prisms and Cylinders	To find surface areas of prisms and cylinders.		
	10-6 Surface Area: Pyramids, Cones, and Spheres	To find surface areas of pyramids, cones, and spheres.		
	10-7 Volume: Prisms and Cylinders	To find volumes of prisms and cylinders.		
	10-9 Volume: Pyramids, Cones, and Spheres	To find volumes of pyramids, cones, and spheres.		

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 11: Right Triangles in Algebra**Length of Unit: 10 days****Instructor: Kristen Marshall****Standard:**

1. Content Problem Solving

Benchmarks:

- 1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard:

2. Algebra

Benchmarks:

- 2.3 Use expressions to model situations solving simple open sentences.

Standard:

3. Geometry

Benchmarks:

- 3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/Provisions
1.2 Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.	11-1 Square Roots and Irrational Numbers	To find square roots of numbers. To classify real numbers.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences.	11-3 Distance and Midpoint Formulas	To find the distance between two points using the distance formula. To find the midpoint of a segment using the midpoint formula.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1 Identify, classify and compare geometric figures knowing basic geometric language for shapes.	11-2 Pythagorean Theorem 11-5 Special Right Triangles 11-6 Sine, Cosine, and Tangent Ratios 11-7 Angles of Elevation and Depression	To use the Pythagorean Theorem. To identify right triangles. To use the relationships in 45° - 45° - 90° and 30° - 60° - 90° triangles. To find trigonometric ratios in right triangles. To use trigonometry to find angles of elevation and depression.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 12: Data Analysis and Probability**Length of Unit: 14 days****Instructor: Kristen Marshall****Standard:**

5. Probability & Statistics

Benchmarks:

- 5.1 Apply probability concepts and counting rules to determine probability of simple events.
5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency and variability.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
5.1 Apply probability concepts and counting rules to determine probability of simple events.	12-5 Independent and Dependent Events 12-6 Permutations and Combinations 12-7 Experimental Probability	To calculate probabilities of independent and dependent events. To use permutations and combinations. To find experimental probability. To use simulations.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.2 Read and interpret simple tables & graphs to demonstrate understanding and application of measures of central tendency of variability.	12-1 Frequency Tables and Line Plots 12-2 Box-and-Whisker Plots	To display data in frequency tables and in line plots. To make and analyze data in box-and-whisker plots.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Transition Math Unit 13: Nonlinear Functions and Polynomials

Length of Unit: 11 days

Instructor: Kristen Marshall

Standard:

1. Content Problem Solving

Benchmarks:

- 1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.

Standard:

2. Algebra

Benchmarks:

- 2.1 Understand and explore numerical patterns.
- 2.3 Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1 Count, read, write, represent, compare and order numbers in regular, expanded & exponential format.	13-4 Polynomials 13-5 Adding and Subtracting Polynomials 13-6 Multiplying a Polynomial by a Monomial 13-7 Multiplying Binomials	To identify and evaluate polynomials. To add and subtract polynomials. To write a polynomial as the product of a monomial and a polynomial. To multiply two binomials.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1 Understand and explore numerical patterns.	13-1 Patterns and Sequences	To describe number patterns with arithmetic and geometric sequences.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3 Use expressions to model situations solving simple open sentences.	13-2 Graphing Nonlinear Functions 13-3 Exponential Growth and Decay	To graph quadratic and absolute value functions. To use tables, rules, and graphs with functions model growth and decay.	chapter test, review exercises, ITED, quizzes, class discussion, STAR math test	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Geometry Syllabus

Instructor: Mrs. Snook

Length of class: One year

This course introduces a student to the understanding of the interaction between geometry and reality. Students are given a chance to use logical thinking. In addition to the basic development of geometry the course includes trigonometry, area and volume, coordinate geometry and transformations. Constructions are used throughout the course.

<u>Unit</u>	<u>Chapters:</u>	<u>Length:</u>
I. Basics of Geometry and reasoning	1-2	Four weeks
II. Perpendicular and Parallel Lines	3.....	Three weeks
III. Triangles and Congruency	4-5	Six weeks
IV. Quadrilaterals.....	6.....	Three weeks
V. Transformations	7.....	Three weeks
VI. Similarity	8.....	Three weeks
VII. Right Triangles and Trigonometry.....	9.....	Four weeks
VIII. Circles	10.....	Four weeks
IX. Areas and Volume.....	11-12	Six weeks

Textbook: McDougal Littell, 2004; Geometry; Larson, Boswell, Stiff

Subject Area: Geometry -- Basics of Geometry and Reasoning Unit I**Length of Unit: Four weeks****Instructor: Mrs. Snook****Standard: 2. Algebra****Benchmarks:** 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
2.4. Understand and explore numerical patterns**Standard: 3. Geometry****Benchmarks:** 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.
3.3. Apply concepts of perimeter, area, and volume

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.4	1.1	Finding and describing patterns	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR
3.1	1.2 1.4 1.6	Understand and use the basic terms of geometry Classify angles as acute, right, obtuse, or straight Identify vertical angles and linear pairs Identify complementary and supplementary angles	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR
3.3	1.7	Find the perimeter and area of plane figures	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR
2.1	2.6	Use angle congruency properties	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE)

Subject Area: Geometry -- Perpendicular and Parallel Lines Unit II**Length of Unit:** Three weeks**Instructor:** Mrs. Snook**Standard:** 2. Algebra**Benchmarks:** 2.2. Solve equations and inequalities**Standard:** 3. Geometry**Benchmarks:** 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.

3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1	3.1	Identify angles formed by transversals	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR
3.2	3.4	Use properties of parallel lines to solve real-life problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR
2.2	3.6 3.7	Write equations of parallel lines in a coordinate plane Write equations of perpendicular lines in a coordinate plane	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry -- Triangles and Congruency Unit III

Length of Unit: Six weeks

Instructor: Mrs. Snook

Standard: 3. Geometry

Benchmarks: 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.

3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Standard: 4. Measurement

Benchmarks: 4.2. Measure length/distance, time, temperature, weight, mass and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1	4.1	Classify triangles by their sides and angles	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH,MCGF, GUID TAG,LS, CS, GS, HGD, CE, AR
3.1	4.5	Use congruent triangles to plan and write proofs	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH,MCGF, GUID TAG,LS, CS, GS, HGD, CE, AR
3.2	5.3	Use properties of medians and altitudes of a triangle	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH,MCGF, GUID TAG,LS, CS, GS, HGD, CE, AR
4.2	5.5	Use triangle measurement to decide which side is longest.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH,MCGF, GUID TAG,LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Quadrilaterals Unit IV

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 3. Geometry

Benchmarks: 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

3.3. Apply concepts of perimeter, area, and volume

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.2	6.4	Use properties of sides, angles and diagonals of rhombuses, rectangles and squares	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	6.5	Use properties of trapezoids	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3	6.7	Find the areas of parallelograms, triangles and trapezoids	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Transformations Unit V**Length of Unit: Three weeks****Instructor: Mrs. Snook****Standard: 2. Algebra****Benchmarks: 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)****Standard: 3. Geometry****Benchmarks: 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.**

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1	7.1	Identify the three basic rigid transformations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	7.2	Identify relationships between reflections and line symmetry	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1	7.5	Represent transformations as compositions of simpler transformations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Similarity Unit VI

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 2. Algebra

Benchmarks: 2.2. Solve equations and inequalities

Standard: 3. Geometry

Benchmarks: 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	8.1	Find and simplify the ratio of two numbers	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	8.2	Use proportions to solve real-life problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	8.3	Identify similar polygons Use similar polygons to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Right Triangles and Trigonometry Unit VII**Length of Unit: Four weeks****Instructor: Mrs. Snook****Standard: 3. Geometry****Benchmarks: 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)****Standard: 4. Measurement****Benchmarks: 4.2. Measure length/distance, time, temperature, weight, mass and volume.**

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.2	9.1, 9.5	Use geometric means to solve problems Use trigonometric ratios to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.2	9.4	Find the side lengths of special right triangles	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Circles Unit VIII**Length of Unit: Four weeks****Instructor: Mrs. Snook****Standard: 2. Algebra****Benchmarks: 2.3.** Use expressions to model situations solving simple open sentences**Standard: 3. Geometry****Benchmarks: 3.2.** Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.2	10.2, 10.4	Use properties of arcs in circles Use angles formed by tangents, chords, and secants to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3	10.6	Use the equation of a circle and its graph to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Areas and Volumes Unit IX**Length of Unit: Six weeks****Instructor: Mrs. Snook****Standard: 3. Geometry****Benchmarks: 3.3. Apply concepts of perimeter, area, and volume****Standard: 4. Measurement****Benchmarks: 4.3. Estimate measurements with appropriate precision (solving problems involving money)****Standard: 5. Probability Statistics****Benchmarks: 5.1. Apply probability concepts and counting rules to determine probability of simple events.**

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
4.3	11.1	Find measures of interior and exterior angles of polygons	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3	11.5, 12.3	Find the area of a circle and a sector of a circle Find the surface area of a pyramid and a cone	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1	11.6	Find a geometric probability	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Precalculus Syllabus

Instructor: Mrs. Snook
Length of class: One year

This Precalculus course uses graphical, numerical, and algebraic modeling of functions as well as problem solving. Appropriate use of technology along with standard “paper and pencil” analytic techniques is included for a balanced approach to help students build an intuitive foundation for calculus

<u>Unit:</u>	<u>Length:</u>
Prerequisites	Two weeks
Functions and Graphs	Two weeks
Polynomial, Power, and Rational Functions.....	Three weeks
Exponential and Logarithmic Functions.....	Three weeks
Trigonometric Functions.....	Four weeks
Analytic Trigonometry.....	Four weeks
Vectors, Parametric and Polar Equations.....	Three weeks
Systems and Matrices	Two weeks
Conic Sections	Three weeks
Discrete Mathematics.....	Three weeks
Introduction to Calculus.....	Seven weeks

Textbook: Pearson/Addison Wesley, 2004; Precalculus, Kennedy

Subject Area: Precalculus – Prerequisites – Unit I

Length of Unit: Two weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 2. Algebra

Benchmarks: 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)
2.2. Solve equations and inequalities

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.1, 1.2	p.1	Use real numbers and write in scientific notation Apply basic properties of algebra	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1	p. 2	Use formulas to find distance and midpoint	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	p. 3-4	Solve linear equations and inequalities in one variable Solve quadratic equations, both graphically and algebraically	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Functions & Graphs – Unit 2**Length of Unit:** Two weeks**Instructor:** Mrs. Snook**Standard:** 1. Content Problem Solving**Benchmarks:** 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format**Standard:** 2. Algebra**Benchmarks:** 2.3. Use expressions to model situations solving simple open sentences.

2.4. Understand and explore numerical patterns

Standard: 3. Geometry**Benchmarks:** 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.3	1.1	Use formulas to relate variable quantities to model the real world	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	1.2	Use the properties of functions to determine local and absolute extrema, symmetry, and asymptotes	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1	1.3	Analyze functions using graphs	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	1.5	Use transformations to understand the connection between algebraic and graphical models	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus-Polynomial, Power and Rational Functions – Unit 3**Length of Unit:** Three weeks**Instructor:** Mrs. Snook**Standard:** 1. Content Problem Solving**Benchmarks:** 1.1. Count, read, write, represent, compare and order numbers in regular, expanded and exponential format
1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.**Standard:** 2. Algebra**Benchmarks:** 2.2. Solve equations and inequalities

2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2	2.1, 2.4, 2.6, 2.8, 2.9	Find the average rate of change Find zeroes of polynomial functions Solve equations and inequalities in one variable	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	2.2, 2.3	Predict the shape of a graph for a power function	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.1	2.5	Use properties of complex numbers for computation	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.2	2.7	Graph and analyze rational functions	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Exponential and Logarithmic Functions – Unit 4

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 2. Algebra

Benchmarks: 2.2. Solve equations and inequalities

2.3. Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	3.1, 3.4	Identify and graph exponential functions Use logarithmic properties	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3	3.2	Use exponential and logistic modeling	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	3.3, 3.5	Graph logarithmic equations Solve exponential and logarithmic equations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Trigonometric Functions – Unit 5**Length of Unit:** Four weeks**Instructor:** Mrs. Snook

- Standard:** 1. Content Problem Solving
Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.
1.4. Check reasonability of answers by performing operations & rounding.
Standard: 2. Algebra
Benchmarks: 2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	4.1, 4.2	Convert angles from degrees to radians	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	4.4, 4.5, 4.6	Use the amplitude, period and frequency of sine and cosine functions to sketch their graphs Graph tangent, cotangent, secant and cosecant functions Analyze composite trigonometric functions	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
1.4	4.7, 4.8	Evaluate inverse trigonometric functions without a calculator Calculate harmonic motion	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Analytic Trigonometry – Unit 6

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standard: 2. Algebra

Benchmarks: 2.4. Understand and explore numerical patterns

Standard: 3. Geometry

Benchmarks: 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon)

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.4	5.1, 5.2, 5.3, 5.4	Use the basic trig identities to simplify and solve equations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	5.5, 5.6	Use the Law of Cosines and the Law of Sines to solve non-right triangles	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Systems & Matrices – Unit 7 **Length of Unit:** Two Weeks

Instructor: Mrs. Snook

Standard: 2. Algebra

Benchmarks: 2.2 Solving equations and inequalities.
2.4 Understand and explore numerical patterns.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2	7.1 7.2	Solve systems of two equations. Solve systems of inequalities.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	7.2 7.3	Perform operations (+, -, scalar multiplication, and matrix multiplication) with matrices. Solve systems using inverse matrices.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Conic Sections – Unit 8

Instructor: Mrs. Snook

Standard: 2. Algebra

Benchmarks: 2.4 Understand and explore numerical patterns.

Standard: 3. Geometry

Benchmarks: 3.2 Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon).

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.4	8.1 8.2 8.3 8.5	Analyze and graph conic sections given their equations. Write equations of sections given information about their characteristics. Write polar equations of conics. Analyze polar equations of conics.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	8.4	Identify the type of conic from an equation. Rotate the axes to eliminate the xy term.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Instructor: Mrs. Snook**Standard:** 2. Algebra**Benchmarks:** 2.4 Understand and explore numerical patterns.**Standard:** 5. Probability & Statistics**Benchmarks:** 5.1 Apply probability concepts and counting rules to determine probability of simple events.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.4	9.2 9.4	Use the binomial theorem to expand a binomial raised to a power. Use formulas to find sums of geometric arithmetic and infinite series. Write explicit and recursive formulas for the n th term.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
5.1	9.1 9.3	Use permutations and combinations to count the number of ways an event can happen. Find the probability of dependent and independent events.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Precalculus – Introduction to Calculus – Unit 10

Length of Unit: Seven Weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.4. Check reasonability of answers by performing operations & rounding.

Standard: 2. Algebra

Benchmarks: 2.4. Understand and explore numerical patterns.

Standard: 3. Geometry

Benchmarks: 3.2. Describe geometric properties, patterns and relationships (trapezoids, parallelograms, cube, sphere, and polygon).
3.3. Apply concepts of perimeter, area, and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.4	10.4	Use a calculator to find derivatives and definite integrals.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	10.1	Use limits to find the slope of a line tangent to a curve.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.2	10.3	Use the properties of limits. Find limits graphically, numerically, and algebraically.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3	10.2	Use rectangles to approximate the area of the region between a graph and the x-axis.	Homework and quizzes Chapter test ITEDS	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Calculus Syllabus

Instructor: Mrs. Snook
Length of class: One year

This course is designed for the college-bound student. Students will explore Calculus through the interpretation of graphs and tables as well as analytical methods. The course will cover differentiation and integration of functions, analytical geometry, and polar coordinates.

<u>Unit:</u>	<u>Chapters:</u>	<u>Length:</u>
I. Prerequisites for Calculus	1.....	Three weeks
II. Limits and Continuity	2.....	Four weeks
III. Derivatives	3-4	Eight weeks
IV. Integrals.....	5-7	Eight weeks
V. L'Hopital's Rule and Partial Fractions	8.....	Three weeks
VI. Infinite Series	9.....	Four weeks
VII. Parametric, Vector, and Polar Functions	10.....	Six weeks

Materials

Textbook: Pearson/Prentice Hall, 2003: Calculus, Graphical, Numerical, Algebraic, Finney, Demana, Waits, Kennedy

White board, coordinate plane board, polar-axis board, and graphing calculators.

Subject Area: Calculus – Prerequisite for Calculus – Unit I

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.4. Check reasonability of answers by performing operations & rounding.

Standard: 2. Algebra

Benchmarks: 2.3. Use expressions to model situations solving simple open sentences.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.4	1.1 – 1.6	Predict solutions to problems using linear or exponential regression analysis.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, HGD, CE, AR
2.3	1.2	Write formulas for piecewise functions.	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE)

Subject Area: Calculus – Limits and Continuity – Unit II

Length of Unit: Four weeks

Instructor: Mrs. Snook

Standard: 2. Algebra

Benchmarks: 2.2. Solve equations and inequalities
2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2	2.1, 2.2	Find the limit of a function, given its equation or its graph	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	2.3	Identify discontinuities in functions and label as removable or non-removable	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Calculus – Derivatives – Unit III

Length of Unit: Eight weeks

Instructor: Mrs. Snook

Standard: 2. Algebra

Benchmarks: 2.2. Solve equations and inequalities
2.4. Understand and explore numerical patterns

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2	3.1 - 3.9, 4.6	Find derivatives of functions, using the Rules of Differentiation Find dy/dx by implicit differentiation Solve problems involving rates of change Find derivatives of inverse trig functions Find derivatives of exponential and logarithmic functions	Homework and quizzes Chapter tests ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.4	4.1 – 4.4	For a given function, be able to locate: a) relative extrema b) intervals of increasing, decreasing or constant behavior c) points of inflection d) concavity intervals	Homework and quizzes Chapter tests ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Calculus – Integrals – Unit IV

Length of Unit: Eight weeks

Instructor: Mrs. Snook

Standard: 2. Algebra
Benchmarks: 2.2. Solve equations and inequalities
 2.4. Understand and explore numerical patterns

Standard: 3. Geometry
Benchmarks: 3.3. Apply concepts of perimeter, area, and volume

Standard: 4. Measurement
Benchmarks: 4.2. Measure length/distance, time, temperature, weight, mass and volume.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.4	5.2, 5.3 5.4 6.1 6.2 6.4, 6.5	Evaluate definite integrals Use the Fundamental Theorem of Calculus to evaluate integrals Find indefinite integrals analytically Integrate composite functions by substitution Be able to solve problems involving radioactive decay (half-life) and population growth	Homework and quizzes Chapter tests ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3	5.1 5.5 7.2 7.3	Estimate the area of a region using finite sums Use the Trapezoidal Rule to approximate the value of an integral Use integration to find the area of a region bounded between two curves Use integration to find the volume of a solid using the disk, washer or shell methods	Homework and quizzes Chapter tests ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
4.2	7.5	Solve integration problems involving work, force or pressure	Homework and quizzes Chapter tests ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Transformations Unit V**Length of Unit: Three weeks****Instructor: Mrs. Snook****Standard: 2. Algebra****Benchmarks: 2.1. Use and interpret operations and relational symbols (equal, greater than, less than)****Standard: 3. Geometry****Benchmarks: 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.**

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
3.1	7.1	Identify the tree basic rigid transformations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	7.2	Identify relationships between reflections and line symmetry	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.1	7.5	Represent transformations as compositions of simpler transformations	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Geometry Similarity Unit VI

Length of Unit: Three weeks

Instructor: Mrs. Snook

Standard: 1. Content Problem Solving

Benchmarks: 1.2. Describe and apply properties of whole numbers and fractions in physical, verbal and symbolic representations.

Standard: 2. Algebra

Benchmarks: 2.2. Solve equations and inequalities

Standard: 3. Geometry

Benchmarks: 3.1. Identify, classify, and compare geometric figures knowing basic geometric language for shapes.

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
1.2	8.1	Find and simplify the ratio of two numbers	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.2	8.2	Use proportions to solve real-life problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.1	8.3	Identify similar polygons Use similar polygons to solve problems	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)

Subject Area: Calculus – Parametric, Vector and Polar Functions – Unit VII**Length of Unit:** Six weeks**Instructor:** Mrs. Snook**Standard:** 2. Algebra**Benchmarks:** 2.2. Solve equations and inequalities

2.3. Use expressions to model situations solving simple open sentences.

Standard: 3. Geometry**Benchmarks:** 3.3. Apply concepts of perimeter, area, and volume

Benchmarks	Section from Text	Critical Objectives	Assessments	Infusions/ Provisions
2.2	10.1 10.2	Find the derivative of a parametric function Find the derivative of a vector function	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
2.3	10.3, 10.4	Solve problems involving vectors and projectile motion	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR
3.3	10.5, 10.6	Find the area of a region bounded by polar curves	Homework and quizzes Chapter test ITEDs	HOTS, SPECIAL, MEDIA, TECH, MCGF, GUID, TAG, LS, CS, GS, HGD, CE, AR

Higher Order Thinking Skills (HOTS); Special Education (SPECIAL); Media Information Skills (MEDIA); Technology (TECH); Multi-Cultural Gender Fair (MCGF); Guidance (GUID); Talented and Gifted (TAG); Learning Skills (LS); Communication Skills (CS); Global Studies (GS); Human Growth and Development (HGD); Career Education (CE); At-Risk (AR)