Career Ready Practices

	Algebra I	Geometry	Algebra II	Intro to College Math	Math Foundations 1	Math Foundations 2	Math Foundations 3	Math Foundations 4	Life Skills Math
CRP1. Act as a responsible and contributing citizen and employee Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.	In Unit 6, students use and interpret exponential growth and decay functions and construct a geometric sequence to investigate some hidden costs that occur when purchasing a car. There is so much more to buying a new car than the purchase price; interest rates, depreciation, sales tax and inflation are all factors that should be taken into consideration when purchasing a new car. Students find the price of three cars that interests them and research interest rates. Taking into account all the extra factors for the price of a car, students will calculate the actual price of the car and the montly payments.	In Unit 11, students use area formulas and formula for population density to calculate the population density of multiple neighborhoods in a given town. Population density is a measure of how many people live within a given area and locations of new schools are decided using geometric models based on it. Several neighborhoods have the same area but vastly different populations and some have similar populations but different areas. Students use mathematics to determine and create new attendance boundaries to account for a new high school and must make compromises between transportation costs, parents' concerns, and student capacity at the schools.	In unit 4, students use characteristics of functions, interpret key features of tables in terms of the quantities for a function that models a relationship between two quantities, relate the domain of a function to its graph, and distinguish between modeling with linear and exponential functions to study of how an urban landscape affects sparrow density. Students compare equations created by different models to explore how the presence of humans affect the population of sparrows in a park, and to determine if more humans mean fewer sparrows or vice versa if the presence of humans increase the number of sparrows up to a point. They will also determine if there are a minimum number of sparrows that can be found in a park, regardless of how many humans are there, and be able to explain what a mathematical models can tell you.	In Unit 8, students construct and intepret scatter plots to explore hybrid cars and their non-hybrid counterpart. Students are given the cost and fuel economy (in miles per gallon) for six different hybrid cars and their equivalent nonhybrid counterparts. Students construct scatter plots for both types of cars and compare the characteristics of the scatter plots and their lines of best fit to determine how much more a person pays in fuel costs per mile if they purchase a hybrid than if they purchase its nonhybrid equivalent	Blocks 4,5,6,7,8 Students engage in activities with a focus on fractional relationships throughout the entire course that connect to workplace responsibilities. Each Block is a "unit".	Course II, Blocks 1-6 Students engage in activities with a focus on ratio and proportional relationship throughout the entire course that connect to workplace responsibilities. Each Block is a "unit".	In units 1, 2, 3, 4, 5, students are posed with Real-World problem solving examples such as: Comparing votes casted using a graph of a function (p 208), Find the distance a runner travels using a graph of a function(p 218), Find the domain and range of a function that represents the time it takes for a submarine to surface(p 228), Describe a student's commute to school from a graph using rate of change(p 238), Compare the costs of 2 television commercials using a graph (p 246), Represent the cost of downloading songs using a direct variation (p 256), Compare the cable company's discount to its original cost using functions (p 265)	Part-time and Full-Time Employment unit- students focus on the following concepts: An effective career plan is flexible, includes a variety o flife experiences, skills and education, and can save time, energy and money. Each job, career and profession has a set of preparation requirements, career exploration experiences and different opportunities for personal and professional growth and satisfaction. **Personal actions today and tomorrow may have an effect on future employment.** In the 21st century, people will most likely have multiple careers and jobs.	1. Money, 2. Telling Time, 3. Basic Banking, 4. Measurement, 5. Basic Math Calculating and Word Problems
CRP2. Apply appropriate academic and technical skills. Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation	In unit 8 students Identify differences and similarities among different types of functions. The performance task in this chapter has students complete three data reports of bacteria growth involving different representations of linear, quadratic, and exponential functions. They identify the type of function that is best represented by each data report. They identify which bacteria sample grew the fastest and explain why. Finally, they answer questions based on population density of bacteria.	In Unit 5 students will view the STEM video: Hanglider Challenge use hang gliders to investigate congruent triangles. Students identify congruent components of hang gliders and use congruence theorems to prove that the triangular shapes in the hang gliders are congruent.	In Unit 1 students identify quadratic functions, convert units of measure, find vertices and maximum values of quadratic functions, compare quadratic functions to discover how coefficients affect the maximum values of the functions to discover how the slope of a ramp affects the height of a dirt bike jump. Students use spreadsheets and the formula for the height of a dirt bike trajectory off a ramp to investigate the coefficients of a quadratic function. They use this formula to find the maximum heights of jumps. Students discover how gravity and the slope of a ramp affect the height of a dirt bike jump and the time the bike stays in the air.	In Unit 14 students add, subtract, and simplify rational expressions and identify ways to rewrite an expression to explore thermistors which are a special kind of resistor used in all types of electronics. Students are given seven rational functions that represent thermistor and must identify a pair that will sum to a linear function becasue engineers would like to detect temperature in a linear way, i.e. a constant change in temperature yields a constant change in resistance. This is not usually the case for a thermistor. They have very nonlinear characteristics. For this reason, circuit designers often use combinations of thermistors to obtain the type of temperature-sensing function they need.	Blocks 4,5,6,7,8 Students engage in activities with a focus on fractional relationships throughout the entire course that connect to workplace responsibilities. Each Block is a "unit".	Course II, Blocks 1-6 Students engage in activities with a focus on ratio and proportional relationship throughout the entire course that connect to workplace responsibilities. Each Block is a "unit".	In unit 5, students will engage in activities related to real world examples such as: Estimate the distance to the horizon (p 617), Use the golden ratio to find the width of a painting (p 624), Using the formula for velocity, calculate the speed in the roller coaster loop (p 630), using a formula, police can find the speed of car when it leaves a skid mark (p 639).	Part-time and Full -Time Employment unit. For example, Students will read the classified section in a newspaper or online website, decipher abbreviations and compare wages, hours, skills needed to apply for part-time and full-time positions. Students will explain the relationship between government programs, services and taxation.	1. Money, 2. Telling Time, 3. Basic Banking, 4. Measurement, 5. Basic Math Calculating and Word Problems

Career Ready Practices

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CRP3. Attend to personal health and financial well-being. Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.	In unit 10 students use radical equations to explore the use of mathematics in medicine. The perfomance task in this chapter explores children's medicine doses which are often calculated from adult doses by using age, body weight, and/or body surface area. The most reliable methods are based on body surface area. When taking medication, it is critical to take the correct dosage. For children in particular, body surface area (BSA) is a key component in calculating that dosage. The Mosteller Formula is commonly used to approximate body surface area.	In unit 2, students learn to distinguish correct logic from that which is flawed. Decisions are made and thoughts are formed based on logic, reasoniong, and goals. Students develop skills to rationalize and reason logically. This thought process impacts students personal wellness decisions and career pathways as they approach young adulthood.	In Unit 5, students multiply and divide functions, and write functions which model the following for a white rhino: the number of heartbeats per lifetime, the average amount of calories burned over its lifespan while resting, and the average amount of calories burned per heartbeat. Students will use this information to understand that 70% of our calories are burned by our major organs as they function to keep us alive. This energy expenditure is known as the Basal Metabolic Rate (BMR). The BMR represents metabolism for any animal at a resting rate when the animal is not digesting food or engaging in physical activity. For the remaining 30% of calories burned, approximately 20% is spent in activity, and 10% is used for the digestion of food.				Unit 4, chapter 9 provides students with opportunities to apply learning to personal financial planning. Unit 5 offers opportunities to for students to calculate interest related to purchases.	Purchasing a car unit, Checking and Savings account unit, Consumer purchases unit (focused on the impact of calculating and paying sales tax on goods and services), Credit card unit, Personal Financial Budgeting unit, Renting or Purchasing a Residence unit and the Taxes unit	1. Money, 3. Basic Banking, 5. Basic Math Calculating and Word Problems
CRP4. Communicate clearly and effectively and with reason. Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.	The third mathematical practice "Construct viable arguments and critique the reasoning of others" is integrated into all components of the curriculum for all mathematical courses. Students routinely work in collaboration with their peers to use mathematics in order to analyze situations, model phenomena, justify conclusions and reason inductively about data. Students engage in meaningful conversations with their peers by being able to articulate their reasoning and logic to their classmates, as well as being able to actively listen to the reasoning of others.			Each block/unit offers a specific career relationship and the problem solving within each area is designed as word problem that requires the students to reflect on the career goal.		Each block/unit offers a specific career relationship and the problem solving within each area is designed as word problem that requires the students to reflect on the career goal.	Each unit in this course requires students to work with their peers to solve problems. Students are charged with organzing equations to determine the correct solution and are asked to write open ended responses such as: Summarize how to simplify a radical, explain how to graph a square root function, etc.	In each unit, students are charged with discussing, analyzing and extending ideas orally and via open-ended response questions. Students are asked to explain their thinking and their method in solving a problem. For example, in the credit card unit, studnets will write a summary of credit card offers to determine the best choice.	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems

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CRP5. Consider the environmental, social and economic impacts of decisions. Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.	In Unit 4, students convert between different units of electrical power., write an equation of a line given two points on the line, write equations in slope-intercept form and use linear equations to solve real-life problems involving renewable engery. Students will be asked to create a linear equation based on real-life data about wind power being used to generate electricity. They will use this equation to determine how many wind farms are needed to reach a certain goal. They will explor how much of the energy you use comes from wind power and discuss if the growth of the number of wind farms in the United States be modeled by a linear function. they will determine how much wind power will be needed in the future.	In Unit 6 students will use construction methods to find the circumcenter, the incenter, and the centroid of a triangle to determine the most strategic places to add bicycle renting stations around the downtown area for a large town. They will discuss and strategize how the best locations are determined and create a proposal for the city planners.	In Unit 2, students create equations in two variables to represent relationships between quantities and interpret key features of tables in terms of the quantities for a function that models a relationship between two quantities to study the relationship between speed and braking distance in a car. Using real data and quadratic regression, students will model the relationship between velocity and braking distance, and calculate the braking distance for common speed limits. Then students will use dimensions of a known object in a photograph, such as the length of the dashed lines along a road, to estimate a scale. Using this scale, they will measure the length of skid marks to determine the braking distance, and they will compare this with their table to determine the minimum speed.				Each unit in this course provides students with experiences that are inter-disciplinary such as: Calculate the period a pendulum swings, find the radius of an orbit, calculate the flow rate of water for firefighters, calculate blood flow, using surveys to answer percent problems, calulating temperature, etc.	Taxes unit	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems
CRP6. Demonstrate creativity and innovation. Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.	In Unit 9, students Approximate the decimal value of Φ, solve a quadratic equation either graphically or by using the Quadratic Formula to find the precise value of Φ, test the appeal of the golden ratio by using precise measurements of rectangles and uUse the golden ratio to solve a real-life interior design problem. Students verify the golden ratio in the dimensions of the Parthenon and then find the ratio in the wings of a moth. Then students investigate the origin of the golden ratio by solving a quadratic equation. Students test to see whether the ratio is appealing to their own aesthetics and use it to determine the best place to hang a picture. Finally, they are challenged to find an existing example of the golden ratio in their own environment.	In Unit 10 students will use the formulas for circumference to find measures in circles, find areas of polygons and find and use volumes of cylinders to construct a viable argument for reopening the water park in a town. The city council will consider reopening the closed water park a team can come up with a cost analysis for painting some of the structures, filling the pool water reservoirs, and resurfacing some of the surfaces. The students will be able to compute the cost of two parts of the renovations and then add their cost to the group expenses. The final step allows students to add their costs and propose a plan to the council that explains why they think the park should reopen.	In Unit 6, students solve and apply an exponential equation and use Newton's Law of Cooling to calculate the time different foods need to cool to 140° and to room temperature. Background is given on bacteria growth rates at different temperatures and food storage guidelines. Students use this information to decide when to refrigerate or chill the food.				Throughout each unit, students are asked to identify new methods and approaches to solving problems. For example, in unit 3 (Ch. 7) students are responsible for responding to open-ended questions such as: Write three systems of equations, a system with one solution, a system with no solution and a system with infinitely many solutions, why is it sometimes easier to solve equations using substitution rather than graphing?, Explain when it is best to solve a system by using elimination, and when it is best to use subsitution, etc.	In each unit, students are presented with real world situations that may arise which require them to identify a solution. For example, in the employment unit, interviewing, promotions and reduction in force are discussed and the impact that may have on future employment or personal finances.	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems

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CRP7. Employ valid and reliable research strategies. Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.		All eight of the mathematical practices are incorporated in all units of the mathematics curriculum and collectively create students who are problem solvers that understand mathematical concepts, discover mathematical understandings, explain and demonstrate their thinking, experiment with various strategies and relate math to the world around them. Students learn to analyze and explain problems, model real-life scenario mathematically, and actively engage in problem solving (develop, carry out, and refine a plan) while demonstrating the ability to select and use tools strategically to visualize, explore and compare information. Throughout the curriculum students are also able to look for, develop, and generalize relationships and patterns, calculate solutions accurately and efficiently, examine the reasonableness of their solutions and justify their approaches.			In each block/unit, students are charged with reading and interpreting word problems to gather information to successfully solve and apply their learning to a variety of real world situations. Students are provided guided practice and performance assessments to determine their growth.	In each block/unit, students are charged with reading and interpreting word problems to gather information to successfully solve and apply their learning to a variety of real world situations. Students are provided guided practice and performance assessments to determine their growth.	Throughout each unit, students are asked to identify new methods and approaches to solving problems. For example, in unit 2 (Ch. 6) students are responsible for responding to open-ended questions such as: What are two ways to find the slope of a line? How does changing the value of m affect the graph of a line? How does changing the value of b affect the graph of a line? Work in pairs to list facts that you can identify about a real-world situation from reading a graph that models that situation, etc.	Part-time and Full -Time Employment unit. For example, Students will read the classified section in a newspaper or online website, decipher abbreviations and compare wages, hours, skills needed to apply for part-time and full-time positions. Students will explain the relationship between government programs, services and taxation.	5. Basic Math Calculating and Word Problems
CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.		The first mathematical practice "Make sense of problems and persevere in solving them" is integrated into all components of the curriculum for all mathematical courses. This standard requires students to analyze and explain the givens, constraints, relationships and goals of problems, actively engage in problem solving (develop, carry out, and refine a plan), and show patience and positive attitudes. Students are able to ask if their answers make sense and are able check their answers to problems using a different method; all the while, continually asking themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.			In each block/unit, students are required to respond to open-ended questions where they explain how to solve a problem and analyze errors to determine solutions or validity.	In each block/unit, students are required to respond to open-ended questions where they explain how to solve a problem and analyze errors to determine solutions or validity.	In each block/unit, students are required to respond to open-ended questions where they are presented with a real world situation and are charged with identifying a method to determine a solution based on the skills of each unit.	Unit 1- Business Data Analysis: Statistics - Average, Unit 2 Purchasing a car,	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems

Career Ready Practices

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CRP9. Model integrity, ethical leadership and effective management. Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.	An actional pathway to establish value, trust and integrity of students' work is expected and explained through teachers' expectations/procedures and District policies. Students are expected to practice academic integrety throughout all courses.							Part-time and Full-Time Employment unit- students focus on the following concepts: An effective career plan is flexible, includes a variety o flife experiences, skills and education, and can save time, energy and money. Each job, career and profession has a set of preparation requirements, career exploration experiences and different opportunities for personal and professional growth and satisfaction. **Personal actions today and tomorrow may have an effect on future employment.** In the 21st century, people will most likely have multiple careers and jobs.	
CRP10. Plan education and career paths aligned to personal goals. Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.	On a quarterly bases, students anlayze their results from the District's Math Benchmarks and note standards met on proficiency sheets. This personal data maintained by the students also shows the areas of mathematics not mastered and provides opportunities for students to grow and improve from their mistakes. Students act on the proficiency plan by reflecting on their misunderstandings and provide feedback to their teachers on the most missed problems. Students' proficiency sheets are filed yearly in order to provide a blueprint of their success throughout their mathematical pathway in high school.			One of the students' mathematical goal in this course is to pass the Accuplacer. Their growth is noted from two administrations (fall and spring) of the Accuplacer, a mid-term, and a final summative assessment provided by Camden County College. The pathway of this course leads students into a non-remedial math program at Camden County College.	Students in this course set individual goals to increase their quantile level over the course of the school year. The minimum goal is to increase by 25 quantile points per school year. In addition, students are active in tracking their progress and are afforded the opportunity to set new goals as well.	Students in this course set individual goals to increase their quantile level over the course of the school year. The minimum goal is to increase by 25 quantile points per school year. In addition, students are active in tracking their progress and are afforded the opportunity to set new goals as well.		Part-time and Full-Time Employment unit	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems

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CRP11. Use technology to enhance productivity. Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.	Interpreting and analyzing functions that model relationships between two quantities is studied throughout all levels of mathematics, and the use of technology enhances and supports this topic. With the use of technology students are able to quickly examine and interpret characteristics of functions individually with a device or jointly through the internet with the use of their Chromebooks. In addition, the use of technology allows teachers to use and create digital activities that requires students to collaboratively explore, use and model mathematics through sites such as teacher.desmos.com. Additionally, students enrolled in Algebra 1, Geometry and Algebra 2 use "Big Ideas Math" platform to accomplish learning tasks, explorations, remediation and some for assessment purposes.				Students in this course engage in individualized software on a daily basis to address skill deficits. Students are provided access to this software 24 hours a day to ensure additional opportunities for growth.	Students in this course engage in individualized software on a daily basis to address skill deficits. Students are provided access to this software 24 hours a day to ensure additional opportunities for growth.	Students in this course engage in individualized software on a daily basis to address skill deficits. Students are provided access to this software 24 hours a day to ensure additional opportunities for growth.	Unit 2- Students will research used car values at kellybluebook.com, compare prices of new, used and rental cars and the cost of insurance utilizing the internet. Throughout all units, students will interact with various internet sites such as www. moneyinstructor.com.	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems
CRP12. Work productively in teams while using cultural global competence. Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.	In all units of the mathematics curriculum, students work collaboratively on active learning and inquiry based learning activities as pairs or in larger groups. These tasks require students to gather data, consider ideas, look for patterns, make conjectures, model real-life scenarios, and use problem-solving strategies to reach a solution. Students are also provided the opportunity to critque the reasoning of the classmates and support conjectures among group members. Within their groups, students are assigned various roles or tasks to ensure all are engaged and positively contributing to the variety of ideas and strategies being discussed and considered for the final outcome.				During each unit, students are provided opportunities to collaborate with peers to solve equations, address real world problems and share new methods of instruction. The peer interaction is facilitated by a teacher with opportunities for students to choose partners as well as work in assigned parterships.	During each unit, students are provided opportunities to collaborate with peers to solve equations, address real world problems and share new methods of instruction. The peer interaction is facilitated by a teacher with opportunities for students to choose partners as well as assigned parterships.	During each unit, students are provided opportunities to collaborate with peers to solve equations, address real world problems and share new methods of instruction. The peer interaction is facilitated by a teacher with opportunities for students to choose partners as well as assigned parterships.	During each unit, students are provided opportunities to collaborate with peers to solve equations, address real world problems and share new methods of instruction. The peer interaction is facilitated by a teacher with opportunities for students to choose partners as well as assigned parterships.	1. Money, 2. Telling Time, 3. Basic Banking, 4.Measurement, 5. Basic Math Calculating and Word Problems