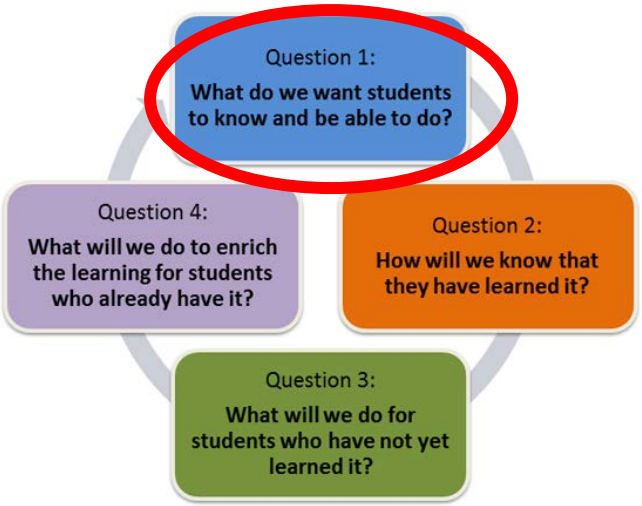
Middle School Essential Standards

The Essential Standards are created to guide teachers in planning for instruction for the remainder of the 2019-20 school year. The Essential Standards are the most critical content to be taught during distance learning.

We begin with what students need to know, understand, and be able to do. We then select teaching/assessing strategies and tools to monitor and ensure progress towards those outcomes for all students.



Essential Standards support cohesion across the division in common outcomes for all students (Question 1). With these outcomes in mind, teams plan for student growth and learning.

Click below to access the Essential Standards for each of the four core content areas.

Mathematics

Middle School English Language Arts

Science

Social Studies

Four Core Content Areas: Weekly At-a-Glance

Mathematics Essential Standards

Algebra I Math 7 Math 7 Honors

Algebra I

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	**A.1.b –** The student will evaluate algebraic expressions for given replacement values of the variables.
Week of 4/13 - 4/17 **Packet 2**	**Unit 7: Polynomials** **MTH.ALG1.2** The student will perform operations on polynomials, including b) adding, subtracting, multiplying, and dividing polynomials; and ● Multiply and divide polynomials ○ Area model/Algebra tiles
Week of 4/20 - 4/24 **Packet 3**	**Unit 7: Polynomials** **MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second-degree binomials and trinomials in one variable. ● Factor polynomials ○ Area model/Algebra tiles ○ Factoring GCF (connects to division) ○ Factoring quadratic trinomials
Week of 4/27 - 5/01 **Packet 4**	**Unit 7: Polynomials** **MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second degree binomials and trinomials in one variable. ● Factor polynomials ○ Area model/Algebra tiles ○ Factoring GCF (connects to division) ○ Factoring quadratic trinomials

Week of **5/04 - 5/08** **Packet 5**	**Unit 8: Quadratics** **MTH.ALG1.7** The student will investigate and analyze linear and quadratic function families and their characteristics both algebraically and graphically, including a) determining whether a relation is a function; b) domain and range; c) zeros; d) intercepts; e) values of a function for elements in its domain; and f) connections between and among multiple representations of functions using verbal descriptions, tables, equations, and graphs. ● Graph quadratic functions ○ Using graphing utility ○ Develop vocabulary
Week of **5/11 - 5/15** **Packet 6**	**Unit 8: Quadratics** **MTH.ALG1.4** The student will solve b) quadratic equations in one variable algebraically; ● Solve quadratic equations. ○ Using graphing utility ○ Connect to factoring
Week of **5/18 - 5/22** **Packet 7**	**Unit 8: Quadratics** **MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ● Solve practical problems
Week of **5/26 - 5/29** **Packet 8**	**Unit 8: Quadratics** **MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ● Solve practical problems
Week of **6/02 - 6/05** **Packet 9**	**Revisit Unit 1 and 2: Expressions and Equations** **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ● Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; Solving linear equations
Week of **6/08 - 6/12** **Packet 10**	**Revisit Unit 1 and 2: Expressions and Equations** **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ● Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; ● Solving linear equations

Math 7

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	**7.11 – The student will evaluate algebraic expressions for given replacement values of the variables.**
Week of 4/13 - 4/17 **Packet 2**	**Revisiting Unit 1-Rational Numbers** **MTH.G7.1** The student will c) compare and order rational numbers. **MTH.G7.2** The student will solve practical problems involving operations with rational numbers. ● Compare and Order Rational Numbers Using Benchmarks ● Compare and Order Rational Numbers Using Fraction Sense/Benchmarks ● Compare and Order Rational Numbers Using Conversions ● Practical Problems with Rational Numbers ● Practical Problems with Rational Numbers
Week of 4/20 - 4/24 **Packet 3**	**Unit 7: Probability** **MTH.G7.8** The student will a) determine the theoretical and experimental probabilities of an event; and b) investigate and describe the difference between the experimental probability and theoretical probability of an event. ● Determine likely/unlikely events ● Find Theoretical ● Do an experiment ● Compare Theoretical/Experimental ● Experiment/Law of Large Numbers
Week of 4/27 - 5/01 **Packet 4**	**Unit 7: Probability** **MTH.G7.8** The student will a) determine the theoretical and experimental probabilities of an event; and b) investigate and describe the difference between the experimental probability and theoretical probability of an event ● Determine likely/unlikely events ● Find Theoretical ● Do an experiment ● Compare Theoretical/Experimental ● Experiment/Law of Large Numbers ● Design and conduct experiments at home

Week of 5/04 - 5/08 **Packet 5**	**Unit 8: Data Distributions** **MTH.G7.9** The student will a) represent data in a histogram; b) make observations and inferences about data represented in a histogram
Week of 5/11 - 5/15 **Packet 6**	**Unit 8: Data Distributions** **MTH.G7.9** The student will a) represent data in a histogram; b) make observations and inferences about data represented in a histogram; and c) compare histograms with the same data represented in stem-and-leaf plots, line plots, and circle graphs.
Week of 5/18 - 5/22 **Packet 7**	**Unit 9: Surface Area and Volume** **MTH.G7.4** The student will a) describe and determine the volume and surface area of rectangular prisms and cylinders; and b) solve problems, including practical problems, involving the volume and surface area of rectangular prisms and cylinders.
Week of 5/26 - 5/29 **Packet 8**	**Unit 9: Surface Area and Volume** **MTH.G7.4** The student will a) describe and determine the volume and surface area of rectangular prisms and cylinders; and b) solve problems, including practical problems, involving the volume and surface area of rectangular prisms and cylinders.
Week of 6/02 - 6/05 **Packet 9**	**Revisit Unit 4: Equations** **MTH.G7.12** The student will solve two-step linear equations in one variable, including practical problems that require the solution of a two-step linear equation in one variable.
Week of 6/08 - 6/12 **Packet 10**	**Revisit Unit 5: Functions** **MTH.G7.10** The student will a) determine the slope, m, as rate of change in a proportional relationship between two quantities and write an equation in the form y = mx to represent the relationship; b) graph a line representing a proportional relationship between two quantities given the slope and an ordered pair, or given the equation in y = mx form where m represents the slope as rate of change; c) determine the y-intercept, b, in an additive relationship between two quantities and write an equation in the form y = x + b to represent the relationship; d) graph a line representing an additive relationship between two quantities given the y intercept and an ordered pair, or given the equation in the form y = x + b, where b represents the y-intercept; and e) make connections between and among representations of a proportional or additive relationship between two quantities using verbal descriptions, tables, equations, and graphs.

Math 7 Honors

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	**8.14.a –** The student will evaluate an algebraic expression for given replacement values of the variables.
Week of 4/13 - 4/17 **Packet 2**	**Unit 7: Solid Figures** **MTH.PALG.6** The student will a) solve problems, including practical problems, involving volume and surface area of cones and square-based pyramids; and b) describe how changing one measured attribute of a rectangular prism affects the volume and surface area. ● Volume and Surface Area (emphasis on using formulas, substitution, and evaluating expressions) ● Square-based Pyramid ● Volume/SA continued – Square-based Pyramid ● Volume – Cone\ ● Surface Area – Cone ● Volume/SA – Changing dimensions
Week of 4/20 - 4/24 **Packet 3**	**Unit 8: Probability of Multiple Events** **MTH.G7H/8.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events. ● Review and overview of probability/single events; writing probability as a percent, decimal, and fraction ● Probability of Independent Events (coins, spinners, dice, etc) ● Probability of Independent Events – with replacement (cards, marbles, etc…) and two separate sets (like marbles in Jar A and Jar B) ● Introduction to Dependent Events. Is the situation Independent or Dependent?
Week of 4/27 - 5/01 **Packet 4**	**Unit 8: Probability of Multiple Events** **MTH.PALG.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events. ● Probability of Dependent Events ● Compare Probability of Independent and Dependent Events

Week of 5/04 - 5/08 **Packet 5**	**Unit 10: Bivariate Data (Scatterplots /Line of Best Fit)** **MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Week of 5/11 - 5/15 **Packet 6**	**Unit 10: Bivariate Data (Scatterplots/Line of Best Fit)** **MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Week of 5/18 - 5/22 **Packet 7**	**Revisit Unit 3: Expressions and Order of Operations** **MTH.PALG.14** The student will a) evaluate an algebraic expression for given replacement values of the variables; b) simplify algebraic expressions in one variable.
Week of 5/26 - 5/29 **Packet 8**	**Revisit Unit 3: Solving Equations** **MTH.PALG.17** The student will solve multistep linear equations in one variable with the variable on one or both sides of the equation, including practical problems that require the solution of a multistep linear equation in one variable
Week of 6/02 - 6/05 **Packet 9**	**Revisit Unit 2: Lines and Rate of Change** **MTH.PALG.16** The student will a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;
Week of 6/08 - 6/12 **Packet 10**	**Revisit Unit 2: Lines and Rate of Change** **MTH.PALG.16** The student will a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;

Middle School English Language Arts Essential Standards

Grade 7 Grade 8

A note to educators: This document *should not be considered a pacing guide*. We know that students don't learn skills in isolation, and we recognize that developing readers and writers have varying skills that are essential to their personal growth. You should be responsive to your students and their needs.

The standards shared in this document emphasize generative skills that we use as readers and writers and align with the Learning Packets students receive weekly. Keep in mind that teachers/CLTs can choose to what extent Learning Packets are part of teacher-facilitated instruction. The "Packet Alignment" column is included to help provide information rather than to indicate what you should be teaching at a specific time. Again, be responsive to your students and their needs.

Grade 7

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	• 7.5.e: Identify elements and characteristics of a variety of genres • 7.5.i: Make inferences and draw conclusions based on the text • 7.5.j: Use reading strategies to monitor comprehension throughout reading • 7.7.c: Use a variety of prewriting strategies to generate and organize ideas • 7.7.d: Organize writing structure to fit form or topic
Week of 4/13 - 4/17 **Packet 2**	• 7.5.e: Identify elements and characteristics of a variety of genres • 7.5.i: Make inferences and draw conclusions based on the text • 7.5.j: Use reading strategies to monitor comprehension throughout reading • 7.7.c: Use a variety of prewriting strategies to generate and organize ideas • 7.7.d: Organize writing structure to fit form or topic
Week of 4/20 - 4/24 **Packet 3**	• 7.5.i: Make inferences and draw conclusions based on the text • 7.5 j: Use reading strategies to monitor comprehension throughout reading **OR** • 7.6.c Make inferences and draw logical conclusions using explicit and implied textual evidence • 7.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and a formal style
Week of 4/27 - 5/01 **Packet 4**	• 7.5.c: Identify cause-and-effect relationships and their impact on plot • 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** • 7.6.j: Identify cause-and-effect relationships • 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence • 7.7: The student will write in a variety of forms to include narrative, expository, persuasive, and reflective, with an emphasis on expository and persuasive writing

Week of 5/04 - 5/08 **Packet 5**	• 7.6.e: Identify the source, viewpoint, and purpose of texts • 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence • 7.7.g: Clearly state a position and organize reasons and evidence, using credible sources • 7.7.h: Distinguish between fact and opinion to support a position
Week of 5/11 - 5/15 **Packet 6**	• 7.6.g: Identify the main idea • 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence • 7.7.e: Establish a central idea incorporating evidence, while maintaining an organized structure and a formal style
Week of 5/18 - 5/22 **Packet 7**	• 7.5.g: Describe the impact of word choice, imagery, and literary devices, including figurative language, in an author's style • 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** • 7.5.f: Compare and contrast various forms and genres of fictional texts • 7.5.c: Identify cause-and-effect relationships and their impact on plot • 7.7.n: revise writing for clarity of content including specific vocabulary and information
Week of 5/26 - 5/29 **Packet 8**	• 7.6.g: Identify main ideas • 7.6.h: Summarize text identifying supporting details • 7.7.d: Organize writing structure to fit form or topic
Week of 6/02 - 6/05 **Packet 9**	• 7.6.g: Identify main ideas • 7.6.h: Summarize text identifying supporting details • 7.7.d: Organize writing structure to fit form or topic
Week of 6/08 - 6/12 **Packet 10**	• 7.5.i: Make inferences and draw conclusions based on text • 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** • 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence • 7.7.e: Establish central idea incorporating evidence, while maintaining an organized structure and a formal style

Grade 8

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	• 8.5.e: Make inferences, draw conclusions using evidence from text as support • 8.5.f: Identify and analyze characteristics within a variety of genres • 8.5.j: Use reading strategies to monitor comprehension • 8.7.c: Use prewriting strategies to generate and organize ideas • 8.7.d: Organize writing structure to fit form or topic
Week of 4/13 - 4/17 **Packet 2**	• 8.5.e: Make inferences, draw conclusions using evidence from text as support • 8.5.f: Identify and analyze characteristics within a variety of genres • 8.5.j: Use reading strategies to monitor comprehension • 8.7.c: Use prewriting strategies to generate and organize ideas • 8.7.d: Organize writing structure to fit form or topic
Week of 4/20 - 4/24 **Packet 3**	• 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** • 8.5.d: Explain the use of symbols and figurative language • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 4/27 - 5/01 **Packet 4**	• 8.5.c: Explain the development of theme(s) **OR** • 8.6.j: Identify cause-and-effect relationships • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 5/04 - 5/08 **Packet 5**	• 8.6.e: Analyze the author's qualifications, viewpoint, word choice, and impact • 8.7.l: Revise writing for clarity of content, word choice, sentence variety, and transitions among paragraphs

Week of 5/11 - 5/15 **Packet 6**	• 8.6.h: Identify the main idea • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 5/18 - 5/22 **Packet 7**	• 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** • 8.5.d: Explain the use of symbols and figurative language • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 5/26 - 5/29 **Packet 8**	• 8.6.i: Summarize the text, identifying supporting details • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 6/02 - 6/05 **Packet 9**	• 8.6.i: Summarize the text, identifying supporting details • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style
Week of 6/08 - 6/12 **Packet 10**	• 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** • 8.5.d: Explain the use of symbols and figurative language • 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style

Science Essential Standards

Life Science Physical Science

Life Science

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	• Experimental Design and Scientific Conclusion
Week of 4/13 - 4/17 **Packet 2**	• Photosynthesis, Matter and Carbon Cycle
Week of 4/20 - 4/24 **Packet 3**	• Responses of living things to their environment
Week of 4/27 - 5/01 **Packet 4**	• Observe variations among traits in a population
Week of 5/04 - 5/08 **Packet 5**	• Ratio of Dominant to Recessive Traits • Pictorial Punnett Squares
Week of 5/11 - 5/15 **Packet 6**	• DNA Model • Traits and Mutations

Week of 5/18 - 5/22 **Packet 7**	• Natural Selection
Week of 5/26 - 5/29 **Packet 8**	• Classification
Week of 6/02 - 6/05 **Packet 9**	• Review and Culminating Activities
Week of 6/08 - 6/12 **Packet 10**	• Review and Culminating Activities

Physical Science

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	• Experimental Design and Scientific Conclusion
Week of 4/13 - 4/17 **Packet 2**	• Sound and Light • Claim-Evidence-Reasoning Explanation
Week of 4/20 - 4/24 **Packet 3**	• Thermal Energy Transfer

Week of 4/27 - 5/01 **Packet 4**	• Motion and Motion Graphs • Gravity
Week of 5/04 - 5/08 **Packet 5**	• Speed and Acceleration
Week of 5/11 - 5/15 **Packet 6**	• Balanced and Unbalanced Forces • Newton's Laws of Motion
Week of 5/18 - 5/22 **Packet 7**	• Friction and Its Effect on Motion
Week of 5/26 - 5/29 **Packet 8**	• Work, Simple Machines, and Power
Week of 6/02 - 6/05 **Packet 9**	• Review and Culminating Activities
Week of 6/08 - 6/12 **Packet 10**	• Review and Culminating Activities

Social Studies Essential Standards

Civics US History II

A note to educators: Based on past and current pacing, teachers will need to make instructional decisions as to which Essential Standards still need to be addressed. The standards shared in this document indicate which standards align with the Learning Packets students receive weekly. The "Packet Alignment" column is included to help provide information rather than to indicate what you should be teaching at a specific time. Be responsive to your and your students' needs, recognizing the Essential Standards you are teaching might not align with the Essential Standards being focused on in that week's Learning Packet.

Civics

Packet Alignment	Essential Standards
As a reminder, Service Learning hours need to be submitted and approved in x2VOL by June 1, 2020.	• The student will demonstrate effective participation in civic life by promoting positivity, a sense of community, and activism in your family, neighborhood, and online communities.
Week of 3/30 - 4/03 **Packet 1**	• The student will apply social science skills to examine the responsibilities of citizenship.
Week of 4/13 - 4/17 **Packet 2**	• The student will apply social science skills to describe the structures and powers of the national executive and legislative branches
Week of 4/20 - 4/24 **Packet 3**	• The student will apply social science skills to understand the judicial systems established by the Constitution of the United States of America.
Week of 4/27 - 5/01 **Packet 4**	• The student will apply social science skills to understand federalism, state courts, and due process.

The standard below might have been integrated as teachers introduced the national level of government and sh ould be revisited as students are introduced to state and local government. ● To apply social science skills to understand how public policy is made at the local, state, and national levels of government (CE 10)	
Week of 5/04 - 5/08 **Packet 5**	● To apply social science skills to explain the differences between state and federal government, with an emphasis on primary legislative and policy issues at the state level.
Week of 5/11 - 5/15 **Packet 6**	● To apply social science skills to understand the role that Fairfax County Government and local city/town governments (when applicable) play in the daily lives of people. ● The student will demonstrate effective participation in civic life by promoting positivity, a sense of community, and activism in your family, neighborhood, and online communities.
Week of 5/18 - 5/22 **Packet 7**	● The student will be able to explain how economics impacts their daily lives with a focus on how scarcity, consumers, producers, and governments must make choices, understanding that everyone's choice has an opportunity cost.
Week of 5/26 - 5/29 **Packet 8**	● The student will compare and contrast how the differences among traditional, free market, command, and mixed economies decide how to allocate their limited resources.
Week of 6/02 - 6/05 **Packet 9**	● The student will apply social science skills to understand how the characteristics of the U.S economy and circular flow promote job growth and competition between businesses.
Week of 6/08 - 6/12 **Packet 10**	● The student will apply social science skills to examine the relationship of Virginia and the United States to the global economy, with emphasis on the impact of technological innovations.

US History II

Note that an Essential Standard has been included for Reconstruction as it is recognized that some History teams address this topic in conjunction with Civil Rights.

Packet Alignment	Essential Standards
Week of 3/30 - 4/03 **Packet 1**	• Apply social science skills to evaluate and explain the role of the United States in World War I.
Week of 4/13 - 4/17 **Packet 2**	• Apply social science skills to describe the social and economic changes that took place during the 1920s. • Apply social science skills to evaluate the ways electrification changed American life in the 1920s.
Week of 4/20 - 4/24 **Packet 3**	• The student will apply social science skills to understand the impact of the Great Depression and New Deal.
Week of 4/27 - 5/01 **Packet 4**	• The student will apply social science skills to understand the reasons for US involvement in World War II and the impact to daily life in the United States.

Week of 5/04 - 5/08
Packet 5
	• The student will apply social science skills to describe select events of World War II in Europe and the Pacific:
	  ○ The Holocaust
	  ○ The D-Day Invasion
	  ○ The dropping of the atomic bomb on Hiroshima and Nagasaki

Week of 5/11 - 5/15 **Packet 6**	• The student will apply social science skills to understand how the goals and ideologies that dominated the Cold War framed interactions around the world.

Week of 5/18 - 5/22 **Packet 7**	• The student will apply social science skills to examine the role of the U.S. foreign policy in conflicts during the Cold War.
Week of 5/26 - 5/29 **Packet 8**	• The student will apply social science skills to examine the role of the U.S. foreign policy in conflicts during the Cold War.
Week of 6/02 - 6/05 **Packet 9**	• The student will apply social science skills to understand the effects of Reconstruction on American life. • The student will apply social science skills to understand the impact of the Civil Rights and the Women's Rights Movements.
Week of 6/08 - 6/12 **Packet 10**	• The student will apply social science skills to understand the impact of the Civil Rights and the Women's Rights Movements.

MS Essential Standards Weekly At-a-Glance

Grade 7 Grade 8

Note for Middle School English Language Arts and Social Studies: The skills listed below indicate alignment to the weekly Learning Packets; however, teachers might be focusing on Essential Standards in an order that is more responsive to the needs of their students.

Grade 7 Essential Standards

Subject	Packet 1: Week of March 30 - April 3 (Review)
Algebra I	• A.1.b – The student will evaluate algebraic expressions for given replacement values of the variables.
Math 7	• 7.11 - The student will evaluate algebraic expressions for given replacement values of the variables.
Math 7 Honors	• 8.14.a - The student will evaluate an algebraic expression for given replacement values of the variables.
Middle School English Language Arts	• 7.5.e: Identify elements and characteristics of a variety of genres • 7.5.i: Make inferences and draw conclusions based on the text • 7.5.j: Use reading strategies to monitor comprehension throughout reading • 7.7.c: Use a variety of prewriting strategies to generate and organize ideas • 7.7.d: Organize writing structure to fit form or topic
Life Science	• Experimental Design and Scientific Conclusion
US History II	• Apply social science skills to evaluate and explain the role of the United States in World War I.

Subject	Packet 2: Week of April 13 - 17 (Review)
Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including b) adding, subtracting, multiplying, and dividing polynomials; and ○ Multiply and divide polynomials ○ Area model/Algebra tiles
Math 7	**Revisit Unit 1-Rational Numbers** ● **MTH.G7.1** The student will c) compare and order rational numbers. ● **MTH.G7.2** The student will solve practical problems involving operations with rational numbers. ○ Compare and Order Rational Numbers Using Benchmarks ○ Compare and Order Rational Numbers Using Fraction Sense/Benchmarks ○ Compare and Order Rational Numbers Using Conversions ○ Practical Problems with Rational Numbers ○ Practical Problems with Rational Numbers
Math 7 Honors	● **Unit 7: Solid Figures - MTH.PALG.6** The student will a) solve problems, including practical problems, involving volume and surface area of cones and square-based pyramids; and b) describe how changing one measured attribute of a rectangular prism affects the volume and surface area. ○ Volume and Surface Area (emphasis on using formulas, substitution, and evaluating expressions) ○ Square-based Pyramid ○ Volume/SA continued – Square-based Pyramid ○ Volume – Cone\ ○ Surface Area – Cone ○ Volume/ SA - Changing dimensions
Middle School English Language Arts	● 7.5.e: Identify elements and characteristics of a variety of genres ● 7.5.i: Make inferences and draw conclusions based on the text ● 7.5.j: Use reading strategies to monitor comprehension throughout reading ● 7.7.c: Use a variety of prewriting strategies to generate and organize ideas ● 7.7.d: Organize writing structure to fit form or topic
Life Science	● Photosynthesis, Matter and Carbon Cycle
US History II	● Apply social science skills to describe the social and economic changes that took place during the 1920s. ● Apply social science skills to evaluate the ways electrification changed American life in the 1920s.

Subject	Packet 3: Week of April 20 - 24
Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second-degree binomials and trinomials in one variable. ● Factor polynomials ○ Area model/Algebra tiles ○ Factoring GCF (connects to division) ○ Factoring quadratic trinomials
Math 7	● **Unit 7: Probability** - **MTH.G7.8** The student will a) determine the theoretical and experimental probabilities of an event; and b) investigate and describe the difference between the experimental probability and theoretical probability of an event. ○ Determine likely/unlikely events ○ Find Theoretical ○ Do an experiment ○ Compare Theoretical / Experimental ○ Experiment / Law of Large Numbers
Math 7 Honors	● **Unit 8: Probability of Multiple Events - MTH.G7H/8.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events. ○ Review and overview of probability/single events; writing probability as a percent, decimal, and fraction ○ Probability of Independent Events (coins, spinners, dice, etc.) ○ Probability of Independent Events – with replacement (cards, marbles, etc.) and two separate sets (like marbles in Jar A and Jar B) ○ Introduction to Dependent Events. Is the situation Independent or Dependent?
Middle School English Language Arts	● 7.5.i: Make inferences and draw conclusions based on the text ● 7.5 j: Use reading strategies to monitor comprehension throughout reading **OR** ● 7.6.c Make inferences and draw logical conclusions using explicit and implied textual evidence ● 7.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and a formal style
Life Science	● Responses of living things to their environment
US History II	● The student will apply social science skills to understand the impact of the Great Depression and New Deal.

Subject	Packet 4: Week of April 27 - May 1
Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second-degree binomials and trinomials in one variable. ● Factor polynomials ○ Area model/Algebra tiles ○ Factoring GCF (connects to division) ○ Factoring quadratic trinomials
Math 7	● **Unit 7: Probability** - **MTH.G7.8** The student will a) determine the theoretical and experimental probabilities of an event; and b) investigate and describe the difference between the experimental probability and theoretical probability of an event. ○ Determine likely/unlikely events ○ Find Theoretical ○ Do an experiment ○ Compare Theoretical / Experimental ○ Experiment / Law of Large Numbers ○ Design and conduct experiments at home
Math 7 Honors	● **Unit 8: Probability of Multiple Events - MTH.PALG.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events. ○ Probability of Dependent Events ○ Compare Probability of Independent and Dependent Events
Middle School English Language Arts	● 7.5.c: Identify cause-and-effect relationships and their impact on plot ● 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** ● 7.6.j: Identify cause-and-effect relationships ● 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence ● 7.7: The student will write in a variety of forms to include narrative, expository, persuasive, and reflective, with an emphasis on expository and persuasive writing.
Life Science	● Observe variations among traits in a population
US History II	● The student will apply social science skills to understand the reasons for US involvement in World War II, and the impact to daily life in the United States.

Subject	Packet 5: Week of May 4 - 8
Algebra I	● **Unit 8: Quadratics - MTH.ALG1.7** The student will investigate and analyze linear and quadratic function families and their characteristics both algebraically and graphically, including a) determining whether a relation is a function; b) domain and range; c) zeros; d) intercepts; e) values of a function for elements in its domain; and f) connections between and among multiple representations of functions using verbal descriptions, tables, equations, and graphs. ● Graph quadratic functions ○ Using graphing utility ○ Develop vocabulary
Math 7	● **Unit 8: Data Distributions - MATH.G7.9** - The student will a) represent data in a histogram; b) make observations and inferences about data represented in a histogram;
Math 7 Honors	● **Unit 10: Bivariate Data (Scatterplots /Line of Best Fit) - MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Middle School English Language Arts	● 7.6.e: Identify the source, viewpoint, and purpose of texts ● 7.6.c:Make inferences and draw logical conclusions using explicit and implied textual evidence ● 7.7.g:Clearly state a position and organize reasons and evidence, using credible sources ● 7.7.h: Distinguish between fact and opinion to support a position
Life Science	● Ratio of Dominant to Recessive Traits ● Pictorial Punnett Squares
US History II	● The student will apply social science skills to describe select events of World War II in Europe and the Pacific: ○ The Holocaust ○ The D-Day Invasion ○ The dropping of the atomic bomb on Hiroshima and Nagasaki

Subject	Packet 6: Week of May 11 - 15

Algebra I	● **Unit 8: Quadratics - MTH.ALG1.4** The student will solve b) quadratic equations in one variable algebraically;
	  ● Solve quadratic equations.
	  ○ Using graphing utility
	  ○ Connect to factoring

Math 7	● **Unit 8: Data Distributions - MATH.G7.9** - The student will a) represent data in a histogram; b) make observations and inferences about data represented in a histogram; and c) compare histograms with the same data represented in stem-and-leaf plots, line plots, and circle graphs.
Math 7 Honors	● **Unit 10: Bivariate Data (Scatterplots /Line of Best Fit)** ● **MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Middle School English Language Arts	● 7.6.g: Identify the main idea ● 7.6.c:Make inferences and draw logical conclusions using explicit and implied textual evidence ● 7.7.e: Establish a central idea incorporating evidence, while maintaining an organized structure and a formal style.
Life Science	● DNA Model ● Traits and Mutations
US History II	● The student will apply social science skills to understand how the goals and ideologies that dominated the Cold War framed interactions around the world.

Subject	Packet 7: Week of May 18 - 22
Algebra I	● **Unit 8: Quadratics - MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ○ Solve practical problems
Math 7	● **Unit 9**: **Surface Area and Volume - MTH.G7.4** The student will a) describe and determine the volume and surface area of rectangular prisms and cylinders; and b) solve problems, including practical problems, involving the volume and surface area of rectangular prisms and cylinders.
Math 7 Honors	**Revisit Unit 3: Expressions and Order of Operations** ● **MTH.PALG.14** The student will a) evaluate an algebraic expression for given replacement values of the variables; b) simplify algebraic expressions in one variable.
Middle School English Language Arts	● 7.5.g: Describe the impact of word choice, imagery, and literary devices, including figurative language, in an author's style ● 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** ● 7.5.f:Compare and contrast various forms and genres of fictional texts ● 7.5.c:Identify cause-and-effect relationships and their impact on plot. ● 7.7.n: revise writing for clarity of content including specific vocabulary and information.
Life Science	● Natural Selection
US History II	● The student will apply social science skills to examine the role of the U.S. foreign policy in conflicts during the Cold War.

Subject	Packet 8: Week of May 26 - 29
Algebra I	● **Unit 8: Quadratics- MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ○ Solve practical problems
Math 7	● **Unit 9**: **Surface Area and Volume - MTH.G7.4** The student will a) describe and determine the volume and surface area of rectangular prisms and cylinders; and b) solve problems, including practical problems, involving the volume and surface area of rectangular prisms and cylinders.
Math 7 Honors	**Revisit Unit 3: Solving Equations** ● **MTH.PALG.17** The student will solve multistep linear equations in one variable with the variable on one or both sides of the equation, including practical problems that require the solution of a multistep linear equation in one variable.
Middle School English Language Arts	● 7.6.g: Identify main ideas ● 7.6.h:Summarize text identifying supporting details ● 7.7.d:Organize writing structure to fit form or topic.
Life Science	● Classification
US History II	● The student will apply social science skills to examine the role of the U.S. foreign policy in conflicts during the Cold War.

Subject	Packet 9: Week of June 2 - 5
Algebra I	**Revisit Unit 1 and 2: Expressions and Equations** ● **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ○ Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions ● **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; ○ Solving linear equations
Math 7	**Revisit Unit 4: Equations** ● **MTH.G7.12** The student will solve two-step linear equations in one variable, including practical problems that require the solution of a two-step linear equation in one variable.
Math 7 Honors	**Revisit Unit 2: Lines and Rate of Change** ● **MTH.PALG.16** The student a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;
Middle School English Language Arts	● 7.6.g: Identify main ideas ● 7.6.h:Summarize text identifying supporting details ● 7.7.d:Organize writing structure to fit form or topic
Life Science	● Review and Culminating Activities
US History II	● The student will apply social science skills to understand the effects of Reconstruction on American life. ● The student will apply social science skills to understand the impact of the Civil Rights and the Women's Rights Movements

Subject	Packet 10: Week of June 8 - 12
Algebra I	**Revisit Unit 1 and 2: Expressions and Equations** ● **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ○ Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions ● **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; ○ Solving linear equations
Math 7	**Revisit Unit 5: Functions** ● **MTH.G7.10** The student will a) determine the slope, m, as rate of change in a proportional relationship between two quantities and write an equation in the form y = mx to represent the relationship; b) graph a line representing a proportional relationship between two quantities given the slope and an ordered pair, or given the equation in y = mx form where m represents the slope as rate of change; c) determine the y-intercept, b, in an additive relationship between two quantities and write an equation in the form y = x + b to represent the relationship; d) graph a line representing an additive relationship between two quantities given the y intercept and an ordered pair, or given the equation in the form y = x + b, where b represents the y-intercept; and e) make connections between and among representations of a proportional or additive relationship between two quantities using verbal descriptions, tables, equations, and graphs.
Math 7 Honors	**Revisit Unit 2: Lines and Rate of Change** ● **MTH.PALG.16** The student a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;
Middle School English Language Arts	● 7.5.i: Make inferences and draw conclusions based on text ● 7.5.j: Use reading strategies to monitor comprehension throughout the reading process **OR** ● 7.6.c: Make inferences and draw logical conclusions using explicit and implied textual evidence ● 7.7.e:Establish central idea incorporating evidence, while maintaining an organized structure and a formal style.
Life Science	● Review and Culminating Activities
US History II	● The student will apply social science skills to understand the impact of the Civil Rights and the Women's Rights Movements

Grade 8 Essential Standards

Subject	Packet 1: Week of March 30 - April 3 (Review)
Algebra I	● A.1.b – The student will evaluate algebraic expressions for given replacement values of the variables.
Pre-Algebra	● 8.14.a - The student will evaluate an algebraic expression for given replacement values of the variables.
Civics	● The student will apply social science skills to examine the responsibilities of citizenship **As a reminder, Service Learning hours need to be submitted and approved in x2VOL by June 1, 2020.** ● The student will demonstrate effective participation in civic life by promoting positivity, a sense of community, and activism in your family, neighborhood and online communities. (1.g & 4.b)
Middle School English Language Arts	● 8.5.e: Make inferences, draw conclusions using evidence from text as support ● 8.5.f: Identify and analyze characteristics within a variety of genres ● 8.5.j: Use reading strategies to monitor comprehension ● 8.7.c: Use prewriting strategies to generate and organize ideas ● 8.7.d: Organize writing structure to fit form or topic
Physical Science	● Experimental Design and Scientific Conclusion

Subject	Packet 2: Week of April 13 - 17 (Review)
Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including b) adding, subtracting, multiplying, and dividing polynomials; and ○ Multiply and divide polynomials ○ Area model/Algebra tiles
Pre-Algebra	● **Unit 7: Solid Figures - MTH.PALG.6** The student will a) solve problems, including practical problems, involving volume and surface area of cones and square-based pyramids; and b) describe how changing one measured attribute of a rectangular prism affects the volume and surface area. ○ Volume and Surface Area (emphasis on using formulas, substitution, and evaluating expressions) ○ Square-based Pyramid ○ Volume/SA continued – Square-based Pyramid ○ Volume – Cone\ ○ Surface Area – Cone ○ Volume/ SA - Changing dimensions
Civics	● The student will apply social science skills to describe the structures and powers of the national executive and legislative branches
Middle School English Language Arts	● 8.5.e: Make inferences, draw conclusions using evidence from text as support ● 8.5.f: Identify and analyze characteristics within a variety of genres ● 8.5.j: Use reading strategies to monitor comprehension ● 8.7.c: Use prewriting strategies to generate and organize ideas ● 8.7.d: Organize writing structure to fit form or topic
Physical Science	● Sound and Light ● Claim-Evidence-Reasoning Explanation

Subject	Packet 3: Week of April 20 - 24
Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second degree binomials and trinomials in one variable. ● Factor polynomials ○ Area model/Algebra tiles ○ Factoring GCF (connects to division) ○ Factoring quadratic trinomials
Pre-Algebra	● **Unit 8: Probability of Multiple Events - MTH.G7H/8.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events. ○ Review and overview of probability/single events; writing probability as a percent, decimal, and fraction ○ Probability of Independent Events (coins, spinners, dice, etc) ○ Probability of Independent Events – with replacement (cards, marbles, etc…) and two separate sets (like marbles in Jar A and Jar B) ○ Introduction to Dependent Events. Is the situation Independent or Dependent?
Civics	● The student will apply social science skills to understand the judicial systems established by the Constitution of the United States of America.
Middle School English Language Arts	● 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** ● 8.5.d: Explain the use of symbols and figurative language ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Thermal Energy Transfer

Subject	Packet 4: Week of April 27 - May 1

Algebra I	● **Unit 7: Polynomials - MTH.ALG1.2** The student will perform operations on polynomials, including c) factoring completely first- and second-degree binomials and trinomials in one variable.
	  ● Factor polynomials
	  ○ Area model/Algebra tiles
	  ○ Factoring GCF (connects to division)
	  ○ Factoring quadratic trinomials

Pre-Algebra	● **Unit 8: Probability of Multiple Events - MTH.PALG.11** The student will a) compare and contrast the probability of independent and dependent events; and b) determine probabilities for independent and dependent events.
	  ○ Probability of Dependent Events
	  ○ Compare Probability of Independent and Dependent Events

Civics	● The student will apply social science skills to understand federalism, state courts, and due process.
Middle School English Language Arts	● 8.5.c: Explain the development of theme(s). **OR** ● 8.6.j:Identify cause-and-effect relationships. ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Motion and Motion Graphs ● Gravity

Subject	Packet 5: Week of May 4 - 8
Algebra I	● **Unit 8: Quadratics - MTH.ALG1.7** The student will investigate and analyze linear and quadratic function families and their characteristics both algebraically and graphically, including a) determining whether a relation is a function; b) domain and range; c) zeros; d) intercepts; e) values of a function for elements in its domain; and f) connections between and among multiple representations of functions using verbal descriptions, tables, equations, and graphs. ● Graph quadratic functions ○ Using graphing utility ○ Develop vocabulary
Pre-Algebra	● **Unit 10: Bivariate Data (Scatterplots /Line of Best Fit) - MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Civics	● The student will apply social science skills to explain the differences between state and federal government, with an emphasis on primary legislative and policy issues at the state level.
Middle School English Language Arts	● 8.6.e: Analyze the author's qualifications, viewpoint, word choice, and impact. ● 8.7.l: Revise writing for clarity of content, word choice, sentence variety, and transitions among paragraphs.
Physical Science	● Speed and Acceleration

Subject	Packet 6: Week of May 11 - 15

Algebra I	● **Unit 8: Quadratics - MTH.ALG1.4** The student will solve b) quadratic equations in one variable algebraically;
	  ● Solve quadratic equations.
	  ○ Using graphing utility
	  ○ Connect to factoring

Pre-Algebra	● **Unit 10: Bivariate Data (Scatterplots /Line of Best Fit)** ● **MTH.PALG.13** The student will a) represent data in scatterplots; b) make observations about data represented in scatterplots; and c) use a drawing to estimate the line of best fit for data represented in a scatterplot.
Civics	● The student will apply social science skills to understand the role that Fairfax County Government and local city/town governments (when applicable) play in the daily lives of people. ● The student will demonstrate effective participation in civic life by promoting positivity, a sense of community, and activism in your family, neighborhood and online communities.
Middle School English Language Arts	● 8.6.h:Identify the main idea. ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Balanced and Unbalanced Forces ● Newton's Laws of Motion

Subject	Packet 7: Week of May 18 - 22
Algebra I	● **Unit 8: Quadratics - MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ○ Solve practical problems
Pre-Algebra	**Revisit Unit 3: Expressions and Order of Operations** ● **MTH.PALG.14** The student will a) evaluate an algebraic expression for given replacement values of the variables; b) simplify algebraic expressions in one variable.
Civics	● The student will be able to explain how economics impacts their daily lives with a focus on how scarcity, consumers, producers, and governments must make choices, understanding that everyone's choice has an opportunity cost.
Middle School English Language Arts	● 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** ● 8.5.d: Explain the use of symbols and figurative language ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Friction and Its Effect on Motion

Subject	Packet 8: Week of May 26 - 29
Algebra I	● **Unit 8: Quadratics- MTH.ALG1.4** The student will solve e) practical problems involving equations and systems of equations. ○ Solve practical problems
Pre-Algebra	**Revisit Unit 3: Solving Equations** ● **MTH.PALG.17** The student will solve multistep linear equations in one variable with the variable on one or both sides of the equation, including practical problems that require the solution of a multistep linear equation in one variable.
Civics	● The student will compare and contrast how the differences among traditional, free market, command, and mixed economies decide how to allocate their limited resources.
Middle School English Language Arts	● 8.6.i: Summarize the text, identifying supporting details. ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Work, Simple Machines, and Power

Subject	Packet 9: Week of June 2 - 5
Algebra I	**Revisit Unit 1 and 2: Expressions and Equations** ● **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ○ Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions ● **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; ○ Solving linear equations
Pre-Algebra	**Revisit Unit 2: Lines and Rate of Change** ● **MTH.PALG.16** The student a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;
Civics	● The student will apply social science skills to understand how the characteristics of the U.S economy and circular flow promote job growth and competition between businesses.
Middle School English Language Arts	● 8.6.i: Summarize the text, identifying supporting details. ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Review and Culminating Activities

Subject	Packet 10: Week of June 8 - 12
Algebra I	**Revisit Unit 1 and 2: Expressions and Equations** ● **MTH.ALG1.1** The student will a) represent verbal quantitative situations algebraically; and b) evaluate algebraic expressions for given replacement values of the variables ○ Expressions ○ Making substitutions and simplifying ○ Simplifying radical and exponential expressions ● **MTH.A1.4** The student will solve a) multistep linear equations in one variable algebraically; ○ Solving linear equations
Pre-Algebra	**Revisit Unit 2: Lines and Rate of Change** ● **MTH.PALG.16** The student a) recognize and describe the graph of a linear function with a slope that is positive, negative, or zero; b) identify the slope and y-intercept of a linear function given a table of values, a graph, or an equation in y = mx + b form;
Civics	● The student will apply social science skills to examine the relationship of Virginia and the United States to the global economy, with emphasis on the impact of technological innovations.
Middle School English Language Arts	● 8.5.e: Make inferences, draw conclusions using evidence from text as support **OR** ● 8.5.d: Explain the use of symbols and figurative language ● 8.7.e: Establish a central idea incorporating evidence, maintaining an organized structure and formal style.
Physical Science	● Review and Culminating Activities