## **Grade-level Typing Florida Standards Index**



## **Table of Contents**

1st Grade	
2nd Grade	
3rd Grade	
4th Grade	
5th Grade	
6th Grade	
7th Grade	
8th Grade	



10th Grade	~	5	3
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1



After completing this typing course, students should be able to meet the following typing standard:

## ELA.1.C.5.2

Identify and use digital tools to produce and publish writing individually or with peers and with support from adults.

## **Foundational Skills**

#### **ELA.1.F.1**

Applying Foundational Reading Skills

## **ELA.1.F.1.3**

Use knowledge of grade-appropriate phonics and word-analysis skills to decode words accurately.

- Decode words using knowledge of spelling-sound correspondences for common consonant digraphs, trigraphs, and blends.
- Decode simple words with r-controlled vowels.
- Decode and encode regularly spelled one-syllable words.
- Decode words with inflectional endings.
- Decode words that use final -e and vowel teams to make longvowel sound.

## ELA.1.F.1.4

Read grade-level texts with accuracy, automaticity, and appropriate prosody or expression.

- Recognize and read with automaticity the grade-level sight words.

## Vocabulary

#### ELA.1.V.1

Finding Meaning

## ELA.1.V.1.1

Use grade-level academic vocabulary appropriately in speaking and writing.

## ELA.1.V.1.2

Identify and use frequently occurring base words and their common inflections in grade-level content.

## Communication

**ELA.1.C.3** Following Conventions

## ELA.1.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Form and use complete simple sentences.

- Use subject-verb agreement in simple sentences.



After completing this typing course, students should be able to meet the following typing standard:

## ELA.2.C.5.2

Use digital tools to produce and publish writing individually or with peers and with support from adults.

## **Foundational Skills**

**ELA.2.F.1** Applying Foundational Reading Skills

## ELA.2.F.1.3

Use knowledge of grade-appropriate phonics and word-analysis skills to decode words.

## Vocabulary

**ELA.2.V.1** Find Meaning

## ELA.2.V.1.2

Identify and use base words and affixes to determine the meaning

4

of unfamiliar words in grade-level content.



#### ELA.2.R.1

**Reading Prose and Poetry** 



## Reading

#### ELA.2.R.1.2

Identify and explain a theme of a literary text. ELA.2.R.1.3 Identify different characters' perspectives in a literary text.

## **Communication**

**ELA.2.C.3 Following Conventions** 

#### ELA.2.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Use apostrophes to form contractions.
- Appropriately use pronouns.
- Form and use regular and irregular plural nouns.
- Form and use past tense of irregular verbs.
- Form and use irregular plural nouns.

## **Number Sense and Operations**

#### **MA.2.NSO.1**

Understand the place value of three-digit numbers.



#### MA.2.NSO.1.1

Read and write numbers from 0 to 1,000 using standard form, expanded form and word form. MA.2.NSO.1.2

Compose and decompose three-digit numbers in multiple ways using hundreds, tens and ones. Demonstrate each composition or decomposition with objects, drawings and expressions or equations.

## Measurement

#### MA.2.M.2

Tell time and solve problems involving money.

#### MA.2.M.2.2

Solve one- and two-step addition and subtraction real-world problems involving either dollar bills within \$100 or coins within 100¢ using \$ and ¢ symbols appropriately.

## **Geometric Reasoning**

#### MA.2.GR.1

Identify and analyze two-dimensional figures and identify lines of symmetry.

#### MA.2.GR.1.1

Identify and draw two-dimensional figures based on their defining attributes. Figures are limited to triangles, rectangles, squares, pentagons, hexagons and octagons.

#### MA.2.GR.1.2

Categorize two-dimensional figures based on the number and length of sides, number of vertices, whether they are closed or not and whether the edges are curved or straight.

## **Life Science**

## SC.2.L.17 Interdependence

#### SC.2.L.17.2

Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.

## **Physical Science**

SC.2.P.8

**Properties of Matter** 

#### SC.2.P.8.1

Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets. **SC.2.P.8.4** Observe and describe water in its solid, liquid, and gaseous states.

#### SC.2.P.9

Changes in Matter

## SC.2.P.9.1

Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.

7



After completing this typing course, students should be able to meet the following typing standard:

#### ELA.3.C.5.2:

Use digital writing tools individually or collaboratively to plan, draft, and revise writing.

## **Foundational Skills**

**ELA.3.F.1** Learning and Applying Foundational Reading Skills

#### ELA.3.F.1.3

Use knowledge of grade-appropriate phonics and word-analysis skills to decode words.

## Vocabulary

**ELA.3.V.1** Find Meaning

## ELA.3.V.1.2

Identify and apply knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in grade-level content.

## ELA.3.V.1.3

Use context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases, appropriate to grade level.

## Reading

**ELA.3.R.1** Reading Prose and Poetry

**ELA.3.R.1.3** Explain different characters' perspectives in a literary text.

**ELA.3.R.3** Reading Across Genres

**ELA.3.R.3.1** Identify and explain metaphors, personification, and hyperbole in text(s).

## Communication

**ELA.3.C.3** Following Conventions

**ELA.3.C.3** Following Conventions

## ELA.3.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Conjugate regular and irregular verb tenses.
- Form and use regular and irregular plural nouns.
- Form and use the past tense of irregular verbs.
- Form and use irregular plural nouns.
- Form and use compound sentences.
- Use quotation marks with dialogue and direct quotations.
- Use conjunctions.
- Use appositives, main clauses, and subordinate clauses.

## Number Sense and Operations

MA.3.NSO.1 Understand the place value of four-digit numbers.

MA.3.NSO.1.4 Round whole numbers from 0 to 1,000 to the nearest 10 or 100.

#### MA.3.NSO.2

Add and subtract multi-digit whole numbers. Build an understanding of multiplication and division operations.

#### MA.3.NSO.2.2

Explore multiplication of two whole numbers with products from 0 to 144, and related division facts.

## MA.3.NSO.2.4

Multiply two whole numbers from 0 to 12 and divide using related facts with procedural reliability.

## **Geometric Reasoning**

#### MA.3.GR.1

Describe and identify relationships between lines and classify quadrilaterals.

#### MA.3.GR.1.2

Identify and draw quadrilaterals based on their defining attributes. Quadrilaterals include parallelograms, rhombi, rectangles, squares and trapezoids.

## **Physical Science**

#### SC.3.P.10

Forms of Energy

## SC.3.P.10.2

Recognize that energy has the ability to cause motion or create change.

## **American History**

**SS.3.A.1** Historical Inquiry and Analysis

**SS.3.A.1.3** Define terms related to the social sciences.

**Civics and Government** 

**SS.3.CG.3** Structure and Functions of Government

#### SS.3.CG.3.2

Recognize that government has local, state and national levels.

11



After completing this typing course, students should be able to meet the following typing standard:

#### ELA.4.C.5.2

Use digital writing tools individually or collaboratively to plan, draft, and revise writing.

## **Foundational Skills**

#### ELA.4.F.1

Learning and Applying Foundational Reading Skills

#### ELA.4.F.1.3

Use knowledge of grade-level phonics and word-analysis skills to decode words.

#### ELA.4.F.1.3.a

Apply knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read and write unfamiliar singlesyllable and multisyllabic words in and out of context.





Finding Meaning

## ELA.4.V.1.2

Apply knowledge of common Greek and Latin roots, base words, and affixes to determine the meaning of unfamiliar words in gradelevel content.

## Vocabulary

#### ELA.4.V.1.3

Use context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases, appropriate to grade level.

## Communication

ELA.4.C.3

Following Conventions

## ELA.4.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Use conjunctions.
- Use principal modals to indicate the mood of a verb.
- Use appositives, main clauses, and subordinate clauses.
- Use conjunctions correctly to join words and phrases in a sentence.
- Use pronouns correctly with regard to case, number, and person, correcting for vague pronoun reference.

## Number Sense and **Operations**

## **MA.4.NSO.1**

Understand place value for multi-digit numbers.

#### MA.4.NSO.1.1

Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.

## **Number Sense and Operations**

#### MA.4.NSO.1.2

Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.

#### **MA.4.NSO.2**

Build an understanding of operations with multi-digit numbers including decimals.

## **Fractions**

#### **MA.4.FR.1**

Develop an understanding of the relationship between different fractions and the relationship between fractions and decimals.

#### MA.4.FR.1.2

Use decimal notation to represent fractions with denominators of 10 or 100, including mixed numbers and fractions greater than 1, and use fractional notation with denominators of 10 or 100 to represent decimals.

## Forms of Energy

## SC.4.P.10.1

Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.

## SC.4.P.10.2

Investigate and describe that energy has the ability to cause motion or create change.

## **Physical Science**

**SC.4.P.11** Energy Transfer and Transformations

## SC.4.P.11.1

Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature.

## Earth and Space Science

**SC.4.E.6** Earth Structures

## SC.4.E.6.3

Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.



After completing this typing course, students should be able to meet the following typing standard:

#### ELA.4.C.5.2

Use digital writing tools individually or collaboratively to plan, draft, and revise writing.

## **Foundational Skills**

## ELA.5.F.1

Learning and Applying Foundational Reading Skills

#### ELA.5.F.1.3

Use knowledge of grade-level phonics and word-analysis skills to decode words.

## ELA.5.F.1.3.a

Apply knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read and write unfamiliar single-syllable and multisyllabic words in and out of context.





Finding Meaning

## ELA.5.V.1.2

Apply knowledge of Greek and Latin roots and affixes, recognizing the connection between affixes and parts of speech, to determine the meaning of unfamiliar words in grade-level content.

## Vocabulary

#### ELA.5.V.1.3

Use context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the meaning of multiple-meaning and unknown words and phrases, appropriate to grade level.

## Reading

**ELA.5.R.1** Reading Prose and Poetry

ELA.5.R.1.4 Explain how figurative language and other poetic elements work together in a poem. Grade-Level Typing Course Standards for

## Communication

**ELA.5.C.3** Following Conventions

## ELA.5.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- -Use appositives, main clauses, and subordinate clauses.
- -Use conjunctions correctly to join words and phrases in a sentence.

# Number Sense and Operations

#### MA.5.NSO.1

Understand the place value of multi-digit numbers with decimals to the thousandths place.

## MA.5.NSO.1.1

Express how the value of a digit in a multi-digit number with decimals to the thousandths changes if the digit moves one or more places to the left or right.

## MA.5.NSO.1.2

Read and write multi-digit numbers with decimals to the thousandths using standard form, word form and expanded form.

## MA.5.NSO.1.3

Compose and decompose multi-digit numbers with decimals to the thousandths in multiple ways using the values of the digits in each place. Demonstrate the compositions or decompositions using objects, drawings and expressions or equations. Example: The

number 20.107 can be expressed as 2 *tens* + 1 *tenth* + 7 *thousandths* 

or as 20 ones + 107 thousandths.

## MA.5.NSO.1.5

Round multi-digit numbers with decimals to the thousandths to the nearest hundredth, tenth or whole number. Example: The number 18.507 rounded to the nearest tenth is 18.5 and to the nearest hundredth is 18.51.

## **Physical Science**

#### SC.5.P.8

**Properties of Matter** 

#### SC.5.P.8.1

Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.

## **Physical Science**

#### SC.5.P.8.4

Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.

## **Civics and Government**

#### SS.5.CG.3

Structure and Functions of Government

#### SS.5.CG.3.1

Describe the organizational structure and powers of the national government as defined in Articles I, II and III of the U.S. Constitution.

- Students will identify legislative, executive and judicial branch functions of the U.S. government as defined in Articles I, II and III of the U.S. Constitution.
- Students will explain why the Constitution divides the national government into three branches.

## SS.5.CG.3.2

Analyze how the U.S. Constitution and Bill of Rights limit the power of the national government and protect citizens from an oppressive government.

- Students will recognize examples of what to include, but not be limited to, popular sovereignty, rule of law, separation of powers, checks and balances, federalism, the amendment process, and the fundamental rights of citizens in the Bill of Rights.

After completing this typing course, students should be able to meet the following typing standard:

ELA.6.C.5.2 Use digital tools to produce writing.

## Vocabulary

**ELA.6.V.1** 

**Finding Meaning** 

## ELA.6.V.1.2

Apply knowledge of Greek and Latin roots and affixes to determine meanings of words and phrases in grade-level content. ELA.6.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.

## Reading

**ELA.6.R.1** 



Reading Prose and Poetry

#### ELA.6.R.1.2

Analyze the development of stated or implied theme(s) throughout a literary text. ELA.6.R.1.3

Explain the influence of multiple narrators and/or shifts in point of view in a literary text.

#### ELA.6.R.3

Reading Across Genres Interpreting Figurative Language

#### ELA.6.R.3.1

Explain how figurative language contributes to tone and meaning in text(s).

## Communication

**ELA.6.C.3** Following Conventions

#### ELA.6.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Use pronouns correctly with regard to case, number, and person, correcting for vague pronoun reference.

# Number Sense and Operations

#### **MA.6.NSO.3**

Apply properties of operations to rewrite numbers in equivalent forms.

#### MA.6.NSO.3.1

Given a mathematical or real-world context, find the greatest common factor and least common multiple of two whole numbers.

## **Algebraic Reasoning**

#### MA.6.AR.1

Apply previous understanding of arithmetic expressions to algebraic expressions.

#### MA.6.AR.1.1

Given a mathematical or real-world context, translate written descriptions into algebraic expressions and translate algebraic expressions into written descriptions.

## MA.6.AR.3

Understand ratio and unit rate concepts and use them to solve problems.

## MA.6.AR.3.1

Given a real-world context, write and interpret ratios to show the relative sizes of two quantities using appropriate notation:  $a \ b$ , a to

*b*, or *a*: *b* where  $b \neq 0$ .

## MA.6.AR.3.2

Given a real-world context, determine a rate for a ratio of quantities with different units. Calculate and interpret the corresponding unit rate.

## Data Analysis and Probability

#### MA.6.DP.1

Develop an understanding of statistics and determine measures of center and measures of variability. Summarize statistical distributions graphically and numerically.

## MA.6.DP.1.1

Recognize and formulate a statistical question that would generate numerical data.

## Data Analysis and Probability

#### MA.6.DP.1.2

Given a numerical data set within a real-world context, find and interpret mean, median, mode and range.

## **Life Science**

#### SC.6.L.14

Organization and Development of Living Organisms

#### SC.6.L.14.2

Investigate and explain the components of the scientific theory of cells (cell theory): all organisms are composed of cells (single-celled or multi-cellular), all cells come from pre-existing cells, and cells are the basic unit of life.

## **Physical Science**

**SC.6.P.13** Forces and Changes in Motion

#### SC.6.P.13.1

Investigate and describe types of forces including contact forces and forces acting at a distance, such as electrical, magnetic, and gravitational.

## SC.6.P.13.2

Explore the Law of Gravity by recognizing that every object exerts gravitational force on every other object and that the force depends on how much mass the objects have and how far apart they are.

## **Physical Science**

#### SC.6.P.13.3

Investigate and describe that an unbalanced force acting on an object changes its speed, or direction of motion, or both.

## Earth and Space Science

**SC.6.E.6** Earth Structures

#### SC.6.E.6.2

Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.

## SC.6.E.7

Earth Systems and Patterns

## SC.6.E.7.8

Describe ways human beings protect themselves from hazardous weather and sun exposure.



#### SS.6.G.1

Understand how to use maps and other geographic representations, tools and technology to report information.

## SS.6.G.1.3

Identify natural wonders of the ancient world.

After completing this typing course, students should be able to meet the following typing standard:

**ELA.7.C.5.2** Use digital tools to produce and share writing.

## Vocabulary

ELA.7.V.1

Finding Meaning

## ELA.7.V.1.1

ELA.7.V.1.1: Integrate academic vocabulary appropriate to grade level in speaking and writing.

## ELA.7.V.1.2

Apply knowledge of Greek and Latin roots and affixes to determine meanings of words and phrases in grade-level content.

## ELA.7.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.



#### ELA.7.R.1

Reading Prose and Poetry

#### ELA.7.R.1.2

Compare two or more themes and their development throughout a literary text.

## Communication

**ELA.7.C.3** Following Conventions

## ELA.7.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Appropriately use dangling modifiers.

# Number Sense and Operations

#### MA.7.NSO.2

Add, subtract, multiply and divide rational numbers.

## MA.7.NSO.2.1

Solve mathematical problems using multi-step order of operations with rational numbers including grouping symbols, whole-number exponents and absolute value.

#### MA.7.NSO.2.2

Add, subtract, multiply and divide rational numbers with procedural fluency.

## MA.7.NSO.2.3

Solve real-world problems involving any of the four operations with rational numbers.

## **Algebraic Reasoning**

## MA.7.AR.3

Use percentages and proportional reasoning to solve problems.

#### MA.7.AR.3.1

Apply previous understanding of percentages and ratios to solve multi-step real world percent problems.

## **Life Science**

#### SC.7.L.15

Diversity and Evolution of Living Organisms

## SC.7.L.15.1

Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.

## SC.7.L.15.2

Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

## SC.7.L.15.3

Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

## Earth and Space Science

**SC.7.E.6** Earth Structures

## SC.7.E.6.5

Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions,

## earthquakes, and mountain building.

#### SC.7.E.6.6

Identify the impact that humans have had on Earth, such as

deforestation, urbanization, desertification, erosion, air and water

quality, changing the flow of water.

## SC.7.E.6.7

Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains

## **Physical Science**

#### SC.7.P.10

Forms of Energy

#### SC.7.P.10.2

Observe and explain that light can be reflected, refracted, and/or absorbed.

## SC.7.P.11

Energy Transfer and Transformations

## SC.7.P.11.2

Investigate and describe the transformation of energy from one form to another.

## SC.7.P.11.3

Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.

## Geography

## SS.7.G.1

Understand how to use maps and other geographic representations, tools, and technology to report information.

## SS.7.G.2

Understand the physical and cultural characteristics of places.

#### SS.7.G.3

Understand the relationships between the Earth's ecosystems and the populations that dwell within them.

## Government

#### SS.7.CG.1

Demonstrate an understanding of the origins and purposes of government, law and the American political system.

## SS.7.CG.1.1

Analyze the influences of ancient Greece and ancient Rome on America's constitutional republic.

## SS.7.CG.2

Evaluate the roles, rights and responsibilities of U.S. citizens, and determine methods of active participation in society, government and the political system.

## SS.7.CG.3

Demonstrate an understanding of the principles, functions and organization of government.



After completing this typing course, students should be able to meet the following typing standard:

#### ELA.8.C.5.2

Use a variety of digital tools to collaborate with others to produce writing.

## Vocabulary

## ELA.8.V.1

Finding Meaning

## ELA.8.V.1.1

Integrate academic vocabulary appropriate to grade level in speaking and writing.

## ELA.8.V.1.2

Apply knowledge of Greek and Latin roots and affixes to determine meanings of words and phrases in grade-level content.

## ELA.8.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.

## Reading

## ELA.8.R.1

Reading Prose and Poetry

## ELA.7.R.1.2

Compare two or more themes and their development throughout a literary text.



## Reading

#### ELA.8.R.1.3

Analyze how an author develops and individualizes the perspectives of different characters.

## ELA.8.R.3

Reading Across Genres

## ELA.8.R.3.1

Analyze how figurative language contributes to meaning and explain examples of symbolism in text(s).

## Communication

**ELA.8.C.3** Following Conventions

## ELA.8.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Appropriately use passive and active voice.

- Use verbs with attention to voice and mood.

## Number Sense and Operations

#### **MA.8.NSO.1**

Solve problems involving rational numbers, including numbers in scientific notation, and extend the understanding of rational numbers to irrational numbers.

## Number Sense and Operations

#### MA.8.NSO.1.1

Extend previous understanding of rational numbers to define irrational numbers within the real number system. Locate an approximate value of a numerical expression involving irrational numbers on a number line.

## **Algebraic Reasoning**

#### MA.8.AR.2

Solve multi-step one-variable equations and inequalities.

#### MA.8.AR.2.1

Solve multi-step linear equations in one variable, with rational number coefficients. Include equations with variables on both sides.

#### MA.8.AR.3

Extend understanding of proportional relationships to twovariable linear equations.

#### MA.8.AR.3.2

Given a table, graph or written description of a linear relationship, determine the slope.

#### MA.8.AR.3.3

Given a table, graph or written description of a linear relationship, write an equation in slope-intercept form.

## **Geometric Reasoning**

#### MA.8.GR.2

Understand similarity and congruence using models and transformations.



## **Geometric Reasoning**

#### MA.8.GR.2.1

Given a preimage and image generated by a single transformation, identify the transformation that describes the relationship.

## **Life Science**

**SC.8.L.18** Matter and Energy Transformations

#### SC.8.L.18.1

Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.

## SC.8.L.18.2

Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.

#### SC.8.E.5.4

Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.

## **Physical Science**

SC.8.P.8

Properties of Matter

#### SC.8.P.8.1

Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.

#### SC.8.P.9

Changes in Matter

## SC.8.P.9.1

Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.

## Geography

## SS.7.G.2

Understand physical and cultural characteristics of places.

## SS.7.G.3

Understand the relationships between the Earth's ecosystems and the populations that dwell within them.

#### SS.8.G.4

Understand the characteristics, distribution, and migration of human populations.

#### SS.7.G.5

Understand how human actions can impact the environment.

## **Civics & Government**

#### SS.8.CG.1

Demonstrate an understanding of the origins and purposes of government, law and the American political system.

## SS.8.CG.1.1

Compare the views of Patriots, Loyalists and other colonists on limits of government authority, inalienable rights and resistance to tyranny.

## SS.8.CG.2

Evaluate the roles, rights and responsibilities of U.S. citizens, and determine methods of active participation in society, government and the political system.

## SS.8.CG.2.1

Identify the constitutional provisions for establishing citizenship.

## SS.8.CG.2.2

Compare the responsibilities of citizens at the local, state and national levels.

## SS.8.CG.2.5

Analyze how the Bill of Rights guarantees civil rights and liberties to citizens.

## **Economics**

## **SS.8.FL.1** Earning Income

## SS.8.FL.2

Buying Goods and Services

# **SS.8.FL.3** Saving



## **Economics**

**SS.8.FL.4** Using Credit

**SS.8.FL.5** Financial Investing

**SS.8.FL.6** Protecting and Insuring

## **American History**

#### SS.8.A.2

Examine the causes, course, and consequences of British settlement in the American colonies.

## SS.8.A.3

Demonstrate an understanding of the causes, course, and consequences of the American Revolution and the founding principles of our nation.

## SS.8.A.4

Demonstrate an understanding of the domestic and international causes, course, and consequences of westward expansion.

#### SS.8.A.5

Examine the causes, course, and consequence of the Civil War and Reconstruction including its effects on American peoples.

# Typing

After completing this typing course, students should be able to meet the following typing standard:

### ELA.9.C.5.2

Use a variety of digital tools to collaborate with others to produce writing.

# Vocabulary

# ELA.9.V.1

Finding Meaning

# ELA.9.V.1.1

Integrate academic vocabulary appropriate to grade level in speaking and writing.

### ELA.9.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.



#### ELA.9.R.1

Reading Prose and Poetry

# ELA.9.R.1.1

Explain how key elements enhance or add layers of meaning and/ or style in a literary text. ELA.9.R.1.2

Analyze universal themes and their development throughout a literary text.

# Grade-Level Typing Course Standards for Florida | Grade 9

# Reading

**ELA.9.R.2** Reading Informational Text Structure

**ELA.9.R.2.1** Analyze how multiple text structures and/or features convey a purpose and/or meaning in texts.

**ELA.9.R.3** Reading Across Genres

**ELA.9.R.3.1** Explain how figurative language creates mood in text(s).

# Communication

**ELA.9.C.3** Following Conventions

### ELA.9.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

- Add variety to writing or presentations by using parallel structure and various types of phrases and clauses.



#### MA.912.AR.1

Interpret and rewrite algebraic expressions and equations in equivalent forms.

# **Algebraic Reasoning**

#### MA.912.AR.1.2

Rearrange equations or formulas to isolate a quantity of interest. **MA.912.AR.1.3** 

Add, subtract and multiply polynomial expressions with rational number coefficients.

### MA.912.AR.1.9

Apply previous understanding of rational number operations to add, subtract, multiply and divide rational algebraic expressions.

# MA.912.AR.3

Write, solve and graph quadratic equations, functions and inequalities in one and two variables.

# MA.912.AR.3.1

Given a mathematical or real-world context, write and solve onevariable quadratic equations over the real number system.

# MA.912.AR.3.2

Given a mathematical or real-world context, write and solve onevariable quadratic equations over the real and complex number systems.

# MA.912.AR.3.3

Given a mathematical or real-world context, write and solve onevariable quadratic inequalities over the real number system. Represent solutions algebraically or graphically.

# MA.912.AR.3.5

Given the *x*-intercepts and another point on the graph of a

quadratic function, write the equation for the function.

**Computer Science -Personal, Community, Global, and Ethical Impact** 

#### SC.912.CS-PC.1

Responsible Use of Technology and Information

#### SC.912.CS-PC.1.1

Compare and contrast appropriate and inappropriate social networking behaviors.

### SC.912.CS-PC.1.3

Evaluate the impacts of irresponsible use of information (e.g., plagiarism and falsification of data) on collaborative projects.

Computer Science -Communication Systems and Computing SC.912.CS-CS.4 Hardware and Software

#### SC.912.CS-CS.4.2

Describe the organization of a computer and identify its principal components by name, function, and the flow of instructions and data between components (e.g., storage devices, memory, CPU, graphics processors, IO and network ports).

# **Life Science**



Diversity and Evolution of Living Organisms

### SC.912.L.15.1

Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.



# **Life Science**

#### SC.912.L.15.3

Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.

#### SC.912.L.16

Heredity and Reproduction

### SC.912.L.16.3

Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

#### SC.912.L.16.4

Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

**Earth and Space Science** 

SC.912.E.6 Earth Structures

### SC.912.E.6.2

Connect surface features to surface processes that are responsible for their formation.

#### SC.912.E.6.3

Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates. **SC.912.E.6.6** 

Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.

# **Physical Science**

#### SC.912.P.8

Matter

#### SC.912.P.8.5

Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.

### SC.912.P.10

Energy

### SC.912.P.10.2

Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

### SC.912.P.10.11

Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.

### SC.912.P.10.12

Differentiate between chemical and nuclear reactions.

# SC.912.P.12

Motion

### SC.912.P.12.2

Analyze the motion of an object in terms of its position, velocity,

and acceleration (with respect to a frame of reference) as functions of time.

# SC.912.P.12.3

Interpret and apply Newton's three laws of motion. **SC.912.P.12.4** 

Describe how the gravitational force between two objects depends on their masses and the distance between them.

# Grade-Level Typing Course Standards for Florida | Grade 9

# Geography

#### SS.912.G.4

Understand the characteristics, distribution, and migration of human populations.

#### SS.912.G.4.1

Interpret population growth and other demographic data for any given place.

# **Civics & Government**

#### SS.912.CG.1

Demonstrate an understanding of the origins and purposes of government, law and the American political system.

#### SS.912.CG.2

Evaluate the roles, rights and responsibilities of U.S. citizens and determine methods of active participation in society, government and the political system.

#### SS.912.CG.3

Demonstrate an understanding of the principles, functions and organization of government.

# **Economics**

### SS.912.E.1

Understand the fundamental concepts relevant to the development of a market economy.

### SS.912.E.2

Understand the fundamental concepts relevant to the institutions, structure, and functions of a national economy.

# **U.S. History**

#### SS.912.A.2

Understand the causes, course, and consequences of the Civil War and Reconstruction and its effects on the American people.

#### SS.912.A.3

Analyze the transformation of the American economy and the changing social and political conditions in response to the Industrial Revolution.

# **World History**

### SS.912.W.1

Utilize historical inquiry skills and analytical processes. (Timelines, time measurements of different cultures, primary and secondary sources, cause and effect of historical events, historiography, historical inquiry, etc)

### SS.912.W.2

Recognize significant events, figures, and contributions of medieval civilizations (Byzantine Empire, Western Europe, Japan).

### SS.912.W.3

Recognize significant events, figures, and contributions of Islamic civilizations.





# Typing

After completing this typing course, students should be able to meet the following typing standard:

### ELA.10.C.5.2

Use online collaborative platforms to create and export publicationready quality writing tailored to a specific audience, integrating multimedia elements.

# Vocabulary

# ELA.10.V.1

Finding Meaning

# ELA.10.V.1.1

Integrate academic vocabulary appropriate to grade level in speaking and writing.

# ELA.10.V.1.2

Apply knowledge of etymology and derivations to determine meanings of words and phrases in grade-level content.

# ELA.10.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.

# Reading

#### ELA.9.R.1

Reading Prose and Poetry



45

# Reading

#### ELA.10.R.1.2

Analyze and compare universal themes and their development throughout a literary text.

### ELA.10.R.2

**Reading Informational Text** 

# ELA.10.R.2.2

Analyze the central idea(s) of historical American speeches and essays.

# ELA.10.R.2.3

Analyze an author's choices in establishing and achieving purpose(s) in historical American speeches and essays.

# ELA.10.R.3

**Reading Across Genres** 

# ELA.10.R.3.1

Analyze how figurative language creates mood in text(s).

# Communication

**ELA.10.C.3** Following Conventions

### ELA.10.C.3.1

Follow the rules of standard English grammar, punctuation,capitalization, and spelling appropriate to grade level.Add variety to writing or presentations by using parallel structure and various types of phrases and clauses.

# **Geometric Reasoning**

#### MA.912.GR.1

Prove and apply geometric theorems to solve problems.

#### MA.912.GR.1.1

Prove relationships and theorems about lines and angles. Solve mathematical and real-world problems involving postulates, relationships and theorems of lines and angles.

### MA.912.GR.1.3

Prove relationships and theorems about triangles. Solve mathematical and real-world problems involving postulates, relationships and theorems of triangles.

### MA.912.GR.1.4

Prove relationships and theorems about parallelograms. Solve mathematical and real-world problems involving postulates, relationships and theorems of parallelograms.

### MA.912.GR.2

Apply properties of transformations to describe congruence or similarity.

Computer Science -Personal, Community, **SC.912.CS-PC.1** Responsible Use of Technology and Information

# Global, and Ethical Impact

# SC.912.CS-PC.1.1

Compare and contrast appropriate and inappropriate social networking behaviors. **SC.912.CS-PC.1.3** Evaluate the impacts of irresponsible use of information (e.g., plagiarism and falsification of data) on collaborative projects.

# **Computer Science -Communication Systems and Computing**

**SC.912.CS-CS.4** Hardware and Software

#### SC.912.CS-CS.4.2

Describe the organization of a computer and identify its principal components by name, function, and the flow of instructions and data between components (e.g., storage devices, memory, CPU, graphics processors, IO and network ports).

# **Life Science**

**SC.912.L.15** Diversity and Evolution of Living Organisms

### SC.912.L.15.1

Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

### SC.912.L.15.3

Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.

#### SC.912.L.16

Heredity and Reproduction

#### SC.912.L.16.3

Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

# **Life Science**

#### SC.912.L.16.4

Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

# **Earth and Space Science**

SC.912.E.6 Earth Structures

### SC.912.E.6.2

Connect surface features to surface processes that are responsible for their formation.

### SC.912.E.6.3

Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.

### SC.912.E.6.6

Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.



Matter

### SC.912.P.8.5

Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.

SC.912.P.10 Energy



# **Physical Science**

#### SC.912.P.10.2

Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

### SC.912.P.10.11

Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.

### SC.912.P.10.12

Differentiate between chemical and nuclear reactions.

### SC.912.P.12

Motion

# SC.912.P.12.2

Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.

### SC.912.P.12.3

Interpret and apply Newton's three laws of motion.

### SC.912.P.12.4

Describe how the gravitational force between two objects depends on their masses and the distance between them.



### SS.912.G.3.2

Use geographic terms and tools to explain how weather and climate influence the natural character of a place. **SS.912.G.3.4** 

Use geographic terms and tools to explain how the Earth's internal changes and external changes influence the character of places.

# Geography

#### SS.912.G.3.5

Use geographic terms and tools to explain how hydrology influences the physical character of a place.

#### SS.912.G.5.6

Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.

# **Civics & Government**

#### SS.912.CG.1

Demonstrate an understanding of the origins and purposes of government, law and the American political system.

### SS.912.CG.1.3

Explain arguments presented in the Federalist Papers in support of ratifying the U.S. Constitution and a republican form of government. **SS.912.CG.1.4** 

Analyze how the ideals and principles expressed in the founding documents shape America as a constitutional republic.

### SS.912.CG.1.5

Explain how the U.S. Constitution and its amendments uphold the following political principles: checks and balances, consent of the governed, democracy, due process of law, federalism, individual rights, limited government, representative government, republicanism, rule of law and separation of powers.

### SS.912.CG.3

Demonstrate an understanding of the principles, functions and organization of government.

# **Civics & Government**

#### SS.912.CG.3.6

Explain expressed, implied, concurrent and reserved powers in the U.S. Constitution.

### SS.912.CG.3.12

Analyze the concept of federalism in the United States and its role in establishing the relationship between the state and national governments.

# **Economics**

#### SS.912.E.3

Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.

# **U.S. History**

#### SS.912.A.3

Analyze the transformation of the American economy and the changing social and political conditions in response to the Industrial Revolution.

# **World History**

### SS.912.W.2

Recognize significant events, figures, and contributions of medieval civilizations (Byzantine Empire, Western Europe, Japan).

### SS.912.W.3

Recognize significant events, figures, and contributions of Islamic, Meso and South American, and Sub-Saharan African civilizations.

# **World History**

#### SS.912.W.4

Analyze the causes, events, and effects of the Renaissance, Reformation, Scientific Revolution, and Age of Exploration.

### SS.912.W.4

Analyze the causes, events, and effects of the Renaissance, Reformation, Scientific Revolution, and Age of Exploration.



# Typing

After completing this typing course, students should be able to meet the following typing standard:

### ELA.11.C.5.2

Create and export quality writing tailored to a specific audience, integrating multimedia elements, publishing to an online or LAN site.

# Vocabulary

#### ELA.11.V.1

Finding Meaning

### ELA.11.V.1.1

Integrate academic vocabulary appropriate to grade level in speaking and writing.

### ELA.11.V.1.2

Apply knowledge of etymology and derivations to determine meanings of words and phrases in grade-level content.

### ELA.11.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and phrases, appropriate to grade level.



# Grade-Level Typing Course Standards for Florida | Grade 11

# Reading

#### ELA.11.R.1

Reading Prose and Poetry

### ELA.11.R.1.1

Evaluate how key elements enhance or add layers of meaning and/ or style in a literary text.

### ELA.11.R.1.2

Track and analyze universal themes in literary texts from different times and places.

# ELA.11.R.3

**Reading Across Genres** 

### ELA.11.R.3.4

Evaluate an author's use of rhetoric in text.

# Communication

**ELA.11.C.3** Following Conventions

# ELA.11.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

# **Algebraic Reasoning**

#### MA.912.AR.1

Interpret and rewrite algebraic expressions and equations in equivalent forms.

# **Algebraic Reasoning**

### MA.912.AR.1.1

Identify and interpret parts of an equation or expression that represent a quantity in terms of a mathematical or real-world context, including viewing one or more of its parts as a single entity.

# MA.912.AR.1.3

Add, subtract, and multiply polynomial expressions with rational number coefficients.

# MA.912.AR.1.7

Rewrite a polynomial expression as a product of polynomials over the real number system.

**Computer Science -Personal, Community, Global, and Ethical Impact** 

# SC.912.CS-PC.1

Responsible Use of Technology and Information

# SC.912.CS-PC.1.1

Compare and contrast appropriate and inappropriate social networking behaviors.

# SC.912.CS-PC.1.3

Evaluate the impacts of irresponsible use of information (e.g., plagiarism and falsification of data) on collaborative projects.

# Computer Science -Communication Systems and Computing

# SC.912.CS-CS.4

Hardware and Software

# Computer Science -Communication Systems and Computing

#### SC.912.CS-CS.4.2

Describe the organization of a computer and identify its principal components by name, function, and the flow of instructions and data between components (e.g., storage devices, memory, CPU, graphics processors, IO and network ports).

# **Life Science**

#### SC.912.L.15

Diversity and Evolution of Living Organisms

#### SC.912.L.15.1

Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

#### SC.912.L.15.3

Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.

**SC.912.L.16** Heredity and Reproduction

### SC.912.L.16.3

Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information. **SC.912.L.16.4** 

Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

# Earth and Space Science

SC.912.E.6 Earth Structures

#### SC.912.E.6.2

Connect surface features to surface processes that are responsible for their formation.

### SC.912.E.6.3

Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.

### SC.912.E.6.6

Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.

# **Physical Science**

### SC.912.P.8

Matter

### SC.912.P.8.5

Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.

# SC.912.P.10

Energy

### SC.912.P.10.2

Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity. **SC.912.P.10.11** 

Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.

# **Physical Science**

#### SC.912.P.10.12

Differentiate between chemical and nuclear reactions.

#### SC.912.P.12

Motion

#### SC.912.P.12.2

Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.

#### SC.912.P.12.3

Interpret and apply Newton's three laws of motion.

### SC.912.P.12.4

Describe how the gravitational force between two objects depends on their masses and the distance between them.

# Geography

### SS.912.G.3

Understand the relationships between the Earth's ecosystems and the populations that dwell within them.

### SS.912.G.3.1

Use geographic terms to locate and describe major ecosystems of Earth.

### SS.912.G.5

Understand how human actions can impact the environment.

### SS.912.G.5.1

Analyze case studies of how the Earth's physical systems affect humans.

# Geography

#### SS.912.G.5.2

Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.

#### SS.912.G.5.3

Analyze case studies of the effects of human use of technology on the environment of places.

#### SS.912.G.5.4

Analyze case studies of how humans impact the diversity and productivity of ecosystems.

#### SS.912.G.5.5

Use geographic terms and tools to analyze case studies of policies and programs for resource use and management.

#### SS.912.G.5.6

Analyze case studies to predict how a change to an environmental factor can affect an ecosystem.

# **Civics & Government**

#### SS.912.CG.3

Demonstrate an understanding of the principles, functions and organization of government.

### SS.912.CG.3.1

Analyze how certain political ideologies conflict with the principles of freedom and democracy.

### SS.912.CG.4

Demonstrate an understanding of contemporary issues in world affairs and evaluate the role and impact of U.S. foreign policy.

# **Civics & Government**

#### SS.912.CG.4.1

Analyze how liberty and economic freedom generate broad-based opportunity and prosperity in the United States.

### SS.912.CG.4.4

Identify indicators of democratization in foreign countries.

# **Economics**

#### SS.912.E.3

Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.

# **U.S. History**

#### SS.912.A.4

Demonstrate an understanding of the changing role of the United States in world affairs through the end of World War I.

### SS.912.A.5

Analyze the effects of the changing social, political, and economic conditions of the Roaring Twenties and the Great Depression.

### SS.912.A.6

Understand the causes and course of World War II, the character of the war at home and abroad, and its reshaping of the United States role in the post-war world.

# **World History**

#### SS.912.W.2

Recognize significant events, figures, and contributions of medieval civilizations (Byzantine Empire, Western Europe, Japan).

### SS.912.W.2.15

Determine the factors that contributed to the growth of a modern economy.

### SS.912.W.2.16

Trace the growth and development of a national identity in the countries of England, France, and Spain.

# SS.912.W.6

Understand the development of Western and non-Western nationalism, industrialization and imperialism, and the significant processes and consequences of each.

# SS.912.W.6.1

Describe the agricultural and technological innovations that led to industrialization in Great Britain and its subsequent spread to continental Europe, the United States, and Japan.

### SS.912.W.6.2

Summarize the social and economic effects of the Industrial Revolution.

# SS.912.W.6.6

Analyze the causes and effects of imperialism.

# SS.912.W.6.7

Identify major events in China during the 19th and early 20th centuries related to imperialism.

### SS.912.W.7

Recognize significant causes, events, figures, and consequences of the Great War period and the impact on worldwide balance of power.

# **World History**

### SS.912.W.7.1

Analyze the causes of World War I including the formation of European alliances and the roles of imperialism, nationalism, and militarism.

# SS.912.W.7.2

Describe the changing nature of warfare during World War I.

# SS.912.W.7.3

Summarize significant effects of World War I.



# Typing

After completing this typing course, students should be able to meet the following typing standard:

### ELA.12.C.5.2

Create, publish, and share multimedia texts through a variety of digital formats.

# Vocabulary

#### ELA.12.V.1

Finding Meaning

# ELA.12.V.1.1

Integrate academic vocabulary appropriate to grade level in speaking and writing.

### ELA.12.V.1.2

Apply knowledge of etymology, derivations, and commonly used foreign phrases to determine meanings of words and phrases in grade-level content.

# ELA.12.V.1.3

Apply knowledge of context clues, figurative language, word relationships, reference materials, and/or background knowledge to determine the connotative and denotative meaning of words and

phrases, appropriate to grade level.

# Grade-Level Typing Course Standards for Florida | Grade 12

# Reading

#### ELA.12.R.1

Reading Prose and Poetry

### ELA.12.R.1.1

Evaluate how key elements enhance or add layers of meaning and/ or style in a literary text and explain the functional significance of those elements in interpreting the text.

### ELA.12.R.1.2

Analyze two or more themes and evaluate their development throughout a literary text.

# ELA.12.R.3

**Reading Across Genres** 

### ELA.12.R.3.4

Evaluate rhetorical choices across multiple texts.

# Communication

**ELA.12.C.3** Following Conventions

### ELA.12.C.3.1

Follow the rules of standard English grammar, punctuation, capitalization, and spelling appropriate to grade level.

# Statistics and Probability MA.912.DP.1

# Summarize, represent and interpret categorical and numerical data with one and two variables



# **Statistics and Probability**

#### MA.912.DP.1.4

Estimate a population total, mean or percentage using data from a sample survey; develop a margin of error through the use of simulation.

#### MA.912.DP.2

Solve problems involving univariate and bivariate numerical data.

#### MA.912.DP.2.1

For two or more sets of numerical univariate data, calculate and compare the appropriate measures of center and measures of variability, accounting for possible effects of outliers. Interpret any notable features of the shape of the data distribution.

#### MA.912.DP.2.2

Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages.

Recognize that there are data sets for which such a procedure is not appropriate.

### MA.912.DP.2.3

Estimate population percentages from data that has been fit to the normal distribution.

### MA.912.DP.4

Use and interpret independence and probability.

# MA.912.DP.4.2

Determine if events A and B are independent by calculating the product of their probabilities. **MA.912.DP.4.3** 

Calculate the conditional probability of two events and interpret the result in terms of its context.

### MA.912.DP.4.4

Interpret the independence of two events using conditional probability.

# **Statistics and Probability**

#### MA.912.DP.4.6

Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.

### MA.912.DP.5

Determine methods of data collection and make inferences from collected data.

### MA.912.DP.5.1

Distinguish between a population parameter and a sample statistic.

# MA.912.DP.5.2

Explain how random sampling produces data that is representative of a population.

# MA.912.DP.5.3

Compare and contrast sampling methods.

### MA.912.DP.5.5

Determine if a specific model is consistent within a given process by analyzing the data distribution from a data-generating process.

### MA.912.DP.5.7

Compare and contrast surveys, experiments and observational studies.

# MA.912.DP.5.8

Draw inferences about two populations using data and statistical analysis from two random samples.

# MA.912.DP.6

Use probability distributions to solve problems.

### MA.912.DP.6.8

Apply probabilities to make fair decisions, such as drawing from lots or using a random number generator. Computer Science -Personal, Community, Global, and Ethical Impact

#### SC.912.CS-PC.1

Responsible Use of Technology and Information

#### SC.912.CS-PC.1.1

Compare and contrast appropriate and inappropriate social networking behaviors.

#### SC.912.CS-PC.1.3

Evaluate the impacts of irresponsible use of information (e.g., plagiarism and falsification of data) on collaborative projects.

Computer Science -Communication Systems and Computing **SC.912.CS-CS.4** Hardware and Software

#### SC.912.CS-CS.4.2

Describe the organization of a computer and identify its principal components by name, function, and the flow of instructions and data between components (e.g., storage devices, memory, CPU, graphics processors, IO and network ports).





Diversity and Evolution of Living Organisms

### SC.912.L.15.1

Explain how the scientific theory of evolution is supported by the fossil record, comparative anatomy, comparative embryology, biogeography, molecular biology, and observed evolutionary change.

# **Life Science**

#### SC.912.L.15.3

Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.

#### SC.912.L.16

Heredity and Reproduction

### SC.912.L.16.3

Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic information.

# SC.912.L.16.4

Explain how mutations in the DNA sequence may or may not result in phenotypic change. Explain how mutations in gametes may result in phenotypic changes in offspring.

# Earth and Space Science

**SC.912.E.6** Earth Structures

# SC.912.E.6.2

Connect surface features to surface processes that are responsible for their formation. **SC.912.E.6.3** 

Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates. **SC.912.E.6.6** 

Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.

# **Physical Science**

#### SC.912.P.8

Matter

### SC.912.P.8.5

Relate properties of atoms and their position in the periodic table to the arrangement of their electrons.

# SC.912.P.10

Energy

# SC.912.P.10.2

Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

# SC.912.P.10.11

Explain and compare nuclear reactions (radioactive decay, fission and fusion), the energy changes associated with them and their associated safety issues.

# SC.912.P.10.12

Differentiate between chemical and nuclear reactions.

# SC.912.P.12

Motion

# SC.912.P.12.2

Analyze the motion of an object in terms of its position, velocity, and acceleration (with respect to a frame of reference) as functions of time.

### SC.912.P.12.3

Interpret and apply Newton's three laws of motion. **SC.912.P.12.4** 

Describe how the gravitational force between two objects depends on their masses and the distance between them.

# Geography

#### SS.912.G.2

Understand physical and cultural characteristics of places.

### SS.912.G.2.1

Identify the physical characteristics and the human characteristics that define and differentiate regions.

### SS.912.G.2.2

Describe the factors and processes that contribute to the differences between developing and developed regions of the world.

# SS.912.G.4

Understand the characteristics, distribution, and migration of human populations.

# SS.912.G.4.1

Interpret population growth and other demographic data for any given place.

# SS.912.G.4.2

Use geographic terms and tools to analyze the push/pull factors contributing to human migration within and among places.

### SS.912.G.4.3

Use geographic terms and tools to analyze the effects of migration both on the place of origin and destination, including border areas. **SS.912.G.4.4** 

# Use geographic terms and tools to analyze case studies of issues in

globalization.

### SS.912.G.4.7

Use geographic terms and tools to explain cultural diffusion throughout places, regions, and the world.

# **Civics & Government**

#### SS.912.CG.2.7

Analyze the impact of civic engagement as a means of preserving or reforming institutions.

# SS.912.CG.2.8

Explain the impact of political parties, interest groups, media and individuals on determining and shaping public policy.

# SS.912.CG.3.7

Analyze the structures, functions and processes of the judicial branch as described in Article III of the U.S. Constitution.

### SS.912.CG.3.8

Describe the purpose and function of judicial review in the American constitutional government.

### SS.912.CG.3.11

Evaluate how landmark Supreme Court decisions affect law, liberty and the interpretation of the U.S. Constitution.

# SS.912.CG.4

Demonstrate an understanding of contemporary issues in world affairs and evaluate the role and impact of U.S. foreign policy.

# SS.912.CG.4.2

Explain how the United States uses foreign policy to influence other nations.

# SS.912.CG.4.3

Explain how U.S. foreign policy supports democratic principles and

protects human rights around the world.

# **Economics**

#### SS.912.E.3

Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.



# **U.S. History**

#### SS.912.A.7

Understand the rise and continuing international influence of the United States as a world leader and the impact of contemporary social and political movements on American life.

# SS.912.A.7.1

Identify causes for Post-World War II prosperity and its effects on American society.

### SS.912.A.7.4

Evaluate the success of 1960s era presidents' foreign and domestic policies.

# SS.912.A.7.5

Compare nonviolent and violent approaches utilized by groups to achieve civil rights.

# SS.912.A.7.9

Examine the similarities of social movements (Native Americans, Hispanics, women, anti-war protesters) of the 1960s and 1970s.

# SS.912.A.7.10

Analyze the significance of Vietnam and Watergate on the government and people of the United States.

# SS.912.A.7.11

Analyze the foreign policy of the United States as it relates to Africa, Asia, the Caribbean, Latin America, and the Middle East.

# SS.912.A.7.13

Analyze the attempts to extend New Deal legislation through the Great Society and the successes and failures of these programs to

promote social and economic stability.

### SS.912.A.7.16

Examine changes in immigration policy and attitudes toward immigration since 1950.

# **World History**

#### SS.912.W.7.5

Describe the rise of authoritarian governments in the Soviet Union, Italy, Germany, and Spain, and analyze the policies and main ideas of Vladimir Lenin, Joseph Stalin, Benito Mussolini, Adolf Hitler, and Francisco Franco.

### SS.912.W.7.6

Analyze the restriction of individual rights and the use of mass terror against populations in the Soviet Union, Nazi Germany, and occupied territories.

# SS.912.W.7.7

Trace the causes and key events related to World War II.

### SS.912.W.7.8

Explain the causes, events, and effects of the Holocaust (1933-1945) including its roots in the long tradition of anti-Semitism, 19th century ideas about race and nation, and Nazi dehumanization of the Jews and other victims.

# SS.912.W.7.10

Summarize the causes and effects of President Truman's decision to drop the atomic bombs on Japan.

### SS.912.W.7.11

Describe the effects of World War II.

# SS.912.W.8

Recognize significant events and people from the post World War II and Cold War eras.

### SS.912.W.8.1

Identify the United States and Soviet aligned states of Europe, and contrast their political and economic characteristics. **SS.912.W.8.2** 

Describe characteristics of the early Cold War.

### SS.912.W.8.4

Summarize the causes and effects of the arms race and proxy wars in Africa, Asia, Latin America, and the Middle East.

# **World History**

#### SS.912.W.8.5

Identify the factors that led to the decline and fall of communism in the Soviet Union and Eastern Europe.

# SS.912.W.9

Identify major economic, political, social, and technological trends beginning in the 20th century.

# SS.912.W.9.1

Identify major scientific figures and breakthroughs of the 20th century, and assess their impact on contemporary life.

# SS.912.W.9.2

Describe the causes and effects of post-World War II economic and demographic changes.

