Grade-Level Typing Course Standards | Grade 11

Typing

CCSS.ELA-LITERACY.W.11-12.6
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Vocabulary Acquisition & Use

CCSS.ELA-LITERACY.L.11-12.4
Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful.

Conventions of Standard English

CCSS.ELA-LITERACY.L.11-12.1
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-LITERACY.L.11-12.1.A
Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.

CCSS.ELA-LITERACY.L.11-12.2
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-LITERACY.L.11-12.2.A
Observe hyphenation conventions.

Key Ideas & Details

CCSS.ELA-LITERACY.RL.11-12.1
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RL.11-12.2
Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.

CCSS.ELA-LITERACY.RL.11-12.6
Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant.

CCSS.ELA-LITERACY.RL.11-12.9
Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance for their themes, purposes, and rhetorical features.

Arithmetic with Polynomials and Rational Expressions

CCSS.HSA-APR.D
Rewrite rational expressions.

CCSS.HSA-APR.D.6
Rewrite simple rational expressions in different forms; write a(x)/b(x) in the form q(x) + r(x)/b(x), where a(x), b(x), q(x), and r(x) are polynomials with the degree of r(x) less than the degree of b(x), using inspection, long division, or, for the more complicated examples, a computer algebra system.

Arithmetic with Polynomials and Rational Expressions

CCSS.HSA-APR.D.7
Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a nonzero rational expression; add, subtract, multiply, and divide rational expressions.

Empowered Learner

ISTE 1.1
Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

ISTE 1.1.d
Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Digital Citizen

ISTE 1.2
Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

STE 1.2.a
Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

Digital Citizen

ISTE 1.2.b
Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

ISTE 1.2.c
Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

ISTE 1.2.d
Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

Engineering Design

NGSS HS-ETS1-1
Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

NGSS HS-ETS1-2
Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

NGSS HS-ETS1-3
Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

Engineering Design

NGSS HS-ETS1-4
Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

From Molecules to Organisms: Structures & Processes

NGSS MS-LS1-1
Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells.

NGSS MS-LS1-2
Develop and use a model to describe the function of a cell as a whole and ways the parts of cells contribute to the function.

NGSS MS-LS1-3
Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells.

NGSS HS-LS1-4
Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.

NGSS HS-LS1-5
Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.

From Molecules to Organisms: Structures & Processes

NGSS HS-LS1-6
Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.

NGSS HS-LS1-7
Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed, resulting in a net transfer of energy.

Ecosystems: Interactions, Energy, & Dynamics

NGSS HS-LS2-1
Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.

NGSS HS-LS2-2
Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

NGSS HS-LS2-3
Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

NGSS HS-LS2-4
Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.

Ecosystems: Interactions, Energy, & Dynamics

NGSS HS-LS2-5
Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.

NGSS HS-LS2-6
Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

NGSS HS-LS2-7
Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

NGSS HS-LS2-8
Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.

Heredity: Inheritance & Variation of Traits

NGSS HS-LS3-1
Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

NGSS HS-LS3-2
Make and defend a claim based on evidence that inheritable genetic variations may result from (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.

Heredity: Inheritance & Variation of Traits

NGSS HS-LS3-3
Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.

Biological Evolution: Unity & Diversity

NGSS HS-LS4-1
Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

NGSS HS-LS4-2
Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.

NGSS HS-LS4-3
Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.

NGSS HS-LS4-4
Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

Biological Evolution: Unity & Diversity

NGSS HS-LS4-5
Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

NGSS HS-LS4-6
Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

Earth's Place in the Universe

NGSS HS-ESS1-1
Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.

NGSS HS-ESS1-2
Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.

NGSS HS-ESS1-3
Communicate scientific ideas about the way stars, over their life cycle, produce elements.

NGSS HS-ESS1-4
Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.

NGSS HS-ESS1-5
Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.

Earth's Place in the Universe

NGSS HS-ESS1-6
Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.

Earth's Systems

NGSS HS-ESS2-1
Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.

NGSS HS-ESS2-2
Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

NGSS HS-ESS2-3
Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.

NGSS HS-ESS2-4
Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.

NGSS HS-ESS2-5
Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

NGSS HS-ESS2-6
Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.

Earth's Systems

NGSS HS-ESS2-7
Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.

Earth & Human Activity

NGSS HS-ESS3-1
Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

NGSS HS-ESS3-2
Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.

NGSS HS-ESS3-3
Create a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity.

NGSS HS-ESS3-4
Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

NGSS HS-ESS3-5
Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.

NGSS HS-ESS3-6
Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

Matter & its Interactions

NGSS S-PS1-1
Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

NGSS HS-PS1-2
Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

NGSS HS-PS1-3
Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.

NGSS HS-PS1-4
Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

NGSS HS-PS1-5
Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

NGSS HS-PS1-6
Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.

NGSS HS-PS1-7
Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

Matter & its Interactions

NGSS HS-PS1-8

Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

Motion & Stability: Forces & Interactions

NGSS HS-PS2-1

Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.

NGSS HS-PS2-2

Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.

NGSS HS-PS2-3

Apply science and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.

NGSS HS-PS2-4

Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.

NGSS HS-PS2-5

Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.

Motion & Stability: Forces & Interactions

NGSS HS-PS2-6
Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.

Energy

NGSS HS-PS3-1
Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.

NGSS HS-PS3-2
Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motion of particles (objects) and energy associated with the relative positions of particles (objects).

NGSS HS-PS3-3
Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

NGSS HS-PS3-4
Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).

Energy

HS-PS3-5
Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.

Waves & their Applications in Technologies for Information Transfer

NGSS HS-PS4-1
Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.

NGSS HS-PS4-2
Evaluate questions about the advantages of using digital transmission and storage of information.

NGSS HS-PS4-3
Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.

NGSS HS-PS4-4
Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.

NGSS HS-PS4-5
Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.

Economics

Florida SS.912.E.3
Understand the fundamental concepts and interrelationships of the United States economy in the international marketplace.

Ohio E.GE.9
When regions and nations use comparative advantage to produce at the lowest cost and then trade with others, production, consumption and interdependence increase.

Texas E.3
The student understands the reasons for international trade and its importance to the United States and the global economy.

California HSS-PoE.12.2
Students analyze the elements of America's market economy in a global setting.

California HSS-PoE.12.4
Students analyze the elements of the U.S. labor market in a global setting.

California HSS-PoE.12.6
Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States's borders.

Geography

Florida SS.912.G.3
Understand the relationships between the Earth's ecosystems and the populations that dwell within them.

Geography

Florida SS.912.G.5
Understand how human actions can impact the environment.

Ohio WG.ES.3
Human modifications of the physical environment in one place often lead to changes in other places.

Ohio WG.ES.6
There are costs and benefits of using renewable, nonrenewable, and flow resources.

Ohio WG.ES.7
Human interaction with the environment is affected by cultural characteristic.

Texas G.4
The student understands the patterns and characteristics of major landforms, climates, and ecosystems of Earth and the interrelated processes that produce them.

Texas G.8
The student understands how people, places, and environments are connected and interdependent.

Texas STS.19
The student understands the impact of technology and human modifications on the physical environment.

Government & Civics

Florida SS.912.CG.3
Demonstrate an understanding of the principles, functions and organization of government.

Government & Civics

Florida SS.912.CG.4
Demonstrate an understanding of contemporary issues in world affairs and evaluate the role and impact of U.S. foreign policy.

Ohio.GOV.GE.20
The federal government uses spending and tax policy to maintain economic stability and foster economic growth. Regulatory actions carry economic costs and benefits.

Texas.E.4
The student understands the roles played by local, state, and national governments in both the public and private sectors of the U.S. free enterprise system.

Texas.E.4.B
Compare the role of government in the U.S. free enterprise system and other economic systems.

Texas.G.11
The student understands the similarities and differences that exist among the U.S. system of government and other political systems.

Texas.G.11.A
Compare the U.S. constitutional republic to historical and contemporary forms of government such as monarchy, a classical republic, authoritarian, socialist, direct democracy, theocracy, tribal, and other republics.

American History

Florida 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.

American History

Florida SS.912.A.5
Analyze the effects of the changing social, political, and economic conditions of the Roaring Twenties and the Great Depression.

Florida 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.

Ohio.AH.FA.14
As a result of overseas expansion, the Spanish-American War and World War I, the United States emerged as a world power.

Ohio.AH.PD.17
An improved standard of living for many, combined with technological innovations in communication, transportation and industry, resulted in social and cultural changes and tensions.

Ohio.AH.PD.18
Movements such as the Harlem Renaissance, AfricanAmerican migration, women's suffrage and Prohibition all contributed to social change.

Ohio.AH.PD.19
The Great Depression was caused, in part, by the federal government's monetary policies, stock market speculation, and increasing consumer debt. The role of the federal government expanded as a result of the Great Depression.

Ohio.AH.IWW.20.
During the 1930s, the U.S. government attempted to distance the country from earlier interventionist policies in the Western Hemisphere as well as retain an isolationist approach to events in Europe and Asia until the beginning of World War II.

American History

Ohio.AH.IWW.21
United States policy and mobilization of its economic and military resources during World War II affected American society. Despite mistreatment, marginalized groups played important roles in the war effort while continuing to protest unfair treatment.

Texas.H.4
The student understands the emergence of the United States as a world power between 1898 and 1920.

Texas.H.6
The student understands significant events, social issues, and individuals of the 1920s.

Texas.H.7
The student understands the domestic and international impact of U.S. participation in World War II.

California HSS-11.5
Students analyze the major political, social, economic, technological, and cultural developments of the 1920s.

California HSS-11.6
Students analyze the different explanations for the Great Depression and how the New Deal fundamentally changed the role of the federal government.

California HSS-11.7
Students analyze America's participation in World War II.

World History

Florida SS.912.W.2.15
Determine the factors that contributed to the growth of a modern economy.

FloridaSS.912.W.2.16
Trace the growth and development of a national identity in the countries of England, France, and Spain.

Florida SS.912.W.6
Understand the development of Western and non-Western nationalism, industrialization and imperialism, and the significant processes and consequences of each.

Florida 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.

Florida SS.912.W.6.2
Summarize the social and economic effects of the Industrial Revolution.

Florida SS.912.W.6.6
Analyze the causes and effects of imperialism.

Florida SS.912.W.6.7
Identify major events in China during the 19th and early 20th centuries related to imperialism.

Florida SS.912.W.7
Recognize significant causes, events, figures, and consequences of the Great War period and the impact on worldwide balance of power.

Florida 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.

Florida SS.912.W.7.2
Describe the changing nature of warfare during World War I.

Florida SS.912.W.7.3
Summarize significant effects of World War I.

Ohio.WH.AC.12
Advances in technology, communication and transportation improved lives, but also had negative consequences.

Ohio.WH.AC.13
The causes of World War I included militarism, imperialism, nationalism and alliances.

Ohio.WH.AC.14
The consequences of World War I and the worldwide depression set the stage for the Russian Revolution, the rise of totalitarianism, aggressive Axis expansion and the policy of appeasement which in turn led to World War II.

Texas.H.8
The student understands the causes and the global impact of the Industrial Revolution and European imperialism from 1750 to 1914.

Texas.H.10
The student understands the causes and impact of World War I.

California HSS-10.5
Students analyze the causes and course of the First World War.

World History

California HSS-10.6
Students analyze the effects of the First World War.

California HSS-10.7
Students analyze the rise of totalitarian governments after World War I.