Grade-Level Typing Course Standards | Grade 12

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.

Statistics and Probability

CCSS.HHS-IC.A
Understand and evaluate random processes underlying statistical experiments

HHS-IC.A.1
Understand statistics as a process for making inferences about population parameters based on a random sample from that population.

Statistics and Probability

HSS-IC.A.2
Decide if a specified model is consistent with results from a given data-generating process.

HSS-IC.B
Make inferences and justify conclusions from sample surveys, experiments, and observational studies.

HSS-IC.B.3
Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.

HSS-IC.B.4
Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.

HSS-IC.B.5
Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.

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.

Empowered Learner

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.

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.

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.

From Molecules to Organisms: Structures & Processes

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.

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.

Ecosystems: Interactions, Energy, & Dynamics

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.

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.

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.

Biological Evolution: Unity & Diversity

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

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.

Earth's Place in the Universe

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.

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.

Earth's Systems

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

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.

Earth & Human Activity

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.

Matter & its Interactions

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.

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.

Motion & Stability: Forces & Interactions

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.

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.

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).

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.

Waves & their Applications in Technologies for Information Transfer

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.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.12.4
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.2.1
Identify the physical characteristics and the human characteristics that define and differentiate regions.

Florida SS.912.G.2.2
Describe the factors and processes that contribute to the differences between developing and developed regions of the world.

Florida SS.912.G.4.1
Interpret population growth and other demographic data for any given place.

Florida SS.912.G.4.2
Use geographic terms and tools to analyze the push/pull factors contributing to human migration within and among places.

Florida 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.

Florida SS.912.G.4.4
Use geographic terms and tools to analyze case studies of issues in globalization.

Florida SS.912.G.4.7
Use geographic terms and tools to explain cultural diffusion throughout places, regions, and the world.

Ohio WG.8
Physical, cultural, economic, and political factors contribute to human migrations.

Geography

Ohio WG.11
Criteria are used to organize regions and as the criteria change, the identified regions change.

Ohio WG.12
The characteristics of regions change over time and there are consequences related to those changes.

Ohio WG.13
There are interconnections within and among physical and human regions.

Ohio WG.14
Regions are used as a basis to analyze global geographic issues.

Ohio WG.17
Globalization has shaped new cultural, economic, and political ideas and entities.

Texas 113.43.c.1
The student understands how geography and processes of spatial exchange (diffusion) influenced events in the past and helped to shape the present.

Texas 113.43.c.5
The student understands how political, economic, and social processes shape cultural patterns and characteristics in various places and regions.

Texas 113.43.c.7
The student understands the growth, distribution, movement, and characteristics of world population.

Geography

Texas 113.43.c.9
The student understands the concept of region as an area of Earth's surface with related geographic characteristics.

Texas 113.43.c.17
The student understands the distribution, patterns, and characteristics of different cultures.

Government & Civics

Florida SS.912.CG.2.7
Analyze the impact of civic engagement as a means of preserving or reforming institutions.

Florida SS.912.CG.2.8
Explain the impact of political parties, interest groups, media and individuals on determining and shaping public policy.

Florida 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.

Florida SS.912.CG.3.8
Describe the purpose and function of judicial review in the American constitutional government.

Florida SS.912.CG.3.11
Evaluate how landmark Supreme Court decisions affect law, liberty and the interpretation of the U.S. Constitution. Students will recognize landmark Supreme Court cases.

Government & Civics

Florida SS.912.CG.4.2
Explain how the United States uses foreign policy to influence other nations.

Florida SS.912.CG.4.3
Explain how U.S. foreign policy supports democratic principles and protects human rights around the world.

Ohio AG.1
Opportunities for civic engagement within the structures of government are made possible through political and public policy processes.

Ohio AG.2
Political parties, interest groups and the media provide opportunities for civic involvement through various means.

Ohio AG.3
Issues can be analyzed through the critical use of credible sources.

Ohio AG.7
Constitutional government in the United States has changed over time as a result of amendments to the U.S. Constitution, Supreme Court decisions, legislation and informal practices.

Ohio AG.12
Law and public policy are created and implemented by three branches of government; each functions with its own set of powers and responsibilities.

Ohio AG.13
The political process creates a dynamic interaction among the three branches of government in addressing current issues.

Government & Civics

Ohio AG.18
A variety of entities within the three branches of government, at all levels, address public policy issues that arise in domestic and international affairs.

Ohio AG.19
Individuals and organizations play a role within federal, state and local governments in helping to determine public (domestic and foreign) policy.

Texas 113.44.c.2
The student understands the roles played by individuals, political parties, interest groups, and the media in the U.S. political system, past and present.

Texas 113.44.d.7
The student understands the structure and functions of the government created by the U.S. Constitution.

Texas 113.44.d.10
The student understands the role of political parties in the U.S. system of government.

Texas 113.44.d.12
The student understands the rights that are protected and secured by the U.S. Constitution and Bill of Rights.

California HSS-PoAD.12.4
Students analyze the unique roles and responsibilities of the three branches of government as established by the U.S. Constitution.

California HSS-PoAD.12.7
Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.

Government & Civics

California HSS-PoAD.12.8
Students evaluate and take and defend positions on the influence of the media on American political life.

American History

Florida SS.912.A.7.1
Identify causes for Post-World War II prosperity and its effects on American society.

Florida SS.912.A.7.4
Evaluate the success of 1960s era presidents' foreign and domestic policies.

Florida SS.912.A.7.5
Compare nonviolent and violent approaches utilized by groups (African Americans, women, Native Americans, Hispanics) to achieve civil rights.

Florida SS.912.A.7.9
Examine the similarities of social movements (Native Americans, Hispanics, women, anti-war protesters) of the 1960s and 1970s.

Florida SS.912.A.7.10
Analyze the significance of Vietnam and Watergate on the government and people of the United States.

Florida 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.

Florida 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.

American History

Florida SS.912.A.7.16
Examine changes in immigration policy and attitudes toward immigration since 1950.

Ohio AH.22
Use of atomic weapons changed the nature of war, altered the balance of power and began the nuclear age.

Ohio AH.23
The United States followed a policy of containment during the Cold War in response to the spread of communism.

Ohio AH.25
The Cold War and conflicts in Korea and Vietnam influenced domestic and international politics.

Ohio AH.26
The collapse of communist governments in Eastern Europe and the U.S.S.R. brought an end to the Cold War.

Ohio AH.27
Following World War II, the United States experienced a struggle for racial and gender equality and the extension of civil rights.

Ohio AH.28
The postwar economic boom and advances in science and technology, produced changes in American life.

Texas 113.41.d.8
The student understands the impact of significant national and international decisions and conflicts in the Cold War on the United States.

American History

Texas 113.41.d.9
The student understands the impact of the American civil rights movement.

Texas 113.41.d.10
The student understands the impact of political, economic, and social factors in the U.S. from the 1970s through 1990.

California HSS-11.8
Students analyze the economic boom and social transformation of post–World War II America.

California HSS-11.9
Students analyze U.S. foreign policy since World War II.

California HSS-11.10
Students analyze the development of federal civil rights and voting rights.

California HSS-11.11
Students analyze the major social problems and domestic policy issues in contemporary American society.

World History

Florida 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.

World History

Florida 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.

Florida SS.912.W.7.7
Trace the causes and key events related to World War II.

Florida 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.

Florida SS.912.W.7.10
Summarize the causes and effects of President Truman's decision to drop the atomic bombs on Japan.

Florida SS.912.W.7.11
Describe the effects of World War II.

Florida SS.912.W.8.1
Identify the United States and Soviet aligned states of Europe, and contrast their political and economic characteristics.

Florida SS.912.W.8.2
Describe characteristics of the early Cold War.

Florida 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.

Florida SS.912.W.8.5
Identify the factors that led to the decline and fall of communism in the Soviet Union and Eastern Europe.

World History

Florida SS.912.W.9.1
Identify major scientific figures and breakthroughs of the 20th century, and assess their impact on contemporary life.

Florida SS.912.W.9.2
Describe the causes and effects of post-World War II economic and demographic changes.

Ohio MWH.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.

Ohio MWH.15
Oppression and discrimination resulted in the Holocaust during World War II.

Ohio MWH.16
World War II devastated most of Europe and Asia, led to the occupation of Eastern Europe and Japan, and began the atomic age.

Ohio MWH.17
The United States and the Soviet Union became superpowers and competed for global influence.

Ohio MWH.18
Treaties and agreements at the end of World War II changed national boundaries and created multinational organizations.

Ohio MWH.20
Postwar global politics led to the rise of nationalist movements in Africa and Southeast Asia.

World History

113.42.c.12
The student understands the causes and impact of World War II.

113.42.c.13
The student understands the impact of major events associated with the Cold War and independence movements.

California HSS-10.8
Students analyze the causes and consequences of World War II.

California HSS-10.9
Students analyze the international developments in the post–World War II world.