

FLORIDA ALIGNMENT FOR NIH SUPPLEMENT HUMAN GENETIC VARIATION

HUMAN GENETIC VARIATION		
Florida Science Standards - Biology		
Activity	Standard	Description
2, 3	SC.F.1.4.1	Know that the body processes involve specific biochemical reactions governed by biochemical principles.
2, 3	SC.F.1.4.5	Know that complex interactions among the different kinds of molecules in the cell cause distinct cycles of activity governed by proteins.
2, 3, 4	SC.F.1.4.7	Know that organisms respond to internal and external stimuli.
2, 3, 4	SC.F.1.4.8	Know that cell behavior can be affected by molecules from other parts of the organism or even from other organisms.
All Activities	SC.F.2.4.2	Know that every cell contains a “blueprint” coded in DNA molecules that specify how proteins are assembled to regulate cells.
2, 3	SC.F.2.4.3	Understand the mechanisms of change (e.g., mutation and natural selection) that lead to adaptations in a species and their ability to survive naturally in changing conditions and to increase species diversity.
2, 3	SC.G.1.4.3	Know that the chemical elements that make up the molecules of living things are combined and recombined in different ways.
2, 3, 4	SC.G.2.4.3	Understand how genetic variation of offspring contributes to population control in an environment and that natural selection ensures that those who are best adapted to their surroundings survive to reproduce.
2, 3, 4	SC.H.1.4.1	Know that investigations are conducted to explore new phenomena, to check on previous results, to test how well a theory predicts, and to compare different theories.
2, 3, 4	SC.H.1.4.3	Understand that no matter how well one theory fits observations, a new theory might fit them as well or better, or might fit a wider range of observations, because in science, the testing, revising, and occasional discarding of theories, new and old, never ends and leads to an increasingly better understanding of how things work in the world, but not to absolute truth.
2, 3, 4	SC.H.2.4.2	Know that scientists control conditions in order to obtain evidence, but when that is not possible for practical or ethical reasons, they try to observe a wide range of natural occurrences to discern patterns.
2, 3, 4, 5	SC.H.3.4.2	Know that technological problems often create a demand for new scientific knowledge and that new technologies make it possible for scientists to extend their research in a way that advances science.
All Activities	SC.H.3.4.3	Know that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.

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2, 3, 4, 5	SC.H.3.4.5	Know that the value of a technology may differ for different people and at different times.
Florida Mathematics Standards – Algebra I		
Activity	Standard	Description
All Activities	MA.A.1.4.1	Associate verbal names, written word names, and standard numerals with integers, rational numbers, irrational numbers, and real numbers.
All Activities	MA.A.1.4.4	Understand that numbers can be represented in a variety of equivalent forms, including integers, fractions, decimals, percents, scientific notation, exponents, radicals, and absolute value.
All Activities	MA.A.3.4.1	Understand and explain the effects of addition, subtraction, multiplication, and division on real numbers, including square roots, exponents, and appropriate inverse relationships.
All Activities	MA.A.3.4.3	Add, subtract, multiply, and divide real numbers, including square roots and exponents, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
1, 2, 4	MA.A.4.4.1	Use estimation strategies in complex situations to predict results and to check the reasonableness of results.
1, 2	MA.B.1.4.3	Relate the concepts of measurement to similarity and proportionality in real-world situations.
1, 2	MA.B.2.4.1	Select and use direct (measured) and indirect (not measured) methods of measurement as appropriate.
All Activities	MA.D.1.4.1	Describe, analyze, and generalize relationships, patterns, and functions using words, symbols, variables, tables, and graphs.
All Activities	MA.E.1.4.1	Interpret data that has been collected, organized, and displayed in charts, tables, and plots.
All Activities	MA.E.1.4.3	Analyze real-world data and make predictions of larger populations by using the sample population data and using appropriate technology, including calculators and computers.
2, 3, 4	MA.E.2.4.1	Determine probabilities using counting procedures, tables, and tree diagrams.
3	MA.E.3.4.1	Design and perform real-world statistical experiments that involve more than one variable, then analyze results and report findings.
2, 3	MA.E.3.4.2	Explain the limitations of using statistical techniques and data in making inferences and valid arguments.
Florida English Language Arts Standards – English I		
Activity	Standard	Description
2, 3	LA.A.1.4.1	Select and use pre-reading strategies that are appropriate to the text, such as discussion, making predictions, brainstorming, generating questions, and previewing to anticipate content, purpose, and organization of a reading selection.

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1, 2, 3	LA.A.1.4.2	Select and use strategies to understand words and text, and to make and confirm inferences from what is read, including interpreting diagrams, graphs, and statistical illustrations.
1, 2, 3	LA.A.1.4.3	Refine vocabulary for interpersonal, academic, and workplace situations, including figurative, idiomatic, and technical meanings.
All Activities	LA.A.2.4.4	Locate, gather, analyze, and evaluate written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.
All Activities	LA.B.1.4.2	Draft and revise writing that is focused, purposeful, and reflects insight into the writing situation; has an organizational pattern that provides for a logical progression of ideas; has effective use of transitional devices that contribute to a sense of completeness; has support that is substantial, specific, relevant, and concrete; demonstrates a commitment to and involvement with the subject; uses creative writing strategies as appropriate to the purpose of the paper; demonstrates a mature command of language with precision of expression; has varied sentence structure; and has few, if any, convention errors in mechanics, usage, punctuation, and spelling.
All Activities	LA.B.2.4.3	Write fluently for a variety of occasions, audiences, and purposes, making appropriate choices regarding style, tone, level of detail, and organization.
2, 3, 4, 5	LA.B.2.4.4	Select and use a variety of electronic media, such as the Internet, information services, and desktop publishing software programs, to create, revise, retrieve, and verify information.
All Activities	LA.C.1.4.3	Use effective strategies for informal and formal discussions, including listening actively and reflectively, connecting to and building on the ideas of a previous speaker, and respecting the viewpoints of others.
2, 5	LA.C.2.4.1	Determine main concept and supporting details in order to analyze and evaluate non-print media messages.
2, 5	LA.C.3.4.3	Use details, illustrations, analogies, and visual aids to make oral presentations that inform, persuade, or entertain.
All Activities	LA.C.3.4.4	Apply oral communication skills to interviews, group presentations, formal presentations, and impromptu situations.
2, 3, 4, 5	LA.C.3.4.5	Develop and sustain a line of argument and provide appropriate support.
Florida Health Standards – Health I – Life Management Skills		
Activity	Standard	Description
4	HE.A.1.4.3	Understand the relationships among physical, mental, emotional, and social health throughout adulthood.
4, 5	HE.B.1.4.1	Understand the role of individual responsibility regarding personal risk behaviors.
3, 4, 5	HE.B.1.4.2	Know strategies for health enhancement and risk reduction.

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3, 4, 5	HE.B.1.4.4	Know strategies for improving or maintaining personal, family, and community health.
2, 3, 4, 5	HE.B.2.4.3	Know how information from peers, family, and the community influences personal health.
4, 5	HE.C.1.4.1	Know various strategies when making decisions related to health needs and risks of young adults (e.g., support-and-reward system).
4, 5	HE.C.1.4.3	Know methods for predicting the immediate and long-term impact of health decisions on the individuals who make them.
4	HE.C.1.4.5	Know how to make positive decisions related to injury, tobacco, nutrition, physical activity, sexuality, and alcohol and other drugs.
4	HE.C.1.4.6	Know various strategies to use when applying the decision-making process regarding healthy habits (e.g., ways to avoid junk foods).
2, 3, 4, 5	HE.C.2.4.2	Know methods for effectively expressing feelings and opinions on health issues.