00 Additional Standards

Content Area: **Science**
Course(s): **Biology CP**
Time Period: **Semester 1 & 2**
Length: **40 weeks**
Status: **Published**

Interdisciplinary Connections Across Content and Grade

S.ID.A.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).
S.ID.B	Summarize, represent, and interpret data on two categorical and quantitative variables
S.IC.B.3	Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.
S.IC.B.6	Evaluate reports based on data (e.g., interrogate study design, data sources, randomization, the way the data are analyzed and displayed, inferences drawn and methods used; identify and explain misleading uses of data; recognize when arguments based on data are flawed).
S.MD	Using Probability to Make Decisions
	Historical, contemporary, and emerging processes, rules, laws, and policies are modified as societies change in an effort to promote the common good and strive to protect human rights.
	Political and economic decisions throughout time have influenced cultural and environmental characteristics.
6.1.12.GeoHE.6.a	Compare and contrast issues involved in the struggle between the unregulated development of natural resources and efforts to conserve and protect natural resources during the period of industrial expansion.
	Advancements in technology, investments in capital goods, and human capital increase productivity, economic growth, and standards of living.
6.1.12.GeoHE.16.a	Explain why natural resources (i.e., fossil fuels, food, and water) continue to be a source of conflict and analyze how the United States and other nations have addressed issues concerning the distribution and sustainability of natural resources and climate change.
6.2.12.GeoPP.6.a	Make evidence-based inferences to determine the global impact of increased population growth, migration, and changes in urban-rural populations on natural resources and land use.
6.2.12.EconGE.6.a	Evaluate efforts of governmental, non-governmental, and international organizations to address economic imbalances, social inequalities, climate change, health and/or illiteracy.
	Economic globalization affects economic growth, labor markets, human rights guarantees, the environment, resource allocation, income distribution, and culture.

Computer Science and Design Thinking

	Individuals select digital tools and design automated processes to collect, transform, generalize, simplify, and present large data sets in different ways to influence how other people interpret and understand the underlying information.
8.1.12.DA.1	Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.
	Engineering design is a complex process in which creativity, content knowledge, research,

	and analysis are used to address local and global problems. Decisions on trade-offs involve systematic comparisons of all costs and benefits, and final steps that may involve redesigning for optimization.
8.2.12.ED.1	Use research to design and create a product or system that addresses a problem and make modifications based on input from potential consumers.
8.2.12.ED.4	Design a product or system that addresses a global problem and document decisions made based on research, constraints, trade-offs, and aesthetic and ethical considerations and share this information with an appropriate audience.
	Changes caused by the introduction and use of a new technology can range from gradual to rapid and from subtle to obvious, and can change over time. These changes may vary from society to society as a result of differences in a society's economy, politics, and culture.
8.2.12.ITH.2	Propose an innovation to meet future demands supported by an analysis of the potential costs, benefits, trade-offs, and risks related to the use of the innovation.
	The ability to ethically integrate new technologies requires deciding whether to introduce a technology, taking into consideration local resources and the role of culture in acceptance. Consequences of technological use may be different for different groups of people and may change over time. Since technological decisions can have ethical implications, it is essential that individuals analyze issues by gathering evidence from multiple perspectives and conceiving of alternative possibilities before proposing solutions.
8.2.12.EC.1	Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made.
8.2.12.EC.2	Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.
8.2.12.ETW.4	Research historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product and present the competing viewpoints.

Career Readiness, Life Literacies, and Key Skills

	Solutions to the problems faced by a global society require the contribution of individuals with different points of view and experiences.
9.4.12.GCA.1	Collaborate with individuals to analyze a variety of potential solutions to climate change effects and determine why some solutions (e.g., political. economic, cultural) may work better than others (e.g., SL.11-12.1., HS-ETS1-1, HS-ETS1-2, HS-ETS1-4, 6.3.12.GeoGI.1, 7.1.IH.IPERS.6, 7.1.IL.IPERS.7, 8.2.12.ETW.3).
	Advanced search techniques can be used with digital and media resources to locate information and to check the credibility and the expertise of sources to answer questions, solve problems, and inform the decision-making.
9.4.12.IML.3	Analyze data using tools and models to make valid and reliable claims, or to determine optimal design solutions (e.g., S-ID.B.6a., 8.1.12.DA.5, 7.1.IH.IPRET.8).
	In order for members of our society to participate productively, information needs to be shared accurately and ethically.
9.4.12.IML.5	Evaluate, synthesize, and apply information on climate change from various sources appropriately (e.g., 2.1.12.CHSS.6, S.IC.B.4, S.IC.B.6, 8.1.12.DA.1, 6.1.12.GeoHE.14.a, 7.1.AL.PRSNT.2).
9.4.12.IML.6	Use various types of media to produce and store information on climate change for

	different purposes and audiences with sensitivity to cultural, gender, and age diversity (e.g., NJSLSA.SL5).
	Accurate information may help in making valuable and ethical choices.
9.4.12.IML.7	Develop an argument to support a claim regarding a current workplace or societal/ethical issue such as climate change (e.g., NJSLSA.W1, 7.1.AL.PRSNT.4).
	Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.
9.4.12.TL.2	Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.
	Collaborative digital tools can be used to access, record and share different viewpoints and to collect and tabulate the views of groups of people.

Reading and Writing

RL.CR.9–10.1	Cite a range of thorough textual evidence and make relevant connections to strongly support analysis of multiple aspects of what a literary text says explicitly and inferentially, as well as including determining where the text leaves matters uncertain.
RI.CI.9–10.2	Determine one or more central ideas of an informational text and analyze how it is developed and refined over the course of a text, including how it emerges and is shaped by specific details; provide an objective summary of the text.
RL.MF.9–10.6	Analyze, integrate, and evaluate multiple interpretations (e.g., recorded or live production of a play or recorded novel or poetry) of a single text or text/s presented in different formats (visually, quantitatively).
W.AW.9–10.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient textual and non-textual evidence.
W.IW.9–10.2.F	Provide a concluding paragraph or section that supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
W.WR.9–10.5	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
SL.PE.9–10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with peers on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
SL.PI.9–10.4	Present information, findings, and supporting evidence clearly, concisely, and logically. The content, organization, development, and style are appropriate to task, purpose, and audience.
SL.UM.9–10.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance findings, reasoning, and evidence and to add interest.