

GEORGIA ALIGNMENT FOR NIH SUPPLEMENT USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY

USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY		
Georgia Science Performance Standards – Biology and Anatomy & Physiology		
Lesson	Standard	Description
1, 2	SCSh1	Evaluate the importance of curiosity, honesty, openness, and skepticism in science.
1, 2, 3	SCSh1.b	Recognize that different explanations often can be given for the same evidence.
2, 3	SCSh1.c	Explain that further understanding of scientific problems relies on the design and execution of new experiments, which may reinforce or weaken opposing explanations.
1, 2, 3	SCSh2.a	Follow correct procedures for use of scientific apparatus.
1, 2, 3	SCSh2.b	Demonstrate appropriate technique in all laboratory situations.
1, 2, 3	SCSh3	Identify and investigate problems scientifically.
1, 2, 3	SCSh3.a	Suggest reasonable hypotheses for identified problems.
1, 2, 3	SCSh3.b	Develop procedures for solving scientific problems.
1, 2, 3	SCSh3.c	Collect, organize and record data appropriately.
1, 2, 3	SCSh3.d	Graphically compare and analyze data points and/or summary statements.
1, 2, 3	SCSh3.e	Develop reasonable conclusions based on data collected.
1, 2, 3	SCSh3.f	Evaluate whether conclusions are reasonable by reviewing the process and checking against other available information.
1	SCSh4.b	Use technology to produce tables and graphs.
1, 2, 3	SCSh4.c	Use technology to develop, test, and revise experimental or mathematical models.
1	SCSh5.d	Express appropriate numbers of significant figures for calculated data, using scientific notation where appropriate.
3	SCSh6.a	Write clear, coherent laboratory reports related to scientific investigations.
2, 3	SCSh6.b	Write clear, coherent accounts of current scientific issues, including possible alternative interpretations of the data.
2, 3	SCSh6.c	Use data as evidence to support scientific arguments and claims in written or oral presentations.
All lessons	SCSh6.d	Participate in group discussions of scientific investigation and current scientific issues.

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3	SCSh7.c	From time to time, major shifts occur in the scientific view of how the world works. More often, however, the changes that take place in the body of scientific knowledge are small modifications of prior knowledge. Major shifts in scientific views typically occur after the observation of a new phenomenon or an insightful interpretation of existing data by an individual or research group.
3	SCSh7.d	Hypotheses often cause scientists to develop new experiments that produce additional data.
3	SCSh7.e	Testing, revising, and occasionally rejecting new and old theories never ends.
3	SCSh9.a	Read technical texts related to various subject areas.
1, 2, 3	SCSh9.c	Demonstrate an understanding of contextual vocabulary in various subjects, use content vocabulary in writing and speaking, and explore understanding of new words found in subject area texts.
3	SAP1.a	Apply correct terminology when explaining the orientation of body parts and regions.
3	SAP1.b	Investigate the interdependence of the various body systems to each other and to the body as a whole.
3	SAP1.e	Describe how structure and function are related in terms of cell and tissue types.

Georgia Mathematics Performance Standards – Mathematics I

Lesson	Standard	Description
1	MM1D1.a	Apply the addition and multiplication principles of counting.
1, 2	MM1P1.b	Solve problems that arise in mathematics and in other contexts.
1, 2	MM1P1.c	Apply and adapt a variety of appropriate strategies to solve problems.
1, 2	MM1P4.c	Recognize and apply mathematics in contexts outside of mathematics.
1, 2	MM1P5.a	Create and use representations to organize, record, and communicate mathematical ideas.
1, 2	MM1P5.b	Select, apply, and translate among mathematical representations to solve problems.
1, 2	MM1P5.c	Use representations to model and interpret physical, social, and mathematical phenomena.

Georgia English Language Arts Performance Standards – Grades 9 & 10

Lesson	Standard	Description
3	ELA9RC1 ELA10RC1	Read both informational and fictional texts in a variety of genres and modes of discourse, including technical texts related to various subject areas.

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All lessons	ELA9RC2 ELA10RC2	Participates in discussions related to curricular learning in all subject areas.
All lessons	ELA9RC3.a ELA10RC3.a	Demonstrates an understanding of contextual vocabulary in various subjects.
All lessons	ELA9RC3.b ELA10RC3.b	Uses context vocabulary in writing and speaking.
All lessons	ELA9RC3.c ELA10RC3.c	Explores understanding of new words found in subject area texts.
1, 3	ELA9RC4.a ELA10RC4.a	Explores life experiences related to subject area content.
3, 4	ELA9W1.b ELA10W1.b	Selects a focus, structure, and point of view relevant to the purpose, genre, expectations, audience, length, and format requirements.
3, 4	ELA9W1.f ELA10W1.f	Uses traditional structure for conveying information (i.e., chronological order, cause and effect, similarity and difference, and posing and answering a question).
All lessons	ELA9W1.g ELA10W1.g	Supports statements and claims with anecdotes, descriptions, facts and statistics, and specific tasks.
3, 4	ELA9W2 ELA10W2	Produces technical writing that reports technical information and/or conveys ideas clearly, logically, and purposefully to a particular audience.
3, 4	ELA9W3.b ELA10W3.b	Uses supporting evidence from multiple sources to develop the main ideas within the body of an essay, composition, or technical document.
3, 4	ELA9C1.a ELA10C1.a	Demonstrates an understanding of proper English usage and control of grammar, sentence and paragraph structure, diction, and syntax.
3, 4	ELA9C1.c ELA10C1.c	Demonstrates an understanding of sentence construction and proper English usage.
3, 4	ELA9C2.b ELA10C2.b	Produces legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.
All lessons	ELA9LSV1.a ELA10LSV1.a	Initiates new topics and responds to adult-initiated topics.
All lessons	ELA9LSV1.b ELA10LSV1.b	Asks relevant questions.

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All lessons	ELA9LSV1.c ELA10LSV1.c	Responds to questions with appropriate information.
All lessons	ELA9LSV1.d ELA10LSV1.d	Actively solicits another person’s comments or opinions.
All lessons	ELA9LSV1.e ELA10LSV1.e	Offers own opinion forcefully without domineering.
All lessons	ELA9LSV1.f ELA10LSV1.f	Volunteers contributions and responds when directly solicited by teacher or discussion leader.
All lessons	ELA9LSV1.g ELA10LSV1.g	Gives reasons in support of opinions expressed.
All lessons	ELA9LSV1.i ELA10LSV1.i	Employs group decisions-making techniques such as brainstorming or a problem-solving sequence (i.e., recognizes problem, defines problem, identifies possible solutions, selects optimal solution, implements solution, evaluates solution).
All lessons	ELA9LSV2.c	Formulates judgments about ideas under discussion and supports those judgments with convincing evidence.
National Health Education Standards – Grades 9 – 12: cited from pre-publication document of National Health Education Standards, Pre K-12, American Cancer Society, December 2005 – August 2006		
Lesson	Standard	Performance Indicator
3	3.12.1	Evaluate the validity of health information, products, and services.