

TEXAS ALIGNMENT FOR NIH SUPPLEMENT CELL BIOLOGY AND CANCER

CELL BIOLOGY AND CANCER		
Texas Essential Knowledge and Skills for Science High School - Biology		
Activity	Standard	Description
4	§112.43.c.1.A	Demonstrate safe practices during field and laboratory investigations.
3, 4	§112.43.c.2.A	Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting equipment and technology.
3, 4	§112.43.c.2.B	Collect data and make measurements with precision.
1, 3, 4	§112.43.c.2.C	Organize, analyze, evaluate, make inferences, and predict trends from data.
1, 3, 4	§112.43.c.2.D	Communicate valid conclusions.
2, 3, 4	§112.43.c.3.A	Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information.
4	§112.43.c.3.B	Evaluate promotional claims that relate to biological issues such as product labeling and advertisements.
2, 3, 4	§112.43.c.3.C	Evaluate the impact of research on scientific thought, society, and the environment.
	§112.43.c.3.D	Describe the connection between biology and future careers.
3, 4	§112.43.c.3.E	Evaluate models according to their adequacy in representing biological objects or events.
2	§112.43.c.3.F	Research and describe the history of biology and contributions of scientists.
	§112.43.c.4.A	Identify the parts of prokaryotic and eukaryotic cells.
2, 3	§112.43.c.4.B	Investigate and identify cellular processes including homeostasis, permeability, energy production, transportation of molecules, disposal of wastes, function of cellular parts, and synthesis of new molecules.
2, 3	§112.43.c.6.C	Identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes.
2	§112.43.c.6.D	Compare genetic variations observed in plants and animals.
2, 3	§112.43.c.6.F	Identify and analyze karyotypes.
2, 3	§112.43.c.11.A	Identify and describe the relationships between internal feedback mechanisms in the maintenance of homeostasis.
2, 3	§112.43.c.11.B	Investigate and identify how organisms, including humans, respond to external stimuli.
2, 3, 4	§112.43.c.11.C	Analyze the importance of nutrition, environmental conditions, and physical exercise on health.

Texas Essential Knowledge and Skills for Mathematics High School – Algebra I & Mathematical Models with Applications		
Activity	Standard	Description
3, 4	§111.32.b.1.B	Gather and record data, or use data sets, to determine functional (systematic) relationships between quantities.
3, 4	§111.32.b.1.D	Represent relationships among quantities using concrete models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.
3, 4	§111.32.b.1.E	Interpret and make inferences from functional relationships.
3, 4	§111.32.b.2.C	Interpret situations in terms of given graphs or create situations that fit given graphs.
3, 4	§111.32.b.2.D	In solving problems, collect and organize data, make and interpret scatterplots, and model, predict, and make decisions and critical judgments.
3	§111.32.c.4.B	Solve systems of linear equations using concrete models, graphs, tables, and algebraic methods.
3, 4	§111.36.c.2.A	Interpret information from various graphs, including line graphs, bar graphs, circle graphs, histograms, and scatterplots to draw conclusions from the data.
3, 4	§111.36.c.3.B	Communicate methods used, analysis conducted, and conclusions drawn for a data-analysis project by written report, visual display, oral report, or multi-media presentation.
3	§111.36.c.8.A	Use geometric models available through technology to model growth and decay in areas such as population, biology, and ecology.
Texas Essential Knowledge and Skills for English Language Arts and Reading High School– English I & II		
Activity	Standard	Description
2, 3, 4, 5	§110.42.b.1.A	Write in a variety of forms using effective word choice, structure, and sentence forms with emphasis on organizing logical arguments with clearly related definitions, theses, and evidence; write persuasively; write to report and describe; and write poems, plays, and stories.
2, 3, 4, 5	§110.42.b.1.B	Write in a voice and style appropriate to audience and purpose.
2, 3, 4, 5	§110.42.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
2, 3, 4, 5	§110.42.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
2, 3, 4, 5	§110.42.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
2, 3, 4, 5	§110.42.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.
2, 3, 4	§110.42.b.6.A	Expand vocabulary through wide reading, listening, and discussing.

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2, 3, 4	§110.42.b.6.B	Rely on context to determine meanings of words and phrases such as figurative language, idioms, multiple meaning words, and technical vocabulary.
All activities	§110.42.b.7.B	Draw upon his/her own background to provide connection to texts.
2, 3, 4, 5	§110.42.b.7.F	Identify main ideas and their supporting details.
2, 3, 4, 5	§110.42.b.7.G	Summarize texts.
2, 3, 4, 5	§110.42.b.7.H	Draw inferences such as conclusions, generalizations, and predictions and support them from text.
4	§110.42.b.12.D	Analyze texts such as editorials, documentaries, and advertisements for bias and use of common persuasive techniques.
3, 4	§110.42.b.13.A	Generate relevant, interesting, and researchable questions.
3, 4, 5	§110.42.b.13.B	Locate appropriate print and non-print information using texts and technical resources, periodicals and book indices, including databases and the Internet.
3, 4	§110.42.b.13.C	Organize and convert information into different forms such as charts, graphs, and drawings.
2, 3, 4, 5	§110.42.b.13.E	Draw conclusions from information gathered.
2, 3, 4, 5	§110.43.b.1.A	Write in a variety of forms with an emphasis on persuasive forms such as logical argument and expression of opinion, personal forms such as response to literature, reflective essay, and autobiographical narrative, and literary forms such as poems, plays, and stories.
2, 3, 4, 5	§110.43.b.1.B	Write in a voice and a style appropriate to audience and purpose.
2, 3, 4, 5	§110.43.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
2, 3, 4, 5	§110.43.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
2, 3, 4, 5	§110.43.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
2, 3, 4, 5	§110.43.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.
2, 3, 4, 5	§110.43.b.6.A	Expand vocabulary through wide reading, listening, and discussing.
2, 3, 4, 5	§110.43.b.6.B	Rely on context to determine meanings of words and phrases such as figurative language, idioms, multiple meaning words, and technical vocabulary.
All activities	§110.43.b.7.B	Draw upon his/her own background to provide connection with texts.
2, 3, 4, 5	§110.43.b.7.F	Produce summaries of texts by identifying main ideas and their supporting details.
2, 3, 4, 5	§110.43.b.7.G	Draw inferences such as conclusions, generalizations, and predictions and support them with text evidence and experience.

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3, 4	§110.43.b.13.A	Generate relevant, interesting, and researchable questions.
3, 4, 5	§110.43.b.13.B	Locate appropriate print and non-print information using text and technical resources, including databases and the Internet.
3, 4, 5	§110.43.b.13.D	Produce reports and research projects in varying forms for audiences.
2, 3, 4, 5	§110.43.b.13.E	Draw conclusions from information gathered.
Texas Essential Knowledge and Skills for Health Education High School – Health I		
Activity	Standard	Description
2, 4, 5	§115.32.b.2.A	Analyze the relationship between health promotion and disease prevention.
4, 5	§115.32.b.2.B	Analyze the influence of laws, policies, and practices on health-related issues including those related to disease prevention.
3, 5	§115.32.b.4.B	Explain how technology has impacted the health status of individuals, families, communities, and the world.
4, 5	§115.32.b.5.D	Demonstrate decision-making skills based on health information.
1, 2, 3, 4	§115.32.b.6.A	Examine the effects of health behaviors on body systems.
3	§115.32.b.7.A	Analyze the harmful effects of alcohol, tobacco, drugs, and other substances such as physical, mental, social, and legal consequences.
5	§115.32.b.8.B	Explain the benefits of positive relationships among community health professionals in promoting a healthy community.
5	§115.32.b.10.B	Analyze the impact of the availability of health services in the community and the world.
2, 4, 5	§115.32.b.13.F	Explore methods for addressing critical-health issues.
4, 5	§115.32.b.16.A	Identify decision-making skills that promote individual, family, and community health.
1, 4, 5	§115.32.b.17.B	Demonstrate knowledge about personal and family health concerns.
1, 2, 4, 5	§115.32.b.17.C	Develop strategies to evaluate information relating to a variety of critical health issues.