

**USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY**

**Texas Essential Knowledge and Skills for Science High School - Biology**

<b>Activity</b>	<b>Standard</b>	<b>Description</b>
3	§112.43.c.2.A	Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting equipment and technology.
1, 2, 3	§112.43.c.2.B	Collect data and make measurements with precision.
1, 2, 3	§112.43.c.2.C	Organize, analyze, evaluate, make inferences, and predict trends from data.
1, 2, 3	§112.43.c.2.D	Communicate valid conclusions.
2, 3	§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.
2, 3, 4	§112.43.c.3.C	Evaluate the impact of research on scientific thought, society, and the environment.
3	§112.43.c.3.D	Describe the connection between biology and future careers.
1, 2, 3	§112.43.c.3.E	Evaluate models according to their adequacy in representing biological objects or events.
4	§112.43.c.3.F	Research and describe the history of biology and contributions of scientists.
1	§112.43.c.4.A	Identify the parts of prokaryotic and eukaryotic cells.
3	§112.43.c.4.C	Compare the structures and functions of viruses to cells and describe the role of viruses in causing diseases and conditions such as acquired immune deficiency syndrome, common colds, smallpox, influenza, and warts.

**Texas Essential Knowledge and Skills for Mathematics High School – Algebra I & Mathematical Models with Applications**

<b>Activity</b>	<b>Standard</b>	<b>Description</b>
1, 2, 3	§111.32.b.1.B	Gather and record data, or use data sets, to determine functional (systematic) relationships between quantities.
1, 2, 3	§111.32.b.1.D	Represent relationships among quantities using concrete models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.
1, 2, 3	§111.32.b.1.E	Interpret and make inferences from functional relationships.
2	§111.32.b.2.C	Interpret situations in terms of given graphs or create situations that fit given graphs.
2	§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.

Texas Essential Knowledge and Skills for English Language Arts and Reading High School– English I & II		
Activity	Standard	Description
3, 4	§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.
3, 4	§110.42.b.1.B	Write in a voice and style appropriate to audience and purpose.
3, 4	§110.42.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
3, 4	§110.42.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
3, 4	§110.42.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
3, 4	§110.42.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.
1, 2, 3	§110.42.b.6.A	Expand vocabulary through wide reading, listening, and discussing.
1, 2, 3	§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.
1, 2, 3	§110.42.b.7.B	Draw upon his/her own background to provide connection to texts.
3, 4	§110.42.b.7.F	Identify main ideas and their supporting details.
3, 4	§110.42.b.7.G	Summarize texts.
3, 4	§110.42.b.7.H	Draw inferences such as conclusions, generalizations, and predictions and support them from text.
3	§110.42.b.13.A	Generate relevant, interesting, and researchable questions.
1, 2, 3	§110.42.b.13.C	Organize and convert information into different forms such as charts, graphs, and drawings.
All lessons	§110.42.b.13.E	Draw conclusions from information gathered.
3, 4	§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.
3, 4	§110.43.b.1.B	Write in a voice and a style appropriate to audience and purpose.
3, 4	§110.43.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
3, 4	§110.43.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
3, 4	§110.43.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
3, 4	§110.43.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.

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

1, 2, 3	§110.43.b.6.A	Expand vocabulary through wide reading, listening, and discussing.
1, 2, 3	§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.
1, 2, 3	§110.43.b.7.B	Draw upon his/her own background to provide connection with texts.
3, 4	§110.43.b.7.F	Produce summaries of texts by identifying main ideas and their supporting details.
3, 4	§110.43.b.7.G	Draw inferences such as conclusions, generalizations, and predictions and support them with text evidence and experience.
3, 4	§110.43.b.13.A	Generate relevant, interesting, and researchable questions.
3	§110.43.b.13.D	Produce reports and research projects in varying forms for audiences.
All lessons	§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
3	§115.32.b.2.B	Analyze the influence of laws, policies, and practices on health-related issues including those related to disease prevention.
3, 4	§115.32.b.4.B	Explain how technology has impacted the health status of individuals, families, communities, and the world.
3	§115.32.b.5.D	Demonstrate decision-making skills based on health information.
3	§115.32.b.10.B	Analyze the impact of the availability of health services in the community and the world.
3	§115.32.b.16.A	Identify decision-making skills that promote individual, family, and community health.
3	§115.32.b.17.C	Develop strategies to evaluate information relating to a variety of critical health issues.