

**HUMAN GENETIC VARIATION**

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

Activity	Standard	Description
3	§112.43.c.2.C	Organize, analyze, evaluate, make inferences, and predict trends from data.
2, 3, 4	§112.43.c.2.D	Communicate valid conclusions.
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, 5	§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.
2, 3, 4	§112.43.c.3.E	Evaluate models according to their adequacy in representing biological objects or events.
2, 3	§112.43.c.3.F	Research and describe the history of biology and contributions of scientists.
2, 3	§112.43.c.6.A	Describe components of deoxyribonucleic acid (DNA), and illustrate how information for specifying the traits of an organism is carried in the DNA.
2, 3	§112.43.c.6.C	Identify and illustrate how changes in DNA cause mutations and evaluate the significance of these changes.
1, 2, 3	§112.43.c.6.D	Compare genetic variations observed in plants and animals.
2, 3	§112.43.c.6.F	Identify and analyze karyotypes.
1, 2	§112.43.c.7.B	Illustrate the results of natural selection in speciation, diversity, phylogeny, adaptation, behavior, and extinction.
4	§112.43.c.11.B	Investigate and identify how organisms, including humans, respond to external stimuli.
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
1, 2, 3	§111.32.b.1.B	Gather and record data, or use data sets, to determine functional (systematic) relationships between quantities.
All activities	§111.32.b.1.D	Represent relationships among quantities using concrete models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities.
3	§111.32.b.1.E	Interpret and make inferences from functional relationships.

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1, 3	§111.32.b.2.C	Interpret situations in terms of given graphs or create situations that fit given graphs.
All activities	§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.
1, 3	§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	§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.

**Texas Essential Knowledge and Skills for English Language Arts and Reading High School– English I & II**

Activity	Standard	Description
All activities	§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.
All activities	§110.42.b.1.B	Write in a voice and style appropriate to audience and purpose.
All activities	§110.42.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
All activities	§110.42.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
All activities	§110.42.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
All activities	§110.42.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.
All activities	§110.42.b.6.A	Expand vocabulary through wide reading, listening, and discussing.
All activities	§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.
All activities	§110.42.b.7.F	Identify main ideas and their supporting details.
3	§110.42.b.7.G	Summarize texts.
2, 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 activities	§110.42.b.13.E	Draw conclusions from information gathered.
All activities	§110.43.b.1.A	Write in a variety of forms with an emphasis on persuasive forms such as logical argument and expression

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		of opinion, personal forms such as response to literature, reflective essay, and autobiographical narrative, and literary forms such as poems, plays, and stories.
All activities	§110.43.b.1.B	Write in a voice and a style appropriate to audience and purpose.
All activities	§110.43.b.1.C	Organize ideas in writing to ensure coherence, logical progression, and support for ideas.
All activities	§110.43.b.4.A	Use writing to formulate questions, refine topics, and clarify ideas.
All activities	§110.43.b.4.B	Use writing to discover, organize, and support what is known and what needs to be learned about a topic.
All activities	§110.43.b.4.F	Compile written ideas and representations into reports, summaries, or other formats and draw conclusions.
All activities	§110.43.b.6.A	Expand vocabulary through wide reading, listening, and discussing.
All activities	§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	§110.43.b.7.F	Produce summaries of texts by identifying main ideas and their supporting details.
2, 3, 4	§110.43.b.7.G	Draw inferences such as conclusions, generalizations, and predictions and support them with text evidence and experience.
3	§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 activities	§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
5	§115.32.b.2.A	Analyze the relationship between health promotion and disease prevention.
3, 5	§115.32.b.2.B	Analyze the influence of laws, policies, and practices on health-related issues including those related to disease prevention.
2, 3, 5	§115.32.b.4.B	Explain how technology has impacted the health status of individuals, families, communities, and the world.
2, 3, 4, 5	§115.32.b.5.D	Demonstrate decision-making skills based on health information.
3, 4, 5	§115.32.b.6.A	Examine the effects of health behaviors on body systems.
3	§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.

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2, 3, 4, 5	§115.32.b.13.F	Explore methods for addressing critical-health issues.
2, 3, 4, 5	§115.32.b.16.A	Identify decision-making skills that promote individual, family, and community health.
4	§115.32.b.17.B	Demonstrate knowledge about personal and family health concerns.
2, 3, 4, 5	§115.32.b.17.C	Develop strategies to evaluate information relating to a variety of critical health issues.