

CONNECTICUT ALIGNMENT FOR NIH SUPPLEMENT CELL BIOLOGY AND CANCER

**CELL BIOLOGY AND CANCER**

**Connecticut Science Academic Standards – Grade 10**

Activity	Standard	Expected Performances
1, 3, 4	D INQ.1	Identify questions that can be answered through scientific investigation.
3, 4	D INQ.3	Formulate a testable hypothesis and demonstrate logical connections between the scientific concepts guiding the hypothesis and the design of the experiment.
3, 4	D INQ.4	Design and conduct appropriate types of scientific investigations to answer different questions.
3, 4	D INQ.5	Identify independent and dependent variables, including those that are kept constant and those used as controls.
1, 2, 3, 4	D INQ.6	Use appropriate tools and techniques to make observations and gather data.
1, 2, 3, 4	D INQ.7	Assess the reliability of the data that was generated in the investigation.
1, 3, 4	D INQ.8	Use mathematical operations to analyze and interpret data, and present relationships between variables in appropriate forms.
3, 4, 5	D INQ.9	Articulate conclusions and explanations based on research data, and assess results based on the design of the investigation.
All activities	D INQ.10	Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic.
2, 3, 4	D 34.	Describe, in general terms, how the genetic information of organisms can be altered to make them produce new materials.
2, 3, 4	D 35.	Explain the risks and benefits of altering the genetic composition and cell products of existing organisms.
2, 3	D 39.	Describe the difference between genetic disorders and infectious diseases.
2, 3	D 40.	Explain how the processes of genetic mutation and natural selection are related to the evolution of species.

**Connecticut Mathematics Academic Standards – Grades 9 - 12**

Activity	Standard	Expected Performances
1, 3, 4	1.1.a.1	Identify, describe, create and generalize numeric, geometric and statistical patterns with tables, graphs, words and symbolic rules.
1, 3, 4	1.1.a.2	Make and justify predictions based on patterns.

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3, 4	2.1.a.1	Compare, locate, label and order real numbers on number lines, scales, coordinate grids and measurement tools.
1, 3, 4	2.1.a.2	Select and use an appropriate form of number (integer, fraction, decimal, ratio, percent, exponential, scientific notation, irrational) to solve practical problems involving order, magnitude, measures, labels, locations and scales.
3	2.1.b.1	Use technological tools such as spreadsheets, probes, computer algebra systems and graphing utilities to organize and analyze large amounts of numerical information.
1, 3, 4	2.2.a.1	Select and use appropriate methods for computing to solve problems in a variety of contexts.
3, 4	4.1.a.1	Collect real data and create meaningful graphical representations of the data.
1, 2, 3, 4	4.2.a.2	Use data from samples to make inferences about a population and determine whether claims are reasonable or false.
3	4.3.a.1	Determine outcomes and solve problems involving the probabilities of events.
3, 4	4.3.a.3	Apply theoretical and experimental probabilities appropriately to solve problems and predict experimental results.

**Connecticut English Academic Standards – Grades 9 - 12**

Activity	Standard	Expected Performances
All activities	1.1.a	Activate prior knowledge, establish purposes for reading and adjust the purposes while reading.
All activities	1.1.b	Determine and apply the most effective means of monitoring comprehension and apply the appropriate strategies.
All activities	1.1.c	Select and organize relevant information from text to summarize
All activities	1.1.e	Draw conclusions and use evidence to substantiate them by using texts heard, read and viewed.
All activities	1.1.f	Make and justify inferences from explicit and or implicit information.
All activities	1.2.a	Generate and respond to questions.
All activities	1.2.b	Interpret information that is implied in a text.
All activities	1.2.c	Distinguish between fact and opinion.
All activities	1.2.e	Discuss and respond to texts by making text-to-self, text-to-text and text-to-world connections.
All activities	1.3.c	Analyze the meaning of words and phrases in context.
All activities	1.3.d	Develop vocabulary through listening, speaking, reading and writing.

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<b>All activities</b>	<b>1.3.e</b>	Use content vocabulary appropriately and accurately (math, music, science, social studies, etc.).
<b>All activities</b>	<b>1.4.a</b>	Respond to the ideas of others and recognize the validity of differing views.
<b>All activities</b>	<b>3.1.a</b>	Use oral language with clarity, voice and fluency to communicate a message.
<b>All activities</b>	<b>3.1.c</b>	Use the appropriate features of persuasive, narrative, expository or poetic writing.
<b>All activities</b>	<b>3.2.a</b>	Determine the purpose, point of view and audience, and choose an appropriate written, oral or visual format.
<b>All activities</b>	<b>4.2.a</b>	Use sentence patterns typical of spoken and written language to produce text.
<b>All activities</b>	<b>4.3.b</b>	Demonstrate proficient use of proper mechanics, usage and spelling skills.
<b>Connecticut Health Academic Standards – Grades 9 - 12</b>		
<b>Activity</b>	<b>Standard</b>	<b>Expected Performances</b>
<b>All activities</b>	<b>2.d</b>	Discuss factors that increase the risk of developing communicable and noncommunicable diseases.
<b>3, 4, 5</b>	<b>3.f</b>	Apply the decision-making process, individually and collaboratively, to address health issues.
<b>4, 5</b>	<b>3.g</b>	Analyze how the media may influence behaviors and decisions.