

USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY

New York State Science Core Subject Learning Standards: Commencement Level – The Living Environment

Lesson	Standard	Description
3	1	Describe and explain the structures and functions of the human body at different organizational levels (e.g., systems, tissues, cells, organelles).
4	5	Relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multicelled organisms.
3, 4	7	Describe the range of interrelationships of humans with the living and nonliving environment.

New York State English Language Core Subject Learning Standards: Commencement Level

All lessons	1	Make perceptive and well-developed connections to prior knowledge.
All lessons	1	Support interpretations and decisions about relative significance of information with explicit statement, evidence, and appropriate argument.
2, 3	3	Analyze, interpret, and evaluate ideas, information, organization, and language of a wide range of general and technical texts and presentations across subject areas.
2, 3	3	Make effective use of details, evidence, and arguments and of presentational strategies to influence an audience to adopt a position.

New York State Mathematics Core Subject Learning Standards: Commencement Level

2, 3	3	Use addition, subtraction, multiplication, division, and exponentiation with real numbers and algebraic expressions.
2, 3	7	Model real-world situations with the appropriate function.
2, 3	7	Translate among the verbal descriptions, tables, equations, and graphic forms of functions.

New York State Interdisciplinary Problem Solving Learning Standards: Commencement Level

1, 3, 4	1	Analyze science/technology/society problems and issues on a community, national, or global scale and plan and carry out a remedial course of action.
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NEW YORK ALIGNMENT FOR NIH SUPPLEMENT USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY

2, 3, 4	1	Explain and evaluate phenomena mathematically and scientifically by formulating a testable hypothesis, demonstrating the logical connections between the scientific concepts guiding the hypothesis and the design of an experiment, applying and inquiring into the mathematical ideas relating to investigation of phenomena, and using technological tools and procedures to assist in the investigation and in the communication of results.
New York State Interconnectedness: Common Themes Learning Standards: Commencement Level		
2, 3	2	Compare predictions to actual observations using test models.
1, 2, 3	3	Describe the effects of changes of scale on the functioning of physical, biological, or designed systems.
1, 3	3	Extend the use of powers of ten notation to understanding the exponential function and performing operations with exponential factors.