USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY		
Colorado Model Content Standards: Science – Grades 9 – 12		
Lesson	**Standard**	**Descriptor**
3	1.1	Ask questions and state hypotheses, using prior scientific knowledge to help design and guide their development and implementation of a scientific investigation.
1, 2, 3	1.2	Select and use appropriate technologies to gather, process, and analyze data and to report information related to an investigation.
1, 2, 3	1.4	Recognize and analyze alternative explanations and models.
2, 3	1.5	Construct and revise scientific explanations and models, using evidence, logic, and experiments that include identifying and controlling variables.
3	5.4	There are cause-effect relationships within systems *(for example: the effect of temperature on gas volume, effect of carbon dioxide level on the greenhouse effect, effects of changing nutrients a the base of a food pyramid).*
3, 4	5.5	Scientific knowledge changes and accumulates over time; usually the changes that take place are small modifications of prior knowledge but major shifts in the scientific view of how the world works do occur.
All lessons	5.6	Interrelationships among science, technology, and human activity lead to further discoveries that impact the world in positive and negative ways.
Colorado Model Content Standards: Mathematics – Grades 9 – 12		
Lesson	**Standard**	**Benchmark**
1	1.1	Demonstrate meanings for real numbers, absolute value, and scientific notation using physical materials and technology in problem-solving situations.
1	2.2	Represent functional relationships using written explanations, tables, equations, and graphs, and describing the connections among these representations.
1	2.3	Solve problems involving functional relationships using graphing calculators and/or computers as well as appropriate paper-and-pencil techniques.
1, 2, 3	5.2	Select and use appropriate techniques and tools to measure quantities in order to achieve specified degrees of precision, accuracy, and error (or tolerance) of measurements.
1	6.1	Use ratios, proportions, and percents in problem-solving situations.
Colorado Model Content Standards: Reading & Writing – Grades 9 – 12		
Lesson	**Standard**	**Descriptor**
All lessons	1.A	Using a full range of strategies to comprehend essays, speeches, autobiographies, and first-person historical documents in addition to directions, nonfiction material, technical writing, newspapers, and magazines.
3, 4	2.B	Conveying technical information in a written form appropriate to the audience.

3, 4	2.C	Supporting an opinion using various forms of persuasion (factual or emotional) in speaking and writing.
3, 4	2.F	Writing in various specialized fields such as career and academic interest areas *(for example, scientific, technical, business communications).*
All lessons	4.B	Using reading, writing, listening, articulate speaking, and viewing to solve problems.
All lessons	5.B	Evaluating information in light of what they know and their specific needs.
3, 4	5.D	Using strategies to gain information from journals, research studies, and technical documents.
3, 4	5.E	Using available technology to access information, conduct research, and produce a carefully documented product.

National Health Education Standards – Grades 9 – 12: cited from pre-publication document of National Health Education Standards, Pre K-12, American Cancer Society, December 2005 – August 2006

Lesson	Standard	Performance Indicator
3	3.12.1	Evaluate the validity of health information, products, and services.