USING TECHNOLOGY TO STUDY CELLULAR AND MOLECULAR BIOLOGY		
Arizona Science Academic Standards: High School		
Lesson	**Standard**	**Performance Objective**
2, 3	**SCHS-S1C1-01**	Evaluate scientific information for relevance to a given problem.
2, 3	**SCHS-S1C1-02**	Develop questions from observations that transition into testable hypotheses.
2, 3	**SCHS-S1C1-03**	Formulate a testable hypothesis.
2, 3	**SCHS-S1C1-04**	Predict the outcome of an investigation based on prior evidence, probability, and/or modeling (not guessing or inferring).
2, 3	**SCHS-S1C2-01**	Demonstrate safe and ethical procedures (e.g., use and care of technology, materials, organisms) and behavior in all science inquiry.
2, 3	**SCHS-S1C2-02**	Identify the resources needed to conduct an investigation.
2, 3	**SCHS-S1C2-03**	Design an appropriate protocol (written plan of action) for testing a hypothesis: • Identify dependent and independent variables in a controlled investigation. • Determine an appropriate method for data collection (e.g., using balances, thermometers, microscopes, spectrophotometer, using qualitative changes). • Determine an appropriate method for recording data (e.g., notes, sketches, photographs, videos, journals (logs), charts, computers/calculators).
2, 3	**SCHS-S1C2-04**	Conduct a scientific investigation that is based on a research design.
1, 2, 3	**SCHS-S1C2-05**	Record observations, notes, sketches, questions, and ideas using tools such as journals, charts, graphs, and computers.
2, 3	**SCHS-S1C3-01**	Interpret data that show a variety of possible relationships between variables, including: positive relationship, negative relationship, or no relationship.
2, 3	**SCHS-S1C3-02**	Evaluate whether investigational data support or do not support the proposed hypothesis.
2, 3	**SCHS-S1C3-03**	Critique reports of scientific studies (e.g., published papers, student reports).
2, 3	**SCHS-S1C3-04**	Evaluate the design of an investigation to identify possible sources of procedural error, including: sample size, trials, controls, and analyses.
1, 2, 3	**SCHS-S1C4-01**	For a specific investigation, choose an appropriate method for communicating the results.
1, 2, 3	**SCHS-S1C4-03**	Communicate results clearly and logically.
All lessons	**SCHS-S1C4-04**	Support conclusions with logical scientific arguments.
1, 4	**SCHS-S2C1-01**	Describe how human curiosity and needs have influenced science, impacting the quality of life worldwide.
1, 4	**SCHS-S2C1-02**	Describe how diverse people and/or cultures, past and present, have made important contributions to scientific innovations.

1, 2, 4	**SCHS-S2C1-03**	Analyze how specific changes in science have affected society.
2, 3, 4	**SCHS-S3C2-03**	Support a position on a science or technology issue.
Arizona Mathematics Academic Standards: High School		
Lesson	**Standard**	**Performance Objective**
1	**MHS-S1C2-05**	Use grade level-appropriate mathematical terminology.
1	**MHS-S1C2-06**	Compute using scientific notation.
1	**MHS-S2C1-01**	Formulate questions to collect data in contextual situations.
1	**MHS-S2C1-02**	Organize collected data into an appropriate graphical representation.
1	**MHS-S2C1-03**	Display data as lists, tables, matrices, and plots.
1	**MHS-S2C1-04**	Construct equivalent displays of the same data.
1	**MHS-S2C1-07**	Make reasonable predictions based upon linear patterns in data sets or scatter plots.
1	**MHS-S2C1-08**	Make reasonable predictions for a set of data, based on patterns.
1, 2	**MHS-S2C1-09**	Draw inferences from charts, tables, graphs, plots, or data sets.
1, 2, 3	**MHS-S2C1-11**	Evaluate the reasonableness of conclusions drawn from data analysis.
Arizona Language Arts Academic Standards: Grades 9 & 10		
Reading		
Lesson	**Standard**	**Performance Objective**
3	**R09-S1C4-02** **R10-S1C4-02**	Infer word meanings from context (e.g., definition, example, restatement, comparison/contrast, cause/effect).
3	**R09-S1C6-02** **R10-S1C6-02**	Generate clarifying questions in order to comprehend text.
3	**R09-S1C6-04** **R10-S1C6-04**	Connect information and events in text to experience and to related text and sources.
3	**R09-S3C1-02** **R10-S3C1-02**	Distinguish: facts from opinions (9) / supported inferences from unsupported inferences (10) in expository selections such as editorials, newspaper articles, essays, reviews, and critiques, providing supporting evidence from the text.
3	**R09-S3C1-04** **R10-S3C1-04**	Organize information from both primary and secondary sources by taking notes, outlining ideas, paraphrasing information; and by making charts, conceptual maps, learning logs, and/or timelines.
3, 3	**R09-S3C1-05** **R10-S3C1-05**	Interpret graphic sources of information (e.g., charts, maps, diagrams, illustrations, tables, timelines, graphs) to support ideas.
3	**R10-S3C1-07**	Make relevant inferences by synthesizing concepts and ideas from a single reading selection.

3	**R09-S3C1-08 R10-S3C1-08**	Support conclusions drawn from ideas (9) and concepts (10) in expository text.
2, 3, 4	**R09-S3C2-01 R10-S3C2-01**	Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to solve a problem.
2, 3, 4	**R09-S3C2-02 R10-S3C2-02**	Synthesize information from multiple sources (e.g., texts, maps, illustrations, workplace documents, schematic diagrams) to draw conclusions.
3, 4	**R09-S3C2-03**	Identify the objective(s) of functional text (e.g., warranties, product information, technical manuals, consumer publications, workplace documents).
Writing		
Lesson	**Standard**	**Performance Objective**
3, 4	**W09-S1C1-02 W10-S1C1-02**	Determine the purpose (e.g., to entertain, to inform, to communicate, to persuade, to explain) of an intended writing piece.
3, 4	**W09-S1C1-03 W10-S1C1-03**	Determine the intended audience of a writing piece.
3, 4	**W09-S1C5-01 W10-S1C5-01**	Prepare writing that follows a format appropriate for the purpose (e.g., for display, sharing with others, submitting to a publication).
3, 4	**W09-S1C5-03 W10-S1C5-03**	Write legibly.
3, 4	**W09-S2C1-01 W10-S2C1-01**	Maintain a clear, narrow focus to support the topic.
3, 4	**W09-S2C1-02 W10-S2C1-02**	Write with an identifiable purpose and for a specific audience.
3, 4	**W09-S2C1-03 W10-S2C1-03**	Provide sufficient, relevant, and carefully selected details for support.
3, 4	**W09-S2C1-04 W10-S2C1-04**	Demonstrate a thorough, balanced explanation of the topic.
3, 4	**W09-S2C1-05 W10-S2C1-05**	Include ideas and details that show original perspective and insights.
3, 4	**W09-S2C2-01 W10-S2C2-01**	Use a structure that fits the type of writing (e.g., letter format, narrative, play, essay).
3, 4	**W09-S2C3-01 W10-S2C3-01**	Show awareness of the audience through word choice, style, and an appropriate connection with, or distance from, the audience.
3, 4	**W09-S2C3-03 W10-S2C3-03**	Choose appropriate voice (e.g., formal, informal, academic discourse) for the application.

3, 4	**W09-S2C3-05** **W10-S2C3-05**	Use language appropriate to purpose, topic, and audience.
3, 4	**W09-S2C6-09** **W10-S2C6-09**	Spell words correctly.
3, 4	**W09-S2C6-011** **W10-S2C6-011**	Demonstrate control of grammar and usage in writing.
3, 4	**W09-S3C2-01** **W10-S3C2-01**	Write an explanatory, multi-paragraph essay.
3, 4	**W09-S3C4-01** **W10-S3C4-01**	Write a persuasive composition.
Arizona Comprehensive Health Education Academic Standards - High School		
Lesson	**Standard**	**Performance Objective**
All lessons	**5CH-P1-01**	Demonstrate the ability to: send clear and direct messages, verbally and nonverbally, listen to others, receiving and understanding their communication, ask for clarification when needed, and respond verbally and nonverbally.