LOOKING GOOD, FEELING GOOD: FROM THE INSIDE OUT – EXPLORING BONE, MUSCLE, AND SKIN			
	Arkansas Science Standards: Grades 6 – 8		
		Grade 6	
Lesson	Standard	Descriptor	
1, 2, 3, 4, 5, 6	NS.1.6.1	Verify accuracy of observations.	
2, 3, 4, 5, 6	NS.1.6.2	 Apply components of <i>experimental design</i> used to produce <i>empirical evidence:</i> <i>hypothesis</i> replication sample size appropriate use of <i>control</i> use of standardized <i>variables</i> 	
2, 3, 4, 5, 6	NS.1.6.4	Construct and interpret scientific data using data tables/charts bar and double bar graphs line graphs stem and leaf plots line graphs 	
2, 3, 4, 5, 6	NS.1.6.5	Communicate results and conclusions from scientific inquiry.	
1, 2, 3, 4, 5, 6	NS.1.6.7	Distinguish between scientific fact and opinion.	
2, 3, 4, 5, 6	NS.1.6.8	Explain the role of prediction in the development of a theory.	
2, 3, 4, 5, 6	LS.2.6.1	Observe, describe, and illustrate animal <i>tissues:</i> muscle blood skin 	
2, 3, 4, 5, 6, 7	LS.2.6.2	Illustrate the hierarchical relationships of cells, tissues, and organs.	
2, 3, 4, 5, 6, 7	LS.2.6.3	Investigate the functions of tissues.	
		Grade 7	
Lesson	Standard	Descriptor	
1, 2, 3, 4, 5, 6	NS.1.7.1	Interpret evidence based on observations.	
2, 3, 4, 5, 6	NS.1.7.2	 Analyze components of <i>experimental design</i> used to produce <i>empirical evidence:</i> <i>hypothesis</i> replication sample size 	

		appropriate use of <i>control</i>
		use of standardized variables
3, 4, 5, 6	NS.1.7.4	Construct and interpret scientific data using histograms circle graphs <i>scatter plots</i> double line graphs line graphs by approximating line of best fit
2, 3, 4, 5, 6	NS.1.7.5	Communicate results and conclusions from scientific inquiry.
2, 3, 4, 5, 6	NS.1.7.7	Distinguish between questions that can and cannot be answered by science.
2, 3, 4, 5, 6	NS.1.7.8	Explain the role of testability and modification in the development of a theory.
2, 3, 4, 5, 6, 7	LS.2.7.1	Illustrate the hierarchical relationships of cells, tissues, organs, and organ systems.
3, 4, 5, 7	LS.2.7.3	Identify organ systems in vertebrates.
All lessons	LS.2.7.4	Analyze the structure and function of <i>tissues</i> , organs, and organ systems of a vertebrate using various models or methods of dissection.
All lessons	LS.2.7.6	Identify human body systems: nervous, digestive, circulatory, respiratory, excretory, integumentary, skeletal/muscular, endocrine, and reproductive.
2, 3, 4, 5, 6, 7	LS.2.7.7	Relate the structure of vertebrate body systems to their functions.
All lessons	LS.2.7.8	Investigate functions of human body systems.
3, 4, 5, 7	LS.2.7.9	Describe interactions between major organ systems.
2, 3	LS.3.7.12	Summarize the interactions between organ systems in the maintenance of homeostasis.
		Grade 8
Lesson	Standard	Descriptor
1, 2, 3, 4, 5, 6	NS.1.8.1	Justify conclusions based on appropriate and unbiased observations.
2, 3, 4, 5, 6	NS.1.8.2	 Evaluate the merits of <i>empirical evidence</i> based on <i>experimental design:</i> <i>hypothesis</i> replication sample size appropriate use of <i>control</i> use of standardized <i>independent</i> and <i>dependent variables</i>
2, 3, 4, 5, 6	NS.1.8.3	Formulate a testable problem using experimental design.
2, 3, 4, 5, 6	NS.1.8.5	 Suggest solutions to real world problems by analyzing scientific data in data tables/charts histograms

1, 2, 3, 4, 5, 6	NS.1.8.6	 circle graphs scatter plots stem and leaf plots line and double line graphs by approximating line of best fit Formulate inferences based on scientific data.
2, 3, 4, 5, 6	NS.1.8.7	Communicate results and conclusions from scientific inquiry following peer review.
2, 3, 4, 5, 6	NS.1.8.9	Generate questions that can and cannot be answered by science.
2, 3, 4, 5, 6, 7	LS.2.8.1	Illustrate the hierarchical relationships of cells, tissues, organs, organ systems, and organisms.
		Arkansas Mathematics Standards: Grades 6 – 8
		Grade 6
Lesson	Standard	Descriptor
4, 5, 6	NO.1.6.1	Demonstrate conceptual understanding to find a specific <i>percent</i> of a number, using models, real life examples, or explanations.
4, 5, 6	NO.1.6.2	Find decimal and percent equivalents for proper fractions and explain why they represent the same value.
4, 5, 6	NO.2.6.3	Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>whole numbers</i> .
4, 5, 6	NO.2.6.4	Apply rules (conventions) for order of operations to whole numbers with and without parentheses
4, 5, 6	NO.2.6.5	Model multiplication and division of fractions (including mixed numbers) and decimals using pictures and physical objects.
4, 5, 6	NO.3.6.1	Apply, with and without appropriate <i>technology</i> , <i>algorithms</i> with <i>computational fluency</i> to perform <i>whole number operations</i> (+, -, x, /).
4, 5, 6	NO.3.6.2	Develop and analyze <i>algorithms</i> for computing with fractions (including mixed numbers) and decimals and demonstrate, with and without <i>technology</i> , <i>computational fluency</i> in their use and justify the solution.
4, 5, 6	NO.3.6.3	Solve, with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil).
6	NO.3.6.6	Use proportional reasoning and <i>ratios</i> to represent problem situations and determine the reasonableness of solutions with and without appropriate <i>technology</i> .
4, 5, 6	A.5.6.1	Model, write and solve one-step equations by informal methods using manipulatives and appropriate technology.
4, 5, 6	A.6.6.1	Complete, with and without appropriate <i>technology</i> , and interpret tables and <i>line graphs</i> that represent the relationship between two <i>variables</i> in <i>quadrant</i> I.
4	A.7.6.1	Identify and compare situations with constant or varying rates of change.
2, 6	M.12.6.1	Identify and select appropriate units and tools from both systems to measure.

2, 6	M.12.6.2	Make conversions within the same measurement system in real world problems.
2, 6	M.13.6.2	Determine which unit of measure or measurement tool matches the context for a problem situation.
4, 5, 6	DAP.14.6.1	Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population.
2, 4, 5, 6	DAP.14.6.2	Collect data and select appropriate graphical representations to display the data including Venn diagrams.
4, 6	DAP.14.6.3	Construct and interpret graphs, using correct scale, including <i>line graphs</i> and <i>double-bar graphs</i> .
4, 6	DAP.15.6.1	Interpret graphs such as <i>double line graphs</i> and <i>circle graphs.</i>
2, 4, 5, 6	DAP.16.6.1	Use observations about differences in data to make justifiable inferences.
		Grade 7
Lesson	Standard	Descriptor
4, 5, 6	NO.1.7.1	Relate, with and without models and pictures, concepts of <i>ratio</i> , <i>proportion</i> , and <i>percent</i> , including <i>percents</i> less than 1 and greater than 100.
4, 5, 6	NO.1.7.4	Find decimal and percent equivalents for mixed numbers and explain why they represent the same value.
4, 5, 6	NO.2.7.2	Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>integers</i> , fractions, and decimals.
4, 5, 6	NO.2.7.3	Apply rules (conventions) for order of operations to integers and positive rational numbers including parentheses, brackets or exponents.
4, 5, 6	NO.2.7.4	Model and develop addition, subtraction, multiplication and division of <i>integers</i> .
4, 5, 6	NO.3.7.1	Compute, with and without appropriate <i>technology</i> , with <i>integers</i> and positive <i>rational numbers</i> using real world situations to solve problems.
4, 5, 6	NO.3.7.2	Solve with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil).
4, 6	NO.3.7.6	Solve, with and without technology, real world percent problems.
4, 5, 6	A.6.7.1	Use tables and graphs to represent <i>linear equations</i> by plotting, with and without appropriate <i>technology</i> , points in a <i>coordinate plane</i> .
4	A.7.7.1	Use, with and without appropriate <i>technology</i> , tables and graphs to compare and identify situations with constant or varying <i>rates</i> of change.
2, 6	M.12.7.1	Understand, select and use the appropriate units and tools (metric and customary) to measure length, weight, <i>mass</i> and <i>volume</i> to the required degree of accuracy for real world problems.
2, 6	M.12.7.2	Understand relationships among units within the same system.
6	M.13.7.5	Apply properties (scale <i>factors</i> , <i>ratio</i> , and <i>proportion</i>) of <i>congruent</i> or <i>similar</i> triangles to solve problems involving missing lengths and angle measures.
4, 5, 6	DAP.14.7.1	Identify different ways of selecting samples and compose appropriate questions.

4, 5, 6	DAP.14.7.2	Explain which types of display are appropriate for various data sets (<i>line graph</i> for change over time, <i>circle graph</i> for part-to-whole comparison, <i>scatter plot</i> for trends).		
4, 6	DAP.14.7.3	Construct and interpret circle graphs, box-and-whisker plots, histograms, scatter plots and double line graphs with and without appropriate technology.		
4, 5, 6	DAP.15.7.1	Analyze data displays, including ways that they can be misleading.		
		Grade 8		
Lesson	Standard	Descriptor		
4, 5, 6	NO.2.8.1	Apply the addition, subtraction, multiplication and division properties of equality to two-step equations.		
4, 5, 6	NO.2.8.4	Apply rules (conventions) for order of operations to rational numbers.		
4, 5, 6	NO.2.8.5	Model and develop addition, subtraction, multiplication and division of rational numbers.		
4, 5, 6	NO.3.8.1	Compute, with and without appropriate technology, with rational numbers in multi-step problems.		
4, 5, 6	NO.3.8.2	Solve, with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e. objects, mental computation, paper and pencil).		
4, 6	NO.3.8.6	Solve, with and without technology, real world percent problems including percent of increase or decrease.		
4, 5, 6	A.6.8.2	Represent, with and without appropriate <i>technology</i> , <i>linear</i> relationships concretely, using tables, graphs and equations.		
4, 6	A.7.8.1	Use, with and without <i>technology</i> , graphs of real life situations to describe the relationships and analyze change including graphs of change (cost per minute) and graphs of accumulation (total cost).		
2, 6	M.12.8.2	Describe and apply equivalent measures using a variety of units within the same system of measurement.		
6	M.13.8.3	Apply proportional reasoning to solve problems involving indirect measurements, scale drawings or rates.		
2, 4, 5, 6	DAP.14.8.1	Design and conduct investigations which include • adequate number of trials • unbiased sampling • accurate measurement • record-keeping		
4, 5, 6	DAP.14.8.2	Explain which types of display are appropriate for various data sets (<i>scatter plot</i> for relationship between two variants and <i>line of best fit</i>).		
4, 6	DAP.14.8.3	Interpret or solve real world problems using data from charts, <i>line plots, stem-and leaf plots, double-bar graphs, line graphs, box-and whisker plots, scatter plots, frequency tables or double line graphs.</i>		
4, 5, 6	DAP.16.8.1	Use observations about differences between sets of data to make <i>conjectures</i> about the populations from which the data was taken.		
		Arkansas English Language Arts Standards: Grades 6 – 8		
	Grade 6			

Lesson	Standard	Descriptor
All lessons	OV.1.6.1	Develop vocabulary from content area texts and personal reading.
All lessons	OV.1.6.2	Use standard English in classroom discussion.
All lessons	OV.1.6.3	Use appropriate oral communication for various purposes and audiences.
All lessons	OV.1.6.6	Contribute appropriately to class discussion.
3, 4, 5, 6, 7	OV.1.6.7	Deliver oral presentations using standard English, appropriate vocabulary, and organization.
All lessons	OV.2.6.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.6.2	Establish purpose for listening.
All lessons	OV.2.6.3	Listen attentively for main ideas and detail.
All lessons	OV.3.6.1	View a variety of media (e.g., posters, film clips, periodicals, charts, cartoons, graphs, statistics, etc.) to enhance and show understanding of a specific topic.
4, 6, 7	OV.3.6.3	Create visual aids that convey information.
All lessons	W.4.6.3	Demonstrate an awareness of purpose and audience for all modes of written discourse.
All lessons	W.4.6.6	Organize expository paragraphs that include a topic sentence, supporting details, and a concluding sentence.
All lessons	W.5.6.1	Write to describe, to inform, to entertain, to explain, and to persuade.
All lessons	W.5.6.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.6.3	Create expository, narrative, descriptive, and persuasive writings.
4, 5, 6, 7	W.5.6.5	Write research reports using a variety of sources, summarizing, and paraphrasing.
All lessons	W.5.6.10	Write across the curriculum.
All lessons	W.6.6.2	Use different <i>kinds of sentences</i> Declarative Interrogative Imperative Exclamatory
All lessons	W.6.6.8	Apply correct spelling to commonly misspelled words.
All lessons	R.9.6.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.
All lessons	R.9.6.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.6.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.6.10	Distinguish among facts and inferences supported by evidence and opinions in text.
All lessons	R.9.6.11	Use text information and background knowledge to draw conclusions and to make inferences (e.g., theme, etc.).
All lessons	R.9.6.18	Summarize the content of a text.

All lessons	R.9.6.20	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.6.13	Read and utilize functional/ <i>practical texts</i> , including advertisements, slogans, brochures, and timelines.
All lessons	R.10.6.13	Use resources to determine meaning of technical and specialized vocabulary.
	IR.12.6.1	Generate questions to explore and select a specific topic for research.
4, 5, 6, 7		
All lessons	IR.12.6.3 IR.12.6.5	Use print and electronic sources, including computer databases, to locate information.
All lessons		Interpret information from graphic sources.
4, 5, 6, 7	IR.12.6.8	Use research to create one or more oral, written, or visual <i>presentations</i> /products.
		Grade 7
Lesson	Standard	Descriptor
All lessons	OV.1.7.1	Use vocabulary from content area texts and personal reading.
All lessons	OV.1.7.2	Use standard English in classroom discussion and presentations.
All lessons	OV.1.7.3	Speak for and to various purposes and audiences.
All lessons	OV.1.7.6	Contribute appropriately to class discussion.
3, 4, 5, 6, 7	OV.1.7.7	Deliver oral presentations using standard English, appropriate vocabulary, examples and/or analogies.
All lessons	OV.2.7.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.7.2	Establish purpose for listening.
All lessons	OV.2.7.3	Listen attentively for mail ideas, details, and organization.
All lessons	OV.3.7.1	View a variety of visually presented materials for understanding of a specific topic.
All lessons	W.4.7.3	Determine a focus and an <i>organizational structure</i> based on purpose, audience, length, and required format for <i>expository</i> , narrative, and descriptive writing
All lessons	W.5.7.1	Write to develop narrative, <i>expository</i> , descriptive, and persuasive pieces.
All lessons	W.5.7.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.7.3	Create expository, narrative, descriptive, and persuasive writings.
4, 5, 6, 7	W.5.7.5	Write research reports and document sources, summarizing, and paraphrasing.
All lessons	W.5.7.10	Write across the curriculum.
All lessons	W.6.7.1	 Vary sentence structure by using simple, compound, and complex sentences and different <i>kinds of sentences</i> Declarative Interrogative Imperative Exclamatory
All lessons	W.6.7.7	Spell words correctly in all writing.
All lessons	R.9.7.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.

All lessons	R.9.7.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.7.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.7.19	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.7.11	Read and utilize functional/practical texts, including forms, reports, cover letters, letterheads, and business letters.
All lessons	R.11.7.6	Use resources to determine meaning of technical and specialized vocabulary.
4, 5, 6, 7	IR.12.7.1	Formulate original questions to select a topic for research.
All lessons	IR.12.7.3	Use print and electronic sources, such as card catalogs and computer databases, to locate information.
All lessons	IR.12.7.6	Use information presented in graphic sources to draw conclusions.
4, 5, 6, 7	IR.12.7.9	Use research to create one or more oral, written, or visual presentations /products.
	•	Grade 8
Lesson	Standard	Descriptor
All lessons	OV.1.8.1	Use vocabulary from content area texts and reading/literature.
All lessons	OV.1.8.2	Use standard English in classroom discussion and presentations.
All lessons	OV.1.8.3	Speak for and to various purposes and audiences.
All lessons	OV.1.8.6	Contribute appropriately to class discussion.
3, 4, 5, 6, 7	OV.1.8.7	Deliver oral presentations using available technology.
All lessons	OV.2.8.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.8.2	Establish purpose for listening
All lessons	OV.2.8.3	Listen attentively to summarize.
All lessons	OV.3.8.1	View a variety of visually presented materials for understanding of a specific topic.
All lessons	W.4.8.1	Self select and apply an appropriate prewriting strategy for a variety of writing purposes across the curriculum, with emphasis on interviewing, note-taking, and gathering data.
All lessons	W.4.8.3	Select a focus and an organizational structure based on purpose, audience, length, and required format for expository narrative, descriptive, and persuasive writing.
All lessons	W.5.8.1	Develop multiple works in a variety of modes of <i>discourse</i> .
All lessons	W.5.8.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.8.3	Create expository, narrative, descriptive, and persuasive writings.
4, 5, 6, 7	W.5.8.5	Write research reports that include a thesis and use a variety of sources.
All lessons	W.5.8.10	Write across the curriculum.
All lessons	W.6.8.1	 Vary sentence structure by using simple, compound, and complex sentences and different <i>kinds of sentences</i> Declarative Interrogative

		Imperative Exclamatory
All lessons	W.6.8.7	Spell words correctly in all writing.
All lessons	R.9.8.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.
All lessons	R.9.8.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.8.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.8.22	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.8.12	Read and utilize functional/practical texts, including manuals, memos, job applications, and career guides.
All lessons	R.11.8.6	Use resources to determine meaning of technical and specialized vocabulary.
4, 5, 6, 7	IR.12.8.1	Formulate original questions to explain and select a topic for research.
All lessons	IR.12.8.3	Use print and electronic sources independently to locate information.
4, 5, 6, 7	IR.12.8.6	Create visual graphics to interpret information.
4, 5, 6, 7	IR.12.8.9	Use research to create one or more oral, written, or visual presentations /products.

Arkansas Physical Education and Health Standards: Grades 6 – 8

	Grade 6		
Lesson	Standard	Descriptor	
2, 3, 4, 5, 6, 7	HW.5.6.1	Examine the relationship between organs, tissues, and cells that forms body systems.	
4, 5, 6	HW.6.6.2	Identify risky behaviors that increase the possibility of developing diseases.	
6	HW.6.6.3	Identify causes of cancer (e.g., heredity, sun, tobacco, food additives, lack of dietary fiber, environment).	
4, 5, 6	HW.10.6.2	Identify the benefits of safe behavior and the consequences of <i>risky behavior</i> (e.g., seatbelts, <i>sexual</i> activity, teen pregnancy, <i>drugs</i> , alcohol, all types of abuse, dietary supplements, and conflict resolution).	
2, 5	HW.11.6.4	Examine nutrient deficiencies in the body (e.g., anemia, night blindness).	
		Grade 7	
2, 3, 4, 5, 6, 7	HW.5.7.1	Discuss and examine the interaction between the body systems.	
2, 5, 6	HW.6.7.1	Compare and contrast communicable and non-communicable diseases.	
2, 5, 6	HW.6.7.2	Identify ways individuals can reduce risk factors related to <i>communicable</i> and <i>chronic diseases</i> (e.g., Hand-washing protocols, healthy eating, maintain healthy weight, regular exercise).	
6	HW.6.7.3	Apply safety precautions to avoid over exposure to the sun (e.g., wear hat, wear sunglasses, and apply sunscreen).	
2, 5, 6	HW.11.7.3	Explain how nutrients affect risk factors for the following four common <i>chronic diseases</i> : cancer, cardiovascular disease, osteoporosis, and type II diabetes.	

Grade 8		
4	PEL.2.8.4	Choose personal goals that affect body composition in nutrition and exercise: nutrition, exercise, and physical activity.
4, 5	PEL.3.8.1	Analyze the benefits of participating in regular physical activity to reduce <i>chronic disease</i> risks: reduce blood lipids, lower blood pressure, improve weight loss, reduce stress, lessen colon cancer risk, and lessen risk for diabetes.
2, 3, 4, 5, 6, 7	HW.5.8.1	Analyze the interaction between the body systems to promote <i>health</i> and <i>wellness</i> (e.g., obesity's impact on specific body systems).
6	HW.6.8.2	Investigate behaviors that increase or decrease the risks of developing cancer (e.g., tobacco use, food consumption, chemical exposure).
3, 4, 5, 6	HW.10.8.2	Distinguish personal responsibility in making choices affecting individual health and wellness.
2, 5	HW.11.8.3	Analyze how nutrients affect risk factors of the following common <i>chronic diseases</i> : cancer, cardiovascular disease, osteoporosis, and type II diabetes.