THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY		
Mississippi Competencies for Science – Grades 6, 7, 8		
Lesson	**Competency**	**Description**
3, 5	**1.a**	Analyze body systems and their functions. (8)
4	**2.b**	Determine how traits are used to classify individual inherited patterns. (6)
1, 3, 4, 5	**3**	Explore how changing resources will influence the regulation and behavior of organisms. (6)
3, 4, 5	**3.b**	Investigate homeostasis as it relates to plants and animals. (7)
2	**10.b**	Investigate forms of energy such as heat, sound, light, or electricity. (6)
All lessons	**10.c**	Research and discuss energy transformation. (8)
Mississippi Competencies for Mathematics – Grades 6 & 7		
Lesson	**Competency**	**Description**
1, 2, 3, 4	**1**	Analyze numbers using place value, prime factorization and exponents. Solve problems involving basic operations of rational numbers greater than or equal to zero. (6)
1, 2, 3	**1**	Apply concepts of rational numbers and perform basic operations emphasizing the concepts of ratio, proportion, and percent. Implement concepts with and without the use of calculators. (7)
1, 2, 3, 4	**2.a**	Solve one-step equations involving addition and subtraction with non-negative rational numbers and solutions. (6)
All lessons	**2.b**	Use patterns and sequences to investigate and draw conclusions. (6)
2, 3	**2.c**	Write and solve one-step equations that represent real-world problems using the properties of equality. (7)
2, 3	**4.b**	Select and apply appropriate units for measuring length, mass, volume, and temperature in the standard (English and metric) systems. (6)
2, 3	**4.b**	Measure the dimensions of given items using standards (English and metric) measurements. (7)
2, 3	**4.c**	Convert units within a given measurement system. (6)
All lessons	**5.b**	Construct and interpret line graphs, bar graphs, and histograms. (6)
All lessons	**5.b**	Interpret and construct frequency tables, bar graphs, line graphs, histograms and stem-and-leaf plots from real-world data. (7)

Mississippi Competencies for Pre-Algebra		
Lesson	**Competency**	**Description**
1, 2, 3, 4	**1.b**	Solve real-life problems involving addition, subtraction, multiplication, and division of rational numbers (i.e., integers, decimals, fractions, and mixed numbers.)
1, 2, 3, 4	**1.d**	Add, subtract, multiply, and divide rational numbers (i.e., integers, decimals, fractions, and mixed numbers) with and without calculators.
2, 3	**1.i**	Solve proportions, including unit rate, scale, and measurement. Apply proportional reasoning to real-world problems.
1, 2	**4.a**	Convert, perform basic operations, and solve real-world application problems using standard measurements.
1, 2, 4, 5	**5.a**	Construct and interpret histograms, bar graphs, line graphs, frequency tables, circle graphs, stem-and-leaf plots, box-and-whisker plots, and scatter plots from given data.
All lessons	**5.b**	Predict patterns or generalize trends based on given data.
1	**5.c**	Explain the role of fair and bias sampling and its effect on data.
1, 2, 3, 4	**5.g**	Collect data. Select and justify the most appropriate representations to organize, record and communicate data.
Mississippi Competencies for Language Arts – Grades 6, 7, 8		
Lesson	**Competency**	**Description**
All lessons	**1.b**	The student will develop and apply expansive knowledge of words and word meanings to communicate.
All lessons	**2.b**	The student will analyze text to understand, infer, draw conclusions, synthesize, or evaluate information. (6 & 7)
All lessons	**2.b**	The student will infer, justify, evaluate, draw conclusions, predict outcomes, synthesize, and evaluate information. (8)
All lessons	**2.c**	The student will recognize or generate an appropriate summary of the events or ideas in literary text, literary nonfiction, and informational text citing text-based evidence. (6 & 7)
All lessons	**2.c**	The student will evaluate or revise a summarization or paraphrasing of the events or ideas in one or more literary texts, literary nonfiction and informational texts of increasing length and difficulty citing text-based evidence. (8)
All lessons	**3**	The student will express, communicate, evaluate, or exchange ideas effectively.
All lessons	**3.d**	The student will compose informational text clearly expressing a main idea with supporting details, including

		but not limited to, text containing chronological order, cause and effect, compare and contrast, or informal problem and solution. (6 & 7)
All lessons	**3.d**	The student will compose information text utilizing topic sentences, effective organization, transitions, vivid word choices, and specific supporting details, including but not limited to, texts containing chronological order, cause and effect, compare and contrast, informal problem and solution, or order of importance. (8)
All lessons	**3.f**	The student will compose texts of a variety of modes based on inquiry and research.
All lessons	**4.a**	The student will use Standard English grammar to compose or edit.
Mississippi Competencies for Comprehensive Health – Grades 6, 7, 8		
Lesson	**Competency**	**Description**
5	**1.c**	Describe the benefits and threats of technological advances to healthy living. (6)
3, 4, 5	**1.d**	Identify ways individuals can reduce risk factors related to communicable and chronic diseases. (8)
2, 3, 4, 5	**3.a**	Express personal feelings associated with making good or poor health related decisions. (6)
2, 3, 4, 5	**3.c**	Identify how a properly balanced diet and exercise influence healthy body weight. (7)
2, 3, 4, 5	**5.c**	Examine ways to promote positive behavior when dealing with individual differences. (8)
2, 3, 4, 5	**6.a**	Apply strategies and skills needed to attain goals that will contribute to a healthy lifestyle. (7)
2, 3, 4, 5	**6.a**	Analyze how nutrition affects physical, mental, and emotional development. (8)
2, 3, 4	**6.b**	Compare and contrast various diet plans and how they relate to personal health. (6)
2, 3, 5	**6.b**	Describe how personal health goals are influenced by changing information, abilities, priorities, and responsibilities. (7)
1, 2, 3, 5	**6.b**	Identify factors that influence individual decisions during adolescence. (8)
2, 3, 4, 5	**6.c**	Demonstrate the ability to apply decision-making models to health issues and problems. (7)
5	**6.d**	Develop a plan that addresses personal strengths, values, needs, and health risks. (7)
3, 5	**6.d**	Analyze how health related decisions are influenced by individuals, family, and community values. (8)
All lessons	**6.e**	Predict how decisions regarding health behaviors have consequences for self and others. (8)
All lessons	**7.a**	Analyze various communication methods that accurately express health opinions and issues. (6)
All lessons	**7.b**	Demonstrate the ability to work cooperatively. (7)
3, 5	**7.c**	Employ the ability to encourage and support others in making healthy choices. (6)