

THE SCIENCE OF ENERGY BALANCE: CALORIE INTAKE AND PHYSICAL ACTIVITY		
Michigan Grade Level Content Expectations: Middle School Science		
Lesson	Standard	GLCE
1, 3, 4	(C) I.1.1	Generate scientific questions about the world based on observation.
1, 3, 4	(C) I.1.2	Design and conduct scientific investigations.
1, 2, 3, 4	(C) I.1.3	Use tools and equipment appropriate to scientific investigations.
2, 3, 4	(C) I.1.4	Use metric measurement devices to provide consistency in an investigation.
1, 3, 4	(C) I.1.5	Use sources of information in support of scientific investigations.
2, 3, 4	(C) I.1.6	Write and follow procedures in the form of step-by-step instructions, formulas, flow diagrams, and sketches.
1, 3, 4	(R) II.1.1	Evaluate the strengths and weaknesses of claims, arguments, or data.
1, 2	(R) II.1.2	Describe limitations in personal knowledge.
1, 2, 3, 4	(R) II.1.3	Show how common themes of science, mathematics, and technology apply in real-world contexts.
3, 4	(LH) III.3.2	Describe how heredity and environment may influence/determine characteristics of an organism.
2, 3, 4	(PME) IV.1.2	Explain when length, mass, weight, density, area, volume or temperature are appropriate to describe the properties of an object or substance.
2, 3, 4	(PCM) IV.2.4	Describe common energy transformations in everyday situations.
Michigan Grade Level Content Expectations: Mathematics Grades 6 – 8		
Grade 6		
Lesson	Standard	GLCE
1, 2, 3, 4	N.FL.06.10	Add, subtract, multiply and divide positive rational numbers fluently.
4	N.MR.06.13	Solve contextual problems involving percentages such as sales taxes and tips.
2, 3, 4	N.FL.06.15	Solve applied problems that use the four operations with appropriate decimal numbers.
All lessons	A.PA.06.08	Understand that relationships between quantities can be suggested by graphs and tables.
2, 3	M.UN.06.01	Convert between basic units of measurement within a single measurement system, e.g., square inches to square feet.
Grade 7		
1, 2, 3, 4	N.FL.07.07	Solve problems involving operations with integers.
2, 3	N.FL.07.09	Estimate results of computations with rational numbers.

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1, 3, 4	A.PA.07.01	Recognize when information given in a table, graph, or formula suggest a proportional or linear relationship.
1, 4, 5	D.RE.07.01	Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box-and-whisker plots, and select appropriate representation to address specific questions.
Grade 8		
4	N.MR.08.07	Understand percent increase and percent decrease in both sum and product form, e.g., 3% increase of a quantity x is $x + .03x = 1.03x$.
4	N.MR.08.08	Solve problems involving percent increases and decreases.
1, 3, 4, 5	D.AN.08.02	Recognize practices of collecting and displaying data that may bias the presentation or analysis.
4	D.PR.08.06	Understand the difference between independent and dependent events, and recognize common misconceptions involving probability, e.g., Alice rolls a 6 on a die three times in a row; she is just as likely to roll a 6 on the fourth roll as she was on any previous roll.
Michigan Grade Level Content Expectations: English Language Arts Grades 6 – 8		
Lesson	Standard	GLCE
1, 3, 4	R.WS.06.01 R.WS.07.01 R.WS.08.01	Explain and use word structure, sentence structure, and prediction to aid in decoding and understanding the meanings of words encountered in context.
1, 3, 4	R.WS.06.05 R.WS.07.05 R.WS.08.05	Acquire and apply strategies to identify unknown words and construct meaning.
All lessons	R.WS.06.07 R.WS.07.07 R.WS.08.07	In context, determine the meaning of words and phrases including: regional idioms, literary and technical terms, and content vocabulary using strategies including connotation, denotation, and authentic content-related resources (6 cross-cultural expressions, mathematical expressions, scientific procedures, and literary terms using strategies and authentic content-related resources (7); content area vocabulary and literary terms using strategies including activating prior knowledge, using text features/structures, and authentic content-related resources. (8)
1, 3, 4	R.IT.06.01 R.IT.07.01 R.IT.08.01	Analyze the structure, elements, features, style, and purpose of informational genre, including: research reports, “how-to” articles, and essays (6); persuasive essay, research report, brochure, personal correspondence, autobiography and biography (7); comparative essays, newspaper writings, technical writings, and persuasive essays. (8)
All lessons	R.CM.06.01 R.CM.07.01 R.CM.08.01	Connect personal knowledge, experiences, and understanding of the world to themes and perspectives in text through oral and written responses.
1, 3, 4	R.CM.06.02 R.CM.07.02 R.CM.08.02	Retell through concise summarization grade-level narrative and informational text.

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All lessons	R.CM.06.03 R.CM.07.03 R.CM.08.03	Analyze global themes, universal truths and principles within and across texts to create a deeper understanding by drawing conclusions, making inferences, and synthesizing.
All lessons	R.CM.06.04 R.CM.07.04 R.CM.08.04	Apply significant knowledge from grade-level science, social studies, and mathematics texts.
1, 3, 4	R.MT.06.01 R.MT.07.01 R.MT.08.01	Self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.
5	W.GN.06.02	Write a personal, persuasive, or comparative essay that includes organizational patterns supporting key ideas.
1, 3, 4	W.GN.06.03 W.GN.07.03 W.GN.08.03	Formulate research questions using multiple resources and perspectives that allow them to organize, analyze, and explore problems and pose solutions that culminate in a final presented project using the writing process. (6) Formulate research questions using multiple resources, perspective, and arguments/counter-arguments to develop a thesis statement that culminates in a final presented project using the writing process. (7) Formulate research questions that demonstrate critical evaluation of multiple resources, perspectives and arguments/counter-arguments that culminate in a presented final project using the writing process. (8)
1, 3, 4	W.PR.06.01 W.PR.07.01 W.PR.08.01	Set a purpose, consider audience, and replicate authors' styles and patterns when writing a narrative or informational piece.
1, 3, 4, 5	W.PR.06.04	Draft focused ideas for a specific purpose using multiple paragraphs, sentence variety, and voice to meet the needs of an audience (e.g., word choice, level of formality, and use of example) when writing compositions.
1, 3, 4, 5	W.PS.06.01 W.PS.07.01 W.PS.08.01	Exhibit personal style and voice to enhance the written message in both narrative (e.g., personification, humor, element of surprise) and informational writing (e.g., emotional appeal, strong opinion, credible support).
1, 3, 4, 5	W.GR.06.01 W.GR.07.01 W.GR.08.01	In the context of writing, correctly use style conventions (e.g., Modern Language Association Handbook) and a variety of grammatical structures in writing.
1, 3, 4, 5	W.SP.06.01 W.SP.08.01	In the context of writing: correctly spell frequently encountered and frequently misspelled words (6); use correct spelling conventions. (8)
1, 3, 4, 5	W.HW.06.01 W.HW.07.01 W.HW.08.01	Write neat and legible compositions.
3, 4	S.CN.06.01 S.CN.07.01 S.CN.08.01	Adjust their use of language to communicate effectively with a variety of audiences and for different purposes by asking and responding to questions and remarks to engage the audience when presenting (6); by using specialized language related to a topic and selecting words carefully to achieve precise meaning when presenting (7); by using enunciation to emphasize key ideas and concepts when presenting. (8)

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3, 4	L.CN.06.01 L.CN.08.01	Respond to, evaluate, and analyze the speaker's effectiveness and content when listening to or viewing a variety of speeches and presentations. (6) Analyze the main idea, significant details, fact and opinion, bias, propaganda, argumentation, or support when listening to or viewing a variety of speeches and presentations. (8)
3, 4	L.CN.06.02 L.CN.07.02 L.CN.08.02	Listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.
All lessons	L.RP.06.01	Listen to or view knowledgeably a variety of genre to summarize, take note on key points, and ask clarifying questions.
All lessons	L.RP.06.05 L.PR.07.05 L.PR.08.05	Respond to multiple text types when listened to or viewed knowledgeably, by discussing, illustrating, and/or writing in order to compare/contrast similarities and differences in idea, form, and style to evaluate quality and to identify personal and universal themes (6); and offer opinions or solutions. (7 & 8)
Michigan Grade Level Content Expectations: Health Education – Grades 6 — 8		
Grade 6		
Lesson	Standard	GLCE
1, 2, 3, 5	1.1	Analyze the benefits of healthy eating and being physically active.
1, 2, 3, 5	1.3	Explain how weight management is influenced by healthy eating and being physically active.
2, 3	1.4	Describe the federal dietary guidelines and the amount of physical activity recommended for one's age in order to achieve health benefits.
2, 3	1.5	Describe strategies for dealing with personal preferences, restrictions, and barriers related to healthy eating, adequate sleep, and physical activity.
1, 3, 4	1.6	Describe environmental influences that encourage or discourage physical activity.
1, 2, 3, 5	1.8	Demonstrate the ability to support others to choose healthy foods and be physically active.
2, 3, 5	1.9	Describe the relationship of self perception, body image, body weight, and physical activity.
2, 3, 5	1.10	Analyze how one's own perception of weight influences healthy eating and being physically active.
2	2.13	Describe the negative health effects of caffeine, tobacco, and diet pills on rest, stress, athletic performance, and weight management.
3	4.6	Describe the decision making and problem solving steps.
3	4.7	Demonstrate the ability to make a decision or solve a problem using criteria to evaluate solutions.
All lessons	4.10	Demonstrate effective listening strategies.
All lessons	4.11	Demonstrate the ability to use assertive communication skills appropriately.

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Grades 7 & 8		
Lesson	Standard	GLCE
1, 2, 3, 5	1.1	Summarize the benefits of healthy eating, being physical active, and keeping the body hydrated, and the potential consequences of not doing so.
2, 3, 5	1.2	Describe the federal dietary guidelines for teenagers, and the recommended amount of physical activity needed to achieve health benefits.
1, 2, 3	1.5	Demonstrate the ability to access resources regarding healthy weight management and unhealthy eating patterns; and assess the validity of the resources.
2, 3	1.7	Evaluate a typical day's food intake according to the federal dietary guidelines for teenagers.
1, 5	1.9	Analyze the influence of television, computer, and video games on physical activity.
1, 2, 3, 5	1.10	Assess personal barriers to healthy eating and being physically active, and develop practical solutions to remove these barriers.
2, 5	1.11	Make a personal plan for improving one's nutrition and incorporating physical activity into daily routines.
2, 3, 5	1.18	Demonstrate the ability to persuade peers to eat healthy and be physically active.
3	4.9	Demonstrate using the problem solving steps to solve a problem.
5	4.16	Evaluate behaviors, including one's own, to determine if they are examples of essential character traits.
1, 3, 4, 5	5.3	Locate resources in one's school and community, and on the Internet, related to personal health issues and concerns; and assess the validity of the resources.