

**2012 Science Textbook Approval Committee Consensus
Correlation to the 2010 Science Standards of Learning and Curriculum Framework – Life Science**

Text Title Science Fusion Life Science Publisher Holt McDougal, a division of Houghton Mifflin Harcourt Print _____ Digital _____ Combination X

Section I. Correlation with the 2010 Science Standards of Learning and Curriculum Framework Life Science Summary	Rating		
	Adequate	Limited	No Evidence
LS.1	X		
LS.1a	X		
LS.1b	X		
LS.1c	X		
LS.1d	X		
LS.1e	X		
LS.1f	X		
LS.1g	X		
LS.1h	X		
LS.1i	X		
LS.1j	X		
LS.2	X		
LS.2a	X		

Section I. Correlation with the 2010 Science Standards of Learning and Curriculum Framework Life Science Summary	Rating		
	Adequate	Limited	No Evidence
LS.2b	X		
LS.2c	X		
LS.2d	X		
LS.3	X		
LS.3a	X		
LS.3b	X		
LS.4	X		
LS.4a	X		
LS.4b	X		
LS.4c	X		
LS.4d	X		
LS.5	X		
LS.5a	X		

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	Adequate	Limited	No Evidence
LS.5b	X		
LS.5c	X		
LS.6	X		
LS.6a	X		
LS.6b	X		
LS.6c	X		
LS.6d	X		
LS.7	X		
LS.7a	X		
LS.7b	X		
LS.8	X		
LS.8a	X		
LS.8b	X		

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	Adequate	Limited	No Evidence
LS.8c	X		
LS.8d	X		
LS.8e	X		
LS.9	X		
LS.9a	X		
LS.9b	X		
LS.9c	X		
LS.10	X		
LS.10a	X		
LS.10b	X		
LS.10c	X		
LS.11	X		
LS.11a	X		

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	Adequate	Limited	No Evidence
LS.11b	X		
LS.11c	X		
LS.11d	X		
LS.11e	X		
LS.12	X		
LS.12a	X		
LS.12b	X		
LS.12c	X		
LS.12d	X		
LS.12e	X		
LS.12f	X		
LS.13	X		
LS.13a	X		

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LS.13b	X		
LS.13c	X		

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Section II. Additional Criteria: Instructional Planning and Support	Degree of Correlation: Place an X to the right of your choice (Adequate, Limited , No Evidence) Must provide comments to support the ratings other than Adequate.		
1. The textbook is presented in an organized, logical manner and is appropriate for the age, grade, and maturity of the students.	Adequate X	Limited	No Evidence
	Textbook is logically organized and grade/age appropriate for students.	Textbook lacks consistency in organization and appropriateness for the grade/age of students.	Textbook is not reasonably organized and is inappropriate for the grade/age of the students.
2. The textbook is organized appropriately within and among units of study.	Comments:		
	Adequate X	Limited	No Evidence
Scope and sequence is easy to read and understand.	Scope and sequence is confusing and not easy to understand.	Scope and sequence is difficult to read and understand.	3. The format design includes titles, subheadings, and appropriate cross-referencing for ease of use.
Comments:			
Adequate X	Limited	No Evidence	
Organizational properties of the textbook assist in understanding and processing content.	Organizational properties of the textbook offer limited assistance in understanding and processing content.	Organizational properties of the textbook do not assist in understanding and processing content.	
Comments:			

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Section II. Additional Criteria: Instructional Planning and Support	Degree of Correlation: Place an X to the right of your choice (Adequate, Limited , No Evidence) Must provide comments to support the ratings other than Adequate.		
4. The writing style, syntax, and vocabulary are appropriate.	Adequate X	Limited	No Evidence
	Readability is appropriate for the grade level. Writing style and syntax are varied and appropriate to enhance student understanding. Vocabulary consists of both familiar and challenging words.	Readability may be appropriate but is inconsistent throughout the text. Writing style and syntax may be inappropriate or lack variety, offering limited support for student understanding. Vocabulary may be too challenging or too familiar.	Readability is not appropriate for the grade level. Writing style and syntax are often inappropriate and lack variety to enhance student understanding. Vocabulary is too challenging or unfamiliar.
	Comments:		
5. Graphics and illustrations are appropriate.	Adequate X	Limited	No Evidence
	Visuals are accurate, support the text, and enhance student understanding.	Visuals are somewhat unclear and offer limited support for the text and student understanding.	Visuals are inaccurate, do not support the text, and do not enhance student understanding.
	Comments:		
6. Sufficient, high-quality instructional strategies are provided to promote depth of understanding.	Adequate X	Limited	No Evidence
	Materials (investigations, laboratories, and inquiry activities) provide students with opportunities to integrate skills and concepts.	Materials (investigations, laboratories, and inquiry activities) provide students with limited opportunities to integrate skills and concepts.	Materials (investigations, laboratories, and inquiry activities) provide students with no opportunities to integrate skills and concepts.
	Comments:		

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
LS.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which	X		
a) data are organized into tables showing repeated trials and means;	X		
b) a classification system is developed based on multiple attributes;	X		
c) triple beam and electronic balances, thermometers, metric rulers, graduated cylinders, and probeware are used to gather data;	X		
d) models and simulations are constructed and used to illustrate and explain phenomena;	X		
e) sources of experimental error are identified;	X		
f) dependent variables, independent variables, and constants are identified;	X		
g) variables are controlled to test hypotheses, and trials are repeated;	X		
h) data are organized, communicated through graphical representation, interpreted, and used to make predictions;	X		
i) patterns are identified in data and are interpreted and evaluated; and	X		

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
LS.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which	X		
j) current applications are used to reinforce life science concepts.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
LS.2 The student will investigate and understand that all living things are composed of cells. Key concepts include	X		
a) cell structure and organelles;	X		
b) similarities and differences between plant and animal cells;	X		
c) development of cell theory; and	X		
d) cell division.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
LS.3 The student will investigate and understand that living things show patterns of cellular organization. Key concepts include	X		
a) cells, tissues, organs, and systems; and	X		
b) patterns of cellular organization and their relationship to life processes in living things.	X		
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Science Standard of Learning	Rating Scale Please indicate the rating for each by placing an X in the appropriate cell.		
	Adequate	Limited	No Evidence
LS.4 The student will investigate and understand how organisms can be classified. Key concepts include	X		
a) the distinguishing characteristics of domains of organisms;	X		
b) the distinguishing characteristics of kingdoms of organisms;	X		
c) the distinguishing characteristics of major animal phyla and plant divisions; and	X		
d) the characteristics that define a species.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.5 The student will investigate and understand the basic physical and chemical processes of photosynthesis and its importance to plant and animal life. Key concepts include	X		
a) energy transfer between sunlight and chlorophyll;	X		
b) transformation of water and carbon dioxide into sugar and oxygen; and	X		
c) photosynthesis as the foundation of virtually all food webs.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.6 The student will investigate and understand that organisms within an ecosystem are dependent on one another and on nonliving components of the environment. Key concepts include	X		
a) the carbon, water, and nitrogen cycles;	X		
b) interactions resulting in a flow of energy and matter throughout the system;	X		
c) complex relationships within terrestrial, freshwater, and marine ecosystems; and	X		
d) energy flow in food webs and energy pyramids.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.7 The student will investigate and understand that interactions exist among members of a population. Key concepts include	X		
a) competition, cooperation, social hierarchy, territorial imperative; and	X		
b) influence of behavior on a population.	X		
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	Adequate	Limited	No Evidence
LS.8 The student will investigate and understand interactions among populations in a biological community. Key concepts include	X		
a) the relationships among producers, consumers, and decomposers in food webs;	X		
b) the relationship between predators and prey;	X		
c) competition and cooperation;	X		
d) symbiotic relationships; and	X		
e) niches.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.9 The student will investigate and understand how organisms adapt to biotic and abiotic factors in an ecosystem. Key concepts include	X		
a) differences between ecosystems and biomes;	X		
b) characteristics of land, marine, and freshwater ecosystems; and	X		
c) adaptations that enable organisms to survive within a specific ecosystem.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.10 The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic, change over time, and respond to daily, seasonal, and long-term changes in their environment. Key concepts include	X		
a) phototropism, hibernation, and dormancy;	X		
b) factors that increase or decrease population size; and;	X		
c) eutrophication, climate changes, and catastrophic disturbances.	X		
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	Adequate	Limited	No Evidence
LS.11 The student will investigate and understand the relationships between ecosystem dynamics and human activity. Key concepts include	X		
a) food production and harvest;	X		
b) change in habitat size, quality, or structure;	X		
c) change in species competition;	X		
d) population disturbances and factors that threaten or enhance species survival; and	X		
e) environmental issues.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			

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	Adequate	Limited	No Evidence
LS.12 The student will investigate and understand that organisms reproduce and transmit genetic information to new generations. Key concepts include	X		
a) the structure and role of DNA;	X		
b) the function of genes and chromosomes;	X		
c) genotypes and phenotypes;	X		
d) characteristics that can and cannot be inherited;	X		
e) genetic engineering and its applications; and	X		
f) historical contributions and significance of discoveries related to genetics.	X		
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	Adequate	Limited	No Evidence
LS.13 The student will investigate and understand that populations of organisms change over time. Key concepts include	X		
a) the relationships of mutation, adaptation, natural selection, and extinction;	X		
b) evidence of evolution of different species in the fossil record; and	X		
c) how environmental influences, as well as genetic variation, can lead to diversity of organisms.	X		
Comments: Provide comments to support “limited” or “no evidence” ratings.			