

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

Text Title Science Fusion Four 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  Grade Four Summary	Rating		
	Adequate	Limited	No Evidence
4.1	X		
4.1a	X		
4.1b	X		
4.1c	X		
4.1d	X		
4.1e	X		
4.1f	X		
4.1g	X		
4.1h	X		
4.1i	X		
4.1j	X		
4.1k	X		
4.1l	X		

Section I. Correlation with the 2010 Science Standards of Learning and Curriculum Framework  Grade Four Summary	Rating		
	Adequate	Limited	No Evidence
4.1m	X		
4.2	X		
4.2a	X		
4.2b	X		
4.2c	X		
4.2d	X		
4.3	X		
4.3a	X		
4.3b	X		
4.3c	X		
4.3d	X		
4.3e	X		
4.3f	X		

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	Adequate	Limited	No Evidence
4.4	X		
4.4a	X		
4.4b	X		
4.4c	X		
4.4d	X		
4.5	X		
4.5a	X		
4.5b	X		
4.5c	X		
4.5d	X		
4.5e	X		
4.5f	X		
4.6	X		

Section I. Correlation with the 2010 Science Standards of Learning and Curriculum Framework  Grade Four Summary	Rating		
	Adequate	Limited	No Evidence
4.6a	X		
4.6b	X		
4.6c	X		
4.7	X		
4.7a	X		
4.7b	X		
4.7c	X		
4.8	X		
4.8a	X		
4.8b	X		
4.8c	X		
4.8d	X		
4.8e		X	

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	Adequate	Limited	No Evidence
4.9	X		
4.9a	X		
4.9b	X		
4.9c	X		
4.9d	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.	<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>
	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.
	Comments:		
2. The textbook is organized appropriately within and among units of study.	<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>
	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.
	Comments:		
3. The format design includes titles, subheadings, and appropriate cross-referencing for ease of use.	<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>
	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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<b>Section II. Additional Criteria: Instructional Planning and Support</b>	<b>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.</b>		
4. The writing style, syntax, and vocabulary are appropriate.	<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>
	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.
5. Graphics and illustrations are appropriate.	Comments:		
	<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>
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.	6. Sufficient, high-quality instructional strategies are provided to promote depth of understanding.
Comments:			
<b>Adequate X</b>	<b>Limited</b>	<b>No Evidence</b>	6. Sufficient, high-quality instructional strategies are provided to promote depth of understanding.
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
4.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which	X		
a) distinctions are made among observations, conclusions, inferences, and predictions;	X		
b) objects or events are classified and arranged according to characteristics or properties;	X		
c) appropriate instruments are selected and used to measure length, mass, volume, and temperature in metric units;	X		
d) appropriate instruments are selected and used to measure elapsed time;	X		
e) predictions and inferences are made, and conclusions are drawn based on data from a variety of sources;	X		
f) independent and dependent variables are identified;	X		
g) constants in an experimental situation are identified;	X		
h) hypotheses are developed as cause and effect relationships;	X		
i) data are collected, recorded, analyzed, and displayed using bar and basic line graphs;	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
4.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which	X		
j) numerical data that are contradictory or unusual in experimental results are recognized;	X		
k) data are communicated with simple graphs, pictures, written statements, and numbers;	X		
l) models are constructed to clarify explanations, demonstrate relationships, and solve needs; and	X		
m) current applications are used to reinforce science concepts.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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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
4.2 The student will investigate and understand characteristics and interactions of moving objects. Key concepts include	X		
a) motion is described by an object’s direction and speed;	X		
b) changes in motion are related to force and mass;	X		
c) friction is a force that opposes motion; and	X		
d) moving objects have kinetic energy.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			



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	Please indicate the rating for each by placing an X in the appropriate cell.		
	Adequate	Limited	No Evidence
4.3 The student will investigate and understand the characteristics of electricity. Key concepts include	X		
a) conductors and insulators;	X		
b) basic circuits;	X		
c) static electricity;	X		
d) the ability of electrical energy to be transformed into light and motion, and to produce heat;	X		
e) simple electromagnets and magnetism; and	X		
f) historical contributions in understanding electricity.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
4.4 The student will investigate and understand basic plant anatomy and life processes. Key concepts include	X		
a) the structures of typical plants and the function of each structure;	X		
b) processes and structures involved with plant reproduction;	X		
c) photosynthesis; and	X		
d) adaptations allow plants to satisfy life needs and respond to the environment.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
4.5 The student will investigate and understand how plants and animals, including humans, in an ecosystem interact with one another and with the nonliving components in the ecosystem. Key concepts include	X		
a) plant and animal adaptations;	X		
b) organization of populations, communities, and ecosystems and how they interrelate;	X		
c) flow of energy through food webs;	X		
d) habitats and niches;	X		
e) changes in an organism’s niche at various stages in its life cycle; and	X		
f) influences of human activity on ecosystems.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
4.6 The student will investigate and understand how weather conditions and phenomena occur and can b predicted. Key concepts include	X		
a) weather phenomena;	X		
b) weather measurements and meteorological tools; and	X		
c) use of weather measurements and weather phenomena to make weather predictions.	X		
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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	Adequate	Limited	No Evidence
4.7 The student will investigate and understand the organization of the solar system. Key concepts include	X		
a) the planets in the solar system;	X		
b) the order of the planets in the solar system; and	X		
c) the relative sizes of the planets.	X		
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Science Standard of Learning	Rating Scale		
	Adequate	Limited	No Evidence
4.8 The student will investigate and understand the relationships among Earth, the moon, and the sun. Key concepts include	X		
a) the motions of Earth, the moon, and the sun;	X		
b) the causes for Earth’s seasons;	X		
c) the causes for the phases of the moon;	X		
d) the relative size, position, age, and makeup of Earth, the moon, and the sun; and	X		
e) historical contributions in understanding the Earth-moon-sun system.		X	
<b>Comments: Provide comments to support “limited” or “no evidence” ratings.</b>			

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	Adequate	Limited	No Evidence
4.9 The student will investigate and understand important Virginia natural resources. Key concepts include	X		
a) watersheds and water resources;	X		
b) animals and plants;	X		
c) minerals, rocks, ores, and energy sources; and	X		
d) forests, soil, and land.	X		
<b>Comments: Provide comments to support "limited" or "no evidence" ratings.</b>			