



Investigating Earth Systems Correlation to the Wisconsin Model Academic Standards, Science 5-8

Standard A: Science Connections

Standards and Expected Performances	Location/Page where Standard is found
A.8.1 Develop their understanding of the science themes by using the themes to frame questions about science-related issues and problems	RL1-6, RL7-14, RL15-28, RL34-44, RL45-51, RL52-57, DP1-7, DP8-21, DP2-29, DP30-40, F1-7, A1-4, A15-25, S1-5, S6-11, S12-16, S26-34, O1-8, MM9-22, W21-31, ER1-9
A.8.2 Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems	RL15-28, DP61-69
A.8.3 Defend explanations and models by collecting and organizing evidence that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them	RL1-6, RL7-14, RL15-28, RL45-51, RL52-57, DP8-21, DP22-29, DP30-40, DP61-69, F1-7, A15-25, A55-72, S1-5, S26-34, O1-8, MM9-22, W21-31
A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time	RL15-28, RL34-44, RL45-51, DP8-21, DP22-29, DP30-40, A15-25, S1-5, S12-16, S26-34, MM9-22, W21-31
A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)	DP8-21, DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, CW79-87

A.8.6 Use models and explanations to predict actions and events in the natural world	DP1-7, DP22-29, DP1-60, ER1-9, F1-7, F8-18, S26-34, RL15-28, RL34-44, RL45-51, W15-20, W21-31, CW48-59, CW69-78, O9-18, O29-38, O39-63
A.8.7 Design real or thought investigations to test the usefulness and limitations of a model	RL15-28, RL45-51, DP1-7, DP8-21, DP22-29, DP30-40, A15-25, S1-5, S26-34, MM9-22, W21-31
A.8.8. Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world	A15-25, S26-34, S35-41, RL7-14, RL15-28, RL34-44, RL45-51, DP22-29, DP51-60, ER1-9, ER21-29, ER40-48, F41-48, F49-56, F57-62, F1-7, F19-27, F28-40, W21-31, CW22-36, CW69-78, O9-18, O19-28

Standard B: Nature of Science

Standards and Expected Performances	Location/Page where Standard is found
B.8.1 Describe how scientific knowledge and concepts have changed over time in the earth and space, life and environmental, and physical sciences	RL52-57, DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, MM23-32, W48-56, CW79-87
B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical sciences and identify the people, cultures, and conditions that led to these developments	DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, MM23-32, CW37-47, W48-56, CW79-87
B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications	RL1-6, RL7-14, RL15-28, RL29-33, RL34-44, DP8-21, A26-32, A33-45, A55-72, O29-38, O47-58, MM9-22, W21-31, W57-62
B.8.4 Describe types of reasoning and evidence used outside of science to draw conclusions about the natural world	RL15-28, RL45-51, DP1-7, DP8-21, DP22-29, DP30-40, A15-25, S1-5, S26-34, MM9-22, W21-31
B.8.5 Explain ways in which science knowledge is shared, checked, and extended, and show how these processes change over time	DP8-21, DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, CW79-87

B.8.6 Explain the ways in which scientific knowledge is useful and also limited when applied to social issues	RL52-57, DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, MM23-32, W48-56, CW79-87
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Standard C: Science Inquiry

Standards and Expected Performances	Location/Page where Standard is found
C.8.1 Identify* questions they can investigate* using resources and equipment they have available	RL1-6, RL7-14, RL15-28, RL34-44, RL45-51, RL52-57, DP1-7, DP8-21, DP2-29, DP30-40, F1-7, A1-4, A15-25, S1-5, S6-11, S12-16, S26-34, O1-8, MM9-22, W21-31, ER1-9
C.8.2 Identify* data and locate sources of information including their own records to answer the questions being investigated	RL7-14, RL52-57, DP61-69, F1-7, A1-4, A55-72, A73-77, S1-5, S42-46, O59-63, ER1-9
C.8.3 Design and safely conduct investigations* that provide reliable quantitative or qualitative data, as appropriate, to answer their questions	RL15-28, RL29-33, DP8-21, DP22-29, A15-25, S1-5, S12-16, S26-34, O1-8, MM9-12, W21-31, ER1-9
C.8.4 Use inferences* to help decide possible results of their investigations, use observations to check their inferences	RL1-6, RL7-14, RL15-28, RL45-51, RL52-57, DP8-21, DP22-29, DP30-40, DP61-69, F1-7, A15-25, A55-72, S1-5, S26-34, O1-8, MM9-22, W21-31
C.8.5 Use accepted scientific knowledge, models*, and theories* to explain* their results and to raise further questions about their investigations*	RL7-14, RL15-28, RL34-44, RL45-51, DP8-21, DP22-29, DP30-40, A15-25, S1-5, S12-16, S26-34, MM9-22, W21-31
C.8.6 State what they have learned from investigations*, relating their inferences* to scientific knowledge and to data they have collected	RL7-14, RL15-28, RL34-44, DP8-21, DP22-29, DP30-40, F1-7, A1-4, A15-25, A46-54, S1-5, S12-16, S26-34, O1-8, MM9-22, W21-31

C.8.7 Explain* their data and conclusions in ways that allow an audience to understand the questions they selected for investigation* and the answers they have developed	RL1-6, RL15-28, RL45-51, DP8-21, DP22-29, DP30-40, DP61-69, F1-7, A15-25, S1-5, S12-16, S26-34, MM9-22, W21-31
C.8.8 Use computer software and other technologies to organize, process, and present their data	A46-54, A73-76, DP61-69, ER61-70
C.8.9 Evaluate*, explain*, and defend the validity of questions, hypotheses, and conclusions to their investigations*	RL1-6, RL15-28, RL45-51, DP8-21, DP22-29, DP30-40, DP61-69, F1-7, A15-25, S1-5, S12-16, S26-34, MM9-22, W21-31, ER61-70
C.8.10 Discuss the importance of their results and implications of their work with peers, teachers, and other adults	RL15-28, DP8-21, DP22-29, DP30-40, F1-7, A1-4, A15-25, A26-32, A33-45, A46-54, A73-76, S1-5, S12-16, S26-34, MM9-22, W21-31, ER10-20
C.8.11 Raise further questions which still need to be answered	RL15-28, RL29-33, DP8-21, DP61-69, A1-4, A15-25, S1-5, S26-34, MM9-22, W21-31

Standard E: Earth and Space Science

Standards and Expected Performances	Location/Page where Standard is found
STRUCTURE OF EARTH SYSTEM	
E.8.1 Using the science themes, explain and predict changes in major features of land, water, and atmospheric systems	RL7-14, RL15-28, RL29-33, RL34-44, RL45-51, RL52-57, RL58-62, DP8-21, DP41-50, DP51-60, DP61-69, S6-11, S17-25, S26-34, S35-41, O9-18, O39-46, MM47-55, W9-14, W15-20, W21-31, CW1-13, CW31-36, CW37-47, CW48-59, CW22-36

E.8.2 Describe underlying structures of the earth that cause changes in the earth's surface	DP8-21, DP41-50, DP51-60, S17-25, O19-28, O39-46, ER21-29, ER40-48, DP22-29, DP30-40, DP61-69, CW69-78, CW79-87
E.8.3 Using the science themes during the process of investigation, describe climate, weather, ocean currents, soil movements and changes in the forces acting on the earth	RL7-14, RL15-28, RL29-33, RL34-44, RL45-51, RL52-57, RL58-62, DP8-21, DP51-60, DP61-69, S6-11, S17-25, S26-34, S35-41, O9-18, O39-46, MM47-55, W9-14, W15-20, W21-31
E.8.4 Using the science themes, analyze the influence living organisms have had on the earth's systems, including their impact on the composition of the atmosphere and the weathering of rocks	RL45-51, RL52-57, RL58-63, DP41-50, DP61-69, S26-34, S35-41, S42-46, O9-18, O47-58, O59-63, W1-8, W42-47, W48-56, W57-62
EARTH'S HISTORY	
E.8.5 Analyze the geologic and life history of the earth, including change over time, using various forms of scientific evidence	RL7-14, RL15-28, RL29-33, RL34-44, RL45-51, RL52-57, RL58-62, DP8-21, DP51-60, DP61-69, S6-11, S17-25, S26-34, S35-41, O9-18, O39-46, MM47-55, W9-14, W15-20, W21-31, F1-7, F8-18, S17-25, O39-46, MM1-8, CW69-78, CW79-87, ER21-29
E.8.6 Describe through investigations the use of the earth's resources by humans in both past and current cultures, particularly how changes in the resources used for the past 100 years are the basis for efforts to conserve and recycle renewable and non-renewable resources	ER1-9, ER10-20, ER21-29, ER30-39, ER40-48, ER49-60, ER61-70, RL45-51, RL52-57, RL58-63, DP41-50, DP61-69, S26-34, S35-41, S42-46, O9-18, O47-58, O59-63, W1-8, W42-47, W48-56, W57-62, MM23-32
EARTH IN THE SOLAR SYSTEM	
E.8.7 Describe the general structure of the solar system, galaxies, and the universe, explaining the nature of the evidence used to develop current models of the universe	A5-9, A15-25, A26-32, A33-45, A46-54, A55-72, A73-77

E.8.8 Using past and current models of the structure of the solar system, explain the daily, monthly, yearly, and long-term cycles of the earth, citing evidence gained from personal observation as well as evidence used by scientists	A5-9, A33-45, A15-25, A26-32
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Standard G: Science Applications

Standards and Expected Performances	Location/Page where Standard is found
G.8.1 Identify* and investigate* the skills people need for a career in science or technology and identify the academic courses that a person pursuing such a career would need	DP51-60, A1-4, A55-72, O29-38, MM23-32
G.8.2 Explain* how current scientific and technological discoveries have an influence on the work people do and how some of these discoveries also lead to new careers	DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, W48-56, CW79-87
G.8.3 Illustrate* the impact that science and technology have had, both good and bad, on careers, systems, society, environment, and quality of life	DP51-60, DP61-69, A1-4, A55-72, A73-77, O29-38, MM23-32, CW37-47, W48-56, CW79-87
G.8.4 Propose a design (or re-design) of an applied science model or a machine that will have an impact in the community or elsewhere in the world and show* how the design (or re-design) might work, including potential side-effects	ER1-9, ER49-54, W57-62, ER61-65, RL45-51, RL52-57, RL58-63, DP41-50, DP61-69, S26-34, S35-41, S42-46, O9-18, O47-58, O59-63, W1-8, W42-47, W48-56, W57-62
G.8.5 Investigate* a specific local problem to which there has been a scientific or technological solution, including proposals for alternative courses of action, the choices that were made, reasons for the choices, any new problems created, and subsequent community satisfaction	DP61-69, A55-72, A73-77, S26-34, S35-41, S42-46, O47-58, O59-63, W1-8, W42-47, W48-56, W57-62
G.8.6 Use current texts, encyclopedias, source books, computers, experts, the popular press, or other relevant sources to identify* examples of how scientific discoveries have resulted in new technology	RL7-14, RL52-57, DP61-69, F1-7, A1-4, A55-72, A73-77, S1-5, S42-46, O59-63, ER1-9
G.8.7 Show* evidence* of how science and technology are interdependent, using some examples drawn from personally conducted investigations*	DP61-69, A55-72, S26-34, S35-41, S42-46, O29-38, O59-63, W57-62, MM23-32, CW37-47

Standard H: Science in Personal and Social Perspectives

Standards and Expected Performances	Location/Page where Standard is found
H.8.1 Evaluate the scientific evidence used in various media (for example, television, radio, Internet, popular press, and scientific journals) to address a social issue, using criteria of accuracy, logic, bias, relevance of data, and credibility of sources	S8, P3, CW79-87, W25, W44, RL7-14, RL52-57, DP61-69, F1-7, A1-4, A55-72, A73-77, S1-5, S42-46, O59-63, ER1-9
H.8.2 Present a scientific solution to a problem involving the earth and space, life and environmental, or physical sciences and participate in a consensus-building discussion to arrive at a group decision	DP61-69, A55-72, S26-34, S35-41, S42-46, O59-63, W57-62
H.8.3 Understand the consequences of decisions affecting personal health and safety	RL45-51, RL52-57, RL58-63, DP41-50, DP61-69, S26-34, S35-41, S42-46, O9-18, O47-58, O59-63, W1-8, W42-47, W48-56, W57-62