Main Criteria: Cogent Education's Interactive Cases
Secondary Criteria: Wisconsin Model Academic Standards
Subject: Science
Grades: 9, 10, 11, 12

Title	Common Among States	Wisconsin Model Academic Standards	Wisconsin Model Academic Standards	Wisconsin Model Academic Standards	Wisconsin Model Academic Standards
Action Potential -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.12. - The Behavior of Organisms: Trace how the sensory and nervous systems of various organisms react to the internal and external environment and transmit survival or learning stimuli to cause changes in behavior or responses. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. WI.CC.9-10.RST. - Reading Standards for Literacy in Science and Technical Subjects - Key Ideas and Details 9-10.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. 9-10.RST.5. - Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. 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		9-10.RST.10. - By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently. WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects 9-10.WHST.1. - Write arguments focused on discipline-specific content. 9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. 9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. 9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.RST.10. - By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently. 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F.12.3. - The Molecular Basis of Heredity: Explain current scientific ideas and information about the molecular and genetic basis of heredity. F.12.12. - The Behavior of Organisms: Trace how the sensory and nervous systems of various organisms react to the internal and external environment and transmit survival or learning stimuli to cause changes in behavior or responses. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. 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WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects 9-10.WHST.1. - Write arguments focused on discipline-specific content. 9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. 9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. 9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement)	9-10.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. 9-10.RST.5. - Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). 9-10.RST.10. - By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently. 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		9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
Diffusion -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.2. - The Cell: Understand how cells differentiate and how cells are regulated. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. 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		9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
Filtration -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.2. - The Cell: Understand how cells differentiate and how cells are regulated. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. 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WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects 9-10.WHST.1. - Write arguments focused on discipline-specific content. 9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. 9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. 9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	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		9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
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		9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic). 11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
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		9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. 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Nitrogen Cycle -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. 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H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. WI.CC.9-10.RST. - Reading Standards for Literacy in Science and Technical Subjects - Key Ideas and Details 9-10.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. 9-10.RST.5. - Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). 9-10.RST.10. - By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently. 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Osmosis -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions.

		C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.2. - The Cell: Understand how cells differentiate and how cells are regulated. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. WI.CC.9-10.RST. - Reading Standards for Literacy in Science and Technical Subjects - Key Ideas and Details 9-10.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. 9-10.RST.5. - Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). 9-10.RST.10. - By the end of grade 10, read and comprehend science/technical texts in the grades 9-10 text complexity band independently and proficiently. WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects 9-10.WHST.1. - Write arguments focused on discipline-specific content. 9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. 9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. 9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	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		9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. 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Photosynthesis -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations.	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations.

		C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.D. - Physical Science: Students in Wisconsin will demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact. D.12.6. - Chemical Reactions: Through investigations, identify the types of chemical interactions, including endothermic, exothermic, oxidation, photosynthesis, and acid/base reactions. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.2. - The Cell: Understand how cells differentiate and how cells are regulated. F.12.3. - The Molecular Basis of Heredity: Explain current scientific ideas and information about the molecular and genetic basis of heredity. F.12.8. - The Interdependence of Organisms: Using the science themes, infer changes in ecosystems prompted by the introduction of new species, environmental conditions, chemicals, and air, water, or earth pollution. F.12.9. - Matter, Energy and Organization in Living Systems: Using the science themes, investigate energy systems (related to food chains) to show how energy is stored in food (plants and animals) and how energy is released by digestion and metabolism. F.12.11. - Matter, Energy and Organization in Living Systems: Investigate how the complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain an organism. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. 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WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.2. - The Cell: Understand how cells differentiate and how cells are regulated. F.12.3. - The Molecular Basis of Heredity: Explain current scientific ideas and information about the molecular and genetic basis of heredity. F.12.8. - The Interdependence of Organisms: Using the science themes, infer changes in ecosystems prompted by the introduction of new species, environmental conditions, chemicals, and air, water, or earth pollution. F.12.9. - Matter, Energy and Organization in Living Systems: Using the science themes, investigate energy systems (related to food chains) to show how energy is stored in food (plants and animals) and how energy is released by digestion and metabolism. F.12.11. - Matter, Energy and Organization in Living Systems: Investigate how the complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain an organism. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. WI.CC.11-12.RST. - Reading Standards for Literacy in Science and Technical Subjects - Key Ideas and Details 11-12.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. 11-12.RST.5. - Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. 11-12.RST.9. - Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. 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		WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects	WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects	11-12.RST.10. - By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.	11-12.RST.10. - By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently.
		9-10.WHST.1. - Write arguments focused on discipline-specific content.	9-10.WHST.1. - Write arguments focused on discipline-specific content.	WI.CC.11-12.WHST. - Writing Standards for Literacy in Science and Technical Subjects	WI.CC.11-12.WHST. - Writing Standards for Literacy in Science and Technical Subjects
		9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.	9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence.	11-12.WHST.1. - Write arguments focused on discipline-specific content.	11-12.WHST.1. - Write arguments focused on discipline-specific content.
		9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.	9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns.	11-12.WHST.1.a. - Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.	11-12.WHST.1.a. - Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.
		9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	11-12.WHST.1.b. - Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.	11-12.WHST.1.b. - Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases.
		9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented.	9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented.	11-12.WHST.1.c. - Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.	11-12.WHST.1.c. - Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.
		9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	11-12.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented.	11-12.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented.
		9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.	9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.	11-12.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.	11-12.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
		9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.	9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.	11-12.WHST.2.a. - Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.	11-12.WHST.2.a. - Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
		9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.	9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts.	11-12.WHST.2.b. - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.	11-12.WHST.2.b. - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
		9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).	11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.	11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
		9-10.WHST.3. - (See note; not applicable as a separate requirement)	9-10.WHST.3. - (See note; not applicable as a separate requirement)	11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.	11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers.
		9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.	9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).	11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
		9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.3. - (See note; not applicable as a separate requirement)	11-12.WHST.3. - (See note; not applicable as a separate requirement)

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Synaptic Transmission -	WI	WI.A. - Science Connections: Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; form and function among scientific disciplines. A.12.7. - Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes. WI.C. - Science Inquiry: Students in Wisconsin will investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others. C.12.1. - When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations. C.12.2. - Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions. C.12.5. - Use the explanations and models found in the earth and space, life and environmental, and physical sciences to develop likely explanations for the results of their investigations. C.12.6. - Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand. WI.F. - Life and Environmental Science: Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. F.12.1. - The Cell: Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms. F.12.12. - The Behavior of Organisms: Trace how the sensory and nervous systems of various organisms react to the internal and external environment and transmit survival or learning stimuli to cause changes in behavior or responses. WI.H. - Science Applications: Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live. H.12.7. - When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning. WI.CC.9-10.RST. - Reading Standards for Literacy in Science and Technical Subjects - Key Ideas and Details 9-10.RST.1. - Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	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WI.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects 9-10.WHST.1. - Write arguments focused on discipline-specific content. 9-10.WHST.1.a. - Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. 9-10.WHST.1.b. - Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. 9-10.WHST.1.c. - Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 9-10.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 9-10.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 9-10.WHST.2.a. - Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 9-10.WHST.2.b. - Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 9-10.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. 9-10.WHST.2.f. - Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 9-10.WHST.3. - (See note; not applicable as a separate requirement) 9-10.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.	11-12.RST.5. - Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. 11-12.RST.9. - Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. 11-12.RST.10. - By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently. WI.CC.11-12.WHST. - Writing Standards for Literacy in Science and Technical Subjects 11-12.WHST.1. - Write arguments focused on discipline-specific content. 11-12.WHST.1.a. - Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. 11-12.WHST.1.b. - Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. 11-12.WHST.1.c. - Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 11-12.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 11-12.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 11-12.WHST.2.a. - Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 11-12.WHST.2.b. - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).	11-12.RST.5. - Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. 11-12.RST.9. - Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. 11-12.RST.10. - By the end of grade 12, read and comprehend science/technical texts in the grades 11-12 text complexity band independently and proficiently. WI.CC.11-12.WHST. - Writing Standards for Literacy in Science and Technical Subjects 11-12.WHST.1. - Write arguments focused on discipline-specific content. 11-12.WHST.1.a. - Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. 11-12.WHST.1.b. - Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. 11-12.WHST.1.c. - Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. 11-12.WHST.1.e. - Provide a concluding statement or section that follows from or supports the argument presented. 11-12.WHST.2. - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. 11-12.WHST.2.a. - Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. 11-12.WHST.2.b. - Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. 11-12.WHST.2.c. - Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12.WHST.2.d. - Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. 11-12.WHST.2.e. - Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).

		9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	9-10.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	11-12.WHST.3. - (See note; not applicable as a separate requirement) 11-12.WHST.3.a. - Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results. 11-12.WHST.4. - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

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