Main Criteria: Cogent Education's Interactive Cases
Secondary Criteria: New York Core Curriculum
Subject: Science
Grades: 9, 10, 11, 12

Title	Common Among States	New York Core Curriculum	New York Core Curriculum	New York Core Curriculum	New York Core Curriculum
Action Potential -	NY	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity. 1.S2.1. - Devise ways of making observations to test proposed explanations. 1.S2.2. - Refine research ideas through library investigations, including electronic information retrieval and reviews of the literature, and through peer feedback obtained from review and discussion. 1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. L.4.1: - Living things are both similar to and different from each other and from nonliving things. 4.1.2. - Describe and explain the structures and functions of the human body at different organizational levels (e.g., systems, tissues, cells, organelles). L.4.5: - Organisms maintain a dynamic equilibrium that sustains life. 4.5.1. - Explain the basic biochemical processes in living organisms and their importance in maintaining dynamic equilibrium.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. 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NY.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.2. - Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. 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.9. - Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. 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. NY.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.	4.5.3. - Relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multicelled organisms. 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		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.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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NY.CC.9-10.WHST. - Writing Standards for Literacy in Science and Technical Subjects	1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. 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The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. 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L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity. 1.S2.1. - Devise ways of making observations to test proposed explanations. 1.S2.2. - Refine research ideas through library investigations, including electronic information retrieval and reviews of the literature, and through peer feedback obtained from review and discussion. 1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. 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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.
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NY.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.	1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. L.4.5: - Organisms maintain a dynamic equilibrium that sustains life. 4.5.1. - Explain the basic biochemical processes in living organisms and their importance in maintaining dynamic equilibrium. 4.5.3. - Relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multicelled organisms. NY.P. - PHYSICAL SETTING / PHYSICS P.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. 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		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.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. 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Membrane Potential -	NY	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world.

		L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity. 1.S2.1. - Devise ways of making observations to test proposed explanations. 1.S2.2. - Refine research ideas through library investigations, including electronic information retrieval and reviews of the literature, and through peer feedback obtained from review and discussion. 1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. 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L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity. 1.S2.1. - Devise ways of making observations to test proposed explanations. 1.S2.2. - Refine research ideas through library investigations, including electronic information retrieval and reviews of the literature, and through peer feedback obtained from review and discussion. 1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. 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Nitrogen Cycle -	NY	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.

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L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. 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NY.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. 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Osmosis -	NY	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. L.1.S1: - SCIENTIFIC INQUIRY: The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. 1.S1.1. - Elaborate on basic scientific and personal explanations of natural phenomena, and develop extended visual models and mathematical formulations to represent one's thinking. 1.S1.2. - Hone ideas through reasoning, library research, and discussion with others, including experts. 1.S1.3. - Work toward reconciling competing explanations; clarify points of agreement and disagreement. 1.S1.4. - Coordinate explanations at different levels of scale, points of focus, and degrees of complexity and specificity, and recognize the need for such alternative representations of the natural world. L.1.S2: - SCIENTIFIC INQUIRY: Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity. 1.S2.1. - Devise ways of making observations to test proposed explanations. 1.S2.2. - Refine research ideas through library investigations, including electronic information retrieval and reviews of the literature, and through peer feedback obtained from review and discussion. 1.S2.3. - Develop and present proposals including formal hypotheses to test explanations; i.e., predict what should be observed under specific conditions if the explanation is true. 1.S2.4. - Carry out a research plan for testing explanations, including selecting and developing techniques, acquiring and building apparatus, and recording observations as necessary. L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. 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L.1.S3: - SCIENTIFIC INQUIRY: The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena. 1.S3.1. - Use various methods of representing and organizing observations (e.g., diagrams, tables, charts, graphs, equations, matrices) and insightfully interpret the organized data. 1.S3.3. - Assess correspondence between the predicted result contained in the hypothesis and actual result, and reach a conclusion as to whether the explanation on which the prediction was based is supported. L.4. - The Living Environment: Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. L.4.1: - Living things are both similar to and different from each other and from nonliving things. 4.1.2. - Describe and explain the structures and functions of the human body at different organizational levels (e.g., systems, tissues, cells, organelles). L.4.5: - Organisms maintain a dynamic equilibrium that sustains life. 4.5.1. - Explain the basic biochemical processes in living organisms and their importance in maintaining dynamic equilibrium. 4.5.3. - Relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multicelled organisms. NY.P. - PHYSICAL SETTING / PHYSICS	NY.L. - THE LIVING ENVIRONMENT L.1. - Analysis, Inquiry, and Design: Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. 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NY.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.2. - Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. 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.9. - Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts. 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. NY.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.	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