

Fourth Grade Science Course Compendium

UNITS OF STUDY*

Unit 1- *Weather and Erosion*

Unit 2- *Transfer of Energy*

Unit 3- *Structures and Functions*

Unit 4- *Waves and Information*

INTERDISCIPLINARY CONNECTIONS

ELA Standards:

- W.4.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly. A. Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. B. Develop the topic with facts, definitions, concrete details, text evidence, or other information and examples related to the topic. C. Link ideas within paragraphs and sections of information using words and phrases (e.g., another, for example, also, because). D. Use precise language and domain-specific vocabulary to inform about or explain the topic. E. Provide a conclusion related to the information or explanation presented.
- W.4.7. Conduct short research projects that build knowledge through investigation of different aspects of a topic. (4-ESS1-1) W.4.7
- W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. (4-ESS2-1),(4-ESS1-1)W.4.8
- W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research. (4-ESS1-1) W.4.9
- SL.4.5 Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes. (4-LS1-2),(4-LS4-2) SL.4.5
- RI.4.9. Integrate and reflect on (e.g. practical knowledge, historical/cultural context, and background knowledge) information from two texts on the same topic in order to write or speak about the subject knowledgeably. (4-PS4-3) RI.4.9
- RI.4.3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- RI.4.8. Explain how an author uses reasons and evidence to support particular points in a text.

Math Standards

- MP.2 Reason abstractly and quantitatively.
- MP.4. Model with mathematics.
- MP.5 Use appropriate tools strategically.
- 4.MD.A.1 Know the relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a

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single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table.

- 4. G.A.1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

21st Century Life and Careers

- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.
- 9.2.4.A.3 Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
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Technology

- 8.2.2.B.4 Identify how the ways people live and work has changed because of technology.
- 8.2.2.C.1 Brainstorm ideas on how to solve a problem or build a product.

GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS		
English Language Learners	Students Receiving Special Education Services	Advanced Learners
<ul style="list-style-type: none"> • WIDA Can Do Descriptors for Kindergarten* • WIDA Essential Actions Handbook • FABRIC Paradigm • Wall Township ESL Grading Protocol <p>*Use WIDA Can Do Descriptors in coordination with Student Language Portraits (SLPs).</p> <p>Potential Accommodations for ELLs</p> <ul style="list-style-type: none"> • Personal glossary • Text-to-speech 	<ul style="list-style-type: none"> • New Jersey Tiered System of Supports • National Center on Universal Design for Learning - About UDL • UDL Checklist • UDL Key Terms <p>Students within this class receiving Special Education/Section 504 programming have specific goals and objectives, as well as accommodations and modifications outlined within their Individualized Education Plans (IEP)/504 Plans due to an identified disability and/or diagnosis. In addition to exposure to the general education curriculum, instruction is differentiated based upon the student's needs. The IEP/504 Plan acts as a supplemental curriculum guide inclusive of</p>	<ul style="list-style-type: none"> • Knowledge and Skill Standards in Gifted Education for All Teachers • Pre-K-Grade 12 Gifted Programming Standards • Gifted Programming Glossary of Terms <p>Potential Accommodations for Advanced Learners</p> <ul style="list-style-type: none"> • Use of high level academic vocabulary/texts • Problem-based learning • Pre-assess to condense curriculum • Interest-based research

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<ul style="list-style-type: none"> • Extended time • Simplified / verbal instructions • Frequent breaks • Small group/One to one • Additional time • Review of directions • Student restates information • Extra visual and verbal cues and prompts • Preferential seating • Verbal and visual cues regarding directions and staying on task • Checklists • Immediate feedback 	<p>instructional strategies that support each specific learner.</p> <p>Potential Accommodations for Special Education</p> <p>Presentation accommodations:</p> <ul style="list-style-type: none"> • Listen to audio recordings instead of reading text • Pre-teach unknown vocabulary through pictures or videos, and relate to prior knowledge • Work with fewer items per page and/or materials in a larger print size • Use a visual blocker • Use visual presentations of verbal material, such as word webs and visual organizers • Be given a written list of instructions/picture cues <p>Response accommodations:</p> <ul style="list-style-type: none"> • Give responses in a form (oral or written) that's easier for him/her • Dictate answers to a scribe • Capture responses on an audio recorder • Use a spelling dictionary or electronic spell-checker • Use a word processor to give responses in class • Use a calculator or table of "math facts" <p>Setting accommodations:</p> <ul style="list-style-type: none"> • Work or take a test in a different setting, such as a quiet room with few distractions • Sit where he/she learns best (for example, near the teacher) • Take a test in small group setting <p>Timing accommodations:</p> <ul style="list-style-type: none"> • Take more time to complete a task or a test • Have extra time to process oral information and directions • Take frequent breaks, such as after completing a task <p>Assignment modifications:</p> <ul style="list-style-type: none"> • Complete fewer or different homework problems than peers • Shorten assignment • Answer fewer or different test questions • Create alternate projects or assignments 	<ul style="list-style-type: none"> • Authentic problem-solving • Homogeneous grouping opportunities <p style="text-align: center;">Students with 504 Plans</p> <p>Teachers are responsible for implementing designated services and strategies identified on a student's 504 Plan.</p>
<p>At Risk Learners / Differentiation Strategies</p>		

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<p>Alternative Assessments Choice Boards Games and Tournaments Group Investigations Guided Reading Learning Contracts Leveled Rubrics Literature Circles Multiple Texts Personal Agendas</p>	<p>Independent Research & Projects Multiple Intelligence Options Project-Based Learning Varied Supplemental Activities Varied Journal Prompts or RAFT Writing Tiered Activities/Assignments Tiered Products Graphic Organizers Choice of Books/Activities Mini-Workshops to Reteach or Extend Think-Pair-Share by readiness or interest Use of Collaboration of Various Activities</p>	<p>Jigsaw Think-Tac-Toe Cubing Activities Exploration by Interest Flexible Grouping Goal-Setting with Students Homework Options Open-Ended Activities Use of Reading Buddies Varied Product Choices Stations/Centers Work Alone/Together</p>
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