

Second Grade Science

Course Compendium

UNITS OF STUDY*

Unit 1- *Earth's Land and Water*

Unit 2- *Properties of Matter*

Unit 3- *Biodiversity of Life*

Unit 4- *Plant Adaptations*

INTERDISCIPLINARY CONNECTIONS

ELA Standards:

- RI.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
- RI.2.3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- RI.2.8. Describe how reasons support specific points the author makes in a text.
- RI 2.9. Compare and contrast the most important points presented by two texts on the same topic.
- W.2.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.
- W.2.7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).
- W.2.8. Recall information from experiences or gather information from provided sources to answer a question.
- SL.2.5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

MATH Standards

- MP.2. Reason abstractly and quantitatively.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- 2. NBT.A.3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
- 2. MD.B.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
- 2.MD.D. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
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**See individual units for Pacing Guide, NJSLS Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

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.
- **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.

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 ● Extended time ● Simplified / verbal instructions ● Frequent breaks ● Small group/One to one ● Additional time ● Review of directions ● Student restates information 	<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 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 	<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 ● Authentic problem-solving ● Homogeneous grouping opportunities
		Students with 504 Plans
		Teachers are responsible for implementing

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<ul style="list-style-type: none"> • Extra visual and verbal cues and prompts • Preferential seating • Verbal and visual cues regarding directions and staying on task • Checklists • Immediate feedback 	<ul style="list-style-type: none"> • 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 	<p>designated services and strategies identified on a student's 504 Plan.</p>
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At Risk Learners / Differentiation Strategies

<p>Alternative Assessments Choice Boards Games and Tournaments Group Investigations Guided Reading Learning Contracts Leveled Rubrics Literature Circles</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</p>	<p>Jigsaw Think-Tac-Toe Cubing Activities Exploration by Interest Flexible Grouping Goal-Setting with Students Homework Options Open-Ended Activities</p>
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Multiple Texts
Personal Agendas

Choice of Books/Activities
Mini-Workshops to Reteach or Extend
Think-Pair-Share by readiness or interest
Use of Collaboration of Various Activities

Use of Reading Buddies
Varied Product Choices
Stations/Centers
Work Alone/Together