Grade 3 Science
Unit # 2 Earth Science

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Topic 3 (26 days) – Weather
Topic 4 (26 days) – Climate

Unit Overview: Students will analyze and interpret data about weather. Students will look for patterns in data to explore water on Earth and how the weather changes season to season. Students will explore the different types of climates on Earth and the patterns associated with them. Students will build on this knowledge as they learn about climate change, climate zones, and world climate.

Unit 2 NYSSLS Performance Expectations (PE)

3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]

3-ESS2-3. Plan and conduct an investigation to determine the connections between weather and water processes in Earth systems. [Clarification Statement: Emphasis should be on the processes that connect the water cycle and weather patterns.]

3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.* [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]

3-ESS2-2. Obtain and combine information to describe climates in different regions of the world. [Clarification Statement: Emphasis should be on various climates in different regions rather than on localized weather conditions.]

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Unit 2 NYSSLS Science and Engineering Practices (SEP)

- Analyzing and Interpreting Data
- Developing and Using Models
- Planning and Carrying Out Investigations
- Obtaining, Evaluating, and Communicating Information

Unit 2 NYSSLS Disciplinary Core Ideas (DCI)

ESS2.D: Weather and Climate

- Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)
- Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)
- (NYSED) Earth's processes continuously cycle water, contributing to weather and climate. (3-ESS2-3)

ESS3.B: Natural Hazards

- A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1) (Note: This Disciplinary Core Idea is also addressed by 4-ESS3-2.)

ETS1.B: Developing Possible Solutions

- Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2)
- At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2)

Unit 2 NYSSLS Cross Cutting Concepts (CCC)

- Cause and Effect
- Patterns

Resources

- Savvas Elevate Science Book NY Edition Grade 3 Topics 3-4
- Savvas Easybridge (access via BPS Staff Resources or Clever)
- Savvas Lab materials
- http://ngss.nsta.org/Classroom-Resources.aspx

Measurement of Student Learning

- Lesson Quiz
- Topic Assessment and Remediation
- Evidence-Based Assessment
- Quest Rubrics
- Exam view Assessment

Savvas Elevate Science Supports

- Topic Differentiated Instruction in TE
- Topic Remediation Summary in TE
- ELL Support in TE
- ELL Vocabulary Support in TE

English Language Learners (ELL) Enhancements To access hyperlinked material, you must be logged into your BPS Google Drive	**Listening** • **Cross- Linguistic Practices:** Gives students opportunities to make connections between what they hear and their home language (For example, allow students to listen to a passage and identify cognates). • **Activating Prior Knowledge** Activating prior knowledge means both eliciting from students what they already know and building initial knowledge that they need in order to access upcoming content. • **Activating Prior Knowledge** • **Visuals** - GIFs, pictures- will assist students in understanding what they are listening to. Use **visual thinking strategies** to set the lens for learning. • Video to review or introduce a topic – use **closed captioning** to help students see the words and pronunciations while they listen to the content. • **Word stretching / Vowel stretching** when instructing allows student to listen closely to the pronunciation of the word. • **Performance Level Descriptors** this document provides teachers with a description of what output they can expect from students based on earned NYSESLAT levels in the modality of listening. Scroll for grade 3.

	Speaking ● **Sentence Stems/Frames** - to begin a sentence - such as *Evolution is…* or *I think that evolution is…* ● **Academic Conversation Starters:** Have a visual of a list of academic sentence starters that students can refer to in a discussion. ● **Choral Reading** - To build fluency, self-confidence and motivation with reading/speaking. ● Create **movement** to go with the word. Movement can be a motivating factor, as well as a kinesthetic tool for conceptualizing the rhythm and flow of fluent reading while triggering brain function for optimal learning. ● **Performance Level Descriptors** This document provides teachers with a description of what output they can expect from students based on earned NYSESLAT levels in the modality of speaking. Scroll for grade 3
	Reading ●—Supplementary Text to help reinforce concepts. ●—**Visual Aids** - Pictures or models to support vocabulary words and concepts ● Video to review or introduce a topic - use **closed captioning** to help students read along while they listen to the content. ● **4 Square / Frayer models** to help students gain a deeper understanding of vocabulary. ● **Highlighting** important text to assist students in answering questions after the reading. ● **Chunking**-Break reading of text into chunks or paragraphs ● **Performance Level Descriptors** this document provides teachers with a description of what output they can expect from students based on earned NYSESLAT levels in the modality of reading. Scroll for grade 3. ● **Vocabulary Morphology**- Morphology relates to the segmenting of words into affixes (prefixes and suffixes) and roots or base words, and the origins of words. Understanding that words connected by meaning can be connected by spelling can be critical to expanding a student's vocabulary
	Instructional Accommodations (depending on the student's needs) ● **Extended time** for tests in class, projects and assignments ● **Directions read.** Broken down as necessary ● **Model** how to complete the activity in the lesson ● **Oral simplification** of directions or questions ● **Translated version** of test when available. Student may have both version English and native language version ● Use of **approved bilingual glossaries** from NYS in each subject
Special Education Modifications Special Education students must have accommodations as per Individual Educational Plan (IEP)	**Instructional** ● **Pre-teach** vocabulary ● Use **picture vocabulary** ● Scaffold **Depth of Knowledge** questions ● Provide copy of notes/**notes in "cloze"** form ● Use of **Think, Pair, and Share** strategy to help process information ● **Scaffold** written assignments with the use of **graphic organizers** ● Allow for **multiple ways to respond** (verbal, written, response board) ● Provide **model of performance task** ● **Modify informational text** to fit the needs of the students ● Provide a digital or paper i**nteractive notebook** ● Present complex **tasks in multiple ways** ● Provide **mnemonic strategies** for scientific concepts

	Technology: ● **Audio** reading of text ● **Text to type** functions ● **Videos** to clarify/visualize science concepts ● **Record class lecture/discussions** and make accessible to student ● **Nearpod**- interactive presentations of notes
	In Class Assessments ● Provide **multiple options** for projects ● **Use of timer** in class ● Break all complex tasks into chunks
Step Up to Writing Materials can be found in BPS Science K-12 Schoology Folder Grade 3 Resources Grade 3 SUTW materials	● Easy Two-Column Notes ● Breaking Down Definitions ● Paragraph Frame- What I Learned ● **Performance Level Descriptors** this document provides teachers with a description of what output they can expect from students based on earned NYSESLAT levels in the modality of writing. Scroll for grade 3.
Culturally and Linguistically Responsive Teaching (CLRT) in the Science Classroom	● Materials, resources, and/or discussions address diverse cultural backgrounds and real-world applications ● Artifacts (posters, charts, etc.) in the science classroom are representative of the cultures of the student population ● All students are given an opportunity to engage in science discourse ● Teacher demonstrates high expectations for all students