Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

Overview: In this unit of study, students observe, describe, and predict some patterns in the movement of objects in the sky. Students are expected to demonstrate grade-appropriate proficiency in planning and carrying out investigations and analyzing and interpreting data.

Overview	Standards for Science	Unit Focus	Essential Questions
Unit 1 Weather, Seasons, and the Sky	• 1-ESS1-1 • 1-ESS1-2 • WIDA 1,4	• Observing objects in the sky • Identifying patterns of night and day • Relating the position of the sun to the size and direction of shadows • Asking questions about phenomena (including objects in the sky and the surrounding environment)	• What is weather? • How can we measure weather? • What makes clouds and rain? • What can we see in the sky? • What causes day and night? • What can we observe about the moon? • How is weather related to the four seasons?
Unit 1: Enduring Understandings	• Shadows are created by the sun • Shadows are a result of light being blocked • Depending on where the sun is in the sky shadows can be longer or shorter. • There is a connection between earth's place in relation to the sun • Seasons are impacted by the amount of sunlight and earth's placement in the sky • The sun is a large object that looks small because it is far away • Stars cannot be seen during the daytime, but are still there • The sun appears to move across the sky always rising in the east and setting in the west in a predictable pattern. • The moon is another object in the sky that follows a predictable pattern.		

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Grade 1 Science

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Curriculum Unit 1	Standards		Pacing	
			Days	Unit Days
Unit 1: **Weather, Seasons, and the Sky**	**1-ESS1-1**	Use observations of the sun, moon, and stars to describe patterns that can be predicted	20	45
	1-ESS1-2	Make observations at different times of the year to relate the amount of daylight to the time of the year.	20	
	Assessment, Re-teach and Extension		5	

Winslow Township School District

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Unit 1: Weather, Seasons, and the Sky

Unit 1 Grade 1		
Disciplinary Core Ideas	**Indicator #**	**Indicator**
ESS1.A: The Universe and its Stars Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1-ESS1-1)	**1-ESS1-1**	Use observations of the sun, moon, and stars to describe patterns that can be predicted
ESS1.B: Earth and the Solar System Seasonal patterns of sunrise and sunset can be observed, described, and predicted. (1-ESS1-2)	**1-ESS1-2**	Make observations at different times of the year to relate the amount of daylight to the time of the year.

Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

<table>
<tr><th colspan="2">Unit 1 Grade 1</th></tr>
<tr><th colspan="2">• Assessment Plan</th></tr>
<tr><td>• Class discussions
• Independent & group work/projects
• Teacher and/or book series provided quizzes, tests, and a performance task to assess student mastery
• Homework monitor and assess class work
• Benchmark assessments
• Teacher Observations
• Performance Tasks</td><td>• Short Constructed Responses
• The Dynamic Trio: Students will learn about the stars, planets, and moons found in our solar system and how they relate to one another. They will watch a video and read a non-fiction read aloud, and then work in groups to create models of the Solar System</td></tr>
<tr><th>Resources</th><th>Activities</th></tr>
<tr><td>• Chromebooks
• HSP Science Teacher Manual
• Lab Explorations
• Big Books pg.
• Leveled Readers
• Songs on CD
• Activity book
• Vocab activities
• vocab cards
• Group discussions
• Manipulatives
• SMARTboard / Mimio Technology
• Google Applications (Documents, Forms, Spreadsheets, Presentation)
• Linkit
• Readworks website
• NJ Department of Education</td><td>• Our Super Star: This is a three-part lesson where students use observations, activities, and videos to learn basic facts about the Sun. Students also model the mechanics of day and night and use solar energy to make a tasty treat. One of the videos is a time-lapse video of a sunrise and a sunset.
• Keep a Moon Journal: Students will learn about the phases of the moon by keeping a moon journal to record their nightly observations for one month. The page has links to diagrams, a student printable, and activities connecting the journal to other content. The page is set up as a "family activity" and could be used as nightly homework for students then discussed weekly in class.
• Patterns of Daylight: Students will take a pre-assessment to assess background knowledge. Then the class will discuss what are objects in the sky? and what is a pattern? A KWL anchor chart will be used to record our new learning.
• Observing the Sun: This lesson is an activity where students create a sun tracker and monitor the sun's position over the course of a day. Examples of student journals and connections within a larger unit are provided.</td></tr>
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Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

Instructional Best Practices and Exemplars	
1. Identifying similarities and differences 2. Summarizing and note taking 3. Reinforcing effort and providing recognition 4. Homework and practice 5. Nonlinguistic representations	6. Cooperative learning 7. Setting objectives and providing feedback 8. Generating and testing hypotheses 9. Cues, questions, and advance organizers 10. Manage response rates

9.1 Personal Financial Literacy, 9.2 Career Awareness, Exploration, Preparation and Training & 9.4 Life Literacies and Key Skills

9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
9.4.2.CT.2: Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.
9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).
9.4.2.IML.3: Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults (e.g., 6.3.2.GeoGI.2, 6.1.2.HistorySE.3, W.2.6, 1-LSI-2).
9.4.2.TL.1: Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
9.4.2.TL.2: Create a document using a word processing application.
9.4.2.TL.6: Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
9.4.2.TL.7: Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).
The implementation of the 21st Century skills and standards for students of the Winslow Township District is infused in an interdisciplinary format in a variety of curriculum areas that include, English language Arts, Mathematics, School Guidance, Social Studies, Technology, Visual and Performing Arts, Science, Physical Education and Health, and World Language.
Additional opportunities to address 9.1, 9.2 & 9.4:
Philadelphia Mint
https://www.usmint.gov/learn/kids/resources/educational-standards
Different ways to teach Financial Literacy.
https://www.makeuseof.com/tag/10-interactive-financial-websites-teach-kids-money-management-skills/

Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

Modifications for Special Education/504

Students with special needs: The students' needs will be addressed on an individual and grade level using a variety of modalities. Accommodations will be made for those students who need extra time to complete assignment. Support staff will be available to aid students related to IEP specifications. 504 accommodations will also be attended to by all instructional leaders. Physical expectations and modifications, alternative assessments, and scaffolding strategies will be used to support this learning. The use of Universal Design for Learning (UDL) will be considered for all students as teaching strategies are considered.

- Small group instruction
- Audio books/ Text-to-speech platforms
- Leveled texts/Vocabulary Readers
- Leveled informational texts via online
- Modeling and guided practice
- Read directions aloud
- Repeat, rephrase and clarify directions
- Extended time as needed
- Break down assignments into smaller units
- Provide shortened assignments
- Modify testing format
- Repeat directions as needed
- Graphic organizers
- Study Guides, Study Aids and Re teaching as needed

Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

Modifications for At-Risk Students

Formative and summative data will be used to monitor student success. At first signs of failure, student work will be reviewed to determine support. This may include parent consultation, basic skills review and differentiation strategies. With considerations to UDL, time may be a factor in overcoming developmental considerations

- Audio books and Text-to-speech platforms
- Leveled texts/Vocabulary Readers
- Leveled informational texts via online
- Extended time as needed
- Read directions aloud
- Assist with organization
- Use of computer
- Emphasize/highlight key concepts
- Recognize success
- Provide timelines for work completion
- Break down multi-step tasks into smaller chunks
- Provide copy of class notes and graphic organizer

Winslow Township School District

Grade 1 Science

Unit 1: Weather, Seasons, and the Sky

English Language Learners	Modifications for Gifted Students
All WIDA Can Do Descriptors can be found at this link: https://wida.wisc.edu/teach/can-do/descriptors ☐ Grade 1 WIDA Can Do Descriptors: ☐ Listening ☐ Speaking ☐ Reading ☐ Writing ☐ Oral Language Students will be provided with accommodations and modifications that may include: • Relate to and identify commonalities in science studies in student's home country • Assist with organization • Use of computer • Emphasize/highlight key concepts • Teacher Modeling • Peer Modeling • Label Classroom Materials - Word Walls	Students excelling in mastery of standards will be challenged with complex, high level challenges related to the topic. • Raise levels of intellectual demands • Require higher order thinking, communication, and leadership skills • Differentiate content, process, or product according to student's readiness, interests, and/or learning styles • Provide higher level texts • Expand use of open-ended, abstract questions • Critical and creative thinking activities that provide an emphasis on research and in-depth study • Enrichment Activities/Project-Based Learning/ Independent Study Additional Strategies may be located at the links: ❖ Gifted Programming Standards ❖ Webb's Depth of Knowledge Levels and/or Revised Bloom's Taxonomy ❖ REVISED Bloom's Taxonomy Action Verbs

Winslow Township School District

Grade 1 Science

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Interdisciplinary Connections
Interdisciplinary Connections: **ELA Standards:** **W.1.7** Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions). (1- ESS1-1),(1- ESS1-2) **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-ESS1-1),(1- ESS1-2) **Math Standards:** **MP.2** Reason abstractly and quantitatively. (1-ESS1-2) MP.4 Model with mathematics. (1-ESS1-2) **MP.5** Use appropriate tools strategically. (1-ESS1-2) **1.OA.A.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations to represent the problem. (1- ESS1-2) **1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. (1-ESS1-2)
Integration of Computer Science and Design Thinking NJSLS 8
8.1.2.CS.1: Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences. **8.1.2.DA.1:** Collect and present data, including climate change data, in various visual formats **8.1.2.DA.2:** Store, copy, search, retrieve, modify, and delete data using a computing device. **8.1.2.DA.3:** Identify and describe patterns in data visualizations. **8.1.2.DA.4:** Make predictions based on data using charts or graphs. **8.1.2.AP.2:** Model the way programs store and manipulate data by using numbers or other symbols to represent information. **8.2.2.ITH.3:** Identify how technology impacts or improves life.