### **Grade 1 Science**

# Unit 3: Plants and Animals All Around and Living Together

**Overview:** In this unit of study, students develop an understanding of how plants and animals use their parts to help them survive, grow, and meet their needs. As students develop possible solutions, one challenge will be to keep them from immediately implementing the first solution they think of and to instead think through the problem carefully before acting.

Overview	Standards for Science	Unit Focus	<b>Essential Questions</b>
Unit 3  Plants and Animals All Around and Living Together	• 1-LS3-1 • K-2-ETS1-1 • WIDA 1,4	<ul> <li>Identify physical characteristics between a parent and offspring.</li> <li>Understand that not all offspring will be identical to their parent (concept of variation).</li> <li>A group of organisms (living things) share physical traits as they are passed down from generation to generation.</li> </ul>	<ul> <li>How are young animals/plants like their parents? What traits do they share?</li> <li>How are young animals/plants different from their parents? What makes each organism unique?</li> </ul>
Unit 3: Enduring Understandings	<ul> <li>Young plants and an</li> <li>Young plants and an</li> <li>Similarities and different much, but not exactly</li> <li>Similarities and different type of animal or plants and animals heart there is a variation of A physical character</li> </ul>		

### **Grade 1 Science**

	urriculum Unit Standards		Pacing	
Curriculum Unit 3			Days	Unit Days
Unit 3:	1-LS3-1	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	20	
Plants and Animals All Around and Living Together	K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	20	45
	Assessment, Re-teach and Extension		5	

### **Grade 1 Science**

Unit 3 Grade 1				
Disciplinary Core Ideas	Indicator #	Indicator		
LS3.A: Inheritance of Traits Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1) LS3.B: Variation of Traits	1-LS3-1	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.  Ask questions, make observations, and gather information about a		
Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS3-1)	K-2-ETS1-1	situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.		
ETS1.A: Defining and Delimiting Engineering Problems A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1) Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1) Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1) ETS1.C: Optimizing the Design Solution Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3)	K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.		

### **Grade 1 Science**

Unit 3 Grade 1			
Assessment Plan			
<ul> <li>Class discussions</li> <li>Independent &amp; group work/projects</li> <li>Teacher and/or book series provided quizzes, tests, and a performance task to assess student mastery</li> <li>Homework monitor and assess class work</li> <li>Benchmark assessments</li> <li>Teacher Observations</li> <li>Performance Tasks</li> </ul>	<ul> <li>Short Constructed Responses</li> <li>Who's your animal parent?: Students will explore similarities and differences between animal babies and their parents to answer the question: Do all animal babies look exactly like their parents?</li> <li>The Emperor Penguin's Egg: Students will read a story or watch a video about how parental behavior helps their offspring to survive. Then students use what they have learned to model how Emperor penguins care for the eggs of their young.</li> <li>PictureSTEM: Designing Hamster Habitats</li> </ul>		
Resources	Activities		
<ul> <li>Chromebooks</li> <li>HSP Science Teacher Manual</li> <li>Lab Explorations</li> <li>Big Books pg.</li> <li>Leveled Readers</li> <li>Songs on CD</li> <li>Activity book</li> <li>Vocab activities</li> <li>vocab cards</li> <li>Group discussions</li> <li>Manipulatives</li> <li>SMARTboard / Mimio Technology</li> <li>Google Applications (Documents, Forms, Spreadsheets, Presentation)</li> <li>Linkit</li> <li>Readworks website</li> <li>NJ Department of Education</li> </ul>	<ul> <li>Eat Like a Bird! January: This lesson and activity is one of several lessons about birds. In this lesson, students learn that bird beaks come in many different sizes and shape. Each beak has a specific shape and function to help the bird to get and eat food.</li> <li>Why So Yummy: Students will investigate how fruits help some plants survive.</li> <li>From Seed to Flower: Students will watch a one-minute time lapse video shows plant growth and development from seeds to flowers. Then answer the following questions: What kinds of plants are these? Do all plants grow like this? What parts of a plant can you identify from this video? How do plants change as they grow? What happens to their size? Their shape? Their parts? Do plants move? How do you know? How does movement help the plant to grow and survive?</li> </ul>		

### **Grade 1 Science**

# Unit 3: Plants and Animals All Around and Living Together

Instructional Best Practices and Exemplars		
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.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.2:** Create a document using a word processing application.
- 9.4.2.TL.3: Enter information into a spreadsheet and sort the information.
- 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/

#### **Grade 1 Science**

# Unit 3: Plants and Animals All Around and Living Together

#### **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

#### **Grade 1 Science**

# Unit 3: Plants and Animals All Around and Living Together

#### **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

### **Grade 1 Science**

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

#### **Grade 1 Science**

# Unit 3: Plants and Animals All Around and Living Together

### **Interdisciplinary Connections**

### **Interdisciplinary Connections:**

#### **ELA Standards:**

- **RI.1.1** Ask and answer questions about key details in a text. (1-LS3-1)
- **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-LS3-1)
- **W.1.8** With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-LS3-1)

#### **Math Standards:**

- MP.2 Reason abstractly and quantitatively. (1-LS3-1)
- **MP.5** Use appropriate tools strategically. (1-LS3-1)
- **1.MD.A.**1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)

## **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.NI.2:** Describe how the Internet enables individuals to connect with others worldwide.
- 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.ETW.1:** Classify products as resulting from nature or produced as a result of technology.