**Plants and Animals in Our World – Unit 6**

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| **Title of Unit** | Plants and Animals in Our World | | **Grade Level** | 1st Grade |
| **Subject** | Science and ELA | | **Time Frame** | 2nd Term (3 weeks) |
| **Developed By** | Helen Rodio and Amanda Huenke | | | |
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| **Stage 1 - Identify Desired Results** | | | | |
| **Established Goals: CCSS / CCCS / Big Ideas / Big Themes** | | | | |
| **Concept:** Dependence, Independence, and Interdependence  **Big Ideas:** Living things includes both plants and animals. Plants and animals need each other to survive in their different habitats. There are many different types of plants and animals.  **Topics:** Needs of plants; needs of animals; habitats; types of plants; types of animals  **Reconceived Standards:**   * Students will identify whether things are living or nonliving. (Analysis) * Students will describe the differences between living and nonliving things. (Comprehension) * Students will create a living and nonliving book. (Creating) * Students will debate whether or not dead and extinct things are living or nonliving. (Evaluating)     **Received Standards:**   * **New Jersey Science Standards:**   + **5.3 Life Science:**All students will understand that life science principles are powerful conceptual tools for making sense of the complexity, diversity, and interconnectedness of life on Earth. Order in natural systems arises in accordance with rules that govern the physical world, and the order of natural systems can be modeled and predicted through the use of mathematics.     - **5.3.2.A.a** - Living organisms: Exchange nutrients and water with the environment. Reproduce. Grow and develop in a predictable manner.     - **5.3.2.A.1** - [*Cumulative Progress Indicator*] - Group living and nonliving things according to the characteristics that they share.     - **5.3.2.B.1 - D**escribe the requirements for the care of plants and animals related to meeting their energy needs.     - **5.3.2.B.2 -** Compare how different animals obtain food and water.     - **5.3.2.B.3 -** Explain that most plants get water from soil through their roots and gather light through their leaves.     - **5.3.P.C.1 -** Observe and describe how natural habitats provide for the basic needs of plants and animals with respect to shelter, food, water, air, and light (e.g., dig outside in the soil to investigate the kinds of animal life that live in and around the ground).     - **5.3.2.C.1 -** Describe the ways in which organisms interact with each other and their habitats in order to meet basic needs.     - **5.3.2.C.2 -** Identify the characteristics of a habitat that enable the habitat to support the growth of many different plants and animals.     - **5.3.2.C.3 -** Communicate ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there, or ways that humans might harm habitats.     - **5.3.2.D.1 -** Record the observable characteristics of plants and animals to determine the similarities and differences between parents and their offspring.     - **5.3.2.D.2 -** Determine the characteristic changes that occur during the life cycle of plants and animals by examining a variety of species, and distinguish between growth and development.     - **5.3.2.E.1 -** Describe similarities and differences in observable traits between parents and offspring.     - **5.3.2.E.2 -** Describe how similar structures found in different organisms (e.g., eyes, ears, mouths) have similar functions and enable those organisms to survive in different environments. * **Common Core – ELA Standards:**   + [CCSS.ELA-Literacy.RL.1.1](http://www.corestandards.org/ELA-Literacy/RL/1/1/) Ask and answer questions about key details in a text. (Knowledge)   + [CCSS.ELA-Literacy.RL.1.2](http://www.corestandards.org/ELA-Literacy/RL/1/2/) Retell stories, including key details, and demonstrate understanding of their central message or lesson. (Comprehension)   + [CCSS.ELA-Literacy.RL.1.3](http://www.corestandards.org/ELA-Literacy/RL/1/3/) Describe characters, settings, and major events in a story, using key details. (Comprehension)   + [CCSS.ELA-Literacy.RI.1.1](http://www.corestandards.org/ELA-Literacy/RI/1/1/) Ask and answer questions about key details in a text. (Knowledge)   + [CCSS.ELA-Literacy.RI.1.2](http://www.corestandards.org/ELA-Literacy/RI/1/2/) Identify the main topic and retell key details of a text. (Knowledge)   + [CCSS.ELA-Literacy.RI.1.3](http://www.corestandards.org/ELA-Literacy/RI/1/3/) Describe the connection between two individuals, events, ideas, or pieces of information in a text. (Comprehension)   + [CCSS.ELA-Literacy.RI.1.5](http://www.corestandards.org/ELA-Literacy/RI/1/5/) Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. (Application)   + [CCSS.ELA-Literacy.RI.1.6](http://www.corestandards.org/ELA-Literacy/RI/1/6/) Distinguish between information provided by pictures or other illustrations and information provided by the words in a text. (Analysis)   + [CCSS.ELA-Literacy.SL.1.4](http://www.corestandards.org/ELA-Literacy/SL/1/4/) Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly. (Knowledge) | | | | |
| **Cross-curricular Integration (Interdisciplinary Teaching and Learning)**  Will you integrate this unit with other curricular areas? If so, what areas? In what ways will you connect the curricular areas? | | | | |
| **Science and Literacy (ELA):**  Literacy strategies and skills will be applied as students acquire information and communicate their learning and understanding in Science. Integration of Literacy and Science is critical for student success. It is essential that literacy strategy and skill instruction be purposefully and appropriately planned and embedded within Science instruction; i.e. planning for the literacy and science outcomes, differentiating, matching instruction to the learners, and in consideration of resources.  This unit will transition from a Social Studies unit that integrates Social Studies and Literacy (ELA) on history and citizenship and responsibilities in our world. This unit will transition into a Science unit that integrates Science and Literacy (ELA). The next unit will be on energy and motion. | | | | |
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| **Enduring Understandings**  If a student spends time with you during this unit, what is  absolutely essential that the student understand and  be able to transfer as a result of the experience (Rigor: Quadrant “D”)? | | **Essential Questions**  What provocative questions will foster inquiry, understanding, and transfer of learning (Relevance)?(Often, open-ended questions that stimulate reflective thought and inquiry and connect the knowledge and skills to the enduring understanding are used.) | | |
| *Students will understand that...*   * Plants and animals have needs. * Plants and animals need each other. * Living and nonliving things make up habitats. * Different habitats meet the needs of the plants and animals that live there. * There are different groups of plants. * There are different groups of animals. | | *Content specific….*  Big Idea:   * What are some ways that plants and animals need each other? * How do plants and animals interact with one another? * Why do we have groups for plants and animals?   Topical:   * What plants or animals live in a \_\_\_\_\_ habitat? * What are some types of habitats? * What are the needs of plants? * What are the needs of animals? * What is a habitat? * What are some plant groups? * What are some animals groups? | | |
| **Knowledge:**  What knowledge (topics and facts) will student acquire as a result of this unit? This content knowledge may come from the indicators, or might also address pre-requisite knowledge that students will need for this unit. | | **Skills**  What skills will students acquire as a result of this unit? List the skills and/or behaviors that students will be able to exhibit as a result of their work in this unit. These will come from the indicators. | | |
| *Students will know...*   * Plants and animals have needs. * Plants and animals are dependent on each other. * Some living and nonliving things that are in each type of habitat. * How habitats meet the needs of plants and animals. * There are different groups of plants and animals. | | *Students will be able to…*   * Name the needs of plants and animals. * Name and describe what is in different habitats. * Explain how habitats meet the needs of plants and animals. * Determine which groups a particular plant or animal belongs to. | | |

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| **Stage 2 – Assessment Evidence** | | |
| **Performance Task**  Through what authentic performance task will students demonstrate the desired understandings, knowledge, and skills? (Typically, the P.T. describes the learning activity in narrative form. The P.T. usually includes a scenario or situation that requires students to apply knowledge and skills to demonstrate their understanding in an authentic, real life situation {Relevance}. Describe your performance task scenario below)  By what criteria will performances of understanding be judged? | | |
| **GRASPS Elements of the Performance Task** | | |
| ***G*** *– Goal*  *What should students accomplish by completing this task?* | Goals:   * Name the needs of plants and animals. (Formative) * Name different types of habitats. (Formative) * Design a habitat poster. (Summative) * Present your habitat poster using key vocabulary. (Summative) * Explain how habitats and other plants and animals help plants and animals meet their needs. (Formative) * Name the different groups of plants and animals. (Formative) * Determine which groups a particular plant or animal belongs to. (Formative)   Role:   * Scientists, researchers, observers, questioners, presenters, writers, and readers   Audience:   * Teachers and/or peers   Situation:   * Students will present their knowledge of plants, animals, and habitats with habitat posters to the class. * Students will present their knowledge to the teachers through labs, discussions, and projects.   Products:   * Test, lab reports, class discussion, habitat poster, plant parts group project | |
| ***R*** *– Role*  *What role (perspective) will your students be taking?* |
| ***A*** *– Audience*  *Who is the relevant audience?* |
| ***S*** *– Situation*  *The context or challenge provided to the student.* |
| ***P*** *– Product, Performance*  *What product/performance will the student*  *create?* |
| ***S*** *– Standards & Criteria for Success*  *Create the rubric for the Performance Task* | Standards:   * Grading key for habitat poster * Grading key for test * Grading key for plant parts group project | |
| **Performance Evidence**  Through what evidence (work samples, projects, surveys, observations, quizzes, tests, journals or other means) will students demonstrate achievement of the desired results? What formative and summative assessments will be used throughout the unit to arrive at the outcomes. | | **Student Self-Assessment**  In what ways will students reflect upon or self-assess their learning? |
| * Checks for Understanding (Formative) * Discussion (Formative) * Debate (Formative) * Student questions/comments (Formative) * Teacher questions and prompts (Formative) * Observation/Anecdotal records (Formative) * Interview (Formative) * Habitat Posters and Presentation (Summative) * Butterfly Life Cycle (Summative) * Test (Summative) | | * Traffic light * Use reflective questions, prompts, and responses * What did I learn? How am I a scientist? |

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| **Stage 3 – Learning Plan**  What teaching and learning experiences (WHERETO) will you use to:   * achieve the desired results identified in Stage 1? * equip students to complete (with understanding) the assessment tasks identified in Stage 2? | | | | |
| **Where are your students headed? Where have they been? How will you make sure the students know where they are going?**  **What experiences do the learners bring to the unit? How have the interests of the learners been ascertained? Have the learners been part of the pre-planning in any way? What individual needs do you anticipate will need to be addressed?**  **Learning environment: Where can this learning best occur? How can the physical environment be arranged to enhance learning?** | | | | |
| |  |  | | --- | --- | | **W**  **H**  **E**  **R**  **E**  **T**  **O** | Where – We will start the unit with students understanding there are living and nonliving things in our world. They will also understand how to determine if things are living or nonliving. Students will build upon that knowledge as we learn about different types of plants and animals, their habitats, and their needs. | | Hook – Students will be given photographs of plants and animals and sort themselves in various groups based on stated criteria. Discuss the results of the groupings. Students will play I Spy with table-mates based on animal characteristics to display their prior knowledge. | | Equip -   * Class discussions about plants, animals, habitats, and needs. * Develop vocabulary – environment, forest, prairie, dessert, wetland, ocean, tundra, vertebrate, invertebrate, animal, plant, fish, amphibian, insect, mammal, birds, seeds, flower, root, petal, stem, legs, antennae, thorax, body * Practice identifying key facts and nonfiction text features in nonfiction texts and how they relate to the main topic * Compare and contrast plants and animals * Explain to a partner the parts of different plants and animals * Explain to a partner the different types of habitats * Explain to a partner the different types of plants and animals * Name some needs of living things | | Rethink – Provide opportunities for students to discuss what they know and think. Ask students lots of questions to help them articulate their ideas. | | Evaluate – Students will consider different plants and animals in their world. They should see that plants and animals have things in common. They should also see that plants and animals interact and depend on one another. | | Tailor – If needed, students will receive extra support in creating projects and test, and/or provide them with a graphic organizer. | | Organization –   * Plan science labs and hands on activities * Prepare photographs to compare and contrast plants and animals * Habitat presentations * Plan an end of unit test | | | | | |
| **In what ways will you engage students at the beginning of the unit?** | | | | |
| Students will be given photographs of plants and animals and sort themselves in various groups based on stated criteria. Discuss the results of the groupings. Students will play I Spy with table-mates based on animal characteristics to display their prior knowledge. | | | | |
| **What activities / events will help students experience and explore the enduring understandings and essential questions in the unit? How will you equip them with needed skills and knowledge?** | | | | |
| **#** | **Lesson Title** | **Lesson Activities** | **Cross-curricular** | **Resources** |
| 1 | Hook: What do we know about plants and animals? | Each student will be given a photograph of plants and animals (see unit folder) and sort themselves in various groups based on stated criteria. Discuss the results of the groupings.  Students will play I Spy with table-mates based on animal characteristics to display their prior knowledge. Found on Science A-Z “Animals Around You” checklist.  \*\*Read I-File articles from Science A-Z at morning meeting. | Yes | Interactive Science textbook by Pearson and online resources  The World of Ants  The Red-Eyed Tree Frog  The Chick and the Duckling  Planting a Rainbow  Scholastic News Magazines and website (as appropriate)  Science A-Z materials  Reading A-Z materials  Brainpop Jr. |
| 2 | What are some groups of living things? (plants) | Read and complete My Planet Diary p. 116.  Read Interactive Science textbook p. 116 - 119. Use the interactive lesson on the smartboard.  Teacher and SW create a class Venn Diagram about plant groups: plants with flowers and plants without flowers.  For entire week of plants, read *Planting a Rainbow* in shared reading. | Yes |
| 3 | What are some parts of plants?  1-2 days | Read Interactive Science textbook p. 122-125. Watch Got It video and take Got It quiz on the smartboard as a class to review the content from the textbook.  Watch Brainpopjr.com video > parts of a plants. Take the easy quiz as a class and students put fingers up to predict the answer (1=A, 2=B, 3=C, 4=D)  Sing parts of a plant (sung to Head, Shoulders, Knees, and Toes.  Complete chapter 4, lesson 2 check-up or parts of a plant WS. | Yes |
| 4 | How do plants grow? | Read Interactive Science textbook p. 126-129. Watch Got It video and take Got It quiz on the smartboard as a class to review the content from the textbook.  Watch Brainpopjr.com video > life cycle of a plant. Take the easy quiz as a class and students put fingers up to predict the answer (1=A, 2=B, 3=C, 4=D)  Life Cycle of a plant sequencing WS. | Yes |
| 5 | Mini Plant assessment | SW be given various materials to create a flower in a small group. Give each student in every group a post it with the word roots, stem, leaf, petal. The student will be responsible for creating that part of the flower in their group. | Yes |
| 6 | What are some groups of living things? And how are they different? (animals) | Read Interactive Science textbook p. 120-121. Use the interactive lesson on the smartboard. Use the got it video, and got it quiz.  SW create a classification/body-covering foldable that shows an example of an animal in each of the 6 groups.  For entire week of plants, read *The Chick and the Duckling* in shared reading. | Yes |
| 7 | How do animals grow? | Read Interactive Science textbook p. 130-135. Use the interactive lesson on the smartboard. Use the got it video, and got it quiz.  Life cycle of a butterfly pasta project | Yes |
| 8 | How are living things like their parents? | Tell students to close their eyes and picture their Mom and Dad. Now ask, “Do you look like them? How do you look like them or not look like them?” Allow students to Turn ‘n’ Talk out their answers.  Read Interactive Science textbook p. 136-139. Use the interactive lesson on the smartboard. Use the got it video, and got it quiz. | Yes |
| 9 | Habitats  3 days | Read Interactive Science textbook p. 86-91 and p. 92-97. Use the interactive lesson on the smartboard. Use the got it video, and got it quiz.  Read *Coral Reef* hard cover, *Rainforest Homes, Insect Homes,* and/or *Who Is in the Pond?*.  Watch: https://www.youtube.com/watch?v=oAIYU8qDa4E to make real world connections.  SW create (in groups) habitat posters that include appropriate plants and animals that live in the specific habitat assigned. Habitat posters will be presented. | Yes |
| 10 | Centers activities | Write the room (see 1st grade folder).  Put topic books on shelf for Read To Self.  Symmetry draw-and-write ocean for Work on Writing  Plant a garden packet for Word Work  Frog or butterfly life cycle sequence WS | Yes |
| 11 | Science Leader | Working in small groups, learn about Dian Fossey and how she has impacted Science by making discoveries and researching gorillas.  SW go to their seat and take notes on Dian Fossey in their *Famous Leaders* book. SW paste the person’s name on a new page, draw a picture of each person, write down 1 major accomplishment, birth date and birth place. |  |
| 12 | Summative Assessment | Animal research: SW work in leveled groups. Each group will view a short video on their assigned animal and answer level-appropriate questions.  Higher groups: sea otter, Atlantic spotted dolphin, seal, manatee, killer whale  Lower groups: “weird animals”  Science Chapter Test | Yes |
| **Special Considerations**:   * Each lesson will begin and end with an essential question * Some instruction will occur during Shared Reading block and some will occur during Science literacy block * Some of the teaching will occur in small groups during centers * Additional resources will be added * Differentiation will occur as needed | | | |  |

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| **Assess and Reflect (Stage 4)** | |
| **Reflections / Considerations (Self-assessment)** | **Comments** |
| **Unit and Areas of Study:**  **Did I maintain alignment and integrity between and among Stage 1, Stage 2, and Stage 3?** |  |
| **Adaptive Dimension:**  **Did I make purposeful adjustments to the curriculum content (not outcomes), instructional practices, and/or the learning environment to meet the learning needs and diversities of all my students?** | For struggling students:  For students who need a challenge: |
| **Instructional Approaches:**  **Did I use a variety of teacher directed and student centered instructional approaches?** |  |
| **Resource-based Learning:**  **Did the students have access to various resources on an ongoing basis?** |  |
| **Content and Perspectives/Gender Equity/Multicultural Education:**  **Have I nurtured and promoted diversity while honoring each child’s identity?** |  |

Adapted from: Wiggins, Grant and J. McTighe. (1998). *Understanding by Design*, Association for Supervision and Curriculum Development.