Teacher Name: Katie Farrell / Betty Harmon

Subject/Grade Level: Third Grade / Science

PART I: LESSON PREVIEW
Unit: Physical and Behavioral Adaptations

Lesson duration (How many class periods): 3-4 days

Summary/description of lesson:

- describe and explain the terms camouflage, and mimicry
- compare the physical characteristics of animals, and explain how the animals are adapted to a certain environment.
- create (model) a camouflage pattern for an animal living in a specific dry-land or water-related environment. (Relates to 3.6.)
- design and construct a model of a habitat for an animal with a specific adaptation.

PART II: LESSON BACKGROUND
Key Vocabulary: adaptation, physical, structural, defense, mechanisms, quills, beaks, talons, camouflage, mimicry
Primary Objectives:
3.4b

Secondary Objectives:
3.5a-c, 3.6a-c, 3.9a, 3.10a-d

Pre-Assessment(s) (Identify/describe the tool(s) used):
Whole Group Smart Board Activity
Students will look at various pictures of animals with physical adaptations. The students will identify a feature that helps the animal survive.

Formative assessments (Identify/describe the tools used):
Physical Characteristics Quiz (multiple-choice and short-answer open-ended questions)

Summative assessment (Identify/describe the tool used):
Lesson 5 Inquiry-Based Project Text p. 129 “How Can We Model a Physical Adaptation
Ecosystem Scenarios (Used for student rating and student justification)

PART III: LEARNING TARGETS (ALL STUDENTS)

Know	Understand	Be Able to Do
• In order to survive, animals adapt to their surroundings. • Physical adaptations help animals survive in their environment (camouflage, mimicry, defense)	• Mimicry occurs when a species has features similar to another species. Either one or both are protected when a third species cannot tell them apart. (Mimicry happens in both animal and plant species.) • Various animals possess adaptations which help them blend into their environments to protect themselves from enemies (camouflage). Camouflage is the means by which animals escape the notice of predators, usually because of a resemblance to their surroundings using coloration or outer coverage patterns.	• Identify plants and animals in nature and label physical adaptations that the animal/plant uses in order to survive. • Apply physical adaptations to the concept that ecosystems are constantly changing and plants and animals must learn how to adapt and change as the ecosystem changes.

PART IV: LEARNING TIERS

Identification of tiers based on pre-assessment data (describe what you will do to help students master content objectives for each tier)		
Tier 1 (Enhanced) Plant Project/Presentation: Text p. 122-123 (This group will work together creating a presentation that will be given to the remainder of the class at a later date.) This will make a connection between plant and animal adaptations. Inquiry Lesson 5 (textbook and online)	**Tier 2 (Target)** Pictures Collaborative Activities Projects/Hands-On Word Walls Interactive Bulletin Board	**Tier 3 (Prerequisite)** Pictures Collaborative Activities Projects/Hands-On Word Walls Interactive Bulletin Board

PART V: PROCEDURES

	Teacher Actions	Student Actions	Materials/Resources (including technology)	Time
Warm up/Activating Prior Knowledge/Emotional Hook	**1.**Give directions on Smart Boards	**1.**Pictures will pop up on the Smart Board. Students will identify a physical characteristic and how it helps the animal survive.	Smart Board activity (provided)	**5-10 mins.**
	2.Teacher will display the virtual lesson on the smart board. Students will listen to the oral lesson and complete the activities.	**2.** Online Digital Lesson (Unit 3, Lesson 4)	Online Virtual Lesson Unit 3, Lesson 4	**5-10mins.**
Teacher Input/Guided Student Practice	**1-2**.Prompt students and guide discussion.	**1.** Students will read text pp. 118-119.	**1.**Fusion p. 118-119	**1.)10mins.**
		2. In their small groups, complete "Sound the Alarm" on p. 119. The oldest student in the group will share their group's findings.	**2.**Lesson Question: "Sound the Alarm"	**2.)10mins.**
	3. KWL chart on the board. Guide students through the K and W of the chart in regards to the terms "mimicry" and "camouflage".	**3.** Students will share what they know and want to learn.	**3.**KWL Chart	**3)10mins.**
	4. Monitor for engagement and participation. (Each student initially makes a word list and draws a picture so that everyone is involved.)	**4.** Students will be assigned either a 1 or 2. The 1's will silently read the selection about *mimicry* and the 2's will read the selection about *camouflage*. As a group, the 1's and 2's will create a list of key words that pertain to their term and draw basic pictures that will help others understand the vocabulary word. The youngest student in each of the two groups will share their group findings to the opposite	**4**. Chart paper for students to compile their findings on and key vocabulary. Reading: Text p. 120-121	**4)20mins.**

		group.		
Independent Student Practice		**5**. Tiered Activities: -Summarizing/Main Idea activity on text p. 124 -Word Play on text p. 125 -Application of Concepts to Real World text p. 126 **6.** Quiz on Physical Adaptations.	**5.** Fusion text pp. 124-126 **6.** Fusion Assessment (AG 28-AG 29) and Open-Ended questions	**5)15mins.** **6)20-25 mins.**
Lesson Synthesis through Review (with opportunity to Analyze, Evaluate, and Create)	Lesson project description. (Teacher flipchart provided)	**7. a.** Shoulder partners will work together completing "How Can We Model a Physical Adaptation**".** 1 student's role will be to read the directions to his or her partner. The other student will complete the folding of the frog. **b.** Partners will works through the scientific method and complete Inquiry Lesson 5 on text p. 129 **(Prior to this, students can complete an online interactive inquiry lesson on "Healthy Bugs vs. Toxic Bugs" Unit 3, Lesson 5)** **c.** Upon completion of the frog experiment, students will rate 3-4 ecosystems based on a 1 being the best ecosystem for this animal's physical adaptations. They will also need to defend their reasoning. Final Project.	**7.** Inquiry-Based Lesson Flipchart page 16 Fusion text p. 129 Text p. 129-130 Online Inquiry Lesson, Unit 3, Lesson 5 Ecosystems for rating	**1)1-2days**

PART VI: INSTRUCTIONAL AND ENGAGEMENT STRATEGIES (Used Throughout Entire Unit)

Instructional Strategies (Check All That Apply)	Qualities of Engaging Work (Check All That Apply)
X Identify similarities and differences	**X Personal response**

X Summarizing and note-taking X Reinforcing effort and providing recognition X Homework and practice X Nonlinguistic representations X Cooperative learning X Setting objectives and providing feedback X Generating and testing hypotheses X Cues, questions, and advance organizers	X Clear/modeled expectations X Emotional/intellectual safety X Learning with others X Sense of audience X Choice X Novelty and variety X Authenticity

PART VII: TEACHER SELF-EVALUATION AND REFLECTION ON LESSON PLANNING AND DELIVERY

Strengths of Lesson	Opportunities for Growth
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