



<p>Timeline -></p>	<p><u>Quarter One (12 lessons)</u></p>
<p>Guiding Questions</p>	<p><u>Science:</u> What can we learn about plants and animals and how they depend on each other? How can you use science process skills to solve a problem? What can we learn about the adaptations that enable plants and animals to survive?</p> <p><u>Language Arts:</u> What can we learn about ecosystems and adaptations by reading and writing? How can we write to show the steps we have used in the scientific method? How can adjectives help our written science descriptions?</p> <p><u>Math:</u> How can charts help sort items that are different? How is a bar graph drawn to show totals with provided data? What conclusions can we draw from the data portrayed by the graph? How can we use mathematics processes to solve problems?</p> <p><u>Social Studies:</u> How can we use the information from maps to understand migration and other patterns in the environment? What are the cultural (local) connections to animals and their adaptations that allow them to survive in Hawaii?</p> <p><u>Art:</u> How can we draw/illustrate and label sketches for a science notebook? How can we create 3-D models to showcase an alien animal or bat?</p>
<p>General Learner Outcomes</p>	<p><u>GLO#1: Self-Directed Learner:</u> Students will develop a variety of resources connected to their learning about ecosystems and adaptations.</p> <p><u>GLO#2: Community Contributor:</u> Students will share “alien animal” or “build-a-bat” with their peers.</p> <p><u>GLO#3: Complex Thinker:</u> Students will use their problem solving, math and writing skills to investigate ecosystems and adaptations of plants and animals.</p> <p><u>GLO#4: Quality Producer:</u> Students will create a final product (poster/diorama/model). Students will create math products (graphs, data tables, charts) that enhance posters and diorama.</p>



Frameworks for Success in Science – MSP Grant SY 2010-11

WORKING DRAFT COHORT I & II

Ka'ūmana, Hilo Union, Kapiolani, Kalaniana'ole, and Ha'aheo Elementary Schools

Content Area: Interdisciplinary/Science

Grade Level: 3

	<u>GLO#5: Effective Communicator:</u> Students will listen, discuss and record information from their different lessons through oral, written and math pieces that illustrate concepts they have learned about.
<i>Assessments</i>	Formative and summative textbook assessments – a) End of chapter four “Where Living Things are Found” p. 158-159. Used the multiple choice questions b) End of chapter five “Living Things Depend on One Another” p. 190-191. Used the multiple choice questions associated with ONLY lesson 1 Constructed response that is based on the unit ideas and concepts The rubric criteria will include assessment of the presentation of concepts learned, as well as the written and drawn presentation quality. Oral communication of final project
<i>Content Area: Science</i>	<i>Grade: 3</i> <i>Quarter: 1</i>

Topic	Scientific Inquiry		
Benchmark SC.3.1.1	Pose a question and develop a hypothesis based on observations		
Sample Performance Assessment (SPA)	The student: Brainstorms different types of questions and develops a question and hypothesis based on observations.		
Advanced	Proficient	Partially Proficient	Novice
Pose a question and develop a hypothesis based on logical inferences and observations	Pose a question and develop a hypothesis based on observations	Pose a question or develop a hypothesis partially based on observations	With assistance, pose a question or develop a hypothesis
Benchmark SC.3.1.2	Safely collect and analyze data to answer a question		
Sample Performance Assessment (SPA)	The student: Safely collects and organizes data using tables, charts, and/or graphs to explain what happens in an experiment.		
Advanced	Proficient	Partially Proficient	Novice
Summarize and share analysis of data collected safely to answer a question	Safely collect and analyze data to answer a question	With assistance, safely collect and analyze data	With assistance, safely collect data and attempt to analyze data

Topic	Interdependence		
Benchmark SC.3.3.1	Describe how plants depend on animals		
Sample Performance Assessment (SPA)	The student: Describes how plants depend on animals for their survival (e.g., seed dispersal, pollination, oxygen/carbon dioxide cycle).		
Advanced	Proficient	Partially Proficient	Novice
Classify plants by their dependence on animals	Describe how plants depend on animals	Name very few ways in which plants depend on animals	Recognize that plants depend on animals



Frameworks for Success in Science – MSP Grant SY 2010-11

WORKING DRAFT COHORT I & II

Ka‘ūmana, Hilo Union, Kapiolani, Kalaniana‘ole, and Ha‘aheo Elementary Schools

Content Area: Interdisciplinary/Science

Grade Level: **3**

Topic	Cells, Tissues, Organs, and Organ Systems		
Benchmark SC.3.4.1	Compare distinct structures of living things that help them to survive		
Sample Performance Assessment (SPA)	The student: Compares the structures of different organisms that help them to survive (e.g., sharp eyes, good ears, fast feet, tall stems).		
Advanced	Proficient	Partially Proficient	Novice
Group living things by the distinct structures that help them to survive and provide justification for the grouping	Compare distinct structures of living things that help them to survive	Describe a few ways in which distinct structures of living things help them to survive	Name distinct structures of living things that help them to survive

Lessons Summary

	Lesson Title	What students will be able to know, do & understand
	HARCOURT TEXT	PRETEST **** determine appropriate questions.
Chapter 4	Lesson 1: What are Ecosystems?	Reviewing what ecosystems are, where they are located, and what are habitats – <ul style="list-style-type: none"> Lesson Quick Study “What are Ecosystems?” RS25-26 at the end of reading the chapter Use Transparency “Infer” IS 12....(locate in teacher resources) Vocabulary Power RS24 (optional – vocab building for HSA)
Vocab to Emphasize		population & community ****habitat and ecosystem were covered in 2 nd grade
Chapter 4	Lesson 1	LM 54-56 “Observe an Environment “ (text p. 125) Use a length of string instead of a hanger...could do a measurement (math) activity to measure string METER, PERIMETER & AREA Give the students LM56 to take home with their string for homework
Chapter 4 repeat from 2 nd grade MSP	Lesson 2: What are some types of ecosystems? OPTIONAL REVIEW	<ul style="list-style-type: none"> Use Transparency “Infer” IS 13 to begin chapter – vocabulary “infer” Lesson Quick Study RS27-28 to have students complete at the end of the chapter. Try to especially utilize the “constructed response” and “critical thinking” questions that are provided on these worksheets.
Chapter 4	Lesson 3: How do Living Things Survive in Ecosystems?	<ul style="list-style-type: none"> Use Transparency “Infer” IS14 to begin chapter. “InstaLAB” Thumbs Down – p. 143 in student text Lesson Quick Study RS 29-30
	MOTH & Mimicry	Could use the “Moth” activity as a lab activity with the students Leah will research and get back to us
Chapter 4 OPTIONAL	Lesson 4: How do Ecosystems Change?	Social Studies connection “RESOURCE” RECYCLE/NONRECYCLE <ul style="list-style-type: none"> Insta Lab p. 151 “Trashy Items” student text Lesson Quick Study RS 31-32 Transparency IS-15 “Predict”



Frameworks for Success in Science – MSP Grant SY 2010-11

WORKING DRAFT COHORT I & II

Ka‘ūmana, Hilo Union, Kapiolani, Kalaniana‘ole, and Ha‘aheo Elementary Schools

Content Area: Interdisciplinary/Science

Grade Level: 3

		Extend Your Thinking...if you were an animal that lived in the Gulf, how would you have to adapt due to the pollution from the oil spill? Coqui Frogs – how did they change our Hawaii environment
	HARCOURT TEXT	Post TEST **** determine appropriate questions. Performance Assessment – EcoMobile (optional)
Chapter Five – Harcourt Textbook		
	HARCOURT TEXT	PRETEST Animal Features and Functions (from Leah)
Chapter 5	Lesson 1: How do Plants and Animals Interact?	<ul style="list-style-type: none"> • Use Transparency IS 16 “Bird Beaks” • InstaLab p 167 “Jobs for Teeth” PRETZELS needed!! • Lesson Quick Study RS34-35 to have students complete at the end of the chapter. Try to especially utilize the “constructed response” and “critical thinking” questions that are provided on these worksheets. • Vocabulary Power p.33 (optional)
AIMS	BIRD BEAKS AND FOWL FEAT	<ul style="list-style-type: none"> • Have students copy key question & goal into their notebook. • Laminate the beaks and the booklets into sets so that pairs of students can “match” beaks to the reading descriptions • Large copies are for the teacher demo booklet and then the smaller pictures for the students
Jean’s Lesson	What About Organized Structure and Adaptations for Birds?	<ul style="list-style-type: none"> • Build A Bird with Clay • Have students build a model bird and write its description. • Jack Jeffrey – www.jackjeffrey.com bird photos!!!
AIMS	Plant Paths	Perhaps use “bird seed” and talk about smaller fruits that have small seeds – use the larger size balloons.
AIMS	Micro and MegaBat	Card-sort of micro and mega bats Read Stellaluna and then complete the student T-chart comparing bats and birds **try to locate DVD with Bats slideshow from “Bats Incredible”
AIMS	I’m Stuck on You	Make predictions before trying the activity NEED party favor blowers and Velcro dots Emphasize 10 trials ONLY per location Then draw conclusions from graph that students fill in
	Seed Transportation Derby	Need to collect seeds Watch “The Magic School Bus Goes to Seed” video (optional)
	How a Plant Attracts the Right Pollinator	
	HARCOURT	Post TEST **** Animal Features and Functions (from Leah)



	TEXT	Performance Assessment – EcoMobile (optional)
Culminating unit project “Designer Animal – Animal Adaptations” Or “Build A Bat” (AIMS)		
	Bess’s unit	Honeybees

PORTFOLIO IDEAS: 3-prong folder

- Use binder paper as the first page to create the Table of Contents (include “Title” in middle and then use the far right faint pink line as the area for “Date”)
- Create a chart to be used as the class model for each time you hand back work to be placed in the portfolio. (I laminate the blank chart paper and then reuse from unit to unit).
- Model writing the Title on the chart as you hand back papers.
- Students record and then place work behind the Table of Contents in the portfolio.
- When the unit is done, have students pull out the Table of Contents and papers.
- Add the UNIT PROFICIENCY CHART to the top to the pile of papers and have students record their grades/proficiencies.

THINK BOOK (notebook): composition tablet

- Set up a new page which will be labeled Table of Contents
- Write Date (in far left pink line) Title in middle and Page # (in far right pink line)
- Model with a chart paper for the class – when it’s used...
- Use only the fronts of the pages to number (students can write front and back but number only the front)
- Make a construction paper “pocket” for the rubberband booklets (use paper clip to make sure the booklet is secure)