Ganado Unified School District (SCIENCE/3rd Grade) 1st QUARTER

PACING Guide SY 2022-2023

RESOURCES	ASSESSMENTS
Vocabulary Cards Science Notebooks Inquiry Flipchart School to Home Resource Letters Leveled Readers Study Guide Foldables Visual Kinesthetic Vocabulary Notebook Foldables Graphic Organizers SCIENCE FUSION – Houghton Mifflin Harcourt	**Pre-Assessment** Page Keeley Science Probes McGraw-Hill Module Pretest **Formative Assessment** Claim-Evidence-Reasoning Three-Dimensional Thinking questions Talk About It Inquiry Activities Quick Check **Summative Assessment** Lesson Reviews McGraw-Hill Lesson Checks Module Test Vocabulary Check STEM Module Project

Core Ideas for Knowing Science*	Core Ideas for Using Science*
Physical Science P1: All matter in the Universe is made of very small particles. **P2:** Objects can affect other objects at a distance. P3: Changing the movement of an object requires a net force to be acting on it. **P4:** The total amount of energy in a closed system is always the same but can be transferred from one energy store to another during an event. **Earth and Space Science E1:** The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate. **E2:** The Earth and our solar system are a very small part of one of many galaxies within the Universe. **Life Science L1:** Organisms are organized on a cellular basis and have a finite life span. **L2:** Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms. **L3:** Genetic information is passed down from one generation of organisms to another. **L4:** The unity and diversity of organisms, living and extinct, is the result of evolution.	**U1:** Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. **U2:** The knowledge produced by science is used in engineering and technologies to solve problems and/or create products. **U3:** Applications of science often have both positive and negative ethical, social, economic, and/or political implications.

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
1st Quarter Week 1 August 2-5	**INTRODUCTION TO WORKBOOK/CLASSROOM/SURROUNDINGS Pre-Assessment on Writing Pre-Assessment on Sight Words 1-400 Pre-Assessment on STAR Testing**			
FUSION Workbook: Unit 1: Investigating Questions				
1st Quarter Week 2 August 8 How do Scientists investigate questions? Print from ***SCIENCE FUSION WORKBOOK Unit 1: Lesson 1-2*** ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations. PO 1. Communicate investigations and explanations using evidence and appropriate terminology.	• How do Scientists investigate questions? • What is science? • What do you see? • How can you predict the outcome of your experiment? • How do you use investigation in an experiment?	I will be able to: * Use observations to make inferences * Explain different ways that science questions can be investigated * Plan and conduct and investigation to answer questions about magnets	observe infer questions predict investigation hypothesis experiment variable model conclusion
UNIT 1: FORCES AROUND US FUSION Workbook: Unit 2: The Engineering Process				
MODULE: FORCES AND MOTION BIG IDEA: What is the relationship between force and motion?				
1st Quarter Week 3 August 2915 Lesson 1: Motion Teacher Edition	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS-2** Generate and compare multiple	* What are patterns of motion? *	I will be able to: * Consider how the different types of forces can cause different types of motion	direction distance motion position speed

(pg 5-20) Student Workbook (pg 5–20) Lesson 1 Review (pg19-20) **Fusion Workbook:** **U2-L1:** How Do Engineers Use the Design Process?	possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problems. **3-PS2-1** Plan and conduct an investigation to provide evident of the effects of balanced and unbalanced forces on the motion of an object. **3-PS2-2** Make observation and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.		* Create a model to show knowledge of patterns of motion.	
1st Quarter **Week 4 August 22** **Lesson 1: Motion** **Inquiry Activity:** • Moving Marbles • Movement of a Wind-Up Toy • How can you design a treehouse (Fusion WKbk Pg. 67) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations. PO 1. Communicate investigations and explanations using evidence and appropriate terminology.	* How will the track affect the direction a marble travels?	I will be able to: * Observe the way objects move using a marble * Test to see if a marble will follow different shaped ramps * Fill out a science investigation format to complete the project	Directions Distance Motion Position Speed
1st Quarter **Week 5 August 29** **Lesson 2: Forces Can Change Motion** Teacher Edition (pg 21c-40) Student Workbook	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problems.	• What happens when an object is pushed or pulled?	I will be able to: * Understand that when a force is applied to an objects, its motion changes	balanced force force friction unbalanced forces

(pg 21-40) Lesson 2 Review (pg39-40) **Fusion Workbook: U2-L2:** How are Technology and Society Related?	**3-PS2-1** Plan and conduct an investigation to provide evident of the effects of balanced and unbalanced forces on the motion of an object. **3-PS2-2** Make observation and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.			
1st Quarter **Week 6 September 6** **Lesson 1: Motion** **Inquiry Activity:** • Forces Affect the Way Objects Move • On the Move • Design It: Reach for the Sky (Fusion WKbk Pg. 415) • Make a Pulley Science Project Worksheet ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations. PO 1. Communicate investigations and explanations using evidence and appropriate terminology.	* How will the track affect the direction a marble travels?	I will be able to: * Observe the way objects move using a marble * Test to see if a marble will follow different shaped ramps * Fill out a science investigation format to complete the project	Directions Distance Motion Position Speed
1st Quarter **Week 7 September 12** **Module Project Planning** Lesson 1: Design a Skatepark (pg41) Lesson 2: Engineering Challenge (pg42-44)	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions.	• Why is it important for an architectural designer to know about motion and force for this project? • Why is it important that an engineer knows about electricity and magnetism?	I will be able to: * To revisit the module phenomenon by explain the relationship between force and motion to describe how the skateboarder got to the top of the ramp * To use what I've learned throughout the module to design,	Directions Distance Motion Position Speed balanced force force friction unbalanced forces

Fusion Workbook: **Pg415:** Reach for the Sky: Building with Cranes **Pg431:** Helen Greiner and Dean Kamen	**3.S.S1.C4**: Communication Communicate results of investigations. PO 1. Communicate investigations and explanations using evidence and appropriate terminology.		build, and test a model for a self-closing gate.	
ELECTRICITY AND MAGNETISM				
1st Quarter **Week 8 September 19** **Lesson 1: Electricity and Designing Solution** TE (pg 49-67) SW (pg 49-67) **Fusion Workbook:** **U10-L1:** What are Simple Machines?	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problems. **3-PS2-3** Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. **3-PS2-4** Define a simple design problem that can be solved by applying scientific idea about magnets	• How can some objects push or pull one another without even touching? • How does electricity affect an object's motion?	I will be able to: * Consider how magnets and electricity can be used to move objects * To ask questions that can be investigated to explore the effects of static electricity on objects *	attract electrical charge repel static electricity
1st Quarter **Week 9 September 26** **Lesson 2: Magnetism and Designing Solutions** TE (pg 67-83) SW (pg 67-83) **Fusion Workbook:** **U10-L2:** What are some other simple machines?		* How do magnets affect an object's motion? * What is a magnetic pole? * What is a magnetic field?	I will be able to: * Explain how magnetic forces can be used in designing solutions to problems	magnet magnetic field magnetism pole
1st Quarter **Week 10 October 3**	**3.S.S1.C1:** Observations, Questions, and Hypotheses	* What is static electricity?	I will be able to:	Attract Electrical charge

Lesson 1: Motion **Inquiry Activity:** • Static Charge (pg63) • Magnetic Forces Pass Through Objects (pg74) • ***Scientific worksheet is included at the end of the pacing guide.*** **Fusion Workbook:** **U10-L3:** How do Simple Machines Affect Work?	Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	* How do you eliminate static electricity? * How is Earth like a magnet? * What is a magnetic pole? * What is a magnetic field?	* Observe the way objects move using a marble * Test to see if a marble will follow different shaped ramps * Fill out a science investigation format to complete the project	Repel Static electricity Magnet Magnetic field Magnetism Pole

Ganado Unified School District (SCIENCE/3RD Grade) 2ND QUARTER

PACING Guide SY 2022-2023

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
UNIT 2: LIFE CYCLES AND TRAITS				
MODULE: PLANTS **BIG IDEA: How do plants grow, develop, and reproduce?**				
1st Quarter **Week 11 October 1** **Lesson 1: Plant Life Cycles** TE (pg 6C-20) SW (pg 5–20) **Fusion Workbook:** **U3-L1:** What are some Plant Life Cycles?	**3-LS1-1** Develop models to describe that organisms have unique and diverse life cycles but all have in a common birth, growth, reproduction, and death. **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-LS4-2** Use evidence to construct an explanation from how the variations in characteristics among individuals of the same species may provide advantages in surviving, fining mates, and reproducing.	* How do plants grow and develop?	I will be able to: * Explore the life cycles of plants and the traits they inherit. * Develop and use models to describe patterns in plan life cycles	germinate life cycle pollination reproduce
2nd Quarter **Week 12 October 17** **Lesson 1: Motion Inquiry Activity:** • Plant Families • Parent Plant	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data.	* How do plants grow and develop? * Did your research support or reject your prediction? * How does you presentation compare to those of the other students?	I will be able to: * Research the life cycles of two plants * See the differences between the two life cycles	Inherited trait Trait Variation

Scientific worksheet is included at the end of the pacing guide. **Fusion Workbook:**	**3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.			
2nd Quarter **Week 13 October 24** **Lesson 2: Plant Traits** TE (pg 22C-36) SW (pg 21-36) **Fusion Workbook: (pg.122-123)** **U3-L4:** What are Structural Adaptation?	**3-LS1-1** Develop models to describe that organisms have unique and diverse life cycles but all have in a common birth, growth, reproduction, and death. **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-LS4-2** Use evidence to construct an explanation from how the variations in characteristics among individuals of the same species may provide advantages in surviving, fining mates, and reproducing.	* How are plants similar and different from their parents?	I will be able to: * Explain patterns in the inheritance of traits by plants, and how variations provide plants advantages for survival *	inherited trait trait variation
2nd Quarter **Week 14 October 31** **Inquiry Activities (Pg.28)** Plant Families Parent Plants **Fusion Workbook:** **U3-L6:** What are Behavioral Adaptations? ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	* How does knowing about plant life cycles affect your module planning * How does inherited traits and plant life cycles influence your model designs.	I will be able to: * Reflect on what I've learned and how that may affect my thinking about growing plants, knowledge of inherited traits, and life cycle of a plant.	

MODULE: ANIMALS BIG IDEA: HOW DO ANIMALS LIVE, GROW, AND SURVIVE?				
2nd Quarter **Week 15 November 7** **Lesson 1: Animals Life Cycle** TE (pg 48A-59) SW (pg -59) LESSON 1 REVIEW **FUSION Workbook:** **U3-L2:** What are some Animal Life cycles?	**3-LS1-1** Develop models to describe that organisms have unique and diverse life cycles but all have in a common birth, growth, reproduction, and death. **3-LS2-1** Construct an argument that some animals form groups that help members survive. **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-LS4-2** Use evidence to construct an explanation from how the variations in characteristics among individuals of the same species may provide advantages in surviving, fining mates, and reproducing.	* How do animals grow and develop?	* To explore the life cycles of animals, the traits they inherit, and their social interactions * Use models to describe patterns in animal's life cycles *	birth metamorphosis
2nd Quarter **Week 17 November 28** **Inquiry Activities (Pg.59)** Animal Life Cycle Model **FUSION Workbook: (Pg. 116-128)** **U3-L4:** What are Structural Adaptation? ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	* What patterns will you observe in the life cycles of the animals you selected?	I will be able to: * Compare the life cycles of two different animals	Birth Metamorphosis

2nd Quarter **Week 18 November 5** **Lesson 2: Animal Traits** TE (pg 64A-75) SW (pg 67-83) LESSON 2 REVIEW **FUSION Workbook:** **(Pg. 132-142)** **U3-L6:** What are Behavioral Adaptations?	**3-LS1-1** Develop models to describe that organisms have unique and diverse life cycles but all have in a common birth, growth, reproduction, and death. **3-LS2-1** Construct an argument that some animals form groups that help members survive. **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-LS4-2** Use evidence to construct an explanation from how the variations in characteristics among individuals of the same species may provide advantages in surviving, fining mates, and reproducing.	* How does living in a group help some animals survive better?	I will be able to: * Engage in argument to explain how some animals form groups that help them survive.	Group Population Survive
2nd Quarter **Week 19 November 12** **Inquiry Activities** **(Pg.90)** Zebrafish Observation ***Scientific worksheet is included at the end of the pacing guide.*** **FUSION Workbook:** **Unit 3:** Pg. 127 and 143 • People in Science • STEM Engineering and Technology	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	* What will happen when a new zebrafish is introduced into a school of zebrafish?	I will be able to: * Reflect on what I've learned and how that may affect my thinking about growing plants, knowledge of inherited traits, and life cycle of a plant.	Group Population Survive
2nd Quarter **Week 20 December 19**	Students will work on Science Worksheets Students will review the 1st Semester of learning			


COMMUNICATION

Ganado Unified School District (SCIENCE/3RD Grade) 3RD QUARTER

PACING Guide SY 2022-2023

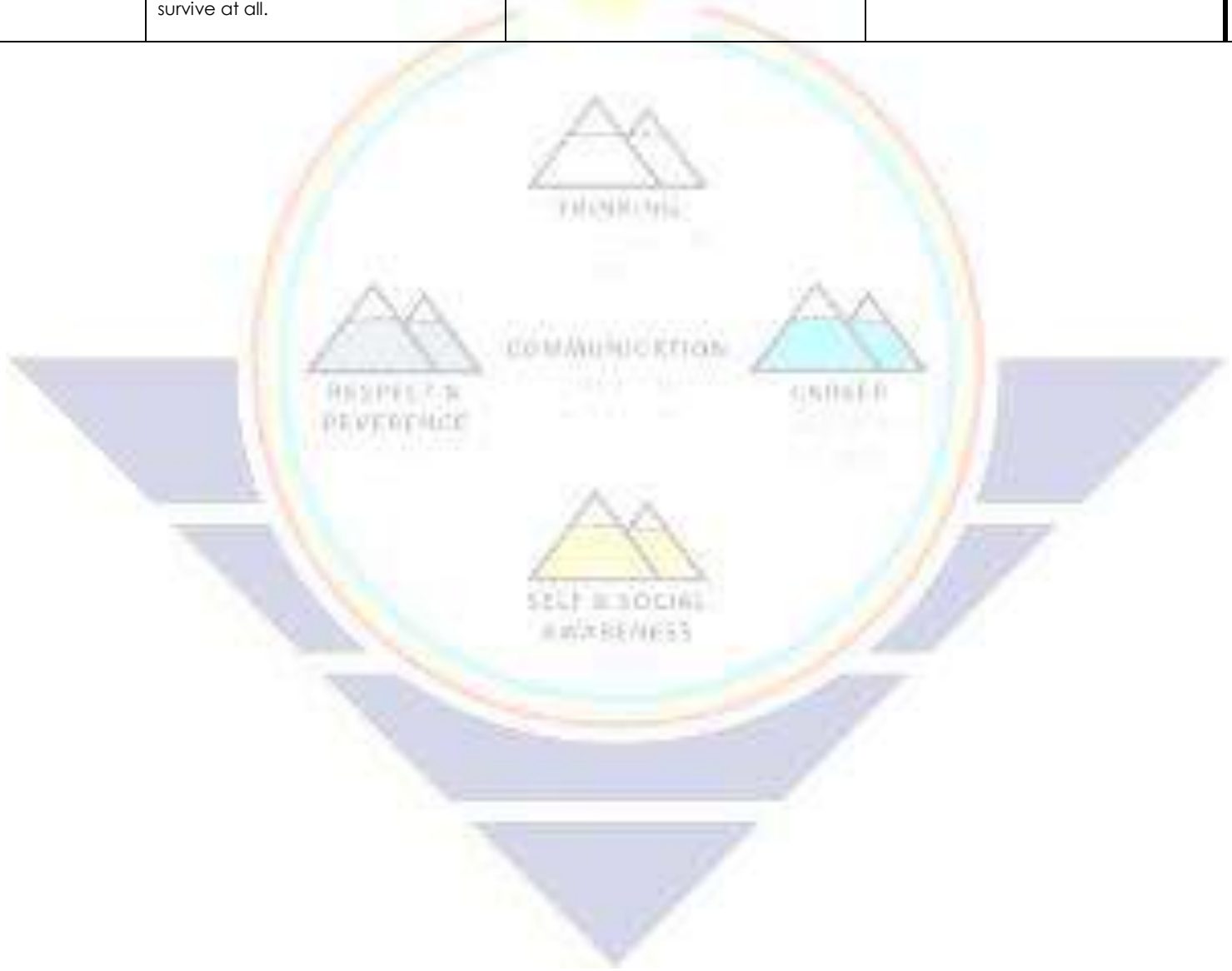
Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
3rd Quarter **Week 21 January 4**	* Students will work on Science Worksheets * Students will review the 1st Semester of learning			
MODULE: ANIMALS **BIG IDEA: HOW DO ANIMALS LIVE, GROW, AND SURVIVE?**				
2nd Quarter **Week 22 January 9** **Lesson 3: Animal Group Survival** TE (pg 79-93) SW (pg 79-93) LESSON 3 REVIEW **FUSION Workbook:** **U4-L1:** What are Ecosystems?	**3-LS1-1** Develop models to describe that organisms have unique and diverse life cycles but all have in a common birth, growth, reproduction, and death. **3-LS2-1** Construct an argument that some animals form groups that help members survive. **3-LS3-1** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. **3-LS4-2** Use evidence to construct an explanation from how the variations in characteristics among individuals of the same species may provide advantages in surviving, fining mates, and reproducing.	* How does living in a group help some animals survive better?	* Engage in argument to explain how some animals form groups that help them survive.	group population survive

2nd Quarter **Week 23 January 17** **Inquiry Activity pg90-91** Zebrafish Observation Animal behavior ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	* How does knowing about animal life cycles affect your habitat design? *	* To use what I've have learned throughout the module to design a habitat for a new animal at a zoo * Choose an animal, identify habitat components that would support the animals' survival, and present my finding.	
UNIT 3: WEATHER PATTERNS **MODULE: SURVIVE THE ENVIRONMENT** **BIG IDEA: HOWO DO SOME ORGANISMS SURVIVE IN SOME ENVORNMENTS BUT OTHER CANNOT?**				
3rd Quarter **Week 24 January 24** **Lesson 1: Survival of Organisms** **Pg.2-19** TE (pg 5-22) SW (pg 5–22) Lesson 1: Review **FUSION Workbook:** **U4-L3:** What is a food chain?	**3-5-ETS-1-3** Plan and carry out fair tests in which variables re controlled and failure points are considered to identify aspects of a model or prototype of that can be improved **3-LS3-2** Use evidence to support he explanation that traits can be **influenced by** the environment **3-LS4-3** Construct an argument with evidence that in a particular habitat some organisms **can survive well,** some survive less well, and some cannot survive at all	• What do organisms need to survive?	I will be able to: * Explore how different organisms survive in different environment * Use evidence to explain what causes organisms to survive in their environment.	competition ecosystem resource
2nd Quarter **Week 25 January 30** **Inquiry Activity pg90-91**	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling)	* How does knowing about animal life cycles affect your habitat design? *	* To use what I've have learned throughout the module to design a habitat for a new animal at a zoo	competition ecosystem resource

Plant Hunt (pg8-9) Needs to a Plant (pg11-12) ***Scientific worksheet is included at the end of the pacing guide.***	Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.		* Choose an animal, identify habitat components that would support the animals' survival, and present my finding.	
3rd Quarter **Week 26 February 6** **Lesson 2: Adaptations and Variations** TE (pg 23-47) SW (pg 23-47) **FUSION Workbook: (Pg. 132-142)** **U3-L6:** What are Behavioral Adaptations?	**3-5-ETS-1-3** Plan and carry out fair tests in which variables re controlled and failure points are considered to identify aspects of a model or prototype of that can be improved **3-LS3-2** Use evidence to support he explanation that traits can be **influenced by** the environment **3-LS4-3** Construct an argument with evidence that in a particular habitat some organisms **can survive well,** some survive less well, and some cannot survive at all	• How do organisms survive in their environments?	I will be able to: * Argue from evidence that some animals survive better in certain environments than others.	adaptation behavior camouflage hibernation migrate mimicry
3rd Quarter **Week 27 February 13** **Inquiry Activity** Camouflage Beans (pg31) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	• How does camouflage helps organism hide from predators?	I will be able to: * To understand how camouflaging protects organisms form predators.	adaptation behavior camouflage hibernation migrate mimicry
MODULE: CHANGE THE ENVIRONMENT **BIG IDEA: HOW DO CHANGES IN THE ECOSYSTEM AFFECT THE ORGANSMS THAT LIVE THERE?**				
	3-5-ETS1-1			extinction

3rd Quarter **Week 28 February 21** **Lesson 1: Fossils** TE (pg 48-68) SW (pg -51-68) Lesson 1: Review	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **4-LS4-1** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. **3-LS4-3** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	• What do fossils tell us about the environment?	I will be able to: * Explore how environmental changes affect the organisms that live there * Analyze and interpret data about fossils to provide evidence about where they lived long ago *	fossils
3rd Quarter **Week 29 February 27** **Inquiry Activity** Fossil Dig (Pg61) Fossil Mystery (Pg64-65) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	• How does camouflage helps organism hide from predators?	I will be able to: * To understand how camouflaging protects organisms form predators.	adaptation behavior camouflage hibernation migrate mimicry
3rd Quarter **Week 30 March 6** **Lesson 2: Changes Affect Organisms** TE (pg 69-84) SW (pg 69-84) Lesson 2: Review	**3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **4-LS4-1** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. **3-LS4-3**	• How does a changing environment affect organisms?	I will be able to: * Explain changes to the environment and how those changes affect living things	invasive species

U4-L5: How Do the Environmental Changes Affect Living Things?	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.			



Ganado Unified School District (SCIENCE/3RD Grade) 4TH QUARTER

PACING Guide SY 2022-2023

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
UNIT 3: WEATHER PATTERNS				
MODULE: SURVIVE THE ENVIRONMENT **BIG IDEA: How does weather change, and how can natural hazards change environments?**				
4th Quarter **Week 31 March 20** **Lesson 1: Weather Patterns** Teacher Edition (pg 5-20) Student Workbook (pg 5–20) Lesson 1: Review **FUSION Workbook:** **U7-L1** What is water cycle?	**3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season **3-ESS2-2** Obtain and combine information to describe climates in different regions of the world. **3-ESS3-1** Make a claim about the merit of a design solutions that reduces the impacts of a weather related hazard **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem	* How does weather change?	I will be able to: * Explore different types of weather and climate, along with natural hazards and how to prepare for them * Analyze and interpret data to describe different weather patterns	atmosphere precipitation temperature weather
3rd Quarter **Week 32 March 27**	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions.	• What kind of weather will the area of the East of your area have tomorrow?	I will be able to: * Use a geographical map online to	atmosphere precipitation temperature weather

Inquiry Activity Predict Weather (pg8) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	• What can you learn by look at weather near you on a weather map? • What can you learn by looking at the weather across the country on a weather map?	determine the weather from 1-10 days * Learn about the current weather and found patterns	
4th Quarter **Week 33 April 3** **Lesson 2: Weather and Seasons** Teacher Edition (pg 21-38) Student Workbook (pg 21-38) Lesson 2: Review **FUSION Workbook:** **U7-L2** What is Weather?	**3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season **3-ESS2-2** Obtain and combine information to describe climates in different regions of the world. **3-ESS3-1** Make a claim about the merit of a design solutions that reduces the impacts of a weather related hazard **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem	How does the weather in the United States compare to other parts of the world?	I will be able to: * Obtain and combine information to describe climate in different regions	axis climate season
3rd Quarter **Week 34 April 11** **Inquiry Activity** Compare Weather Patterns (pg24) Land and Temperature Change (pg34-35)	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare	• How does your weather compare to a city to the north of you? • How did the high and low temperatures compare between _____ and your city?	I will be able to: * Speculate about the weather conditions in the two cities based on their locations on the map. * Conduct a research on weather patterns on two cities, record data,	axis climate season

Scientific worksheet is included at the end of the pacing guide.	to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.		and analyze the data to make comparisons.	
4th Quarter **Week 35 April 17** **Lesson 3: Natural Hazards and the Environment** Teacher Edition (pg 39-54) Student Workbook (pg -39-54) Lesson 3: Review **FUSION Workbook:** **U5-L2** How does Earth's Surface Change Slowly? **U5-L4** How does Earth's Surface Change Quickly?	**3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season **3-ESS2-2** Obtain and combine information to describe climates in different regions of the world. **3-ESS3-1** Make a claim about the merit of a design solutions that reduces the impacts of a weather related hazard **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem	* How do natural hazards affect environments?	I will be able to: * Use evidence to describe how natural hazards affect environments, and identify ways to reduce damage from natural disasters.	natural hazards
3rd Quarter **Week 36 April 24** **Inquiry Activity** Flooding Plants (Pg42) Natural Hazards (pg50) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication	• What will happen to a plant that gets too much water? • What characteristics did you use to compare the plants? • Do you think all plants respond the same? Why? • What effect might the erosion of soil have on an ecosystem?	I will be able to: * Observe what happens when a plant gets too much water * Connect the plant models to what they know about the climate * Model the effects of a landslide on buildings	natural hazards

	Communicate results of investigations.			
4th Quarter **Week 37 May 1** **Lesson 4: Prepare for Natural Hazards** Teacher Edition (pg 55-74) Student Workbook (pg 55-74) Lesson 4: Review **FUSION Workbook:** **U6-L1** What are some Natural Resources?	**3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season **3-ESS2-2** Obtain and combine information to describe climates in different regions of the world. **3-ESS3-1** Make a claim about the merit of a design solutions that reduces the impacts of a weather related hazard **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem	* How can we prepare for natural hazards?	I will be able to: * Design and compare models to explain how to reduce the impact of natural hazards.	floodwall levee lightning rod
3rd Quarter **Week 39 May 15** **Week 40 May 22** **Inquiry Activity** Build a Sugar Structure (pg58-59) Sandbags and Floods (pg64-65) ***Scientific worksheet is included at the end of the pacing guide.***	**3.S.S1.C1:** Observations, Questions, and Hypotheses Observe, ask questions, and make predictions. **3.S.S1.C2**: Scientific Testing (Investigating and Modeling) Participate in planning and conducting investigations, and recording data. **3.S.S1.C3**: Analysis and Conclusions, Organize and analyze data; compare to predictions. **3.S.S1.C4**: Communication Communicate results of investigations.	• How many sugar cubes can be stacked without falling over when they are tapped? • How does height affect the likelihood of the model building to remain standing after simulating an earthquake? • How will the sandbags change the effect of the water on the land? • Did your results support your prediction?	I will be able to: * Model how to prevent damage from a flood using sandbags * Discuss whether their results supported their prediction	floodwall levee lightning rod