Timeline ->	*Quarter Four (12 lessons)*
Guiding Questions	***Science:*** How can we understand how the Earth's landforms change due to slow processes like weathering, erosion, and flooding? What are the fast processes that change the Earth? How do earthquakes, and volcanoes occur in/on the Earth's surface? What happens to the Earth's surface during the water cycle? Where does the Earth's fresh and salt water come from and go? ***Language Arts:*** What can we learn about the processes that change the Earth's surface through reading the textbook or other resources? How can we write to show the steps we have used in the scientific method or to describe the water cycle with poetry? How can adjectives help our written science descriptions? ***Math:*** How can Venn diagrams help sort items that are the same or 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? How are ratios used to solve problems? (fresh/salt water) **Social Studies:** How can we use information to solve a societal problem? What are the economic issues that occur when natural processes like earthquakes and volcanoes cause destruction? **Art** How can we draw/illustrate and label sketches for a science notebook? How can we create 3-D models to showcase what we have learned about volcanoes and the water cycle?
General Learner Outcomes	***GLO#1: Self-Directed Learner:*** Students will create ……. ***GLO#2: Community Contributor:*** Students will share ***GLO#3: Complex Thinker:*** Students will use their problem solving, math and writing skills to investigate ***GLO#4: Quality Producer:*** Students will create a final product (poster/diorama/model) that illustrates the Students will create math products (graphs, data tables, charts) that enhance posters and diorama.

	GLO#5: Effective Communicator: Students will listen, discuss and record information from their different lessons through oral, written and math pieces that illustrate concepts they have learned about. Students will orally share with younger students their final products.
Assessments	Formative and summative textbook assessments. Constructed response (math, language arts, science) that is based on the unit ideas and concepts A summative product rubric will be used to assess the final science poster/diorama/model that each student produces. 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

Standards and Benchmarks

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.		
Rubric			
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.		
Rubric			
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	Forces that Shape the Earth		
Benchmark SC.3.8.2	Describe how the water cycle is related to weather and climate		
Sample Performance Assessment (SPA)	The student: Illustrates the water cycle and explains its relationship to weather and climate.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Describe how the phases of the water cycle relate to weather and climate	Describe how the water cycle is related to weather and climate	Give an example of how the water cycle is related to weather or climate	Recognize that the water cycle is related to weather and climate

Topic	Forces that Shape the Earth		
Benchmark SC.4.8.1	Describe how slow processes sometimes shape and reshape the surface of the Earth		
Sample Performance Assessment (SPA)	The student: Describes how the surface of the Earth is shaped and reshaped through slow processes (e.g., waves, wind, water, ice).		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Use evidence to explain how slow processes have shaped and reshaped the surface of the Earth	Describe how the shaping and reshaping of the Earth's land surface is sometimes due to slow processes	Provide examples of the shaping and reshaping of the Earth's land surface due to slow processes	Recognize that the shaping and reshaping of the Earth's land surface is sometimes due to slow processes

Topic	Forces that Shape the Earth		
Benchmark SC.4.8.2	Describe how fast processes (e.g., volcanoes, earthquakes) sometimes shape and reshape the surface of the Earth		
Sample Performance Assessment (SPA)	The student: Describes how fast processes have shaped and reshaped the Hawaiian Islands.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Use evidence to explain how fast processes have shaped and reshaped the surface of the Earth	Describe how the shaping and reshaping of the Earth's land surface is sometimes due to fast processes	Provide examples of the shaping and reshaping of the Earth's land surface due to fast processes	Recognize that the shaping and reshaping of the Earth's land surface is sometimes due to fast processes

Lessons Summary

Lesson Title	What students will be able to know, do & understand
Harcourt Text Chapter 7	**Pretest** – Forces that Shape the Land
Harcourt Text OPTIONAL	Vocabulary Sheet – students build along the way (spelling homework folder or portfolio) Check teacher resources for the "vocabulary cards with words/pictures
Harcourt Lesson 1	Consider doing the "Folds in the Earth's Crust" lab LM90. The rest of this lesson has been covered by the landforms book that Grade 2 completed
Harcourt Lesson 2 How do Landforms Change Slowly?	Grade 2 did a modification on the lab "water at work" and the "ice breaker" AIMS activity, so you don't need to do this experience. Use Transparency IS 23 as an opener to ask the question about how the land is changing. Then go through the chapter to understand the slow processes. Use the RS51-52 to help students review how slow processes change the surface of the earth.
Harcourt Text	Math in Science – Glaciers data table and then do the "writing in science" (p.245) where students write a narrative about the day in the life of someone during the last ice age.
AIMS (choose one)	Agent Erosion (different ways that rocks are eroded) Ice Breakers (connected to glaciers) Sandpile (how is sand formed – from what)
Harcourt Lesson 3 How Do Landforms Change Quickly?	Earthquakes – read and review this section
AIMS	Shakes and Quakes – What happens to Earth and structures on Earth when it quakes?
Harcourt Lesson 3 How Do Landforms Change Quickly?	Volcanoes – read and review this section
AIMS (OPTIONAL)	Volcanoes (can make a simpler model with paper plate, play dough and small dose cup – eruption = baking soda and vinegar)
Harcourt Text Lesson 3	Complete the Reading Support and Homework RS 53-54
Harcourt Text Chapter 7	Chapter POST test

Harcourt Text Chapter 9	The Water cycle PRETEST
Lesson 1-Where is Water Found on Earth?	Good review to lead to where water comes from and briefly describes the small ratio of fresh water to salt. RS 65 is a good intro
Lesson 2- What is the Water Cycle?	RS 68-69 Multiple choice RS 30 Condensation/Evap/Precipitation "The Changing Forms of Water" On Level reader will reinforce ideas "The Magic School Bus: Wet All Over" (available on www.discoveryeducation.com) with descriptions of purification/conservation/water cycle. (Some extensions included in lesson pack) "My 10 Water facts" worksheet to follow up reading the book Transparency GO 30 Textbook lab "Condensation in a Terrarium" pg. 313 (Note: Condensation occurring in the lid of terrarium) LM 118 matches this lab.
AIMS	Moving Raindrops in the Water Cycle: learn the three ways water moves.
AIMS OPTIONAL	Pond Today – Meadow Tomorrow
AIMS OPTIONAL	Moving Water
Lesson 3- What is Weather?	Review and Prep for post test in textbook 332-333

EXTENSIONS-
LA integration
"The Day the Water Stopped" worksheet
Poems about Water

EXTRA WORKSHEETS

The Water Cycle (Teacher created materials)

Which Will Evaporate first? (Scotts Foresman)

Beaches Change

How Do We Use Water?

Don't Let the Water Run When You Brush Your Teeth

Water stories in sequence

Water Everywhere

Reading and Science

Amazing Water

What Does Evaporate Mean?

Moving Water

Resource:
www.harcourtscience.com
Grade three, Ch 9 good visual of water cycle
Brainpopjr.com
Water cycle quick video