Timeline ->	*Quarter One*
Guiding Questions	***Science:*** How can we observe and record daily weather patterns? What tools can we use to gather observations about rain, wind and other forms of the weather that we observe? ***Language Arts:*** How can students ask and respond to basic "wondering" questions about the world around them? How can we relate the terms beginning, middle and end to help model non-fiction writing? How can we use non-fiction text to build our vocabulary word wall? How can we use our science notebook to write about our observations, our learning, our class data and new vocabulary? How can we use new science terms to describe our weather observations? ***Math:*** How can Venn diagrams help sort items that are the same or different? How can frequency data be collected and recorded on a data table? How is a bar graph drawn to show totals with collected data? What conclusions can we draw from the data portrayed by the graph? How can we use different measuring tools to collect data? ***Art:*** How can we draw/illustrate and label sketches for a science notebook? How can we create 3-D models that show what we have learned about observing the weather.
General Learner Outcomes	***GLO#1: Self-Directed Learner:*** Students will follow directions to complete the class and homework tasks. ***GLO#2: Community Contributor:*** Students will share their math, science and literacy products with other members of their class or another classroom. ***GLO#3: Complex Thinker:*** Students will use their problem solving, math and writing skills to investigate how weather changes and how plants grow. ***GLO#4: Quality Producer:*** Students will create several products (poster/model/graphs/data tables) that illustrate their understanding about living/non-living characteristics, as well as making observations (weather)

	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. Students will orally share their products with other students. **GLO#6: Effective and Ethical User of Technology:** Students will utilize technology to record observations, categorize items, and supplement their constructed response questions.
Assessments	Constructed response a) Senses b) Weather

Standards & Benchmarks

Big Idea(s) / Major Understanding(s): *Students will understand that...*

HCPS III Benchmarks:

◊ *K.1.1* **Scientific Inquiry**
Use the senses to make observations

◊ *K.1.2* **Scientific Inquiry**
Ask questions about the world around them

◊ *K.2.1* **Science, Technology, and Society**
Identify different types of technologies at home, in the classroom, and/or in the world

◊ *K.6.1* **Nature of Matter**
Classify objects by their attributes (e.g., physical properties, materials of which they are made)

Sample Performance Rubrics

Strand	**The Scientific Process**
Standard 1: The Scientific Process: SCIENTIFIC INVESTIGATION: Discover, invent and investigate using the skills necessary to engage in the scientific process	

Topic	Scientific Inquiry
Benchmark SC.K.1.1	Use the senses to make observations
Sample Performance Assessment (SPA)	The student: Uses the five senses (i.e., sight, smell, hearing, touch, and taste) to make observations about objects and events.

Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Use appropriate senses to make detailed observations on what is actually observed	Use appropriate senses to make observations on what is actually observed	Use the senses to make limited observations on what is observed	Use the senses to make observations that are inaccurate or inferred

Topic	Scientific Inquiry		
Benchmark SC.K.1.2	Ask questions about the world around them		
Sample Performance Assessment (SPA)	The student: Asks questions about objects, organisms, events, places, or relationships in the environment.		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Consistently ask relevant questions about the world around them	Usually ask relevant questions about the world around them	Sometimes ask questions, with assistance, about the world around them	Rarely ask questions, even with assistance, about the world around them
Topic	Science, Technology, and Society		
Benchmark SC.K.2.1	Identify different types of technologies at home, in the classroom, and/or in the world		
Sample Performance Assessment (SPA)	The student: Identifies examples of technologies that exist at home, in the classroom, and/or in the world (e.g., knife, pencil, computer, pencil sharpener, refrigerator).		
Rubric			
Advanced	**Proficient**	**Partially Proficient**	**Novice**
Identify and explain examples of technology at home, in the classroom, and/or in the world	Identify different types of technologies at home, in the classroom, and/or in the world	Provide limited examples of technologies at home, in the classroom, and/or in the world	Recognize, with assistance, examples of technologies at home or in the classroom

Lessons Summary – Observing with Our Senses and Recording the Weather

Lesson Day #	Lesson Title	What students will be able to know, do & understand
	Pre-assessment	Senses Teacher will go over each picture to explain what the picture is before students circle each question. Teacher will read each prompt.
Lesson One	The Five Senses 4 days: day 1 – listening day 2 – seeing day 3 – smell day 4 -taste	"What are the senses we use to observe?" • Use the posters to help remind students about how they use their senses to collect information. • Start using "sensory experiences" daily in the beginning of the school year to introduce the vocabulary about senses and scientific inquiry, math. • 5 senses coloring activity booklet (has pictures from the pre/post assessment • Introduce Wonder and Discover Book (DASH) created by the teacher in a notebook. Each child's name is on a

		separate page and when a specific student asks a question, the teacher reinforces "that's a great question" and then logs it onto the student's page. Teacher can use the Wonder book to determine how many questions students are asking over time as a formative assessment.
AIMS Lesson Two	Touch & Tell	Sorting with textures and sense of touch • Plastic cup inside a long sock – put the items in the cup first before placing cup in the sock or paper sacks with several pieces of different materials (one sack for each group) • Pairs of cloth swatches, student gets one out and then tries to select the match • Students sort the pairs into either the smooth or rough category as selection • Tally sheet from rough/smooth OPTIONAL • Next sequence from smoothest to roughest OPTIONAL (Could use the other senses – sound, smell to do a similar matching activity)
AIMS	Shape Search	"How can you sort and classify shapes without using your eyes?" Suggestions for shapes: Attribute blocks, use a Cricut or Diecut to cut out the sandpaper shapes.
	Post-assessment	Senses post test
	Pre-assessment	Weather pretest
	Making a Weather Windsock	"What is weather" How can we use our senses to make observations about the weather? Connect classroom pictures to different types of weather. Students create their own weather windsocks with oaktag and construction paper. Students cut out, color and glue the different weather types and place onto the windsock. Students can use the tool to make their daily weather observations. Then the windsock can be sent home and one class weather windsock can be used by the class meteorologist for the daily weather monitoring. Teacher models with the students daily, how to fill in the calendar/chart with the weather of the moment. *Website resource for sounds of weather
AIMS	Making a Rain Gauge	Have students bring in a water bottle. Teacher will need to have a

		box/crate for the water bottles, so that the rain gauge does not fall over during rain. Suggest using a soda can box upside down (cut holes) or a 6-pack holder. An adult will cut tops off the water bottle and invert it to make it like a funnel. Tape the edge of the funnel top to the bottle. Use the AIMS cm ruler (laminated) and glue/tape onto the outside of the water bottle. BELOW THE BOY'S FEET = "LITTLE RAIN" ABOVE HIS FEET MEANS HE IS STEPPING IN PUDDLES = "LOTS OF RAIN" Students record their rain observations with picture of water bottle and other data in their notebook. Students empty after each observation.
Teachertube	Making a Rain Stick	Make rain stick – How to Make a Rainstick (Teachertube). 1. Using a toilet paper tube – have kids paint the outside with earthtone colors (dots of color). 2. Cut a circle and score so that the circle will fit tightly over the end of the tube. Teacher glues in place and secures with a rubber band. 3. Students can roll and twist a 1' square of aluminum foil fairly tightly and place in toilet paper tube. 4. Have students pour in ~2 T of rice into the tube. 5. Help students secure top of tube the same way that the bottom was secured. Glue a piece of yarn around the top for decoration.
AIMS	Watching the Weather	Use a blank calendar template or the AIMS template to have students write in the DATE (writing numbers) and then record the data (class agreed weather observation). Students observe and record daily, then at the end of the month there is a "tally" area for the different types of weather (sunny, partly sunny, voggy, cloudy, windy, rainy)
AIMS	Observing the Weather (title of wksht – part of Watching the Weather)	1st time –teacher modeled chart with the students, go outside with students –teacher leads with questions to prompt the different sense observations, debriefed with the class afterwards on the chart (formative assessment – put names with responses) 2nd time – students had a copy of the weather observation chart, went outside and made observations, students came in and drew on individual papers.
	Post-assessment	Weather post test

	Formative/ summative assessment idea	After each month calendar is done, the students glue the calendar into their science notebook. Room will be left for the rest of the monthly calendars in the same section so that the calendars are all together. Use the calendars at the end of the semester to compare student progress for the benchmarks in math (number writing), science (accurately collect and record data using their senses), social studies (using a calendar to record change over time).

Word Wall – Science words

Inquiry Standard: observe, 5 senses (sight, hear, touch, smell, taste), question, prediction

Earth science: weather, sunny, rainy, vog, cloudy, partly sunny, windsock/anemometer, rain gauge, temperature

Technology: tool, equipment, scientist, meteorologist (National Weather Service, TV news, Civil Defense), windsock/anemometer, rain gauge

Math: numbers, data, graph, data table, shapes, sizes, physical attributes

Social Studies: calendar, time (days, months, seasons), change

USE ON THE SMARTBOARD RESOURCE:
www.scholastic.com/kids/weather/sim/game.htm
Rainstick directions:
Cloudy with a Chance of Meatballs
Achieve 3000 – Kid Biz article

Word Wall – Science words

Inquiry Standard:	sort (general ie: red ones) classify (uses a specific attribute to group and can explain/justify the grouping) collect & record
Life Science:	same/compare, different/contrast, needs (water, air, food, move, have young, grow, dead/die)
Technology:	tool, equipment, digital camera, KIDPIX + computer, smartboard, scientist
Math:	survey (collect/record) data, t-chart, shapes, physical attributes