MJSD TWI 2nd Grade Science Scope and Sequence

Unit 1-Beginning	**Big Idea**	**Science**	**UOS-- Launching**	**Readers Workshop**	**Strategies**	**WIDA**
Creating a bicultural classroom environment (Sept. 1- Oct. 10)	I want my students to understand that we speak two languages and bring various cultural perspectives to our learning and that we can learn together and support each other in two languages and cultures.	What is science? What do scientists do? (They ask questions, investigate questions, and answer questions based on research.) What is an environment?	Launching	What does our learning environment look like, sound like, and feel like? How do we promote our own learning within our own environment? (self-regulated learners who are engaged and active in their own learning, proactive about problem solving and care about each other) Connect this to: What is the environment or setting of our stories? This is how we create our environment: Teach via Read alouds: ● Friendship ● Problem solving ● Accepting others and their differences ● ● Valuing differences	What do they infer about the settings that have to do with science?	Developing oracy Observation and classification (Language of science) recall, describe, apply, breakdown, relate, evaluate

				Explain how specific images contribute to and clarify a text. RI.2.7 Ask and answer questions. RI.2.1		
Unit 2--Structure and properties of matter	**Big Idea**	**Science**	**UOS 1--Narrative**	**Readers Workshop**	**Strategies**	**WIDA-**
Structure and properties of matter--part 1 (Oct. 12-Nov. 21)	I want my students to understand that all things are made of matter.	2-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 2-PS1-2: Analyze data obtained from testing different materials to determine which materials have the properties that are best	<u>Narrative</u>: Students study and draw on craft moves to write specific small moment stories Bend One: Stretch out and magnify the small moments in their tiny topic notebooks Bend Two: study author's craft and revise with craft in mind Bend Three: students revise and edit to make their writing clear and powerful	<u>Genres</u>: 1. *Primary focus focus*--study craft moves as readers so that they can apply them in writing. They will focus on analyzing, interpreting, and evaluating. RL.2.1 ask and answer questions RL.2.2 recount and identify messages RL.2.3 describe how characters respond RL. 2.5 overall structure of a story RL.2.6 point of view	<u>Science Strategies:</u> -classify, identify patterns conclude <u>Science Connection to literacy</u>: --Describe how reasons support specific points the author makes in a text. (RI.2.8) -recall information from experiences or gather information from provided sources	Describe, give examples (classify), interpret, write, analyze, evaluate (Language of language arts, science)

		suited for an intended purpose			to answer a question (W.2.8)	
Unit 3 Theme	**Big Idea**	**Science**	**UOS 2 --Informative**	**Readers Workshop**	**Strategies**	**WIDA Standards**
Structure and properties of matter--part 2 (Nov. 23 - Jan. 8)	I want my students to understand that matter has various states that can change such as solids, liquids and gasses which can alter by heating or cooling.	2-PS1-3 -Making observations to construct an evidence based account 2-PS1-4 Construct an argument with evidence	Informative--Lab Reports and Science Books Observation --notebooks or clipboards to look at making observations and taking notes about those observations --specific authors and how do they write. --What are the characteristics of the writing, notice, name and try --Writing like a scientist might write and then doing their own writing like a scientist Bend 1-- Write from their own life experiences	Informational Text Primary Focus : Looking at text features RI.2.3 connections between events and concepts RI.2.4 main idea of words and phrases RI.2.5 text features RI.2.6 main purpose of a text Bend 1 and 2 aligned-- How do scientists write to inform and influence their readers? -How text features affect the reader's understanding of text? --craft moves of informational text -Understand the structure of informational texts -How do readers determine the author's purpose?	Science Strategies -Observation -Cause and Effect -Gathering evidence Connection to Literacy RI 2.8 W. 2.8	Language of Science and language arts, recall, observe, discover, compare, evaluate.

			Bend 2--Write on a single topic and extending their own knowledge by using other resources (interdependent relationships in ecosystems)			
Unit 4 Theme	**Big Idea**	**Science**	**UOS 4--Poetry**	**Reader's Workshop**	**Strategies**	**WIDA Standards**
Earth's Systems: Processes that Shape the Earth--part 1 (Jan. 11-Feb. 11)	I want my students to understand that maps show where things are located and show different kinds of land and water, and that water is found all over the world in various places and in two forms.	ESS2.B: Plate Tectonics and Large-Scale System Interactions Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2) ESS2.C: The Roles of Water in Earth's Surface Processes Water is found in the ocean,	Bend 1--How writers look at the world with poet's eyes, how writers notice the sound and the look of poems, and how writers find meaningful topics and write in ways that convey big thoughts, feelings, and ideas. Bend 2--as poets revise, they also lift the level of their poetry writing skills, so the next poem they write will incorporate all that they have learned through revision.	RL 2.4 meaning of words and phrases RL 2.1 ask and answer questions RI 2.1 ask and answer questions RF2.4 fluency How does word choice and rhythm bring meaning and fluency to a piece? Authors arrange specific words and phrases to evoke a feeling or response. Understand key details of the text Fluency, expression, phrasing	Science and Literacy Strategies: Obtaining, evaluating,communicating information using various texts, text features, and other media to answer a scientific question	Language of science , lg. arts Recall/ describe, write,(patterns) analyze / apply evaluate

		rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3) ETS1.C: Optimizing the Design Solution Because there is always more than one possible solution to a problem, it is useful to compare and test designs. *(secondary to 2-ESS2-1)*	Bend 3--Revise poems, choosing craft moves they have learned so far. You can teach them how to find treasures in discarded drafts and even how to turn stories into poems. .			
Unit 5 Theme	**Big Idea**	**Science**	**Writer's Workshop**	**Readers Workshop**	**Strategies**	**WIDA**
Earth's Systems: Processes that Shape the Earth--part 2 (Feb. 15-Mar. 17)	I want my students to understand that the earth's surface has changed slowly and rapidly over time because of wind and water.	ESS1.C: The History of Planet Earth Some events happen very quickly; others occur very slowly, over a time period	Information: All About Books W.2.2 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and	RI 2.1 ask and answer questions RI 2.3 connections between events and concepts RI 2.9 compare and contrast two texts	Science and Literacy Strategies: Obtaining, evaluating,communicating information using various texts, text features,	Lg. of lg. arts and science describe, predict, inform, create, conclude

		much longer than one can observe. (2-ESS1- 1) --build model to show patterns in natural world ESS2.A: Earth Materials and Systems Wind and water can change the shape of the land. (2-ESS2-1)	provide a concluding statement or section. Students write books on topics about which they have some knowledge, but will also do a bit of research and incorporate that into what they know. Bend One: students write as many books as they can. Bend Two: kids plan each chapter with more detail and learn strategies for elaboration Bend Three: students conduct research to create an "expert" book with many chapters on a topic or a collection of separate books on a topic Bend Four: Students present their expert		and other media to answer a scientific question	

			projects at an expert fair and prepare a presentation			
Unit 6 Theme	**Big Idea**	**Science**	**Writer's Workshop**	**Readers Workshop**	**Strategies**	**WIDA**
Interdependent Relationships in Ecosystems-part 1 (March 28-April 29)	I want my students to understand that plants depend on animals and need certain things to live.	Standards-- --Plan and conduct an investigation --Develop simple models that mimic the function of an animal in dispersing seeds or pollinating plants	Writing Gripping Fictional Stories W2.3 write narrative to recount cause and effect Bend One: students write several focused small moment stories, focusing on using details to build tension and stretching out the most exciting parts Bend Two: students revise their stories to add meaning and tension and to have students solve their character's problems in multiple ways Bend Three: students revise again and write compelling endings	RI 2.2 main topic RI 2.9 compare and contrast two texts	Science: --cause and effect analyze patterns and relationships	Language of science and lg. arts Name, explain, produce, compose/construct, conclude/ support

			and conveying messages to readers			
Unit 7 Theme	**Big Idea**	**Science**	**UOS 3--Opinion**	**Readers Workshop**	**Strategies**	**WIDA**
Interdependent Relationships in Ecosystems-part 2 (May 2 - June 3)	I want my students to understand that plants grow and survive in various habitats.	--Make observations to compare the diversity of life in different habitats.	**Writing about reading** Bend 1:Students will develop opinions, retell their stories and send letters out. Bend 2: Focus on grade level writing and close reading to elaborate their opinions using reasons to support their opinions Bend Three: use quotations to supply further text evidence, make comparisons between books and series, add introductions and conclusions	RL 2.1 ask and answer questions RL2.2 recount stories and determine lesson RL 2.3 character change RL 2.5 story structure RL 2.7 effect of illustrations -Close reading of a text to determine what the text says and understand it at a deeper level -Use evidence to support their thinking -understanding story elements	Science: -cause and effect -structure and function -Comparison -Evidence	(Language of Science/ lg. arts define, describe, relate, categorize, compare, relate, choose, justify