**Language & Literacy**

**with a STEM Focus**

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**Components of Highly Effective Classrooms**

* All science/math/engineering instruction integrated with reading and writing
* Every minute of time used well-even mundane routines are instructional
* Provide scaffolding
* Emphasis on self-regulation and self-monitoring
* Abundance of reading and writing in other content areas
* Teachers have high expectations for all children
* Teachers have excellent classroom management procedures

**STEM Focuses**

* Classifying/Sorting
* Observation
* Construction
* Spatial Relationships
* Ordering
* Patterns

**Language and Literacy Ideas**

**Phonemic/Phonological Awareness:**

* Constructing a model of a portion or object in a nursery rhyme (ex: Miss Muffett’s tuffet or bowl or curds and whey) is a great engineering exercise.
* Recreate nursery rhyme using materials and figures. Recite nursery rhyme using props helps with sequencing.
* Hide rhyming word animal pictures in dry sand. Find the matching pictures. Add another science element by putting a magnetic strip on the pictures.
* Build 2-3 items that begin with the same sound (ex: boy, ball, bat).
* Discuss the sounds that animals make.
* After building a pretend habitat out of materials, identify the beginning sound of the item(s).

**Letter Recognition:**

* Hide letters of the alphabet in sand. Name each letter when it is found (looking for attributes that are the same and different is essential for math and science).
* Hide magnetic letters in sand and find the letters using a magnetic wand.
* Form letters of the alphabet out of wet sand-fill letters with water.
* Match letters of the alphabet to different foods that are healthy.
* Use alphabet cookie cutters with playdough or gak.
* Make a science journal and have the children indicate which alphabet letters are used in the science words.
* Float foam letters in water, fish them out with tongs or ladle and name them.
* Float magnetic letters in water and using a magnet attached to a string, fish out the letters and name them.
* Float letters in water and using a ladle, fish out two letters that are next to each other in the alphabet.
* Do a letter recognition activity with translucent letters and the light table.
* Recreate letters in the environment using molding materials.
* Do a classification and sorting activity with letter so the alphabet.

**Print Awareness:**

* Use science-based books for reading and comprehension discussions.
* Share more information about the scientific subject of the books shared.
* Take the child to the library and have him/her find books about a certain animal, weather, seasons, etc.

**Listening Comprehension:**

* Instead of asking questions, respond to a story by creating a favorite part of the story with wet sand or playdough.
* Create three parts of a story that indicate numbers, such as the 3 Pigs, to support mathematics skills.
* With a partner, construct a story just read and use the project to retell the story to others.
* Create your own story, using pictures, about an animal and it’s habitat.
* Create an additional part of a story using materials in the sand/water table.

**Writing:**

* ‘Fish’ for a magnetic letter of the alphabet. Practice writing that letter.
* Draw a picture of your favorite food.
* Create a self-portrait (with body parts) using play dough or construction paper..
* Smell a new smell for your five senses. Draw a picture of what you think created the smell.
* Create a journal about some mathematical concept, such as classifying, sorting, counting, or shapes.

**Oral Language:**

* Explain the creation made in the sand table or play dough tray (creations could be a science or math concept)
* Explain the process that happens in the pouring center with water, snow or ice.