**Lesson Plan**

**The Three Sisters Garden**

**Learning Intentions**

* To build holistic understandings of numeracy, Indigenous learning and pedagogy.
* To focus on building an understanding of the Mathematics Learning Progressions, specifically interpret, analyze and communicate.
* To support learning how Pedagogical Narration can aid in understanding where students are at

**Curricular Intentions**

* Mathematics
	+ K
		- Repeating patterns
		- Likelihood of familiar life events – planting and growing
	+ Grade 1
		- Direct measurement with non-standard units
		- Likelihood of familiar life events using comparative language
	+ Grade 2
		- Direct Linear Measurement
		- Repeating Patterns
		- Likelihood of familiar life events using comparative language
	+ Grade 3
		- Pattern Rules
		- Measurement using standard units
		- Time concepts
		- Likelihood of simulated events

**Materials Needed**

* Book – The Three Sisters
* Counter Space
* Cut outs of seeds, manipulatives, string, other centres
* iPad or other recording device

**Prior to Lesson**

* There are some things that you may need to know prior to doing this task and these can be done in any order:
	+ When do you find out what kids know about plants, gardening, digging, playing in the dirt? Background knowledge.
	+ How do you introduce the vocabulary? How do you help students to know the names that will be shared in the story? How do you help yourself to know these before sharing?

**Anticipatory Phase**

* Gather students. Discuss some of the prior learning that has happened and talk about how in math we are going to be looking at some real life examples. How many people have a garden? How many people have seen a garden? How many share in the gardening at home (maybe a think-pair-share).
* How do we see where students are in terms of understanding of culture? Do they know about Respect, Responsibility, Reciprocity, Reverence, Inter-relatedness, Holism, Synergy?

**Learning Phase**

* Share the background and the story of the Three Sisters
* Have a conversation about what students know about various things – what you do with things like beans, corn, squash? Why are these pieces important? Why were they important in the story and to the first peoples?
* Conversations that could be had around this either here or prior to lesson.
	+ How does the planting here differ from how we plant at home? (Gardens are usually in rows in most areas, with plants being separate).
* Where does math fit in with gardening – how does it look different in this type garden – what patterns might be possible?

**Activity Phase**

* Share how a garden in the story is made, with measurements (standard or non-standard units)
* Set up centres. (There are many possible, but today we will focus on just the one).
* Students are provided with a space to create a garden based on the story and the measurements provided. Also provided with a table and/or a string. Their goal is to try to figure out how to create a garden that can grow the most of the Three Sisters, making sure that they are in the right spacing for them to grow.
* A table would provide a stable structure for the garden, and a string would provide different perimeters – this might be good for personalization
* Have students try to see how they could make the garden. Assessment – observation, taking pictures and asking questions of the student to gather their understanding.

**Contemplative Phase**

* Have students video, take pictures or talk about the solutions that they came up with and why. Find a way to share this between each other and see if they can figure each other’s solutions.