

Integrated Mathematics

CCSS Standards-Kindergarten:

Counting & Cardinality

Know number names and the count sequence

Count to tell the number of objects

Compare numbers

Measurement & Data

Describe & compare measurable attributes

Classify objects & count the number of objects in each category

Integration of Science, English Language Arts, and Math:

In this TK classroom, children are studying about living things, that seeds are alive and grow into plants.

- After reading *The Carrot Seed* children plant their own seeds in a cup labeled with their names. They count how many seeds were planted and record the number on the cup. The students place their cups in the sun, and water the soil when it becomes dry.
- Each day they observe their garden cup. They record their findings in a science journal by drawing a picture of, or “writing” about what they see or changes on each numbered day.
- The students record the growth of the plant using a paper measuring strip. They draw a line to show how tall the plant has grown at each measuring interval. These strips can be graphed and discussed using language such as length, taller, shorter, same as, equal, etc.
- The children learn a chant created by the teacher that builds from day to day: “Day one, see it grow? No, no, no! Day two, see it grow? No, no, no! Day six, see it grow? Yes, so, so!”
- They count how long it takes for each seed to sprout, marking calendar days to illustrate this process. They count how many seeds did not sprout and compare the numbers. Use sentence frames to help develop academic language. (e.g. “ ___ more seeds sprouted than did not.” “I planted ___ seeds. ___ grew and ___ did not.”)
- At a center, students can sort seeds according to various attributes using muffin tins to hold the seeds; count how many belong to each group, using language such as more than, less than, equal to; record the number on a pictorial recording sheet or use magnetic numbers; graph the seeds by type.
- Students create a large tri-fold class mural, with children drawing a sequenced story about their seeds becoming plants. Create a timeline across the top to show the number of days it took for their seed to sprout.
- Students create a class math book by dictating their story about the process of a seed becoming a plant and how many days it took for this process to happen.

