Unit 1 - Numbers and Numerical Operations

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

Unit Overview

Each unit is comprised of standards that are considered major content along with supporting content. This unit builds upon numbers and numerical operations. Students will be able to count, recognize numbers, and solve simple numerical operations. Prekindergarten children must be able to understand and use the vocabulary of mathematics. They need to understand and describe the relationship of things in the environment to one another. Pre-kindergarteners should understand and be able to use positional words and words such as smaller than, bigger than, same as, and different than. They should also engage in meaningful counting activities in the context of their daily routines. They need many opportunities to count and expand their sense of number. The focus should be on counting orally to 10.

Enduring Understandings

• By pointing to number line, using the calendar, using our fingers and using manipulatives.

• Student will count both groups to identify which group has more and which group has less.

• Students will place fish together and give the total.

Essential Questions

• How can you count numbers 1-20?
• How do you know which group has more and which group has less?
• You have 2 red fish and 3 blue fish, how many fish are there all together?

Learning Objectives

• Count to 20 by ones
• Recognize and name one-digit written numbers up to 10
• Know that written numbers are symbols for number quantities
• Write numbers from zero to 10 • Count objects with quantities up to 20
• Arrange and count different kinds of objects to demonstrate understanding of quantities
• Recognize, without counting, small quantities of up to 3 to 4 objects
• Compare groups of up to 5 objects

Standards: Content

4.1	Children begin to demonstrate an understanding of number and counting.
4.1.1	Count to 20 by ones with minimal prompting.
4.1.2	Recognize and name one-digit written numbers up to 10 with minimal prompting.
4.1.3	Know that written numbers are symbols for number quantities and, with support, begin to write numbers from 0 to 10.
4.1.4	Understand the relationship between numbers and quantities (i.e., the last word stated when counting tells “how many”):
4.1.4.a	Accurately count quantities of objects up to 10, using one-to one-correspondence, and accurately count as many as 5 objects in a scattered configuration.
4.1.4.b	Arrange and count different kinds of objects to demonstrate understanding of the consistency of quantities (i.e., “5” is constant, whether it is a group of 5 people, 5 blocks or 5 pencils).
4.1.4.c	Instantly recognize, without counting, small quantities of up to 3 or 4 objects (i.e., subitize).
4.1.5	Use one to one correspondence to solve problems by matching sets (e.g., getting just enough straws to distribute for each juice container on the table) and comparing amounts (e.g., collecting the number of cubes needed to fill the spaces in a muffin tin with one cube each).
4.1.6	Compare groups of up to 5 objects (e.g., beginning to use terms such as “more,” “less,” “same”).

Standards: Interdisciplinary

0.1	Children demonstrate self-confidence.
0.1.1	Express individuality by making independent decisions about which materials to use.
0.1.2	Express ideas for activities and initiate discussions.
0.1.3	Actively engage in activities and interactions with teachers and peers.
0.1.4	Discuss their own actions and efforts.
0.2	Children demonstrate self-direction.
0.2.1	Make independent choices and plans from a broad range of diverse interest centers.
0.2.2	Demonstrate self-help skills (e.g., clean up, pour juice, use soap when washing hands, put away belongings).
0.2.3	Move through classroom routines and activities with minimal teacher direction and transition easily from one activity to the next.
0.2.4	Attend to tasks for a period of time.
0.3	Children identify and express feelings.
0.3.1	Recognize and describe a wide range of feelings, including sadness, anger, fear, and happiness.
0.3.2	Empathize with feelings of others (e.g., get a blanket for a friend and comfort him/her when he/she feels sad).
0.3.3	Channel impulses and negative feelings, such as anger (e.g., taking three deep breaths, using calming words, pulling self out of play to go to “safe spot” to relax, expressive activities).

0.4	Children exhibit positive interactions with other children and adults.
0.4.1	Engage appropriately with peers and teachers in classroom activities.
0.4.2	Demonstrate socially acceptable behavior for teachers and peers (e.g., give hugs, get a tissue, sit next to a friend/teacher, hold hands).
0.4.3	Say “thank you,” “please,” and “excuse me.”
0.4.4	Respect the rights of others (e.g., “This painting belongs to Carlos.”).
0.4.5	Express needs verbally or nonverbally to teacher and peers without being aggressive (e.g., “I don’t like it when you call me dummy. Stop!”).
0.4.6	Demonstrate verbal or nonverbal problem-solving skills without being aggressive (e.g., talk about a problem and related feelings and negotiate solutions).
0.5	Children exhibit pro-social behaviors.
0.5.1	Play independently and cooperatively in pairs and small groups.
0.5.2	Engage in pretend play.
0.5.3	Demonstrate how to enter into play when a group of children are already involved in play.
0.5.4	Take turns.
0.5.5	Demonstrate understanding the concept of sharing by attempting to share.
1.4.6	Create more recognizable representations as eye-hand coordination and fine-motor skills develop.

Assessment Evidence

Formative	Teacher observations, Questioning, Discussions, Visual Representations, Student Conferences, Portfolio Check, Debriefing, Grade book, Centers
Summative	• Count number of children at their table • Count number of cookies or other snacks each child has • Observe and document participation in songs, rhymes and finger plays that require counting • Child’s ability to describe which child has more or less blocks or other manipulatives • Child’s ability to determine which trees, buildings or other structures on the school campus are taller/shorter
Alternative & Benchmark	
Assessment Evidence Resource	

Instructional Resources

Instructional Resource List

Curricular Mandates

Below are the curricular requirements as defined in NJ Administrative Code and Statute

	Amistad		Diversity, Equity, and Inclusion
	Holocaust		LGBT and Disabilities (Grades 6-12)
	Climate Change		Asian American & Pacific Islander

Social Emotional Learning (SEL) Competencies

NJ Social and Emotional Learning Competencies & Sub-Competencies

	Self-Awareness	**X**	Relationship Skills
	Responsible Decision-Making	**X**	Social Awareness
X	Self-Management		

21st Century Skills & Themes

	Global and Cultural Awareness		Technology Literacy		Planning and Budgeting
X	Creativity and Innovation		Financial Institutions		Risk Management and Insurance
X	Information and Media Literacy		Digital Citizenship		Economic and Government Influences
X	Critical Thinking and Problem Solving		Credit Profile		Career Awareness and Planning
	Civic Financial Responsibility		Financial Psychology		