

Student Teacher Candidate: Lexi Callander
Lesson Subject(s)/Title: Counting and Cardinality
Lesson Date(s): 10/3/2018
Course & Grade(s): Math, Preschool – 2nd Grade

INSTRUCTIONAL MATERIALS:

Number Puzzles <https://www.pinterest.com/pin/565624034435046768/>
Dice
Posters on the Board
Markers
Video on Cardinality “In the Big Blue Sea – Counting Song”

Incorporation of Music, Literature, and Technology:

Anticipatory set: Video “In the Big Blue Sea – Counting Song” (Incorporates Music)
I could use literature in the lesson by using the book “Math-terpiece” which helps the students with cardinality. The book also shows students different ways to group one number. Technology can be fit into the lesson by using the “Little Wizard Counting Game” which provides a variety of different games on one app for students to practice counting from 1-10. This app could be used as a closure or an anticipatory set.

ESSENTIAL QUESTIONS/ SUBSIDIARY QUESTIONS:

How will we count to ten?
Can you recognize groups of shapes or patterns that represent specific numbers?
Can you group numbers with their corresponding group?

PURPOSE:

Students will be able to recognize numbers 1-10 and see them in different forms. They will be able to group numbers and organize them.

SPECIFIC LEARNING OBJECTIVES: (clear, observable)

1. After watching the review video, students will use prior knowledge to fill out their worksheet while they roll the dice to ensure they can link the number on the dice to how many they color in on the page.
2. After completing the dice/worksheet activity, students will play the cardinality and counting puzzle game to show that they understand that numbers can be represented in different ways.
3. After putting together their puzzles, each student will explain the pieces of their puzzle to check for understanding.

STANDARDS:

Subject Area: Mathematics

Eligible Content:

CC.2.1.PREK.A.2: **Count to tell the number of objects.**
CC.2.1.PREK.A.1: **Know number names and the count sequence.**

Sensory Register	STM	LTM
Attention Recognition Perception	Focus Organization Rehearsal Visualization	Connections Elaborations Meaning

Facets of Understanding

1. Explanation
2. Interpretation
3. Application
4. Perspective
5. Empathy
6. Self-Knowledge

Multiple Intelligences

1. Linguistic [words]
2. Visual [pictures]
3. Mathematical [numbers & reasoning]
4. Kinesthetic [hands-on]
5. Musical [music]
6. Interpersonal [social]
7. Intrapersonal [self]
8. Naturalist [nature]

Multiple Exposures [4 x 2]

1. Dramatization
2. Visualization
3. Verbal

Complex Interactions

1. Discussion
2. Argumentation

Bloom's Taxonomy

1. Knowledge [Verbatim]
2. Comprehension [Own Words]
3. Application [Problem-Solving]
4. Analysis [Identify components]
5. Synthesis [Combine information]
6. Evaluation [Decisions]

Aspects of the Topic

1. Facts
2. Compare
3. Cause/Effect
4. Characteristics
5. Examples
6. Relationships

9 Effective Strategies

1. Similarities and Differences
2. Summarization and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Questions, Cues, and Advanced Organizers

DIFFERENTIATION STRATEGIES:

Students with a learning disability will be provided with printed outs of spoken directions for Dice Roll cardinality activity.

For specific students, some parts of the puzzle can be put together already. A full puzzle could be put together to model for the students.

ANTICIPATORY SET:

Students will listen to a video reviewing counting and cardinality before they start the lesson. This video will allow them to recognize groups of objects and match them with the amount up to the number 10.

The teacher will briefly talk about counting and cardinality with the students. She will use manipulatives to show them an example of how different objects/representations can represent the same number. The students will then each follow the teachers modeling and roll a dice. Whatever number they roll, they represent with counter cubes.

INPUT/ ACQUIRE NEW KNOWLEDGE:

There will be a poster in front of each student with 10 black and white objects. The kids will roll the dice, and whatever number they get, they will color the number of objects on the poster to correspond with what they rolled. This allows the students to have a singular exposure to cardinality at first. They are focusing on how the die can represent a number on each side.

and/or

APPLY/ DEEPEN NEW KNOWLEDGE:

Students will count to ten with the teacher by counting out loud as she holds up the puzzle pieces that have numbers on them. They will show the teacher that they can count to ten and move on to grouping the pieces by numbers. They will put the puzzles 1-3 together as a class. Next, they will do individual work and put the number puzzles 4-9 together themselves. 10 is an example puzzle. The amount of cardinality puzzles obviously will vary based on how many students you have in your class. I had 5 students so I could model 1-3 as a class and allow each of them to individually complete them for puzzles 4-9. Many copies can be made and students can do the same number puzzle but individually for a larger class size.

CLOSURE/ASSESSMENT:

Each student will stand up to show their puzzle and count with the class to show how each group or object represents the number that they were given.

HOMEWORK: (Purpose- Preparation, Practice, Expansion)

Look for something at home that is an example of cardinality. Talk about your example in class the next day. Maybe your mother puts tallies on her calendar or your family plays a board game that involves dice. The teacher will have examples ready for children who may come without an example.

EVALUATION/ASSESSMENT OF STUDENTS:

The students are evaluated whenever they watch the teacher model with manipulatives during the anticipatory set and then do their own cardinality example with dice and counters.

Students will be evaluated as they work together as a class to put puzzles 1-3 together. They will also be evaluated as they put together the puzzles individually.

INSTRUCTIONAL PROCEDURES:

Time:

The teacher will:

1. Put the video on the board.
2. Talk with the class about cardinality and sit down on the carpet to model with manipulatives. Have the students practice themselves once.
3. Teacher will pass out posters and explain that they will use dice and color in the amount of objects that their dice represents.
4. Students can be assigned to pairs to work together on one poster if you are running short for time.
5. Put the puzzle piece activity in the middle of the table and model with the puzzle "10".
6. Instruct students to explain their puzzle pieces.

The students will:

1. Watch the video to refresh prior knowledge on counting and cardinality.
2. Watch as the teacher models with manipulatives, then roll the dice and follow the example she gave. How many counters do you need to represent the number on the die you rolled?
3. Students will roll dice and color in their posters to coordinate with the dice.
4. Optional: Students can be put into pairs for the poster activity.
5. Students will do a whole group exercise with the puzzle pieces and an individual exercise.
6. Each student will explain how they saw each group and put together their puzzle.

