

Capacity

Kyla Baker · Kindergarten – Mathematics: Measurement – Capacity Introduction

Core Competencies:

Communication:

- (1) Connect and engage with others (to share and develop ideas)
 - Students will participate in individual and group work to simultaneously share knowledge and gain new skills “I can ask and respond to simple, direct questions.”
- (2) Acquire, interpret, and present information
 - Students will compare objects and use applicable language to interpret and present their findings “I can understand and share information about a topic that is important to me.”

Thinking:

Creative Thinking

- (1) Novelty and Value
 - Students will utilize items that are novel to them in order to place values upon those items using the prescribed terminology “I get ideas when I play.”

Critical Thinking

- (1) Analyze and Critique
 - Students will observe objects and compare them using non-standard measurements to evaluate attributes “I can identify criteria that I can use to identify evidence.”
- (2) Question and Investigate
 - Students will be questioned about the attributes of comparable objects in order to examine them “I can explore materials and actions.”

Personal & Social:

Personal Awareness and Responsibility

- (1) Self-determination
 - Students will be presented with problems which are attainable “I can show a sense of accomplishment and joy.”
- (2) Self-regulation
 - Students will recognize when they are struggling and act accordingly “I can persevere with challenging tasks.”

Social Responsibility

- (1) Solving problems in peaceful ways
 - Students will work with others to solve questions “I can solve problems myself and can identify when to ask for help.”

Big Ideas:

- Objects have attributes that can be described, measured, and compared.

Curricular Competencies:

Students will be able to:

- Compare and identify capacities: holds more, holds less, holds the same

Content:

Students are expected to know:

- Terminology specific to height width, length, mass, and capacity: longer than, shorter than, taller than, wider than, heavier than, lighter than, same as, holds more, holds less
- Answers to Questions including: How many of a specific object can I hold in my hand? Which objects can I hold more of and why? Which objects can I hold less of and why?

Incorporation of Aboriginal Education:

First Peoples Principles of Learning:

- Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).

- Learning is embedded in memory, history, and story.
- Learning involves patience and time.
- Learning requires exploration of one's identity.

Diversification/Differentiation:

- Students can work in pairs to help each other count and record answers
- Students can reference the number chart if they are unsure of how to write certain numbers

Assessment Tools & Strategies:

- Observation: teacher will record (take pictures) to document student learning;
- While they are measuring address any missed information/how to measure better/more accurately
- While students are handing in worksheets check numbers and ask them to go back and try a station again if the numbers seem inconsistent

Cross-Curricular Connections:

English Language Arts: learning new vocabulary

Resources/Materials:

- | | |
|----------------|-----------------------|
| • Dominos | • Whiteboard & Marker |
| • Dice | • Premade Worksheet |
| • Chain Links | |
| • Unifix Cubes | |

Method:

Prep: Make a class copy of the worksheet and set up stations



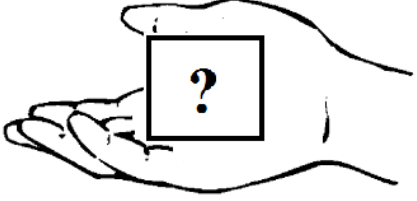




Lesson:

1. Tell students we will learn about capacity today, have them repeat the word, as if anyone knows what capacity means (if they come up with a definition ask students if they can think of the two terms that go with capacity (holds less and holds more) just like mass had heavy and light what terms do you think we use for capacity?)
2. Demonstrate the two terms using the marble jars, ask students which holds more and which holds less and repeat asking which has the bigger capacity and which the lesser capacity
3. Inform students we will be learning the capacity of our hands, how much of different items our hands can hold
4. Model the activity with unifix cubes, ask students to guess/predict/estimate how many you can hold in your hand and write the estimate on a worksheet for yourself (ask if students can remember what an estimate is)
5. Begin to add unifix cubes into your hand until it is full, having students count along as you add pieces or once your hand is full and you are taking them away – write down the answer on your worksheet
6. Inform students they will be learning how many of some different items fit in their hands, but it is important to guess/estimate/predict first
7. Emphasize the importance of estimating first as it is the thinking that warms our brain up for the activity and remind students that last time some people forgot about the estimating part so please take your time and remember (pointing to the spot to write your estimate ask several students what goes there)
8. Ask students if estimating is when you do the activity and then write the same number twice (necessary to addresses misinformation from the last exercise which involved estimating)
9. While handing worksheets out ask students what they are going to do first (estimating!)
10. As students are handing their worksheets in ask which item they could hold the most of and which item they could hold the least of (write a ✓ if they answer correctly or – if they answer incorrectly on the back of the page)
11. Students can play with math tubs once they have finished

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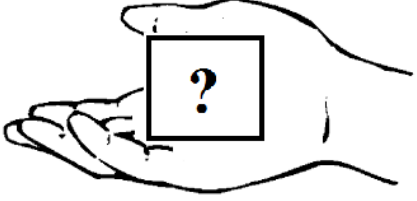




How Many Can I Hold in My Hand?

 <p>In my hand</p>	 <p>I think I can hold</p>	 <p>I can hold</p>
 <p>Dominos</p>		
 <p>Unifix Cubes</p>		
 <p>Chain Links</p>		
 <p>Dice</p>		

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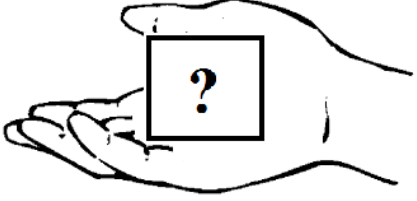




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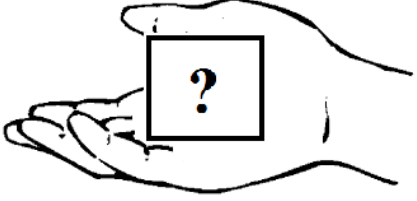




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