

## Population Narrative

In our second grade dual language program the complete class size is exactly 34 students, **29%** are English Native Speakers (10 students) and **71%** are Native Spanish speakers (24 students). Three of these students currently have an IEP in place. By the end of the third quarter we showed **73%** of our students met or exceeded at the appropriate DRA (English) reading level of 28. Out of the 10 Native English speakers **50%** met or exceeded the expectations in their first language based on DRA levels, **58%** of the 24 Spanish speakers met or exceeded their expectations in their second language, which is English for these ELL. Based on EDL levels **50%** of the Native English speakers met or exceeded in their second language acquisition based on EDL levels **83%** of the Native Spanish speakers met or exceeded in their primary language.

Channing Memorial Elementary is located in Elgin, Illinois and is part of the school District U-46. The school serves grades K-6 and is a high mobility school. Approximately 90% of the school population is Hispanic, 90% low income and part of free or reduced lunch. The rest of the population is composed of Anglo, Afro-American, Asian students. There is no school bus transportation to or from Channing that is supplied by the district. At Channing we have a 50/50 program model with a 50/50 classroom setup. Currently we have 2 Dual Language Kindergarten classrooms, 2 Dual Language first grade, 2 Dual Language second grade, 1 Dual Language third grade, 1 Dual Language fourth grade, 1 Dual Language fifth grade and next year we will open a sixth grade Dual Language classroom with the first group of kids that started this program at Channing. The Dual Language students at Channing are from different ethnic backgrounds: Mexicans, Puerto Ricans, Anglos, Russians, Polish, Laotians, Koreans, and one student from Brazil. All of my student's financial status this year is low to lower-middle income.

According to the Map Scores in our assessment, currently, we show the following data in both reading and Math by there respective categories:

<b>Reading</b>	<b>High</b>	<b>Average</b>	<b>Low</b>
• Word Analysis Vocabulary	26.5% (9)	14.5% (5)	59% (20)
• Reading - Comprehension	21% (7)	26% (9)	53% (18)

- |                  |           |            |          |
|------------------|-----------|------------|----------|
| • Literature     | 26.5% (9) | 26.5% (9)  | 47% (16) |
| • Literary Works | 26.5% (9) | 35.5% (12) | 38% (13) |

**Math**

- |                              |            |           |          |
|------------------------------|------------|-----------|----------|
| • Number Sense               | 18% (6)    | 38% (13)  | 44% (15) |
| • Measurement                | 14.5% (5)  | 26.5% (9) | 59% (20) |
| • Algebra                    | 35.5% (12) | 14.5% (5) | 50% (17) |
| • Geometry                   | 23.5% (8)  | 23.5% (8) | 53% (18) |
| • Data Analysis -Probability | 26.5% (9)  | 26.5% (9) | 47% (16) |

\*\*\*Unfortunately, we believe that the Math MAP Scores are inconsistent with our Everyday Math Assessments due to the fact that all of our students took the Math MAP Exam strictly in English because they were not given the option to take the test in Spanish, although it was available. This hindered our student's scores because 71% of our students are Native Spanish Speakers. Also, due to the curriculum schedule for the second grade dual language program, it requires us to teach Math in Spanish the first 2 quarters of the year to all the students in the program. Lastly, this was the first time that the students took this type of assessment and it was on a computer and many made errors and clicked continue but could not go back and correct or select their best answer.

**Solution going forward:** To avoid this problem in the future we must allow our students the option of taking the MAP Math exam in Spanish since it is available. Also we will give the exam in the beginning of the school year as well to track their progress and allow them the capability of getting more familiar with this computer test.

**Strengths:** The implementation of the Dual Language Program has been very successful in Second grade. The use of our basal Trophies by Harcourt, Making Meaning Strategies, Academic Vocabulary, Everyday Math and Curriculum Mapping in both languages has been a positive asset in the program. The combination of having two teachers working together side by side on lesson planning and classroom settings has a lot to do with student success. The use of the five components in two languages reinforces instruction especially for children who

struggle in their first language. Many activities used under these programs are Hands-on activities which are crucial strategies and techniques for a Second classroom. The constant repetition, reinforcement of vocabulary, fun-filled skills, songs, guided- reading level books, decodable books and cassettes provided by Harcourt are excellent.

**Reflection:** Due to the time constraints in the Dual Language program because the students are getting literacy in both languages, we have to be very selective of what types of programs we are utilizing in the classroom and their purposes for each language and how we can differentiate language instruction based on a student's individual basis. One literacy component that we know we struggle with is writing. And although we do implement writing across the curriculum we really need a solid writing program that will benefit our students in both languages considering the realistic time constraints presented by the dual language schedule in order to assist us in true writing instruction and help increase our student's literacy. We have been fortunate that our school has now just purchased the Lucy Caulkins Writing Program for next year to complement the 6+1 Traits of Writing. And as a grade level we will be involved in Group Lesson Study where we will each take certain components and prepare a lesson plan and present it in the other classes

Other things to consider with the current Dual Language Program is the fact that through out the years we lose children for various reasons beyond the programs control such as relocations, socio-economic issues and the challenges with acquisition of the minority language. For this we tend to lose many native English speakers and we may need to consider various options to maintain them in the program through educating parents on the research of second language acquisitions and real expectations, increasing their exposure to the minority language through specials, community outreach programs and more school activities in the minority language or increase the percentage of native English speakers that begin the program to account for their losses later in the program.

Unit Theme  
Mathematics -Measurement

Unit Big Idea  
I want my students to understand that measurement consists of a number, unit and an implied level of accuracy using different units of measurements (standard and non standard) and the most appropriate measurement instrument.

Lesson Big Ideas

Lesson 1 Big Idea  
I want my students to understand that objects can be measured with standard and non-standard units of measurement. There are many different tools for measuring an attribute; some are more appropriate for a specific task than others.

Lesson 2 Big Idea  
I want my students to understand that the perimeter of a shape consists of a number and a unit calculated from other measurements using standard and non standard units of measure.

Standards for Unit on Measurement

**Illinois Learning Standards for Lesson 1 and Lesson 2 from  
<http://www.isbe.net/ils>**

**STATE GOAL 1: Read with understanding and fluency.**

**A. Apply word analysis and vocabulary skills to comprehend selections.**

**1.A.1a** Apply word analysis skills (e.g., phonics, word patterns) to recognize new words.

**1.A.1b** Comprehend unfamiliar words using context clues and prior knowledge; verify meanings with resource materials.

**B. Apply reading strategies to improve understanding and fluency.**

**1.B.1a** Establish purposes for reading, make predictions, connect important ideas, and link text to previous experiences and knowledge.

**1.B.1b** Identify genres (forms and purposes) of fiction, nonfiction, poetry and electronic literary forms.

**1.B.1c** Continuously check and clarify for understanding (e.g., reread, read ahead, use visual and context clues, ask questions, retell, use meaningful substitutions).

**C. Comprehend a broad range of reading materials.**

**1.C.1a** Use information to form questions and verify predictions.

**1.C.1c** Make comparisons across reading selections.

**STATE GOAL 3: Write to communicate for a variety of purposes.**

**3.A.1** Construct complete sentences which demonstrate subject/verb agreement; appropriate capitalization and punctuation; correct spelling of appropriate, high-frequency words; and appropriate use of the eight parts of speech.

**C. Communicate ideas in writing to accomplish a variety of purposes.**

**3.C.1b** Create media compositions or productions which convey meaning visually for a variety of purposes.

**STATE GOAL 4: Listen and speak effectively in a variety of situations**

**A. Listen effectively in formal and informal situations.**

**4.A.1a** Listen attentively by facing the speaker, making eye contact and paraphrasing what is said.

**4.A.1b** Ask questions and respond to questions from the teacher and from group members to improve comprehension.

**4.A.1c** Follow oral instructions accurately.

**4.A.1d** Use visually oriented and auditorily based media.

**B. Speak effectively using language appropriate to the situation and audience.**

**4.B.1a** Present brief oral reports, using language and vocabulary appropriate to the message and audience (e.g., show and tell).

**4.B.1b** Participate in discussions around a common topic

**STATE GOAL 5: Use the language arts to acquire, assess and communicate information.**

**5.A.1a Identify questions and gather information.**

**5.A.1b Locate information using a variety of resources.**

**STATE GOAL 7: Estimate, make & use measurements of objects, quantities & relationships and determine acceptable levels of accuracy.**

**A. Measure and compare quantities using appropriate units, instruments and methods.**

**7.A.1a** Measure length, volume and weight/mass using rulers, scales and other appropriate measuring instruments in the customary and metric systems.

**B. Estimate measurements and determine acceptable levels of accuracy.**

**7.B.1a** Given a problem, describe possible methods for estimating a given measure.

**7.B.1b** Compare estimated measures to actual measures taken with appropriate measuring instruments.

**\*\*C. Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate findings.**

**7.C.1** Determine perimeter and area using concrete materials (e.g., geoboards, square tiles, grids, measurement instruments).

\*\*Only applies for lesson 2.

**Big Idea/Essential Understanding:** I want my students to understand that objects can be measured with standard and non-standard units of measurement. There are many different tools for measuring an attribute; some are more appropriate for a specific task than others.

**Language of Instruction: English Grade level – 2<sup>nd</sup>**

**State Standards – 1.A.1a, 1.A.1b, 1.B.1a, 1.B.1b, 1.B.1c, 1.C.1a, 1.C.1c, 3.A.1, 3.C.1b, 4.A.1a, 4.A.1b, 4.A.1c, 4.B.1a, 5.A.1a, 5.A.1b, 7.A.1a, 7.B.1a, 7.B.1b**

**Content Objectives** – Students will preview key content area vocabulary. They will also classify measurement tools relating to the concept of standard and non-standard units of measurements.

- They will also watch a video titled: “*Math Monsters: Standard and Non Standard Measurement*” The video explores *Standard and Non Standard Measurement* and ways children can gain accuracy in *measurement taking* and in *communicating their results*.
- Students will be able to compare and contrast standard and non-standard units of measurement.
- Students will be able to describe and select the appropriate measurement tool when measuring specific objects.

**Language Objectives** – Students (L1 and L2) will discuss specific math vocabulary for the new lesson such as *standard* and *non-standard units of measurement, yard and meter*.

- Once children can distinguish the attributes and differences of these various units of measure, they will then have to measure certain objects and distinguish what type of measurement tool is needed and why.
- They will utilize sentence prompts to assist them in explaining their choice of measurement tool, such as: “In my opinion, \_\_\_\_\_ measurement tool is better because \_\_\_\_\_.” Peer responses will follow sentence prompts as “I agree with \_\_\_\_\_ because \_\_\_\_\_.” I disagree with \_\_\_\_\_ because \_\_\_\_\_.”

**Strategies:** \***Concept Attainment**-Physical objects/Visuals will be prepared for children to classify them according to standard measure and non-standard measurement tools. Also I will provide objects and visuals that they can measure with the various tools. This is the perfect strategy for all thinking capabilities because all students can be challenged by the various activities that will call on them to compare and contrast and articulate specific attributes. This will be coupled with....

\* **Cooperative learning** – “*Think-Pair-share*.” Partners will discuss each item and determine if the item is a standard measurement tool or non-standard measurement tool and how did they come to determine that and the *Think-Pair-share* strategy will continue to be used in the subsequent activity when partners measure various objects and have to determine which measurement tool is best to use and why. This will challenge students to orally express themselves and can be challenging for either groups of L1 or L2 learners as they are called to elaborate on why they’ve chosen a specific tool for measuring. Sentence prompts will really prove helpful during these activities.

**Differentiation:**

Heterogeneous groups will be paired up by L1 and L2 and academic math and language abilities. Visuals will enhance the lesson by previewing measurement tools and the inclusion of the physical activity that students will conduct and witness regarding what tools are best for various objects based on particular lengths and dimensions will create background knowledge to file away in their mental filing cabinet. Also there will be explicit modeling, regular check-ins “everybody with me...” and sentence prompts to assist L2 students.

**Flexible Grouping:** Heterogeneous groups of children will be partnered up in two’s, according to language and academic ability, L1 with L2’s through all the activities.

**Instructional Assessment:**

The best way to assess children’s understanding of measurement is through ongoing observation as they classify standard and non-standard units of measurements and tools. Additionally, I will observe how they participate in various measuring activities using standard units of measurement and their discussions during “Think-pair-share and during whole group as we discuss their rationalization of specific tool choices. The target language will also be assessed through observation on how they use key vocabulary and sentence prompts. Lastly, I want to see if the children were engaged and if both L1 and L2 student pairs contributed in the partner exercises to ensure that L1’s do not dominate the conversations.

Preview Stage:

**Focus Learning Stage**

**Content Objectives**—Students will read and hear various fiction and non-fiction children stories regarding measurements such as: “Millions to Measure”, “Why we Measure”, “Inch Worm and a Half”, “Counting on Frank”, “How Big is a Foot” etc...  
 -Then children will orally summarize, paraphrase, and write something about what they learned from the texts, their writings will actually be converted into a booklet (math journal) that displays the different types of measuring tools and the items that can be measured with those tools.  
 -The booklet will include illustrations and photographs cut out by the individual students.

**Language Objectives** - Students will listen to various stories and then they will orally express their ideas of the readings/videos.  
 -children will utilize sentence prompts in their math journals such as: “\_\_\_\_\_ is a \_\_\_\_\_ unit of measure ... compared to \_\_\_\_\_.”  
 “You can use a \_\_\_\_\_ to measure a \_\_\_\_\_.”  
 -They will then read and share their newly created math booklets informally with their classmates  
 -To challenge the L1 learners specifically new words will be introduced that I will ask them to incorporate in their discussions/writings like *estimate, yardstick, meter, and equivalent*

**Strategies:** \***Say Something/Write Something**  
 – Children will be grouped in trio’s during reading time. We will conduct a *making meaning* type lesson on various selected storybooks regarding measurement in which they will *turn-n-talk* to their partners and discuss what have they learned thus far from the texts at different segments of the stories and they will summarize key points.  
 -Then insights will be shared in whole group discussions.  
 -They will then enter the information learned regarding measurement and key vocabulary in a math journal booklet that will include a word bank box and a **4-square vocabulary graphic organizer** to define and illustrate key vocabulary like *feet, yards, meters, inches* and *centimeters*. They will include in their booklets illustrations and labels of specific types of measuring tools. They will also draw or cut out photographs of items that can be measured with those tools and include them on that tools specific page.  
 -They will then measure various objects that they have cut out pictures of like wrists, waists, books, etc...with the various tools both standard and non standard items.  
 -These strategies promote active involvement and provides for opportunities for language development, which is helpful to both L1 and L2 learners. Also, a **\*Compare-Contrast Paragraph graphic organizer** will be included in the booklet that contains **\*sentence prompts** which will prove useful for students who struggle with how to summarize and organize essential facts regarding the lesson. Writing is always a bit of a challenge with my students so this will really assist both my L1 and L2 kids.

**Differentiation:** Heterogeneous groups will be grouped in three’s with L1 and L2 students based on their academic math and language abilities. The books selected provide visuals for ELL students and

**Flexible Grouping:** Heterogeneous groups of children will be grouped in three’s, according to language and academic ability, L1 with L2’s through all the activities.

**Instructional Assessment:** With informal observations I will be able to see if students can express their ideas orally from the readings in the say something forum. Through the math booklets that they create I will be able to see if the students can take notes that express what they’ve learned from the readings and each other and if they thoroughly comprehend the lesson at hand. I will be able to evaluate if the graphic organizers were used appropriately and provided organization to their thoughts in their writing. I will also look to see if the specific *vocabulary terms* and *specific tools* were mentioned in their writings.

	<p>their own personal visuals will help their comprehension. The <i>say something</i> strategy is helpful in the sense that partners will share, collaborate and gain insight in children specific terms that will make it easier for them to understand and comprehend the lesson. The <i>write something strategy</i> will challenge both types of learners in various ways but the <i>sentence prompts</i> will help them to get their thoughts on paper. The <i>graphic organizers</i> included promote higher-level thinking and helps to focus lesson on the main ideas of the lesson.</p>	
<p><b>Application Stage:</b></p> <p><b>Content Objectives</b> –Students will apply the concepts learned regarding <i>Standard and Non Standard units of Measurement</i> through various activities such as:          -measuring the length of the classroom using one class member as the unit (this represents non standard unit of measure) versus a meter stick (standard unit of measure).          -2 Centers with various objects (pencils, paperclips, straws, books, bottles, fabric, table, etc...) to measure at one center with standard units of measure (ruler, yard stick, meter stick, etc...) and at other center with non standard units of measure such as small paperclips linked together and jumbo paperclips, unit cubes, etc...          -Students will journal what they have learned in their application of their investigations comparing and contrasting the various units of measure.          -Students will also create and present a chart of potential non standard units of measurement that can prove as good replacements when standard units are unavailable.</p> <p><b>Language Objectives</b> - Students will apply their concept knowledge of the vocabulary learned regarding the lesson such as <i>standard and</i></p>	<p><b>Strategies: LEA-</b> will be utilized in a whole class setting in the measuring of the length of the classroom with the various units of measure. This strategy is great for both the L1 and L2 learners because it supports concept development while continuing with the vocabulary growth and provides meaning to the lesson while providing a visual for the L2 learners through the experiences they create and share.</p> <p><b>Cooperative learning</b> – During the Center Activities, after each child has independently measured each item on their own. They will then work with a partner and utilize “<i>Think-Pair-share</i>” to discuss and compare their initial outcomes of each object with one another. If answers differ, they will have to work together and reconduct the experiment to confirm who had the correct answer. This will challenge students to orally express themselves and can be challenging for either groups of L1 or L2 learners because of the various academic abilities. Sentence prompts will really prove helpful during these activities and discussions. “I agree with your answer because _____” or “I disagree with your answer because ____.”</p> <p><b>Chart and Present</b> – Students will be grouped in</p>	<p><b>Flexible Grouping:</b> Heterogeneous groups of children will be grouped in pairs and then in groups of four, according to language and academic ability, L1 with L2’s through all of the activities.</p> <p><b>Instructional Assessment:</b>          -I will observe how they participate in various measuring activities using standard units of measurement and non standard units of measurement and their discussions during “Think-pair-share and during whole group as they discuss and present their suggestions and experiences with each measurement tool.          -The target language will also be assessed through observation on how they use key vocabulary and sentence prompts in their discussions and in their journaling.          - I will look to see if students can take notes that express what they’ve learned from the activities and each other. This will reveal if they comprehend the lesson at hand.          -As a formal assessment, the students will</p>

<p><i>non-standard units of measurement, yard, meter, equivalent, and estimate and measurement tools like ruler, yard stick, meter stick, tape measure.</i></p> <p>Students will utilize language structured sentence prompts during their application discussion as well as in their learning journal, such as:</p> <p>“The length of the classroom is _____(number)_____ (student’s name) long.”</p> <p>“The length of the classroom is _____ (yards/meters) long.”</p> <p>“The _____ is about _____ long”</p> <p>“A _____ could serve as a non standard measurement tool to represent _____ (insert a standard unit of measurement) because _____.”</p>	<p>teams of four to chart the potential non standard units of measurement that can prove as good replacements when standard units are unavailable. Groups will then present to the class their selected choices and why they chose them, they will have to specifically choose a Non-Standard Measurement tool to represent a standard unit of measure.</p> <p>-Sentence prompts will be available during the activity to aid their discussions.</p> <p><b>Record/Journal</b> - Students will then journal in their math booklet, on an organizational sheet, what they have learned from the lesson regarding standard and non standard units of measure after the application phase and how they can use this knowledge in the future. They will utilize sentence prompts in their journal writing to aid them. “I learned that _____ and it is useful _____.”</p> <p><b>Differentiation:</b> Heterogeneous pairs and groups will be partnered up by L1 and L2 and academic math and language abilities. LEA will enhance the lesson by previewing and utilizing various measurement tools and the inclusion of the physical activity that students will conduct and witness with regards to measuring the physical objects. This will make the lesson more comprehensible. The sentence prompts will assist in promoting oral language development for L2 learners and prove to be a good model of grammar and speech for L1’s. The journaling of their experiences will help them retain the lesson in their memory banks. Also, I will be available to assist anyone during the independent measuring activity if need be. Lastly, the children will have their Measurement Journal’s as a reference tool for any of the vocabulary and concepts introduced in the prior phases of the lesson. This is essential, especially for L2 Learners that need additional recall.</p>	<p>have to utilize a checklist that will require them to include specific details during the Chart and Presentation element in this phase to allow me to see if they have really grasped the big idea! I will formally grade them based on the full implementation of items from the checklist.</p> <p>-Lastly, I want to see if the children were engaged and if both L1 and L2 student pairs contributed in the partner exercises and that L1’s did not dominate the conversations. I want to ensure that team building was promoted.</p>
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**Big Idea/Essential Understanding:** I want my students to understand that the perimeter of a shape consists of a number and a unit calculated from other measurements using standard and non standard units of measure.

**Language of Instruction:** English Grade level – 2<sup>nd</sup>

**State Standards** 1.A.1a, 1.A.1b, 1.B.1a, 1.B.1b, 1.B.1c, 1.C.1a, 1.C.1c, 3.A.1, 3.C.1b, 4.A.1a, 4.A.1b, 4.A.1c, 4.B.1a, 5.A.1a, 5.A.1b, 7.A.1a, 7.B.1a, 7.B.1b, 7.C.1

**Content Objectives** –

-Students will preview key content area vocabulary.

-They will also watch videos such as: “*Discovering Math: Measurement*” and “*Maths Mansion: 31, All The Way Round*” These videos explore Area and Perimeter of various geometrical shapes with various standard and non standard tools of measurements that can be utilized to measure perimeter and one of the videos takes them on an adventure in which the host is trapped in a mansion until they correctly answer some math challenges involving perimeter and measurement that set him free.

-Students will be able to review standard and non-standard units of measurement.

**Language Objectives** – Students (L1 and L2) will discuss specific math vocabulary for the new lesson such as *Perimeter*.

-They will also write their own student friendly definition and include an illustration of the definition in their measurement math journal.

-They will then have to measure certain objects all around with both standard measurement tools like a tape measure and ruler and non standard measurement tools like their foot steps.

-They will then write what they learned in their measurement math journal.

-They will have access to sentence prompts for their journal, such as: “In the video, they explained perimeter to be \_\_\_\_\_. I believe perimeter is \_\_\_\_\_.” I learned that when you measure \_\_\_\_\_ that is called \_\_\_\_\_.

**Strategies:** \* **Cooperative learning** –

“*Turn-N-Talk*.” Teacher will stop video at various points so that partners can *Turn-N-Talk* with one another about what they saw and understood thus far in the video. This will challenge students to orally express themselves and can be challenging for either groups of L1 or L2 learners as they are called to elaborate not only what they saw in the video but to express their true comprehension of the concepts expressed in the video regarding the measuring of a perimeter and when it’s necessary to use perimeter (ex. Fencing in a yard).

\***LEA** – Students will observe and write about their observations from the video and from teacher modeling various perimeters utilizing standard and non-standard units of measurements for whole group. They will also take turns as partners draw various geometrical shapes and measure their perimeters and writing their experiences and observations.

\***Graphic Organizer** – A vocabulary 4 –square organizer will be completed by each student in which they can put their own student friendly definition and include an illustration of the definition and a personal memory that has to do with perimeter and area to be apart of their measurement math journal. This promotes higher level thinking and increases language development.

**Differentiation:**

Heterogeneous groups will be paired up by L1 and L2 and academic math and language abilities to provide support for one another. Visuals and Video will enhance the lesson. The inclusion of the physical activities that students will conduct and witness regarding perimeter will create background knowledge to file away in their mental filing cabinet. Also there will be explicit modeling, regular check-ins “everybody with me...” and sentence prompts to assist L2 students.

**Flexible Grouping:** Heterogeneous groups of children will be partnered up in two’s, according to language and academic ability, L1 with L2’s through most of the activities as well as Teacher guided whole group during LEA. They will independently complete their graphic organizer.

**Instructional Assessment:**

-The best way to assess children’s understanding of measurement is through ongoing observation as they create their own perimeter measuring experiences with the various measurement tools.

-Additionally, I will observe how they express their definition of perimeter based on their individual completion of the graphic organizer and as they expressed what they learned in their measurement math journals.

-The target language will also be assessed through observation on how they use key vocabulary and sentence prompts and how they expressed themselves throughout the discussions.

-Lastly, I want to see if the children were engaged and if both L1 and L2 student pairs contributed in the partner exercises to ensure that L1’s do not dominate the conversations.

Preview Stage:

Focus Learning Stage

<p><b>Content Objectives</b> –Students will read and hear various fiction and non-fiction children stories regarding Perimeter such as: “Spaghetti and Meatballs for All”, “Racing Around”, “50 Fabulous Measurement Activities”, etc...</p> <ul style="list-style-type: none"> <li>-Then children will orally summarize, paraphrase, and write something about what they learned from the texts, their writings will go into their math journal.</li> <li>-Children will make various polygons with geoboards to find the perimeter and work with flashcards to find the missing measurement to solve the perimeter.</li> </ul> <p><b>Language Objectives</b> - Students will listen to various stories and then they will write and orally express their ideas of the readings.</p> <ul style="list-style-type: none"> <li>-They will then read and share reflections in their math booklets informally with their classmates.</li> <li>-</li> </ul>	<p><b>Strategies:</b> *<b>Say Something/Write Something</b></p> <ul style="list-style-type: none"> <li>– Children will be grouped in partners during reading time. We will conduct a <i>making meaning</i> type lesson on various selected storybooks regarding measurement in which they will <i>turn-n-talk</i> to their partners and discuss what have they learned thus far from the texts at different segments of the stories and they will write in their journals.</li> <li>-Then insights will be shared in whole group discussions.</li> </ul> <p>*<b>Field Trip</b> - Children will take a simple trip outside to measure the perimeter of the school and playground in paces and include the measurements in their journal.</p> <p>*<b>Games</b> – Children will play various games in the form of centers such as: making various polygons with geoboards &amp; rubberbands and find the perimeter, work with flashcards to find the missing measurement to solve the perimeter, interactive computer games on perimeter, complete various math worksheets.</p> <ul style="list-style-type: none"> <li>-These strategies promote active involvement and provides for opportunities for language development, which is helpful to both L1 and L2 learners. Also, writing is always a bit of a challenge with my students so this will really assist both my L1 and L2 kids.</li> </ul> <p><b>Differentiation:</b> Heterogeneous groups will be put in both partners and then in groups of 4’s by L1 and L2. The books selected provide visuals for ELL students and their own personal visuals will help their comprehension. The <i>say something</i> strategy is helpful in the sense that partners will share, collaborate and gain insight in children specific terms that will make it `easier for them to understand and comprehend the lesson. The <i>write something strategy</i> will challenge both types of learners in various ways but the <i>sentence prompts</i> will help them to get their thoughts on paper.</p>	<p><b>Flexible Grouping:</b> Heterogeneous groups of children will be grouped in two’s and four’s, according to language and academic ability, L1 with L2’s through all the activities.</p> <p><b>Instructional Assessment:</b> With informal observations I will be able to see if students can express their ideas orally from the readings in the say something forum. The math booklets will allow me to see if the students can take notes that express what they’ve learned from the readings and each other and if they thoroughly comprehend the lesson at hand. I will also look to see if the specific academic <i>vocabulary</i> was mentioned in their writings.</p>
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Application Stage:

**Content Objectives** –Students will apply the concepts learned regarding *Perimeter* through various activities such as:

- creating their own word problems.
- solve and illustrate various word problems.

**Language Objectives** - Students will apply their concept knowledge of the vocabulary learned regarding the lesson.

Students will utilize language structured sentence prompts during their creation of word problems and solving various word problems, such as:

“The length of the classroom is \_\_\_\_\_(number)\_\_\_\_\_ (student’s name) long.”

“When I measured the length of the classroom, I calculated the perimeter to be \_\_\_\_\_ long.”

“I calculated the perimeter to be \_\_\_\_\_.”

“(Name) needed to build a \_\_\_\_\_ for his/her \_\_\_\_\_”

**Strategies: LEA-** will be utilized in a whole class setting in measuring the *perimeter* of the classroom with both a standard and non-standard unit of measure. This strategy is great for both the L1 and L2 learners because it supports concept development while continuing with the vocabulary growth and provides meaning to the lesson while providing a visual for the L2 learners through the experiences they create and share. .

**Cooperative Learning** – Students will work with a partner to write their very own word problem based on real world examples such as fencing a yard, building a dog house, making a picture frame, etc... They will have a checklist that will provide them the specific details of what needs to be included in their word-problem and sentence prompts will be made available. They will then have to verify the answer.

-Partners will then be separated and grouped into different teams of four to present their word problem to the new group and the other students will have to draw an illustration and solve the problem individually. They will then self-check their answers with one another. The creator will verify if they are right or wrong. So each child will have 3 opportunities to solve various perimeter problems.

This is a fun way to exhibit their knowledge and help one another as they solve various student-generated problems. This approach allows students to personalize their learning experience, increase motivation and enrich oral language development.

**Differentiation:** Heterogeneous pairs and groups will be partnered up by L1 and L2 and academic math and language abilities. LEA will enhance the lesson by previewing and utilizing both measuring options in finding the perimeter. This will make the lesson very visual and comprehensible.

**Flexible Grouping:** Heterogeneous groups of children will be grouped in pairs and then in groups of four, according to language and academic ability, L1 with L2’s through all of the activities.

**Instructional Assessment:**

-The target language will be assessed through observation on how they use key vocabulary and sentence prompts in their discussions and in their word problems.

-As a formal assessment, the students will have to utilize a checklist that will require them to include specific details in their word problems. The teacher will also utilize the checklist to ensure as a formal assessment.

-Their independent answers to the student-generated problems will be a formal resource to verify that they have grasped the academic content.

-Lastly, I want to see if the children were engaged and if both L1 and L2 student pairs contributed in the partner exercises and that L1’s did not dominate the conversations. I want to ensure that team building was promoted.

	<p>The sentence prompts will assist in promoting oral language development for L2 learners and prove to be a good model of grammar and speech for L1's. The student generated word problems will help them retain the lesson in their memory banks and the groups of four will also provide support as needed. Also, I and my assistant will be available to assist anyone throughout this phase. Lastly, the children will have their Measurement Journal's as a reference tool for any of the vocabulary and concepts introduced in the prior phases of the lesson. This is essential, especially for L2 Learners that need additional recall.</p>	
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## Annotated Bibliography

\*\* This lesson was taught strictly in English by the English Teacher. Therefore none of the resources below are in Spanish because of the two partner teacher dynamic and therefore all the materials had to be strictly in English based on the Dual Language Program at Channing Memorial Elementary. Spanish integration of vocabulary and other independent library books would be available to students in the Spanish classroom but introduced by the Spanish teacher.

### Text Resources

1. Myller, Rolf, "How big is a foot?", New York : Dell Pub., 1991, c1990

This book is excellent in the focus phase of understanding various units of measurement for Lesson 1. It take the children on a journey from a nonstandard measurement foot size to the standard foot size we all know today by way of a juvenile fiction story about a King who wants to give the Queen something special for her birthday. The Queen has everything, everything except a bed. The trouble is that no one in the Kingdom knows the answer to a very important question: How Big is a Bed? Because beds at the time had not yet been invented. The Queen's birthday is only a few days away. How can they figure out what size the bed should be?

2. Hightower, Susan, "Twelve Snails to One Lizard : A Tale of Mischief and Measurement", New York : Simon & Schuster Books for Young Readers, c1997.

Bubba the bullfrog helps Milo the beaver build a dam by explaining to him the concepts of inches, feet, and yards. This book serves the students well by assisting them with pictures and children friendly concepts regarding the various standard units of measure, it's perfect for independent reading during lesson 1.

3. Markle, Sandra, "Measuring up! : Experiments, puzzles, and games exploring measurement", New York : Atheneum Books for Young Readers, c1995

This is a good book to have available to the children to look through and experiment with by way of different hands-on activities that will assist them in retaining measurement concepts and is perfect for all levels as an independent activity during centers or in partners perfect for both lesson 1 and 2.

4. Leedy, Loreen, "Measuring Penny", New York : Henry Holt, 1997

Lisa learns about the mathematics of measuring by measuring her dog Penny with all sorts of units, including pounds, inches, dog biscuits, and cotton swabs. The children loved this book because it was fun and it is perfect to really help them grasp the very challenging concept of non-standard measuring and non standard measurement tools when standard measurement tools are unavailable perfect to enhance lesson 1, the visuals are great for the L2 learners.

5. Murphy, Stuart J., "Super and Castle Saturday", New York : HarperCollins Publishers, 1999.

This book introduces the concept of nonstandard measurement as three friends compete in a sand castle building contest. Great Read Aloud for Lesson 1 or for independent reading time, it also serves the L2 learner really well with its visuals.

6. DeRubertis, Barbara, "Lulu's Lemonade", New York : Kane Press, 2000.

This is a good resource for k-2 on the concept of standard units of measures such as cups, tablespoons, ounces, etc.... It's a fun story about how on a hot summer day, three children squabble over which ingredients and what quantities should go into their extra special lemonade. Great for independent reading for lesson 1.

7. Long, Lynette, "Measurement Mania : Games and activities that make math easy and fun", New York : Wiley, c2001.

This is an excellent teacher resource as it has a collection of educational games and activities designed to help students enjoy and understand the basics of mathematics and can be utilized in both lessons.

8. Herman, Gail, "Keep your Distance", New York : Kane Press, 2001.

Jen learns about closeness and the measurement of distance in inches, feet, yards, and miles when she has to share a room with her little sister Lucy. This is a fun read aloud or independt resource for the students to have during lesson 1.

9. Gabriel, Nat, "Sam's Sneaker Square", New York : Kane Press, 2002.

This is perfect for assisting students in understanding the concept of area and perimeter as Sam figures out how to measure the size of the lawns he mows with his brother's help. This is what I used as a read aloud in the focus phase of lesson 2.

10. Murphy, Stuart J., "Bigger, Better, Best", New York : HarperCollins Publishers, 2002

Jeff and Jenny argue over everything, and Jill can't stand it anymore. In their new house, all three siblings must master the concept of area to find who'll have the bigger room. But is bigger always better? Perfect independent or read aloud resource for lesson 2.

11. Murphy, Stuart J., "Bigger, Better, Best", New York : HarperCollins Publishers, 2002

Readers learn the concept of perimeter by reading about Mike's attempt to ride his bicycle in a fifteen-kilometer race. Lesson 2 resource that is easy to understand for the L2 learner.

12. Pistoia, Sara, "Measurement", Chanhassen, MN : Child's World, c2003

This simple text describes the basic units of measurement, and how to use tools to help measure objects. This can help the L2 student with reinforcing math concepts during lesson 1.

13. Gresko, Marcia S., "Measuring", Milwaukee, WI: Garreth Stevens Pub.,c2004

Photographs and brief text show how to measure length, weight, temperature, and time. This can help the L2 student with reinforcing math concepts during lesson 1.

14. Woodford, Chris, "AREA", Detroit, MI : Blackbirch Press, 2005.

Explores and explains the system of measuring area. A good resource to have available during independent reading in lesson 2.

15. Pollack, Pam, "Chickens on the Move", New York : Kane Press, 2002.

Tom, Anne, and Gordon learn about shape and measurement when they try to find the right spot for their chicken pen. A good resource to have available during independent reading in lesson 2.

16. Reisberg, Joanne A., "Zachary Zormer : Shape Transformer : A Math Adventure", Watertown, MA : Charlesbridge, c2006.

Fun for children to gain insight on perimeter through an adventure when Zachary forgets his homework assignment, readers will be amazed at what he is able to accomplish with what he finds in his pocket. Each week he takes on a different math concept (length, width, area, perimeter) with projects that include a mobius strip, a paper frame, and a light show. Instructions for doing Zach's projects are included at the end. Lesson 2 resource.

17. Burns, Marilyn, "Spaghetti and Meatballs For All", New York : Scholastic, Inc, 2002

The book provides an exuberant and eye-catching introduction to perimeter and area problems Burns' story shows the mathematical relationship of area to perimeter. An appendix "For Parents, Teachers, and Other Adults" offers additional suggestions for integrating the story with learning. Lesson 2 resource.

18. Lee, Martin, Miller, Marcia, "50 Fabulous Measurement Activities", New York: Scholastic, Inc, 2002

Hands-on Activities for Exploring Length, Perimeter, Weight, Volume, and Time That Will Make Kids' Measurement Skills Sky High! Children can utilize this book during centers in lesson 2.

19. Balka, Don, "Unifix Mathematics Activities: Book 2", Pollocksville, NC: Bender-Burkot, 1995

Volume, Area, Perimeter. This book contains blackline masters for games and game boards that use UNIFIX materials to teach a variety of basic mathematic and logic skills for k-2. Perfect resource to use for both lesson 1 and 2 during centers.

20. The University of Chicago school Mathematics Project, Everyday Mathematics 2<sup>nd</sup> Grade Teacher's Lesson Guide, Chicago, IL: Everyday Learning

This is the math program used by the district to teach children the Illinois State Standards for Math. It provides the teacher with a teacher's lesson guide that is interactive, informative and includes games for learning. It also provides text resources to help enhance the lesson. Resource for both Lesson 1 and 2.

### **Video and Website Resources**

21. <http://www.unitedstreaming.com>

This website is a valuable resource for various videos on measurement and perimeter such as:

Math Monsters: Standard and Non-Standard Measurement

Discovering Math: Measurement

Maths Mansion: 31, All the Way Round

Videos were used in the preview phase of both lessons that were retained from this website. They also provide many of the blackline activities that we performed in class.

22. <http://www.shodor.org/interactivate/activities/>

This website is an interactive site where students can learn the relationship between perimeter and area. A random shape will be automatically generated and they will have to calculate the area and perimeter of this shape. They also have various math activity games that children can utilize to apply their knowledge of math concepts. Perfect for lesson 1 & 2.

23. <http://www.funbrain.com/>

This website is an interactive site where students can play with centimeters and inches by measuring the red line with the ruler on the page, or find the area and perimeter of various geometrical shapes at various levels: easy, medium, hard and super brain. Perfect Centers website for both lessons.

24. <http://www.gamequarium.com/measurement.html>

This website is an interactive site where students can play various types of measurement games to enhance and apply their knowledge. Perfect for Lesson 1 and 2.

25. <http://math.com/>

This website provides various math games and worksheets on various math topics that focus on enhancing skills in all areas of math including measurement and perimeter.

26. <http://www.emgames.com/>

This site is sponsored by Everyday Math which is the math program we use in school district u-46 and the games correlate to the lessons. Kids love it!