

APL (Active Playful Learning) Learning Experience Title: Building Blocks and Number Sense

Grade Level or Course	1st		
Quarter # Unit #: Unit Title	Quarter 1, Unit 2: Counting and Numeracy Part 1		
Featured APL Practice:	Small & Paired Groups 	Student Contributions 	Hands-on & Minds-on 
	Voice & Choice 	Meaningful Connections 	Enthusiasm & Positivity 
APL Summary Briefly describe connection between lesson and APL practice	Students will work hands-on with base ten blocks to build designs. Using their own creations, they will express the amount as a numeral, in ones (27 ones) and in combined tens/ones (2 tens 7 ones). They will compare the amounts in their designs to classmates' designs.		
Suggested Pacing # of minutes does <i>not</i> include your intervention - Unit Progression: When might you implement this learning experience within the unit?	Approximate Time (in min.): Part 1: 15-20 minutes per teacher-led small group Part 2: 10-30 minutes depending on which option(s) are implemented	Unit Progression: This experience would be great once students have started to explore number comparisons. Ideally, students will have already had some experiences with the base ten blocks. If not, consider spreading the part 1 activities into smaller separate chunks.	
Driving Question Driving Question Resource - Open-ended; aligned with standards - Frames a rigorous, authentic context in which to learn content	How can base ten blocks help us to count and compare numbers? How can we represent an amount up to 30 using base ten blocks? How can we compare amounts up to 30?		
Materials / Resources - Link Teacher Slide Deck - Include all materials and technology needed for teachers and students - Any digital links should be set to LCPS view-only - Add materials or resources directly to this document if possible	Base ten blocks (rods and units only) Index cards Exit ticket/journal prompt (printed) Sentence strips		
Math Standards - Refer to VDOE standard(s) from Yearly Overview Elementary Cross-curricular document	Math SOLs (write out the whole SOL): 1.NS.2 The student will represent, compare, and order quantities up to 120. (limit to 30 and multiples of 10 in Unit 2) c) Create a concrete or pictorial representation of a number using tens and ones and write the corresponding numeral up to 120 (e.g., 47 can be represented as 47 ones or it can be grouped into 4 tens with 7 ones left over).		

Tiered Vocabulary Words	e) Compare two numbers between 0 and 120 represented pictorially or with concrete objects using the terms greater than, less than, or equal to. Connected SOLs (<i>standards explored, standards reviewed, prior knowledge, cross-curricular standards, etc.</i>): f) Order three sets, each set containing up to 120 objects, from least to greatest, and greatest to least. Key Vocabulary (<i>Tier 2, Tier 3</i>):	
Skills - Which 5C skill(s) will you highlight to students? Describe how students are developing the 5Cs within this experience. Critical Thinker, Communicator, Collaborator, Creator, Contributor - Which Math Process Goals are addressed in this experience?	5Cs Communicator - Critical Thinker Collaborator Creator - Contributor Confidence (APL) Content Expertise (APL)	Math Process Goals: Communication - Connections Representations - Reasoning - Problem Solving
Learning Objective(s) - Student-facing <i>"The student will..."</i> <i>"I can..."</i> Elementary - PLC+ 5 Guiding Questions (Where are we going?) Secondary - 4 Critical Questions (What do we want all students to know and be able to do?)	<u>The student will...</u> - Show an amount up to 30 using units and using combined rods/units - Compare amounts using the terms <i>greater than</i>, <i>less than</i>, or <i>equal to</i> <u>I can...</u> - Use base ten blocks to show an amount up to 30 - Use the words <i>greater than</i>, <i>less than</i>, or <i>equal to</i> to compare	
Learning Experience Sequence - Follows Math Workshop Sequence - Teacher-facing language - Describe elements of the learning experience here, within the model of Math Workshop - Student and Teacher Actions: What should students be doing? What should teachers be doing?	Structure of Learning Experience: Part 1: Teacher-led small groups  Provide students a few minutes of unstructured exploration with base ten blocks.  Talk together as a group. Ask students what they noticed (or already knew) about the base ten blocks. •Review/model how to count using base ten blocks, counting by tens with rods and by ones with the units. Students might chorally count with you.   Introduce task: Each student will build a structure or create a design/picture with up to 30 units. When through, they will record the number of units used in their design on an index card. Challenge students as they finish to show the same number using rods and units (e.g. if 27 units were used, that is = 2 rods + 7 units)	

-  **Model comparing:** After students have completed their designs, review the terms *greater than*, *less than*, and *equal to*. Display these 3 terms on sentence strips. Model a comparison between a teacher-built design and one of the student's designs ("My structure is less than Joe's structure because mine has 15 units and his has 20 units").

•Students verbally compare their structures to others' at the table using the comparison terms.

•Take a photo of each students' structure along with the index card. Print photos for later use in Part 2.

Part 2 (This will likely be a few days later, after all students have built their structures in small groups) Use printed photos to:

- **Option 1:**  **Find someone who** Students mingle around the room to find classmates whose structure is greater than, less than, and equal to their own design. Record findings/names on back of printed photos.
- **Option 2:**   At table groups, students work together to organize the table's photos from least to greatest.
- **Option 3:**  **Whole group comparing** Create a number line on the floor or wall using painters tape, or hang a clothesline. Mark to show 0, 10, 20, and 30. Students come up (1 at a time or by table) and place their structure photo where they think it belongs on the number line. As more students add their photos, they may need to slide others. Continue until all photos are on the class number line.

Wrap up: What are some of the strategies that you used to tell when an amount is greater than, less than, or equal to your own design?

Reflection ([Resources](#)):

Math journal or exit ticket [prompt](#)

(Students circle the appropriate number of base ten blocks to go with their designs.)