







APL (Active Playful Learning) Learning Experience Title: Patterns Quiz-Quiz-Trade

Grade Level or Course	2nd Grade		
Quarter # Unit #: Unit Title	Quarter 2, Unit 3: Thinking Flexibly to 120		
Featured APL Practice:	Small & Paired Groups 	Student Contributions 	Hands-on & Minds-on 
	Voice & Choice 	Meaningful Connections 	Enthusiasm & Positivity 
APL Summary <ul style="list-style-type: none">Briefly describe connection between lesson and APL practice	<p>This month students will work in small or paired groups in a quiz-quiz-trade structure, building communication and collaboration skills while reinforcing their understanding of patterns. Students will begin independently and create either repeating or increasing patterns (or both at teacher discretion). Then, students will pair and quiz each other to identify the pattern, analyze and identify the core or progression of the increasing pattern, extend and transfer patterns in a format of choice e.g.hand drawn using dry erase markers, manipulatives, or tech options such as Wixie or Canva. Students will then trade and make a new partnership to begin the procedure again.</p> <p><i>*Before you begin the activity, instruct students on positive partnership; greeting, coaching, and feedback.</i></p>		
Suggested Pacing <ul style="list-style-type: none"># of minutes does <i>not</i> include your interventionUnit Progression: When might you implement this learning experience within the unit?	Approximate Time (in min.): 20-30 min	Unit Progression: Towards the end of the unit as review and practice and/or for use as a formative assessment.	
Driving Question <ul style="list-style-type: none">Driving Question ResourceOpen-ended; aligned with standardsFrames a rigorous, authentic context in which to learn content	<p>How can you use what you have learned about patterns to identify and analyze a partner’s pattern before you extend and transfer it? <i>Explain the process for extending a repeating/increasing pattern. Explain the process for transferring a repeating/increasing pattern.</i></p> <p>How can you use what you have learned about increasing patterns to analyze a partner's pattern and predict what will come next...in the third progression...seventh progression, etc.</p>		
Materials / Resources <ul style="list-style-type: none">Link Teacher Slide DeckInclude all materials and technology needed for teachers and studentsAny digital links should be set to LCPS view-onlyAdd materials or resources directly to this document if possible	<p>Materials will depend on the teacher or student choice for the activity. Options include:</p> <p>Dry erase markers and boards Manipulatives like pattern blocks, shape blocks, counters, unifix cubes etc Student device and access to apps such as Wixie or Canva Quiz Quiz Trade procedure slide</p>		
Math Standards	Math SOLs (write out the whole SOL):		

<ul style="list-style-type: none"> Refer to VDOE standard(s) from Yearly Overview Elementary Cross-curricular document Tiered Vocabulary Words 	<p>2.PFA.1 The student will describe, extend, create, and transfer repeating and increasing patterns (limited to addition of whole numbers) using various representations.</p> <p>a) Identify and describe repeating and increasing patterns.</p> <p>b) Analyze a repeating or increasing pattern and generalize the change to extend the pattern using objects, pictures, and numbers.</p> <p>c) Create a repeating or increasing pattern using various representations (e.g., objects, pictures, numbers).</p> <p>d) Transfer a given repeating or increasing pattern from one form to another (e.g., objects, pictures, numbers) and explain the connection between the two patterns.</p>	
	<p>Connected SOLs (<i>standards explored, standards reviewed, prior knowledge, cross-curricular standards, etc.</i>):</p> <p>1.PFA.1 The student will identify, describe, extend, create, and transfer repeating patterns and increasing patterns using various representations.</p>	
	<p>Key Vocabulary (<i>Tier 2, Tier 3</i>):</p> <p>transfer extend</p>	
<p>Skills</p> <ul style="list-style-type: none"> Which 5C skill(s) will you highlight to students? Describe how students are developing the 5Cs within this experience. <p>Critical Thinker, Communicator, Collaborator, Creator, Contributor</p> <ul style="list-style-type: none"> Which Math Process Goals are addressed in this experience? 	<p>5Cs</p> <ul style="list-style-type: none"> Communicator Critical Thinker Collaborator Creator Contributor Confidence (APL) Content Expertise (APL) 	<p>Math Process Goals:</p> <ul style="list-style-type: none"> Communication Connections Representations Reasoning Problem Solving
<p>Learning Objective(s)</p> <ul style="list-style-type: none"> 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?) 	<p><u>The student will...</u></p> <ul style="list-style-type: none"> Identify a pattern as repeating or growing Analyze a pattern to identify the core or progression Extend the pattern Transfer the pattern <p><u>I can...</u></p> <ul style="list-style-type: none"> Describe how a pattern is changing Use math vocabulary to describe how a pattern is changing. Communicate my thinking, listen to the math ideas of others, and share feedback. 	
<p>Language Objective</p> <ul style="list-style-type: none"> See Scaffolding and Supports for additional resources to support the language objective 	<p><i>Grade level teams and EL co-teachers collaborate to create language objectives</i></p>	
<p>Learning Experience Sequence</p> <ul style="list-style-type: none"> Follows Math Workshop Sequence Teacher-facing language Describe elements of the learning experience here, within the model of Math Workshop Student and Teacher 	<p>Number Sense Routine (Resources and Look-Fors):</p> <p>2.PFA.1 slide deck</p>	
	<p>Structure of Learning Experience:</p> <ul style="list-style-type: none"> Begin the task in the whole group and teach the procedure for positive 	

<p>Actions: What should students be doing? What should teachers be doing?</p>	<p>partnership.</p> <ul style="list-style-type: none"> • After direct instruction on the procedure for greeting, coaching, and feedback students will begin the task independently and draw or create a repeating/increasing pattern. • As the task progresses, students will pair up and engage in the quiz-quiz-trade structure to identify, analyze, extend and transfer another student's pattern. • Students will then follow the structure to indicate successful solving before seeking a new partnership to begin the task again. • The teacher may be circulating and monitoring student work or recording observations for use as a formative assessment.. Teacher may also engage in questioning and discussion prompts as needed if students need support getting started e.g. <i>Tell me about your work. Describe what you notice in the pattern. What information do you have? What information will you need? What do you think will happen next? Can you explain what you have done so far? What can you do to get started?</i> • Finish the lesson by returning to a whole group discussion and reflection of both the lesson objectives and student experience with positive partnership procedure. <p>Intervention / Enrichment: <i>Please do <u>NOT</u> edit this box. Please refer to links below for Intervention Resources.</i></p> <ul style="list-style-type: none"> • K-12 Math Decision Tree • RTI (Response to Intervention) Fact Sheets - Elementary and Secondary • MTSS Library - Math Intervention Resources <p>Reflection (Resources): What steps did you take as you worked with each partner's pattern? Did anyone think about it in a different way? Do you have anything you want to add on? Do you agree or disagree? Why?</p>
<p>Scaffolding and Supports</p> <ul style="list-style-type: none"> • Differentiation • Scaffolding • Remediation • Extension • EL Scaffolds (Elem) • EL Scaffolds (Sec) • QTEL Strategies (Elem) • QTEL Strategies (Sec) 	<p><i>Grade-level teams and specialists collaborate to devise scaffolds and supports based on students' needs.</i></p>