

Analysis to Action

It has become very common for teachers to develop classroom assessments and “score” student work using rubrics or scoring guides. This has been good for teachers, and has definitely served to clarify expectations for students. However, looking at the “evidence” of student thinking more closely - across groups of students and/or across time - provides more meaningful information than just the scores alone, when making instructional and curricular decisions at the classroom and school levels.

The “Analysis to Action” template was created to serve *several possible purposes* that use learning progressions for making instructional decisions and documenting/measuring progress:

- ✚ To use student assessment data to “fill in the gaps” along the continuum of Learning Progression (or rubric) indicators: **Are there other important indicators that I have observed in student performance that I can add along the continuum that will guide my instruction?**
- ✚ To use Learning Progressions as a means for tracking progress of individual students across time (during school year, across several months): **Is *this student* moving along the learning progressions continuum? What instructional strategies are needed next?**
- ✚ To use Learning Progressions as a means for tracking and analyzing small group performance at a given point in time: **What instructional strategies are needed next – for some? For all?**
- ✚ To use Learning Progressions as a means for tracking and analyzing whole class performance at a given point in time: **What instructional strategies are needed next – for some? For all?**

The examples on the following pages show how the “Analysis to Action” template can be modified to capture assessment information (through teacher observations and evidence in student work) for the different purposes described above.

The assessments used to clarify or validate learning progressions or to monitor progress during the school year need to be open-ended enough to capture the range of potential student performance and offer insights into student thinking and understanding. This type of assessment also allows for the same assessment to be used more than once to look for development of expertise, rather than focusing only on mastery. For example, a formative assessment probe in science that asks students to identify examples and non-examples of living things and then explain why they were chosen provides a window into students’ conceptual understanding and preconceptions beyond simply knowing or not knowing the correct answer.

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✚ To use student assessment data to “fill in the gaps” along the continuum of Learning Progression (or rubric) indicators: **Are there other important indicators that I have observed in student performance that I can add along the continuum that will guide my instruction?**

Step #1: Fill in Entry Points/ LP indicators, leaving spaces (empty rows) in between. [See LP indicators below in **bold** on the left side of the table.]

Step #2: Use observations and evidence to *add other descriptors*. If the student could not do ____, what did s/he do? If the student “almost” did ____, what did that look like? [See **highlighted** indicators on the right side of the table that have been added to this continuum based on “actual” student work.]

Step #3 (optional): Modify assessment tools in order to capture better data/evidence. What did you miss? What other questions do you have?

LP Criterion: Math Standard #10	
Patterns, Functions, & Algebra: Use symbolic forms to represent, model, and analyze mathematical situations	
<i>Draft Grade 3 Learning Progression Indicators with blank spaces between indicators</i>	<i>Grade 3 Learning Progression Indicators after review of student responses</i>
	➤ Describe how a number of objects in a set increases, decreases, stays same
Describe how a <u>series of numbers</u> increases or decreases (Less Complex)	Describe how a <u>series of numbers</u> increases or decreases (Less Complex)
	➤ Show increase/decrease using objects
	➤ Describe changes only in vague terms
	➤ Describe fluctuations beyond “up” or “down”
Describe how a <u>series of numbers</u> stays the same (Less Complex)	Describe how a <u>series of numbers</u> stays the same (Less Complex)
Identify & describe changes verbally (Proficient)	Identify & describe changes verbally (Proficient)
	➤ Using line graph
	➤ Using table
	➤ Using bar graph
Identify & describe changes numerically (Proficient)	Identify & describe numerically (Proficient)
	➤ Using line graph
	➤ Using bar graphs & tables
Create and explain quantitative change using words & equations (Advanced)	Create and explain quantitative change using words & equations (Advanced)

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- ✚ To use Learning Progressions as a means for tracking progress of individual students across time (during school year, across several months): **Is *this student* moving along the learning progressions continuum? What instructional strategies are needed next?** (The same open-ended task - or similar tasks - can be used multiple times to look for development of more sophisticated thinking/understanding.)

Place a “√” to indicate that evidence was found/observed to match the learning progressions (or rubric) description.

LP Criterion: Math Standard #10 Patterns, Functions, & Algebra: <i>Use symbolic forms to represent, model, and analyze mathematical situations</i>	Student Name / ID #:								
Grade 3 Learning Progression Indicators	Date 9/15	Date 9/21	Date 10/5	Date 10/15	Date	Date	Date	Date	Date
➤ Describe how a number of objects in a set increases, decreases, stays same	√								
Describe how a <u>series of numbers</u> increases or decreases (Less Complex)		√	√	√					
➤ Show increase/decrease using objects	√								
➤ Describe changes only in vague terms		√							
➤ Describe fluctuations beyond “up” or “down”			√	√					
Describe how a <u>series of numbers</u> stays the same (Less Complex)			√	√					
Identify & describe changes verbally (Proficient)				√					
➤ Using line graph				√					
➤ Using table									
➤ Using bar graph									
Identify & describe numerically (Proficient)									
➤ Using line graph									
➤ Using bar graphs & tables									
Create and explain quantitative change using words & equations (Advanced)									

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✚ To use Learning Progressions as a means for tracking and analyzing small group performance at a given point in time: **What instructional strategies are needed next – for some? For all?**

Place a “√” to indicate that evidence was found/observed to match the learning progressions (or rubric) description.

LP Criterion: Math Standard #10 Patterns, Functions, & Algebra: <i>Use symbolic forms to represent, model, and analyze mathematical situations</i>	Grade: 3 Date: September								
Learning Progression Indicators (P=Proficient; A= Advanced)	ID # 1	ID # 2	ID # 3	ID # 4	ID # 5				
➤ Describe how a number of objects increases, decreases, stays same	√	√							
Describe how a series of numbers increases or decreases (Less Complex)		√	√	√	√				
➤ Showed increase/decrease with objects	√	√	√						
➤ Described only in vague terms		√	√						
➤ Described fluctuations				√	√				
Describe how a series of numbers stays the same (Less Complex)				√	√				
Identify & describe changes verbally (P)				√	√				
➤ line graph				√	√				
➤ table									
➤ bar graph									
Identify & describe numerically (P)									
➤ line graph									
➤ bar graphs & tables									
Create and explain quantitative change using words & equations (A)									
What instruction comes next? <i>Use objects to create graphs & data tables & number sequences & then match to descriptions</i>				X	X				
What instruction comes next?									

Which students might benefit/be ready for this instruction next?

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- ✚ To use Learning Progressions as a means for tracking and analyzing whole class performance at a given point in time: **What instructional strategies are needed next – for some? For all?**

Place a “√” to indicate that evidence was found/observed to match the learning progressions (or rubric) description.

LP Criterion: Math Standard #10 Patterns, Functions, & Algebra: <i>Use symbolic forms to represent, model, and analyze mathematical situations</i>	Grade: 3 Date: September										
Learning Progression Indicators	ID # 1	ID # 2	ID # 3	ID # 4	ID # 5	ID # 6	ID # 7	ID # 8	ID # 9	ID # 10	Totals
➤ Describe how a number of objects increases, decreases, stays same											
Describe how a series of numbers increases or decreases (Less Complex)											
➤ Showed increase/decrease with objects											
➤ Described only in vague terms											
➤ Described fluctuations											
Describe how a series of numbers stays the same (Less Complex)											
Identify & describe changes verbally (P)											
➤ line graph											
➤ table											
➤ bar graph											
Identify & describe numerically (P)											
➤ line graph											
➤ bar graphs & tables											
Create and explain quantitative change using words & equations (A)											
What instruction comes next?											
What instruction comes next?											