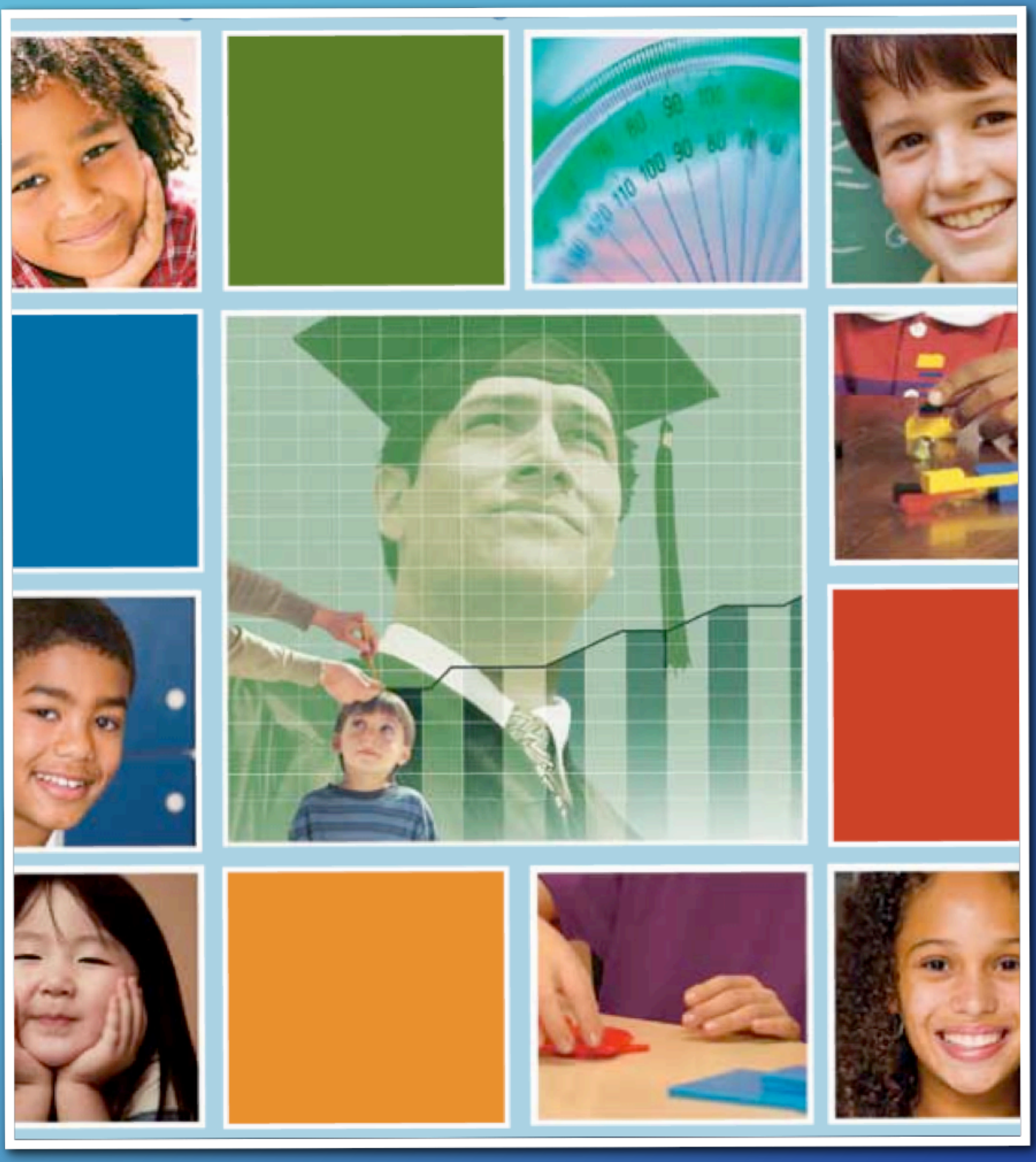


MSTAR

Learning Progressions Learning Portfolio

What is a Learning Progression?

What do you know?

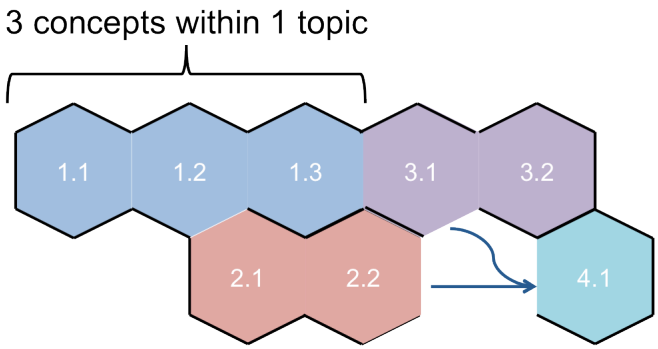
What do you want to know?

What questions do you have?

What is a Learning Progression?

According to the National Research Council, learning progressions describe ways of thinking about a topic. Learning progressions become more sophisticated as children deepen their understanding of a particular topic.

As you look at this graphic, what do you notice?



A learning progression is not unerringly accurate but represents best instructional thinking.

A learning progression is not the one and only way, but it represents a general projected path.

Notes:

What is a Learning Progression?

	Standard	Learning Progression
Definition		
Characteristics		

How useful is understanding the definition of standards and learning progressions for your planning? How is this useful for student assessment?

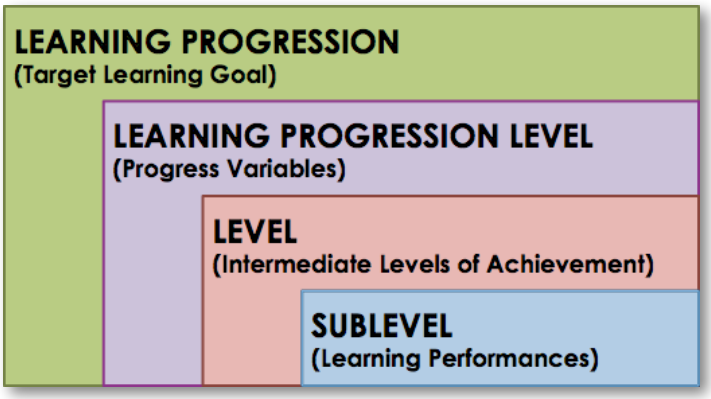
Notice that the content standards are interwoven in a learning progression. How does this help you understand how or what students should be taught?

What is a Learning Progression?

Take a moment to choose a standard from the TEKS and describe a learning progression that would support that TEKS. When bridged with standards, what information can you expect to gain about your students?

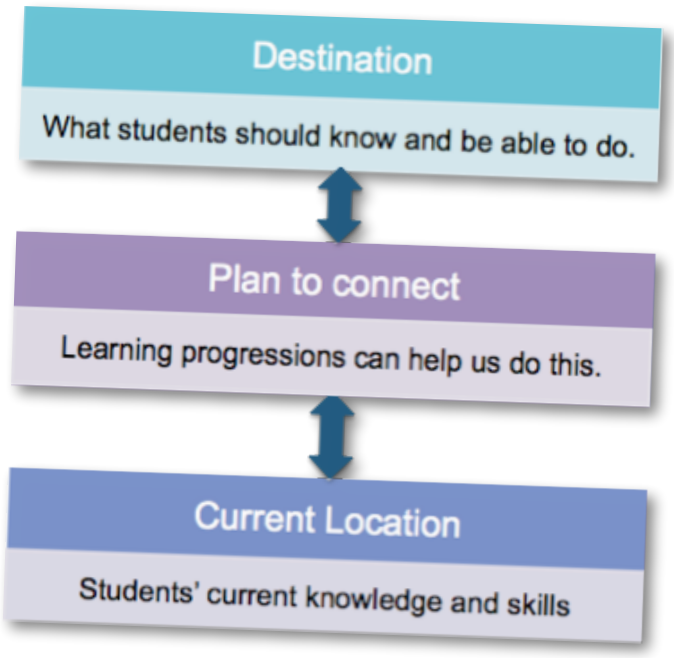
What is a Learning Progression?

Notes:



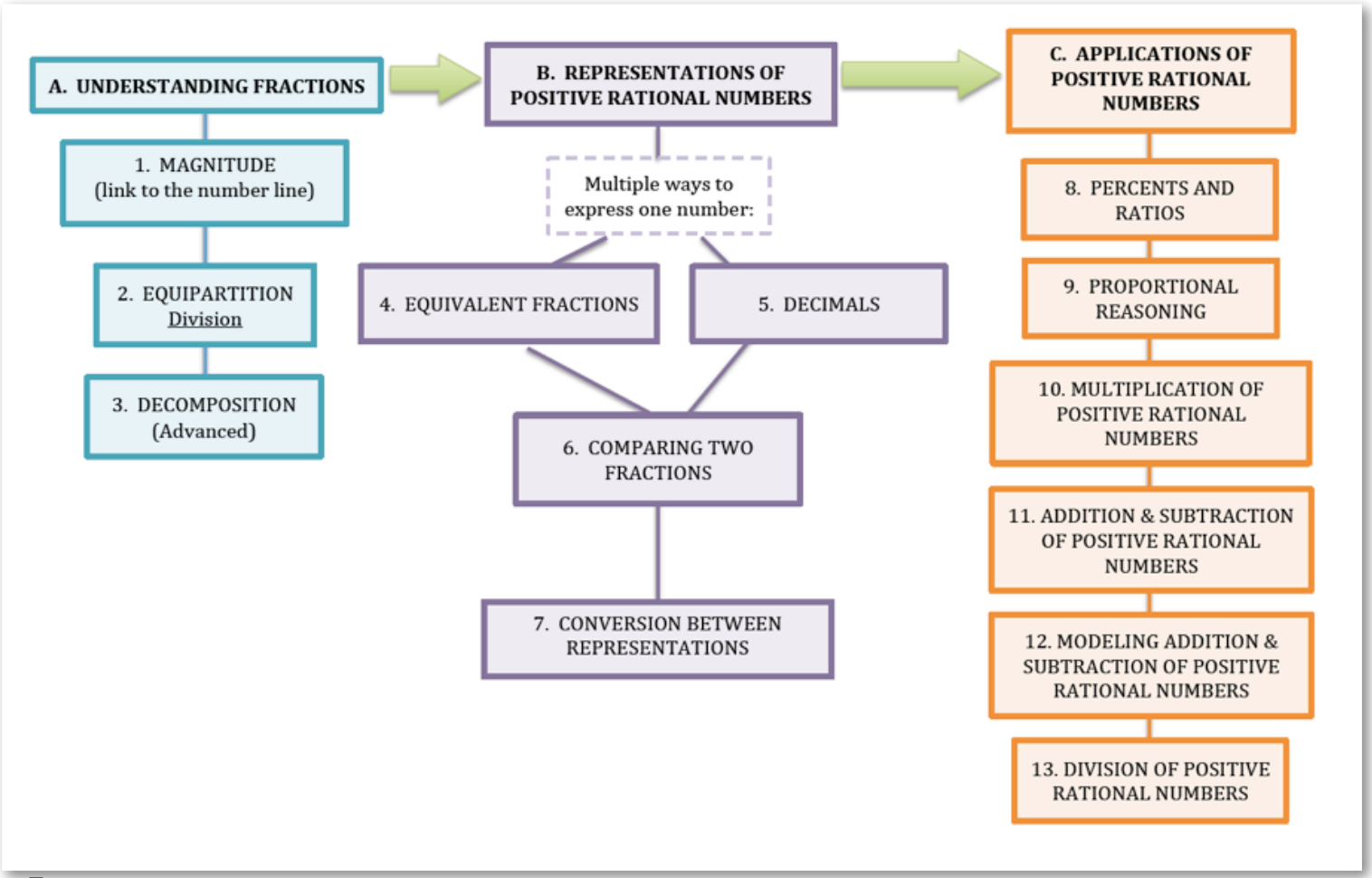
What is a Learning Progression?

Notes:

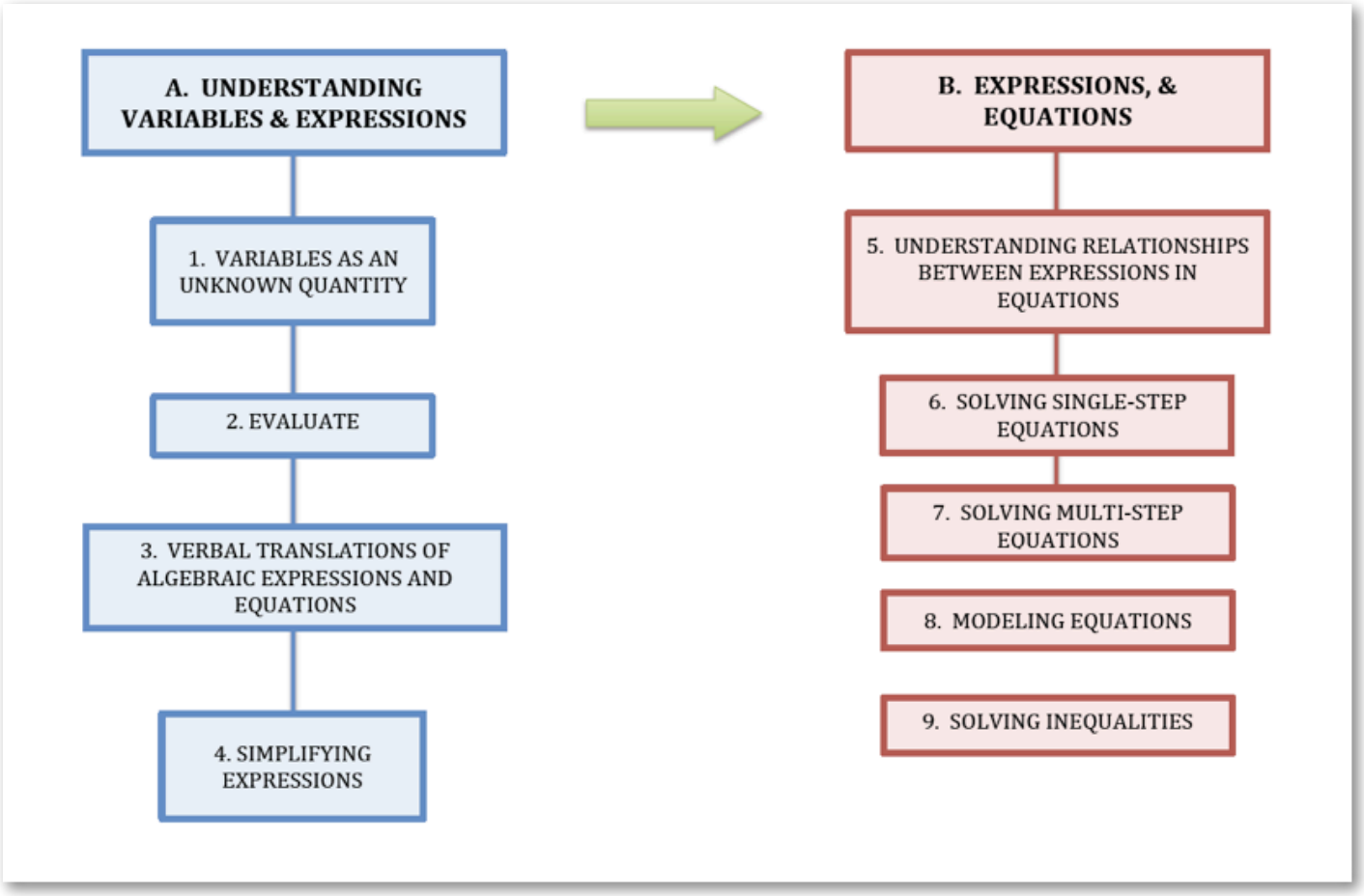


A Close Look at the ESTAR/MSTAR Learning Progressions

Record concepts, skills, misconceptions, and errors that you believe may be associated with each of these levels.



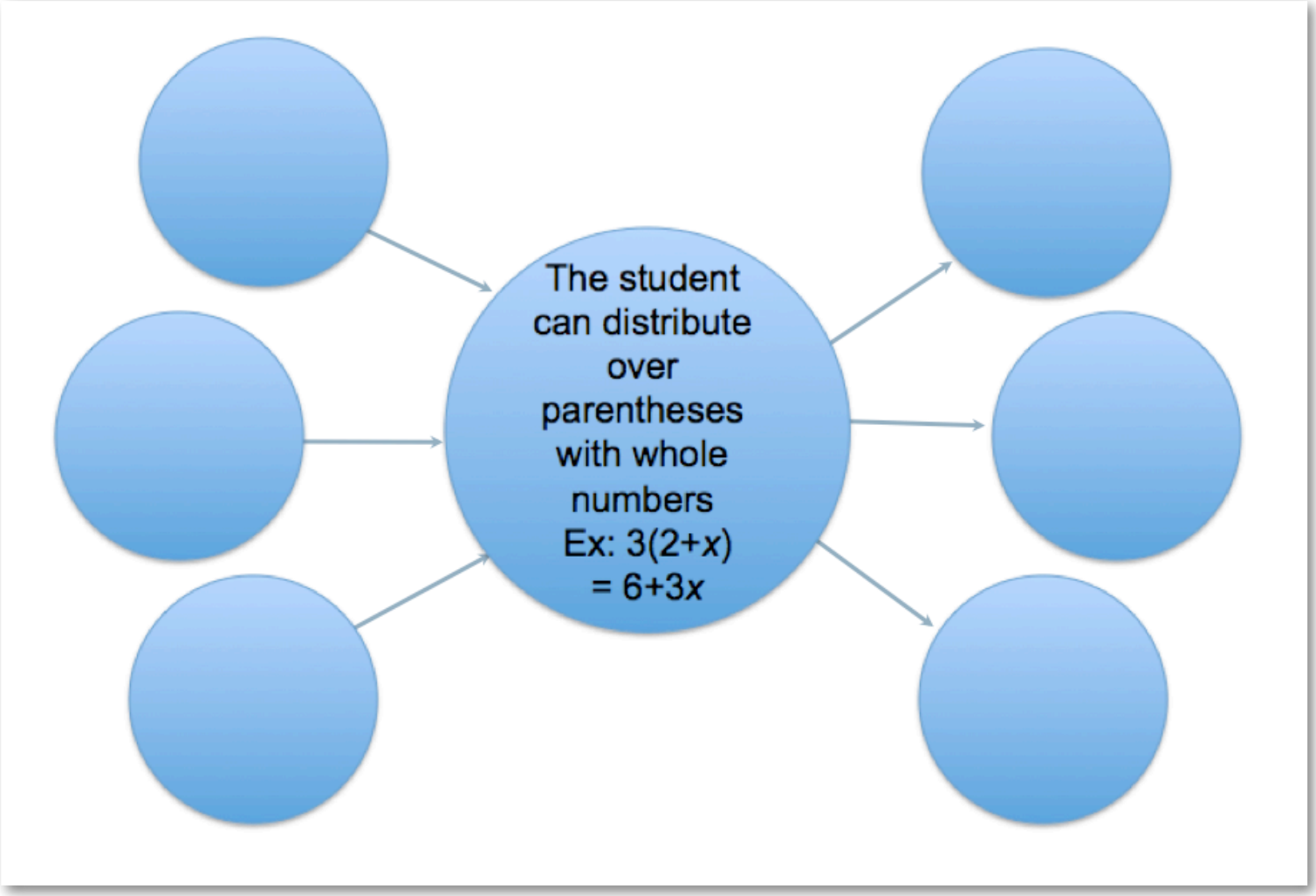
A Close Look at the ESTAR/MSTAR Learning Progressions



Record concepts, skills, misconceptions, and errors that you believe may be associated with each of these levels.

A Close Look at the ESTAR/MSTAR Learning Progressions

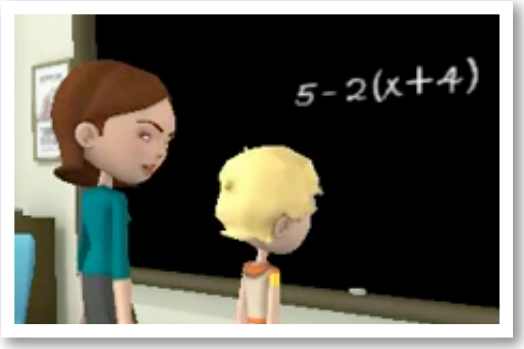
What concepts do you think a student would need to master in order to demonstrate this sublevel description? Write down all of your ideas using the MSTAR Learning Progression outline while keeping in mind the definition of a learning progression.



A Close Look at the ESTAR/MSTAR Learning Progressions

Video 1

23.3.ii - The student does not always distribute over parentheses correctly.

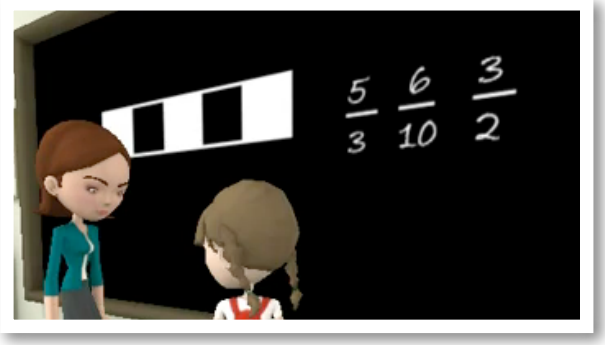


What is the error that the student is making?

Which previous subcomponents need to be reviewed?

Video 2

4.3.i – The student can generate simple equivalent fractions using a visual model.



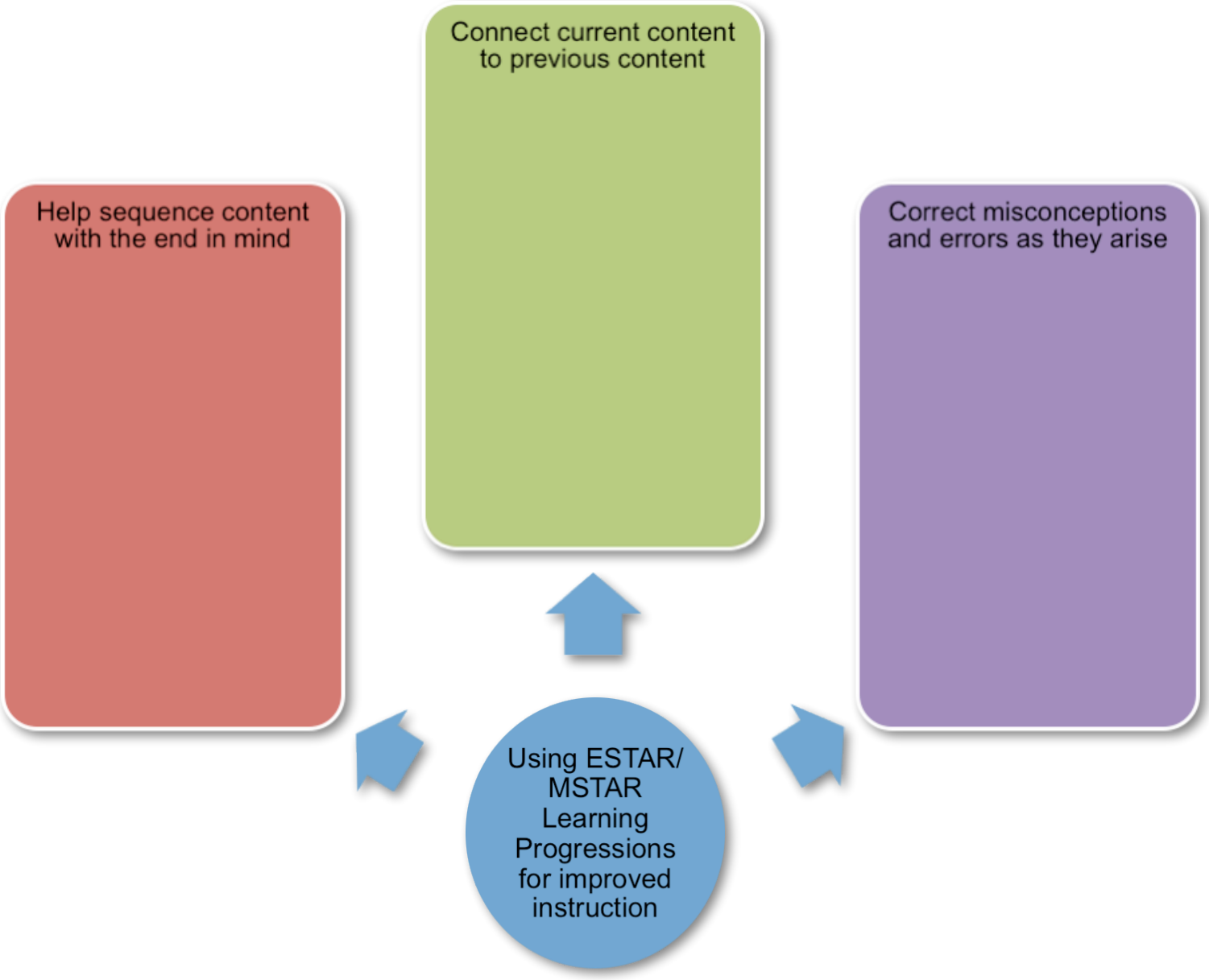
What is the error that the student is making?

Which previous subcomponents need to be reviewed?

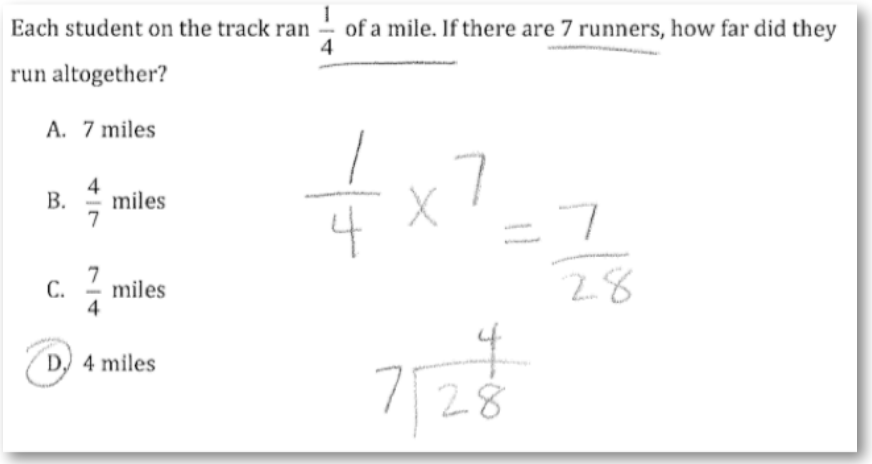
A Close Look at the ESTAR/MSTAR Learning Progressions

Now that you have seen the content of the ESTAR/MSTAR Learning Progressions, how do you think you could use this content in your teaching?

ESTAR/MSTAR Learning Progressions Improved Instruction



Using the ESTAR/MSTAR Learning Progressions for Instruction



This information gathered from the student's response can help to guide supplemental instruction. What information does the student's work provide about his or her misconceptions?

What would supplemental instruction look like for this student based on learning progressions?

Using the ESTAR/MSTAR Learning Progressions for Assessment

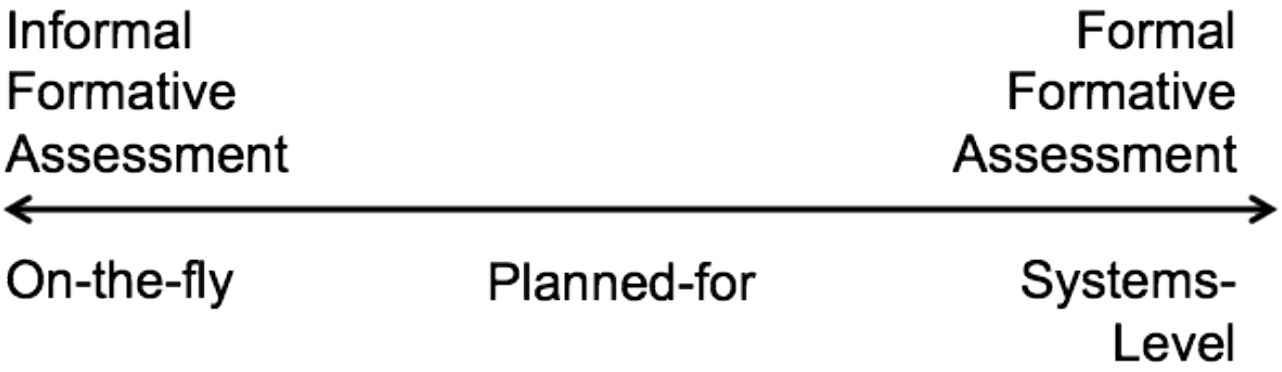
- Systematic process to _____ gather evidence about learning (Heritage, 2007).

- Places agency for the improvement of learning on both the _____ as they move through a unit of instruction (Shavelson and Stanford Education Assessment Laboratory, 2003).

- Critical to a teachers' ability to plan for, support, and assess the quality of _____ learning mathematics (NRC, 2007).

How do these definitions of formative assessment compare with your past experiences with assessment?

Using the ESTAR/MSTAR Learning Progressions for Assessment



How do you currently use on-the-go, planned-for, and systems-level formative assessment in your teaching?

Using the ESTAR/MSTAR Learning Progressions for Assessment

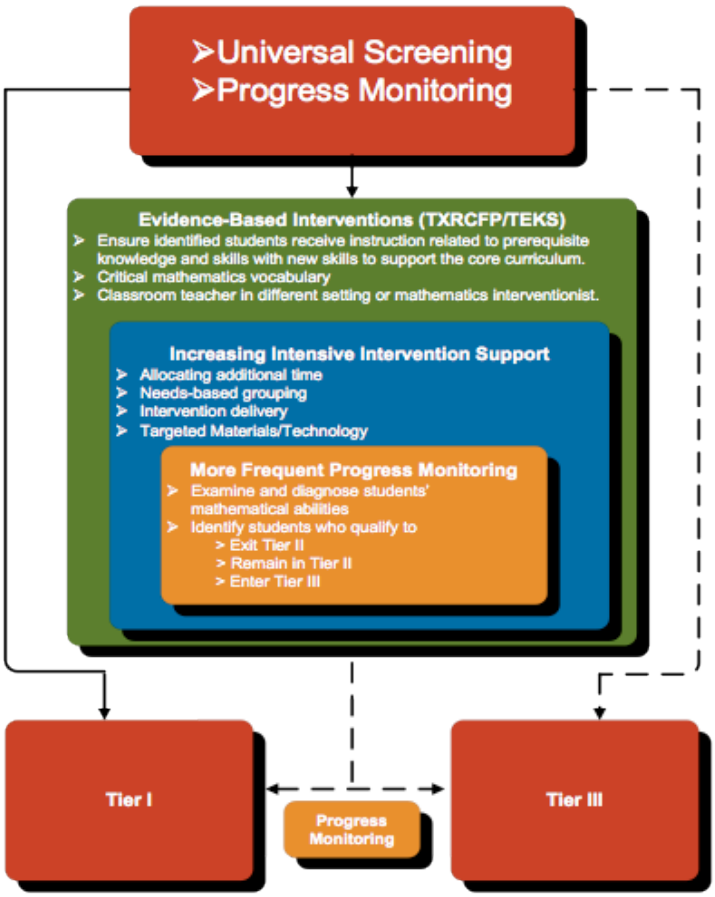
Screening: Are students on track?

Diagnosis: What are students' skill deficits?

Progress Monitoring: Are students progressing?

Using the learning progressions with systems-level formative assessments allows teachers to understand students' thinking, identify possible student misconceptions and errors, and individualize instruction based on students' needs.

Using the ESTAR/MSTAR Learning Progressions for Assessment



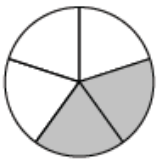
Notes:

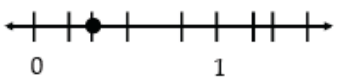
Students are monitored using the diagnostic assessment and other progress monitoring techniques. Those students who are in Tier 2 are given regular core instruction in addition to intensive intervention support and more frequent progress monitoring. Teachers can decide when students are able to move back into Tier I or need to move into Tier III for more support.

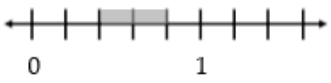
Using the ESTAR/MSTAR Learning Progressions for Assessment

Universal Screener	Diagnostic Assessment

Which of the following are correct representations of 2/5?

I. 

II. 

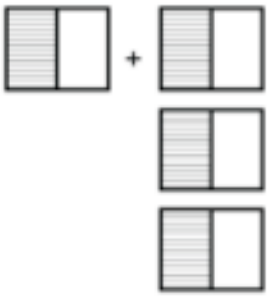
III. 

A. I, III only
B. I only
C. II only
D. I, II, III

On Steve's bookshelf, he has 4 books on bugs and 6 books on animals. What percent of his books are about bugs?

a. 20%
b. 40%
c. 60%
d. 67%

Using the ESTAR/MSTAR Learning Progressions for Assessment

Ralph had $2\frac{3}{6}$ quarts of ice cream. He gave $1\frac{5}{6}$ quarts of ice cream to his friends. Which equation shows how many quarts of ice cream are left?  a. $2\frac{3}{6} - 1\frac{5}{6} = \frac{4}{6}$ b. $2\frac{3}{6} + 1\frac{5}{6} = 4\frac{2}{6}$ c. $2\frac{3}{6} - 1\frac{5}{6} = 1\frac{2}{6}$ d. $2\frac{3}{6} + 1\frac{5}{6} = 3\frac{8}{12}$	**Key Features**
Which of these equations is the correct representation for the given model?  A. $\frac{1}{2} + \frac{3}{2} = \frac{4}{4}$ B. $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = \frac{4}{8}$ C. $\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 4 \times \frac{1}{2}$ D. $\frac{1}{2} + \frac{3}{2} = \frac{1}{2} \times 3$	**Key Features**

Notes:

Using the ESTAR/MSTAR Learning Progressions for Assessment

How do you think that by incorporating each of these different types of formative assessment, in conjunction with the content of the ESTAR/MSTAR Learning Progressions, your teaching and students' understanding of mathematics concepts will be impacted?