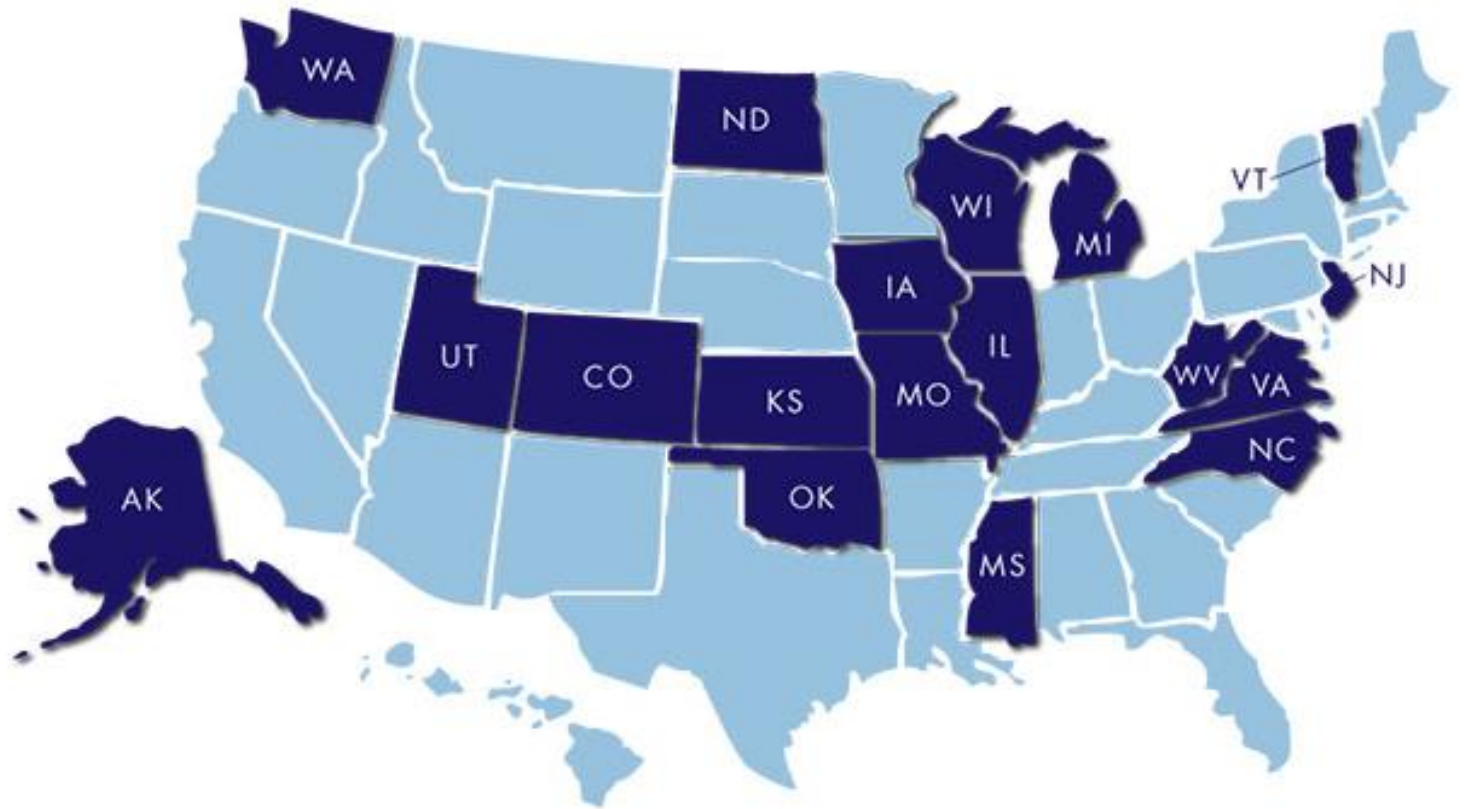


Learning Maps: Tools for Formative Assessment Practice

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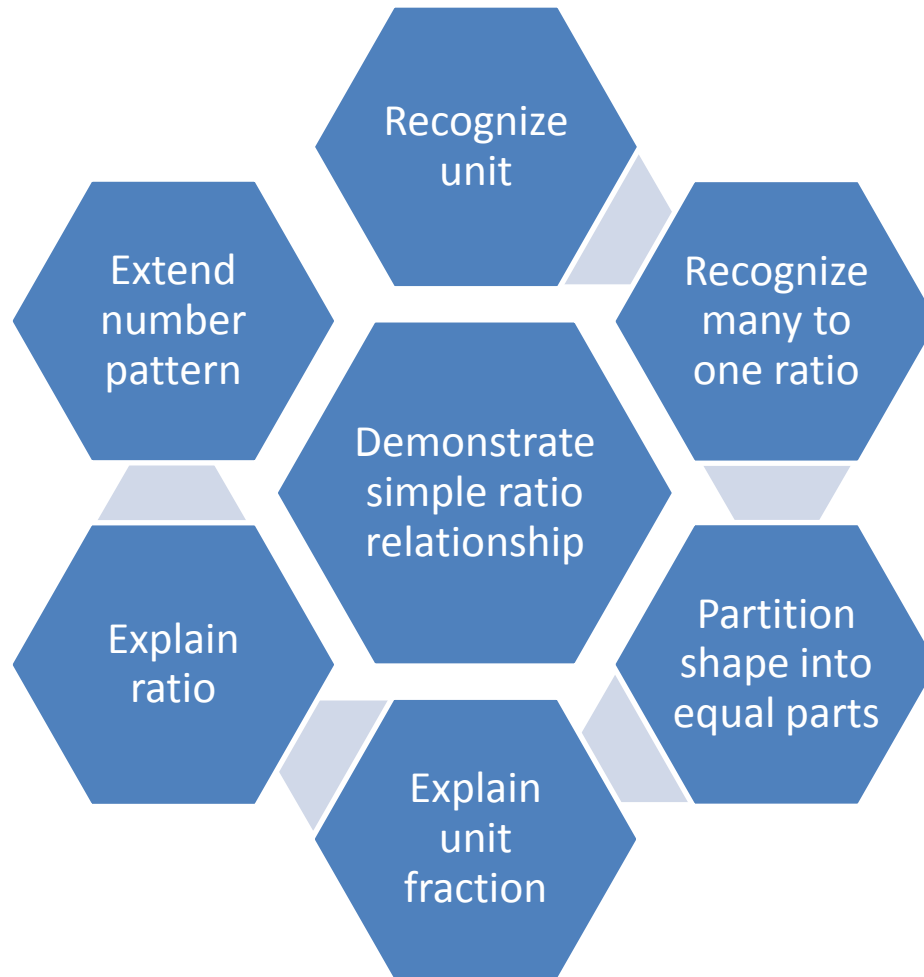
Who We Are



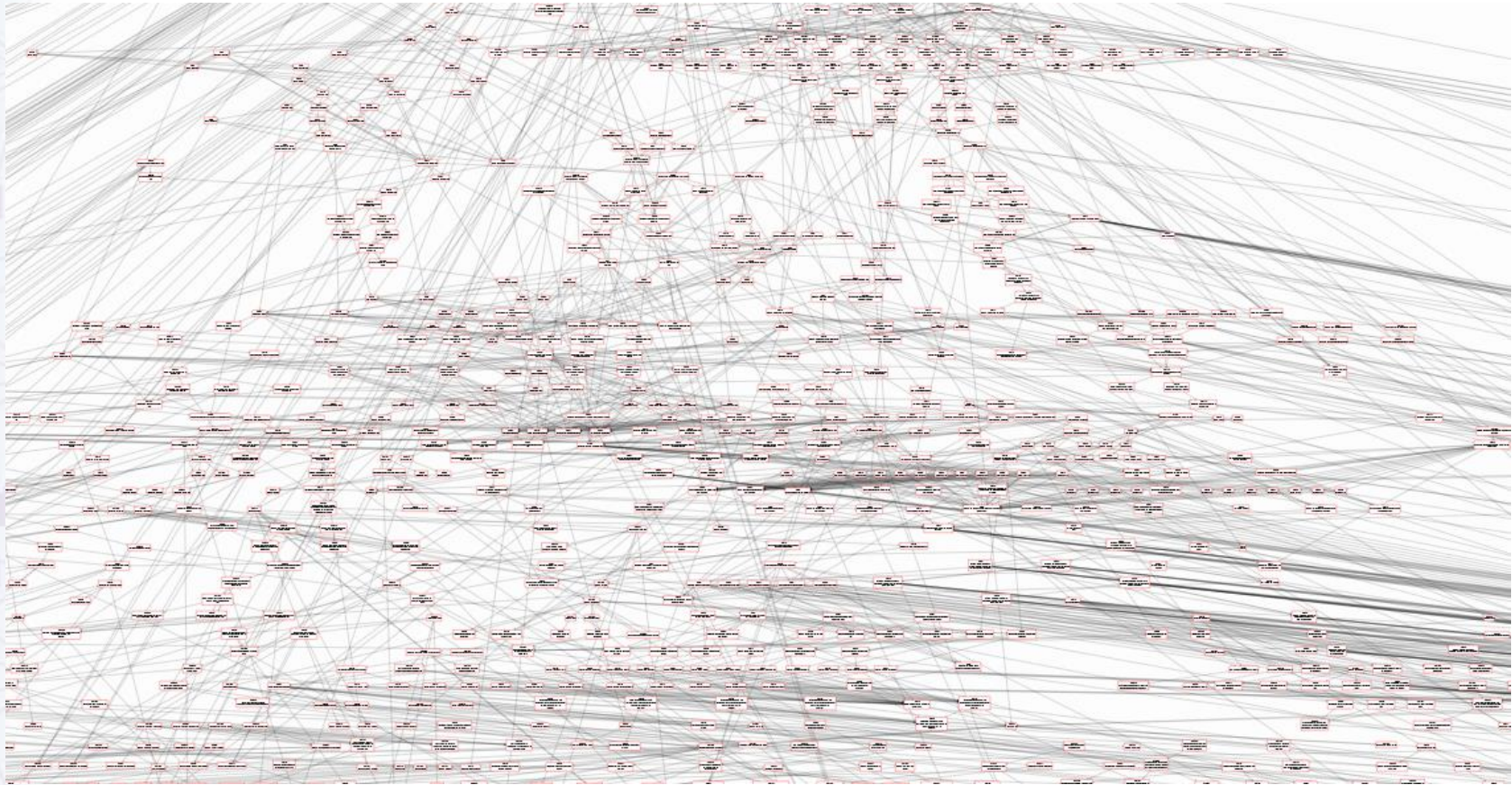
Key Features of the DLM

- Learning maps
- Testlets
- Instructional relevance
- Embedded and year-end assessments
- Multiple entry points
- Dynamic assessment
- Assessment technology system (KITE)

Connected Knowledge



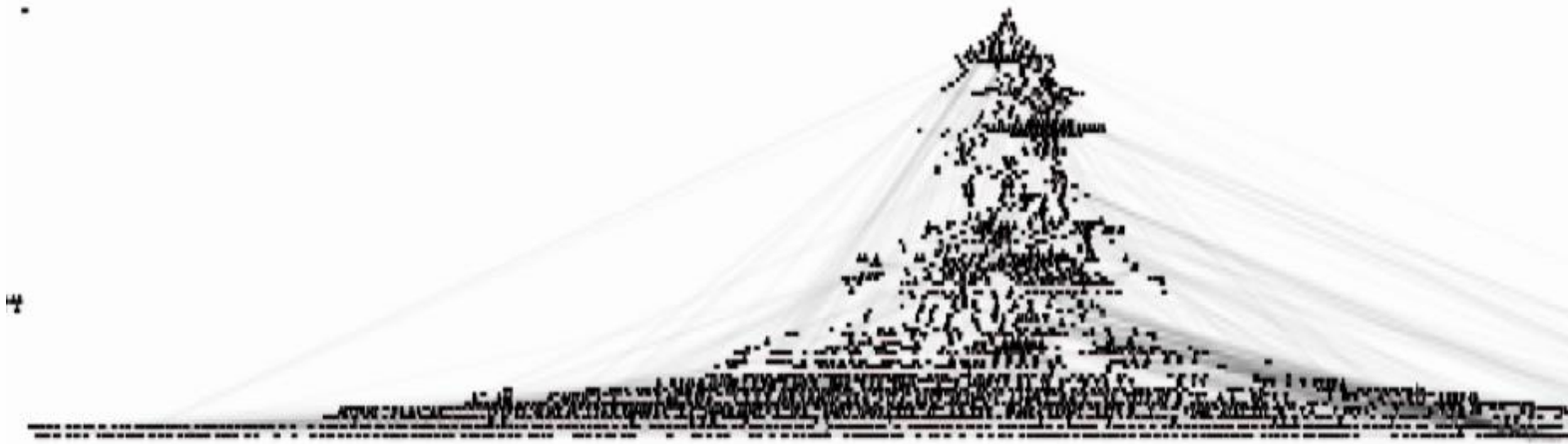
A Portion of the Math Learning Map



Components of the Learning Map

- **Nodes** specify individual skills and understandings that were drawn from the research in Mathematics and English Language Arts.
- **Connections** indicate relationships between nodes and are indicated by arrows in the learning map.
- **Alternate pathways** acknowledge that students do not all necessarily follow the same sequence of learning.

Quick Facts about the Mathematics Map



- 141 foundational nodes
- 2,316 mathematics nodes
- 4,838 connections

HOW DOES THE MAP RELATE TO THE FORMATIVE ASSESSMENT?



DYNAMIC
LEARNING MAPS

Formative Assessment

“Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes.”

CCSSO (2012)

Key Elements of Formative Assessment

- Systematic collection of evidence of student learning
- Quality teacher feedback provided to students
- Involvement of students in the assessment and learning process

Heritage (2008)

Attributes of Formative Assessment

- **Learning goals and criteria for success** should be clearly identified and communicated to students.
- **Learning progressions** should clearly articulate the sub-goals of the ultimate learning goal.
- **Evidence of learning** is elicited during instruction in terms of the steps outlined in the learning progression.

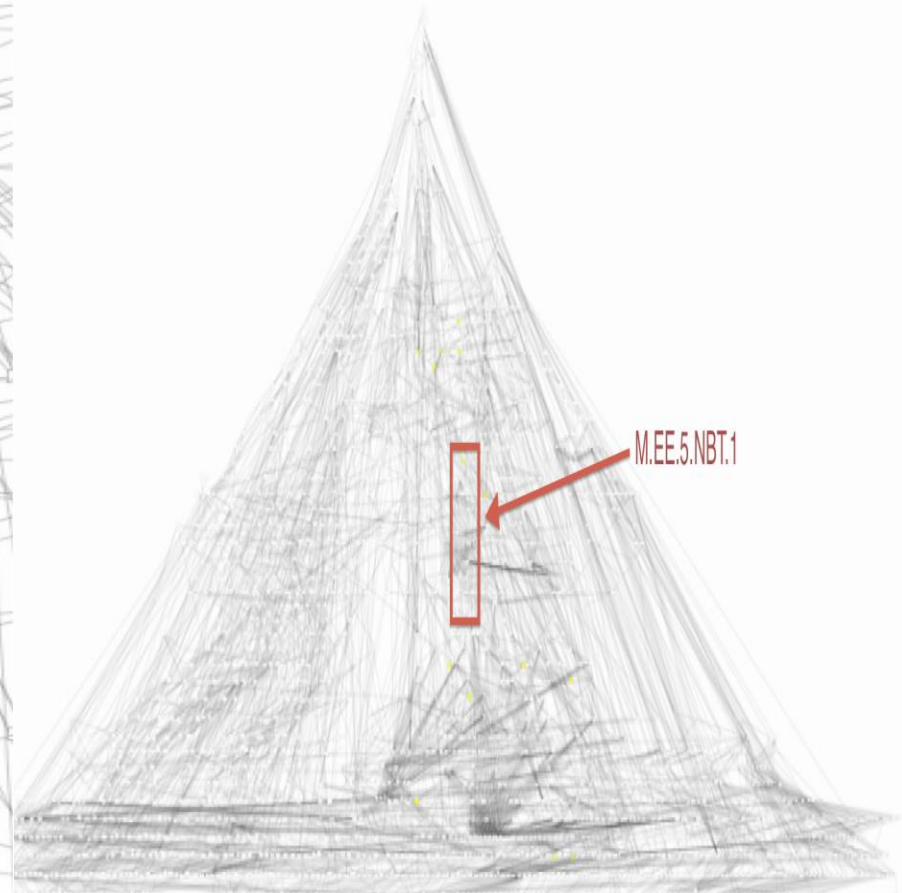
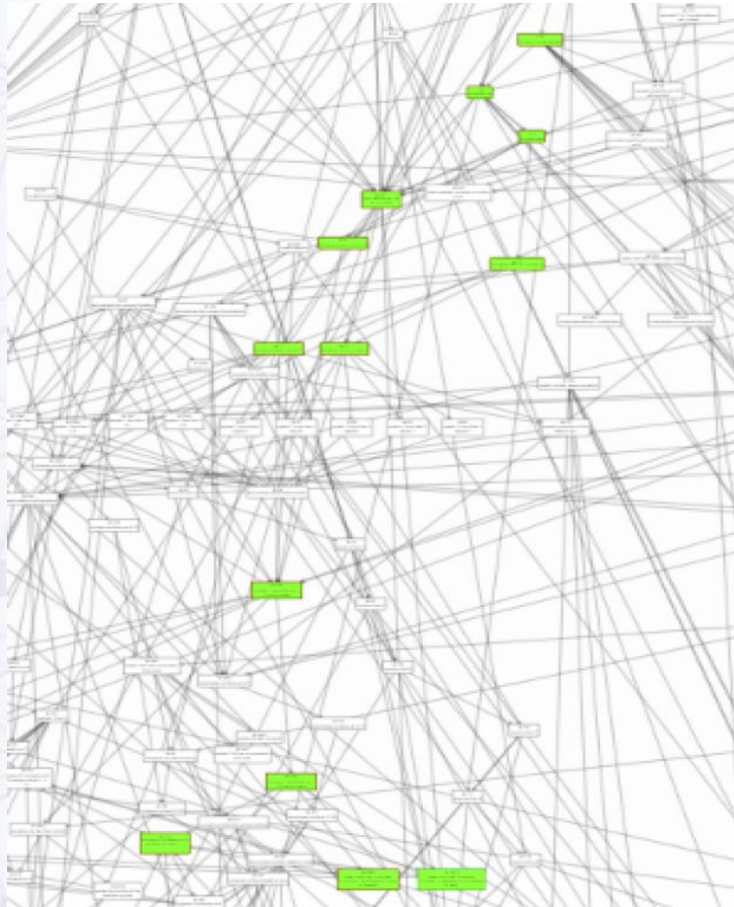
FAST SCASS (2012)

Attributes of Formative Assessment

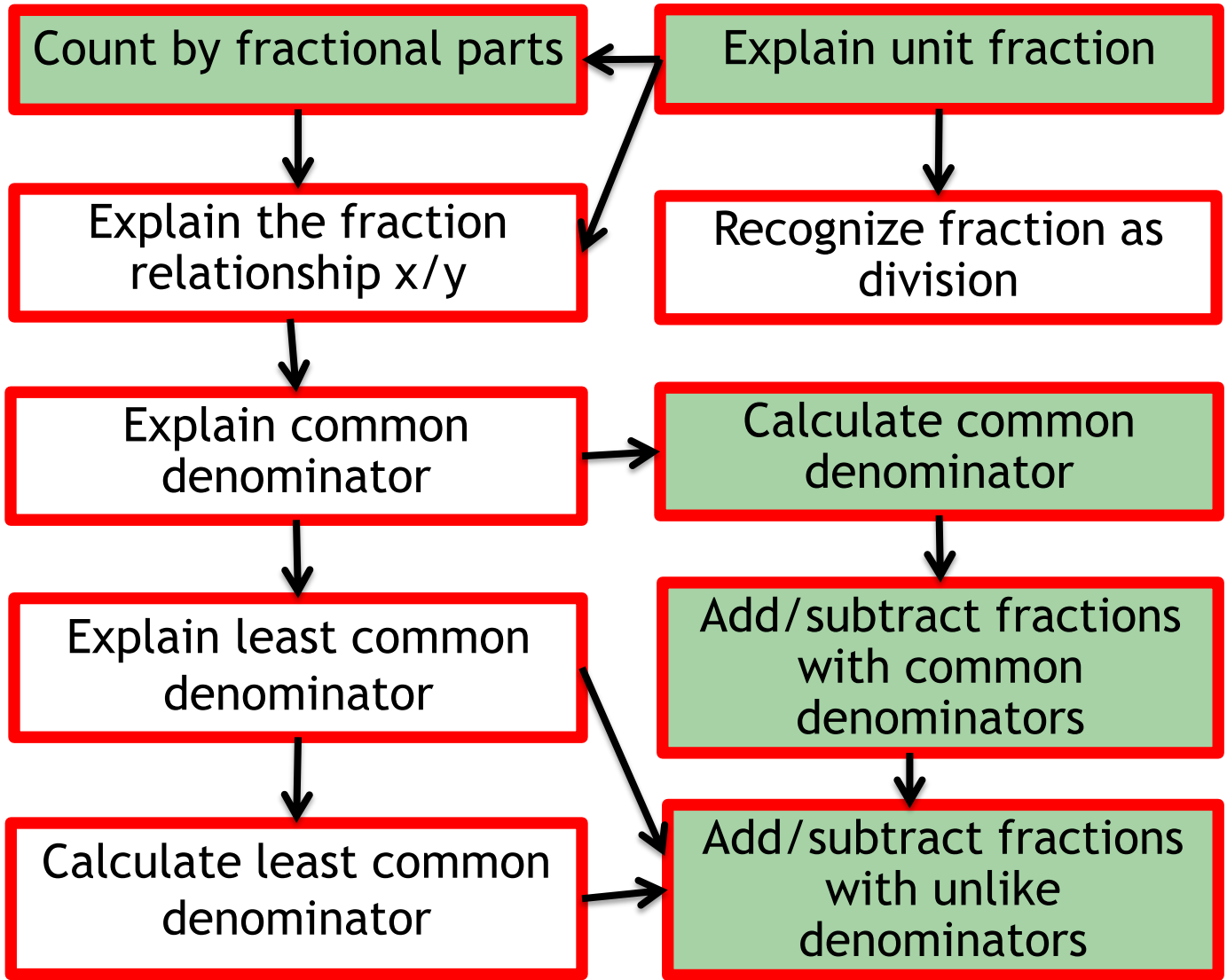
- **Descriptive feedback** should be provided with evidence-based feedback that is linked to the intended instructional outcomes and criteria for success.
- **Self- and peer-assessment** are important for providing students an opportunity to think meta-cognitively about their learning.
- **Collaboration** - A classroom culture in which teachers and students are partners in learning should be established.

FAST SCASS (2012)

Learning Goals in the Learning Map



Fractions Case Study



Activity

- How does the learning map help you collect evidence of student thinking and learning in:
 - place value?
 - operations with fractions?
 - operations and algebraic thinking?
- Select at least two nodes and design two interactive activities for each node that would elicit evidence of student thinking.

Discussion

How the Map Supports Teachers' Formative Assessment Practice?

- Deepen mathematical content knowledge
- Recognize learning sequences made explicit in the map
- Raise awareness about prerequisite skills and connections to future learning
- Identify voids in student understanding
- View multiple pathways in support of differentiated instruction

Thank you!

References

FAST SCASS. (2012). Distinguishing formative assessment from other educational assessment labels. Retrieved on 03/25/2014 from <http://www.ccsso.org/Resources/Publications>

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