# The Dynamic Learning Maps Alternate Assessment System and Accessibility

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# Background

- History of students with disabilities in large-scale assessments
- Assessment options
- Alternate assessments – past and future

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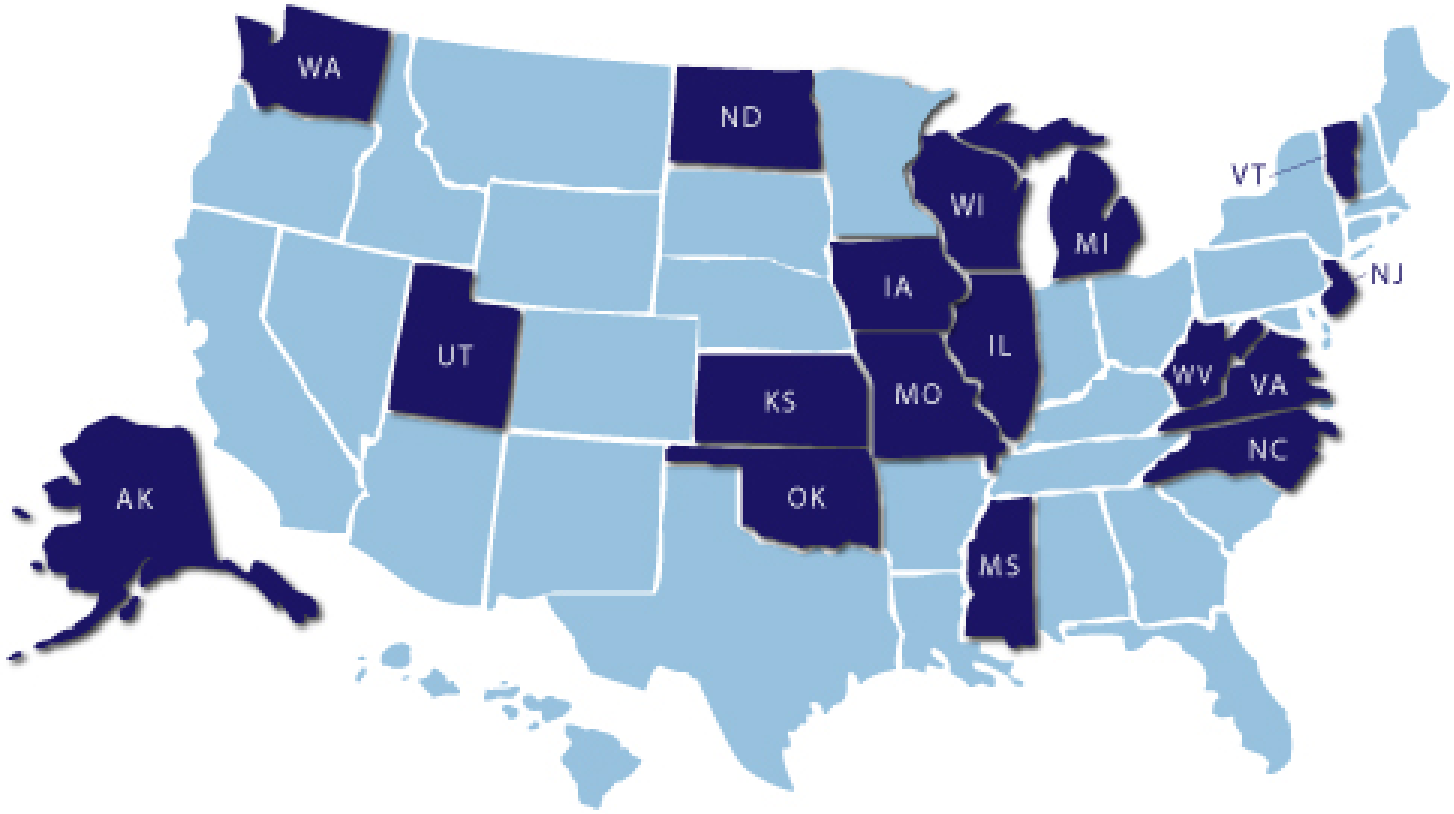
DYNAMIC LEARNING MAPS

# DLM Eligibility Criteria

1. The student has a significant cognitive disability.
2. The student is primarily being instructed using the DLM Essential Elements as content standards.
3. The student requires extensive direct individualized instruction and substantial supports to achieve measureable gains in the grade-and age-appropriate curriculum.

# Students with the most complex needs

# Who We Are

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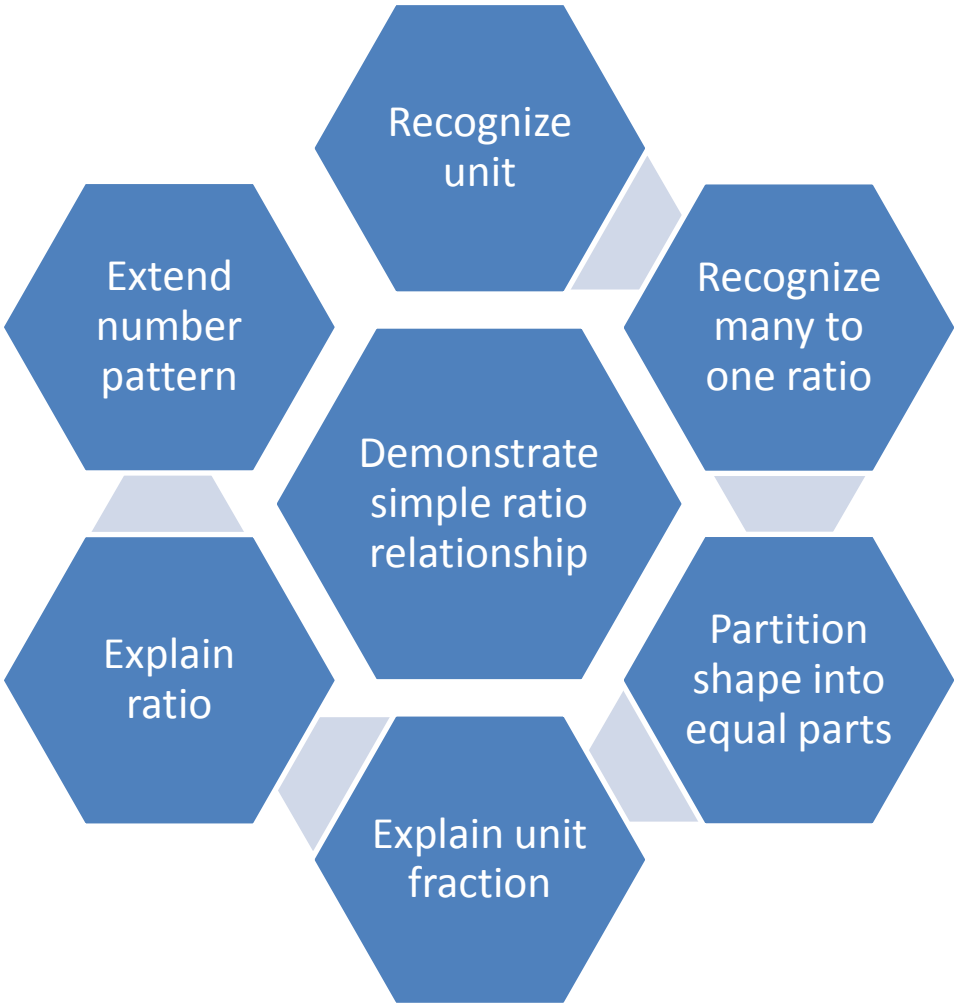
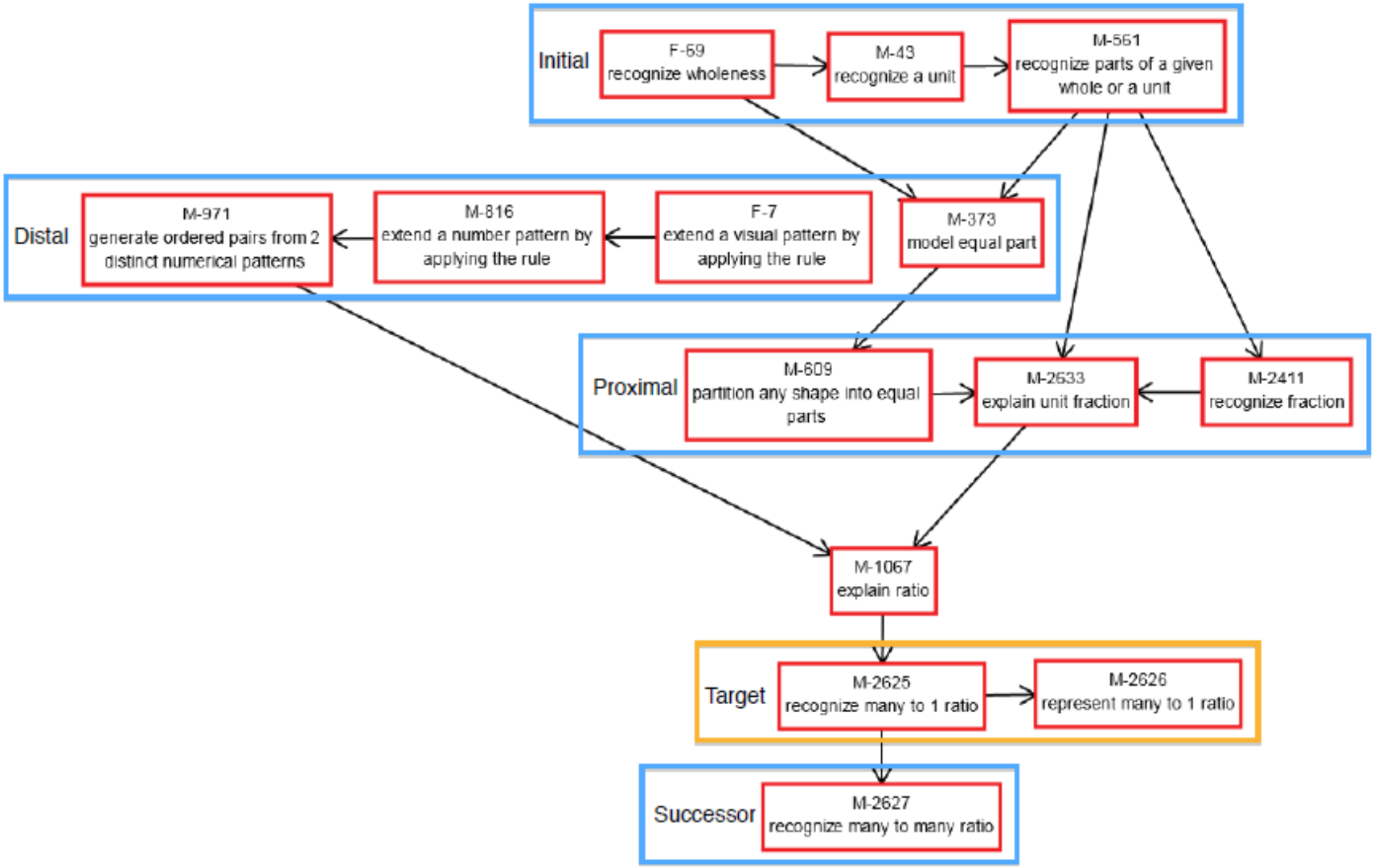
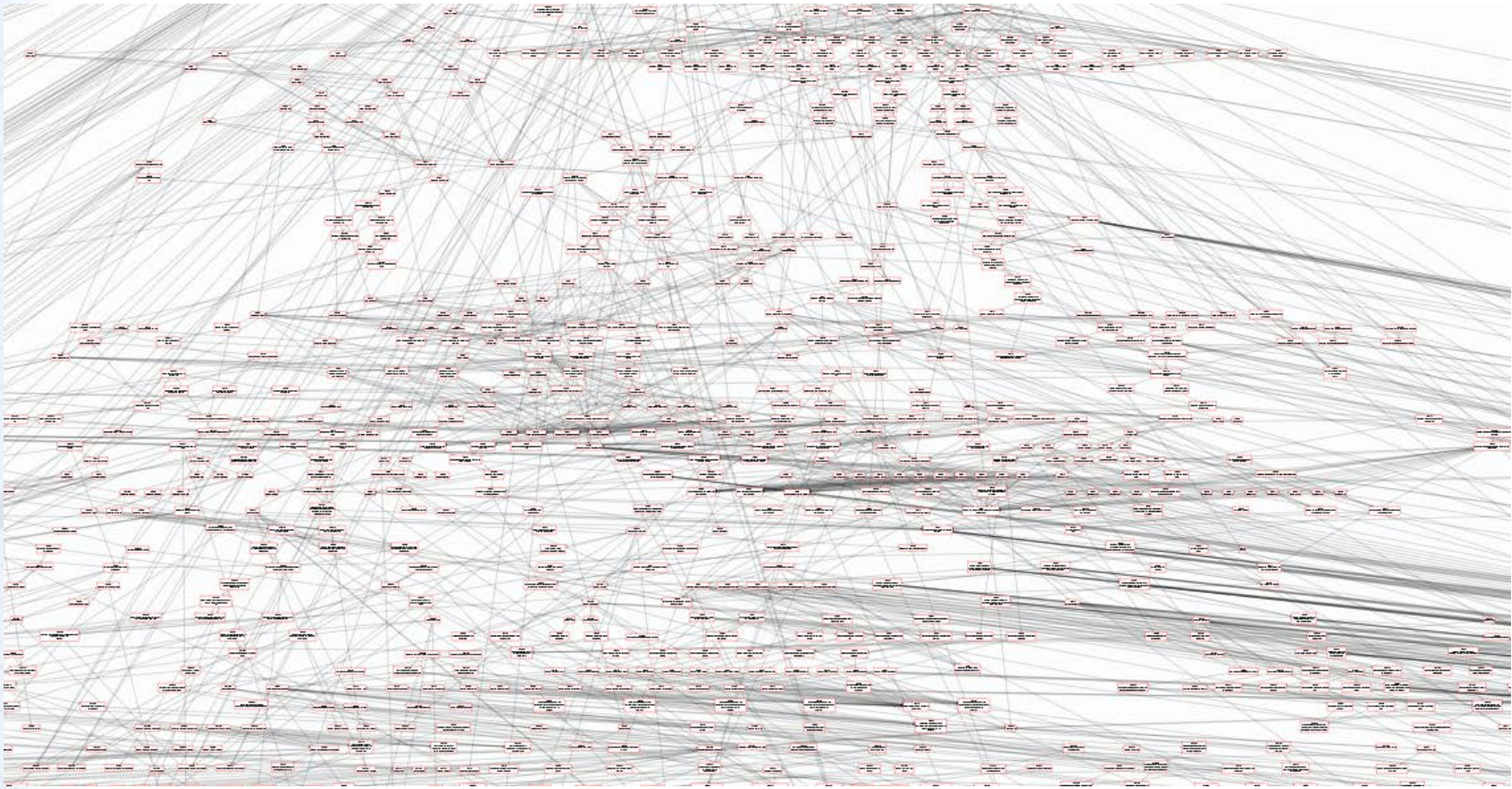


M.EE.6.RP.1: Demonstrate a simple ratio relationship.



# A Portion of the Math Map



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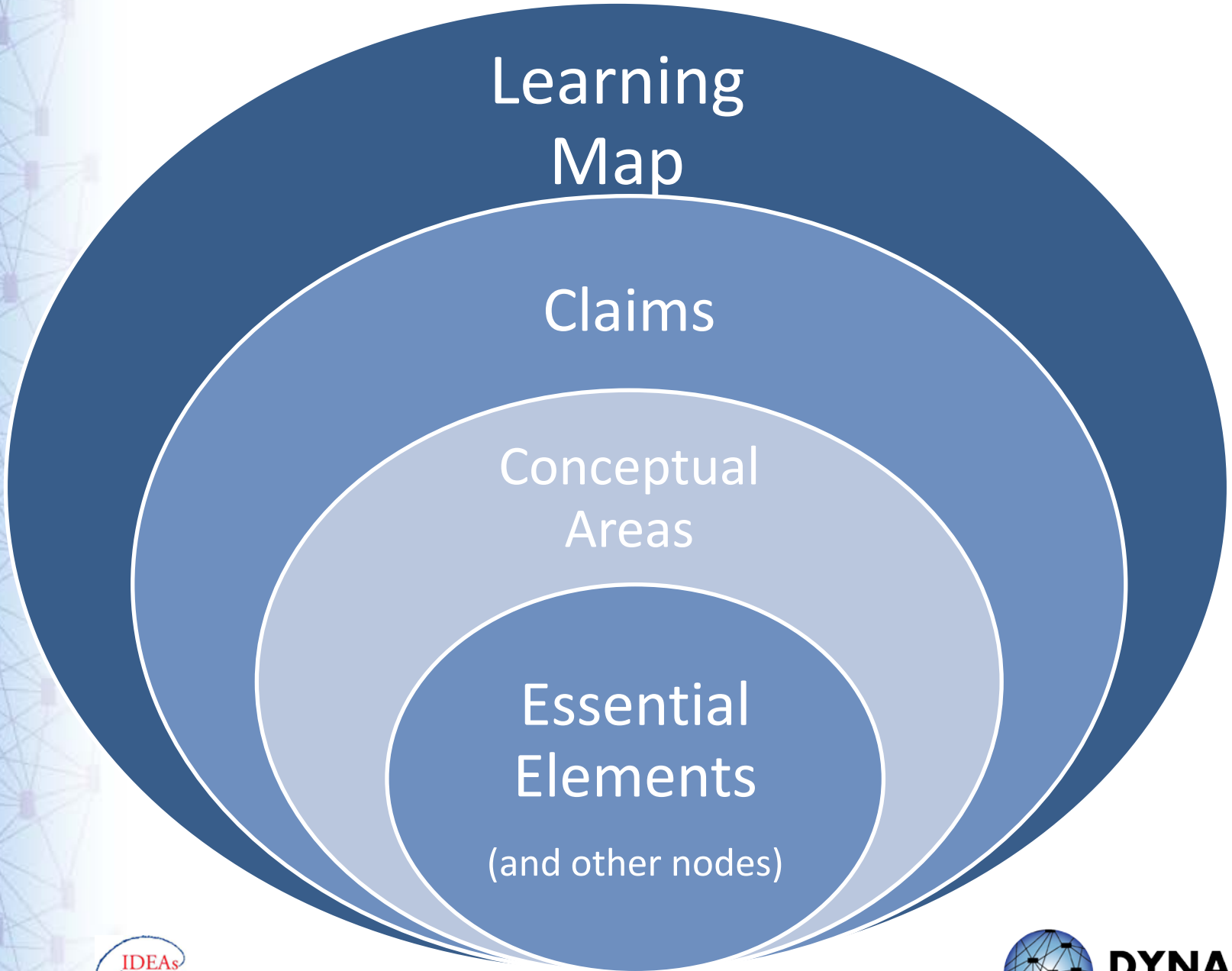


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DYNAMIC LEARNING MAPS

# DLM Claims

English Language Arts – Claim 1

*Students will comprehend text in increasingly complex ways*

Mathematics – Claim 1

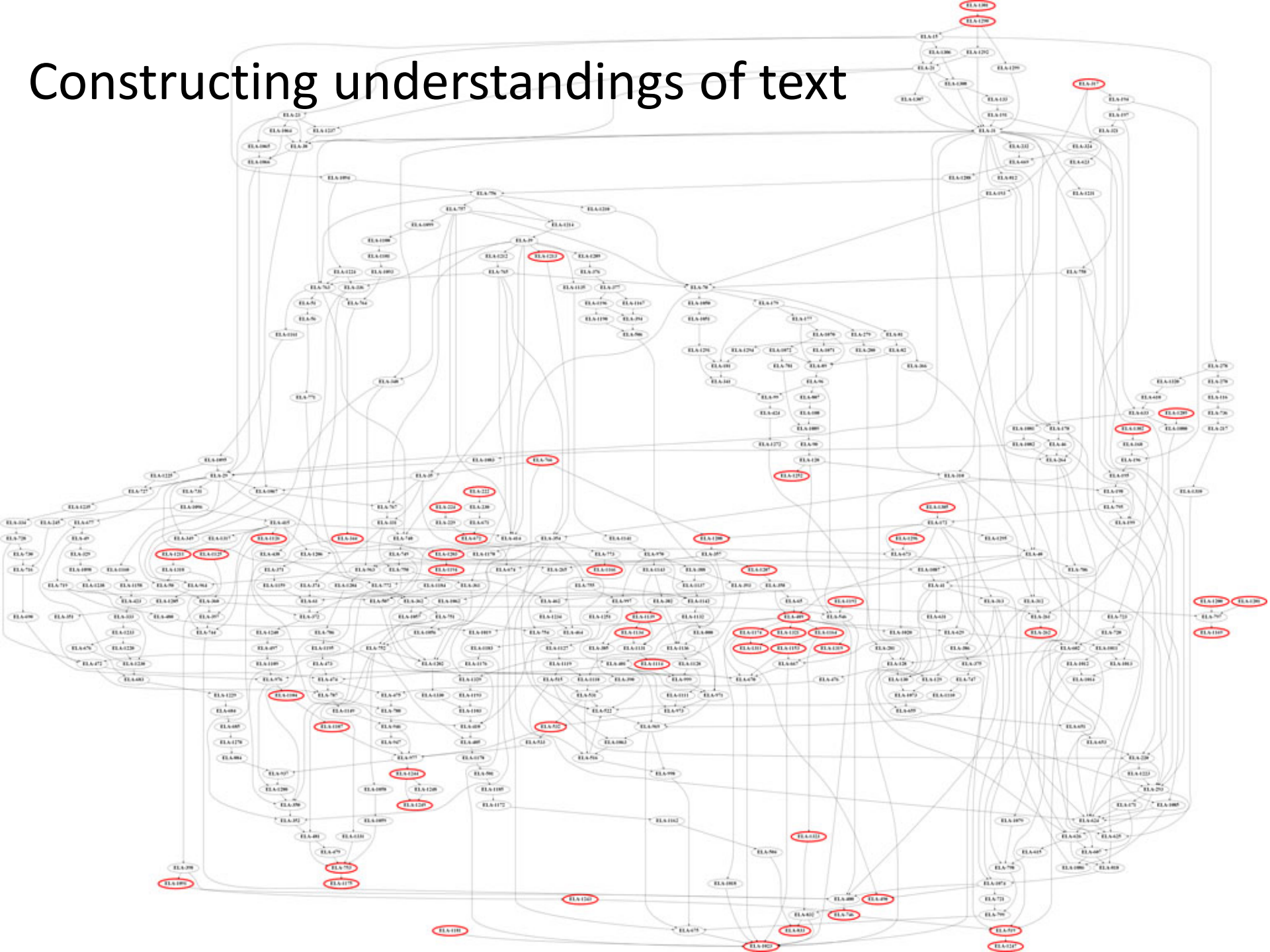
*Students will demonstrate increasingly complex understanding of number sense.*

# Conceptual Areas

- Comprised of nodes that represent the development of related skills and processes in the learning map
  - nodes that have been identified as the target for an Essential Element
  - nodes preceding and extending beyond the targets

| English Language Arts | |
|---|---|
| **Major Claims** | **Conceptual Areas** |
| Students can comprehend text in increasingly complex ways | Determining critical elements of text |
| | Constructing understandings of text |
| | Integrating ideas and information from text |
| Students can produce writing for a range of purposes and audiences | Using writing to communicate |
| | Integrating ideas and Information in writing |
| Students can communicate for a range of purposes and audiences | Using language to communicate with others |
| | Clarifying and contributing to discussion |
| Students can investigate topics and present information | Using sources and information |
| | Collaborating and presenting ideas |

# Constructing understandings of text



| Mathematics | |
|---|---|
| **Major Claims** | **Conceptual Areas** |
| Students demonstrate increasingly complex understanding of number sense. | Understand number structures (counting, place value, fraction) |
| | Compare, compose, and decompose numbers and sets |
| | Calculate accurately and efficiently using simple arithmetic operations |
| Students solve increasingly complex mathematical problems, making productive use of algebra and functions. | Use operations and models to solve problems |
| | Understand patterns and functional thinking |
| Students demonstrate increasingly complex spatial reasoning and understanding of geometric principles. | Understand and use geometric properties of two- and three-dimensional shapes |
| | Solve problems involving area, perimeter, and volume |
| Students demonstrate Increasingly complex understanding of measurement, data, and analytic procedures. | Understand and use measurement principles and units of measure |
| | Represent and interpret data displays |

# WHAT ARE ESSENTIAL ELEMENTS?

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DYNAMIC LEARNING MAPS

# Definition

The DLM Essential Elements (EEs) are specific statements of the content and skills that are linked to the Common Core State Standards (CCSS) grade level-specific expectations for students with significant cognitive disabilities.

In Kansas: *Kansas College and Career Standards*

# DLM Essential Elements

- Reduced depth, breadth, complexity
- Provide appropriate level of rigor and challenge
- Focus on the skills (with multiple means of demonstration)
- Are a starting point for defining achievement standards
- Are not functional or pre-K skills or instructional descriptions

# Example for English Language Arts

**Common Core State Standard**

- RL.6.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

**Essential Element**

- EE.RL.6.2 Determine the theme or central idea of a familiar story and identify details that relate to it.

# Example for Mathematics

**Common Core State Standard**

- 4.MD.5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
- An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
- An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

**Essential Element**

- EE.4.MD.5. Recognize angles in geometric shapes

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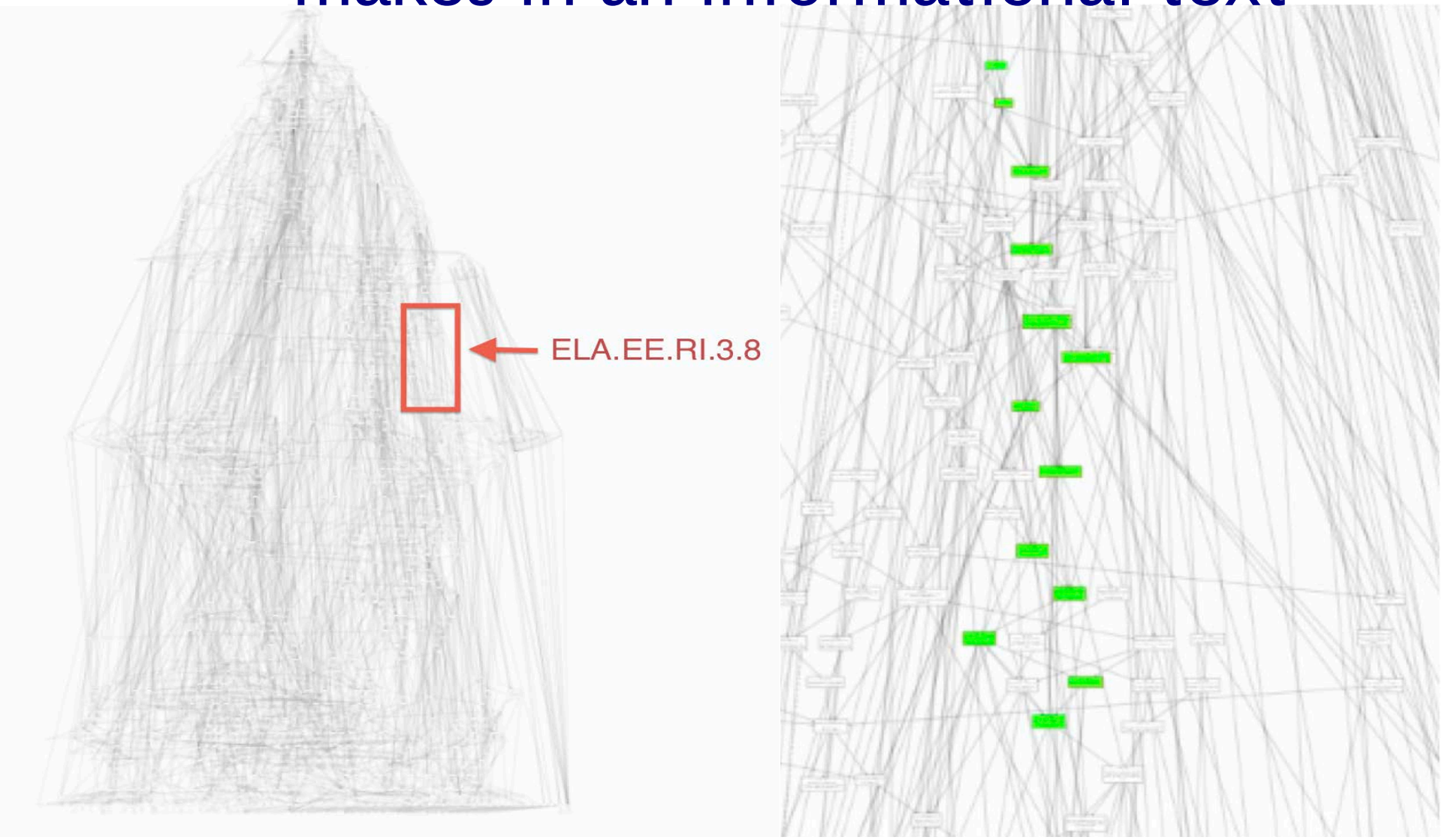
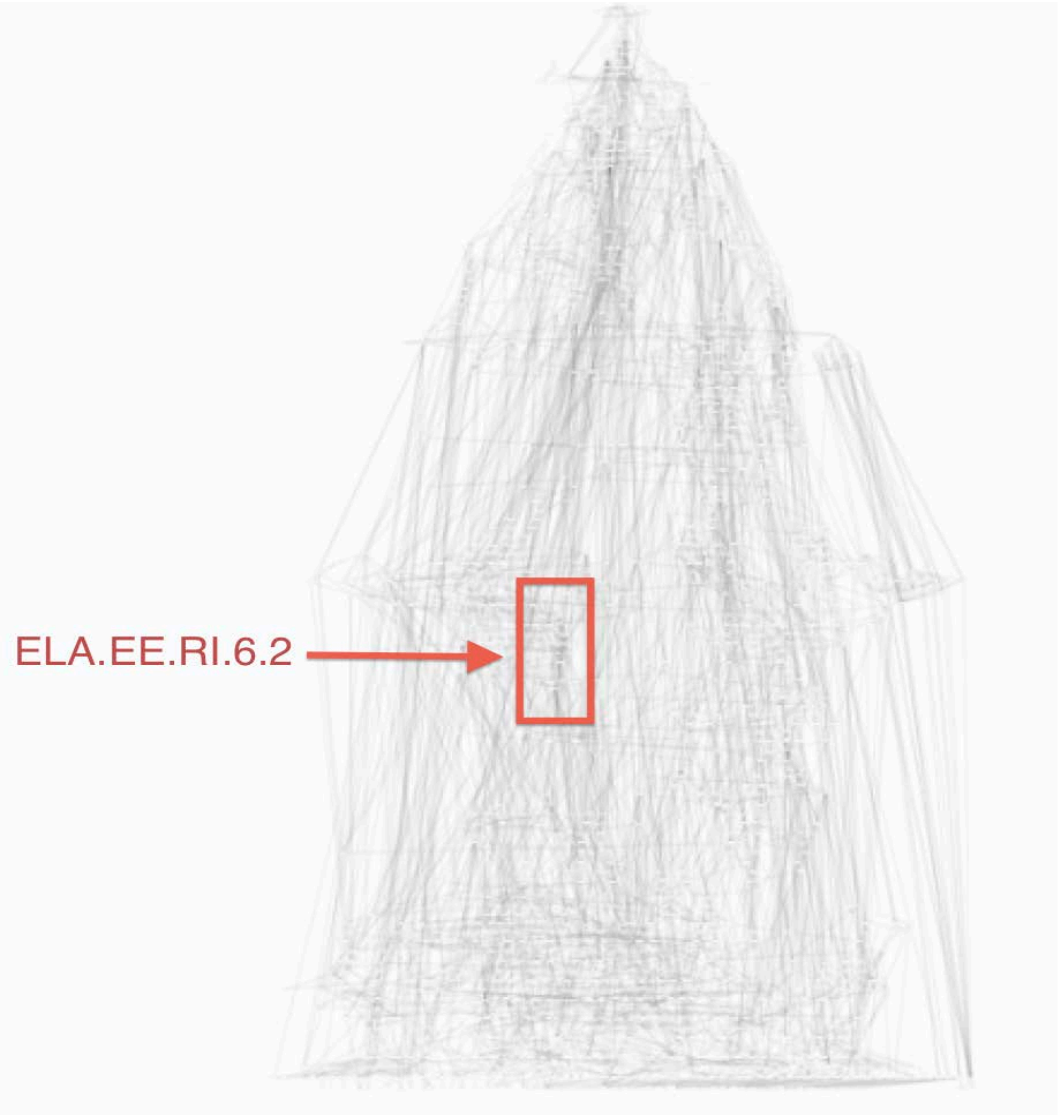
DYNAMIC LEARNING MAPS

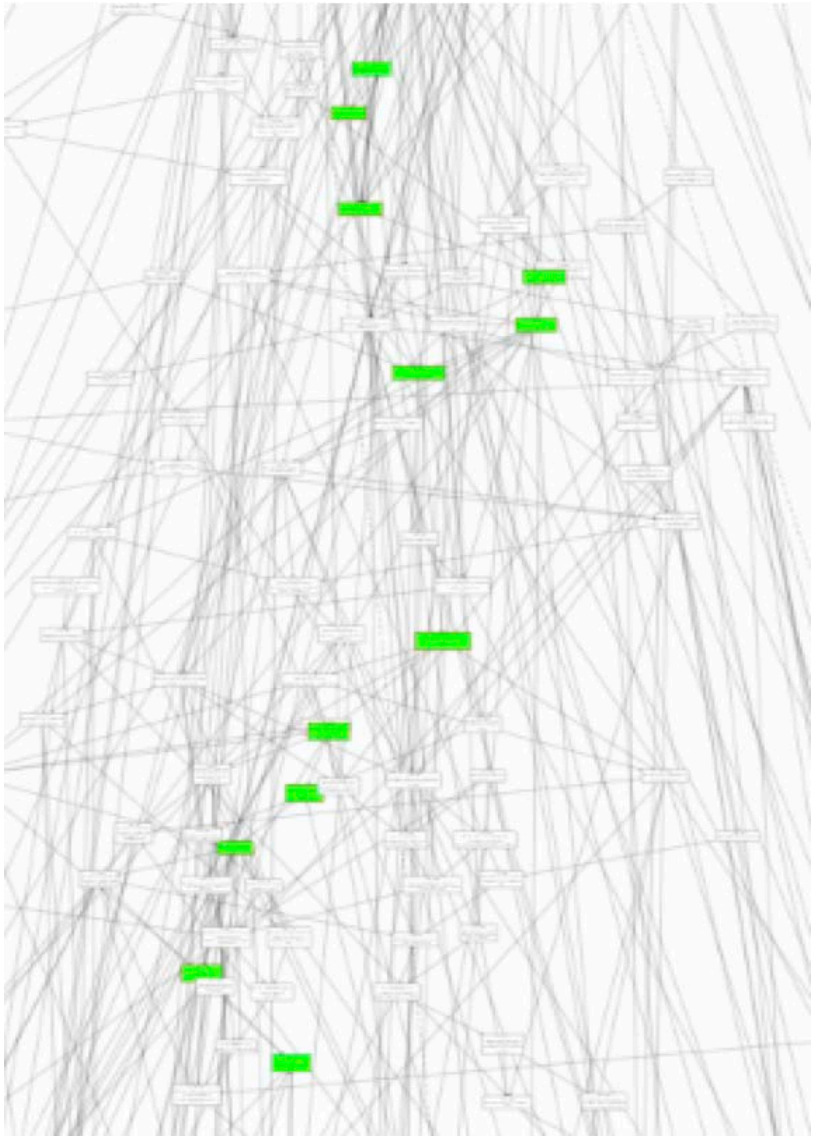
# HOW DO ESSENTIAL ELEMENTS RELATE TO THE MAP?

# Identify two related points the author makes in an informational text

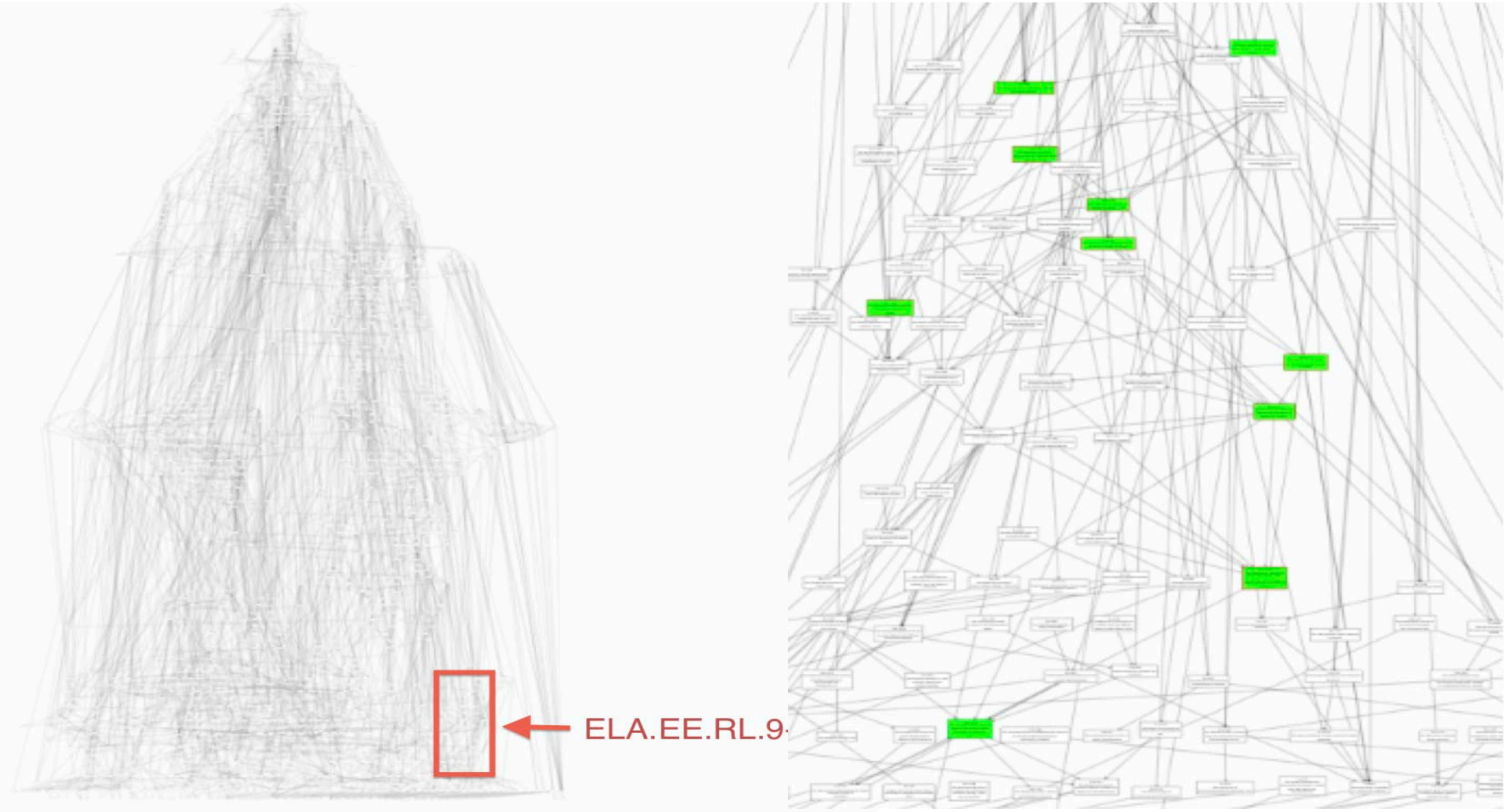


# Determine the main idea of a passage and details or facts related to it

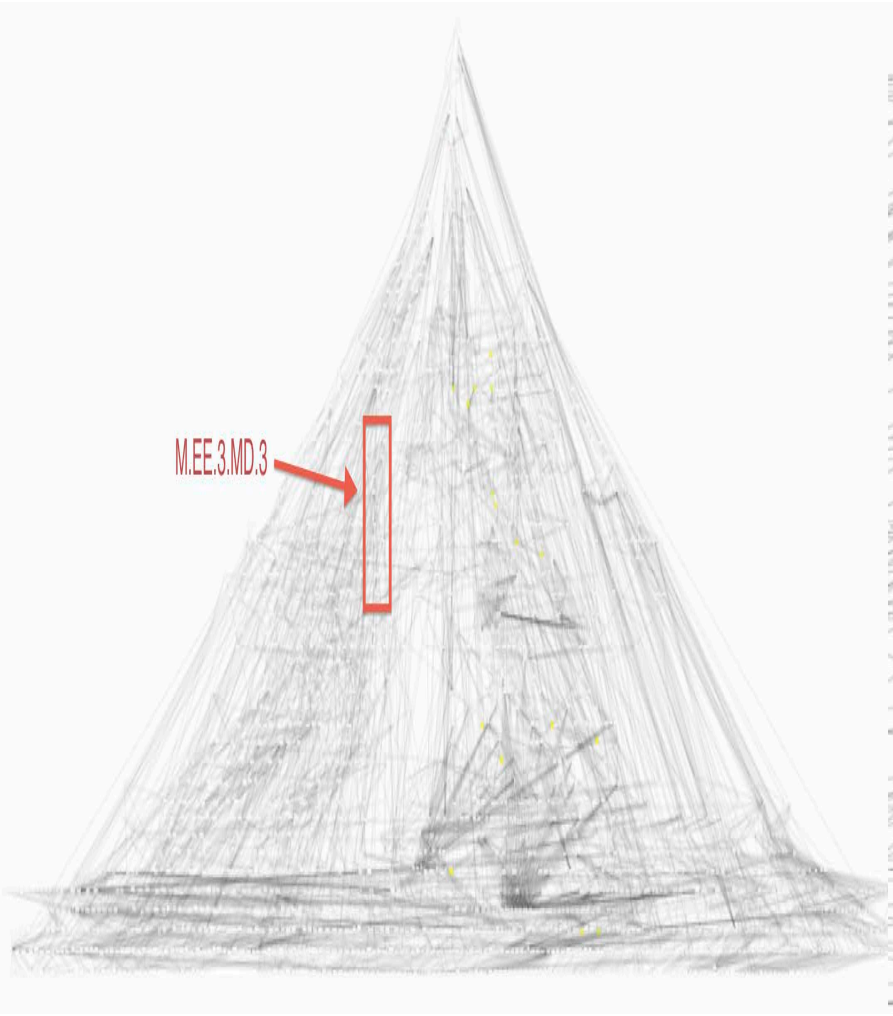


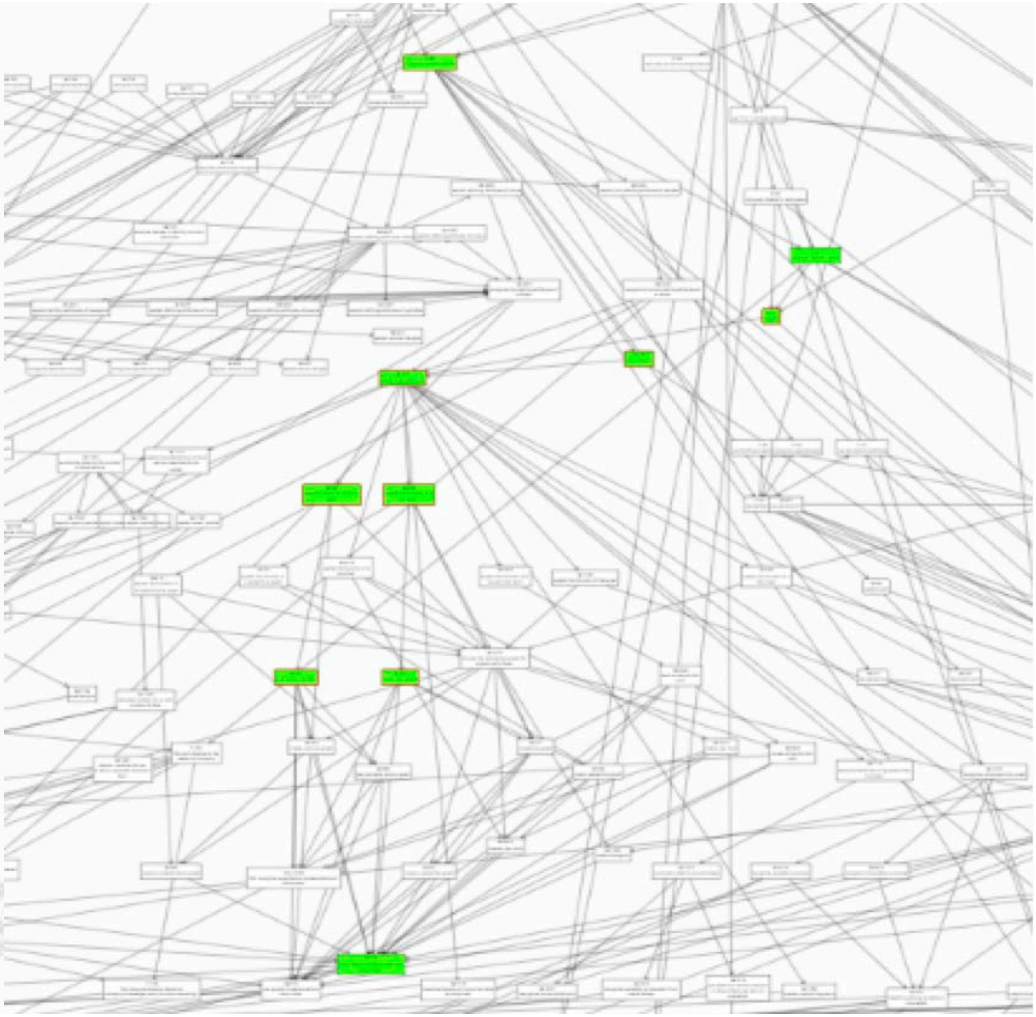



Determine the meaning of words and phrases as they are used in a text, including idioms, analogies, and figures of speech

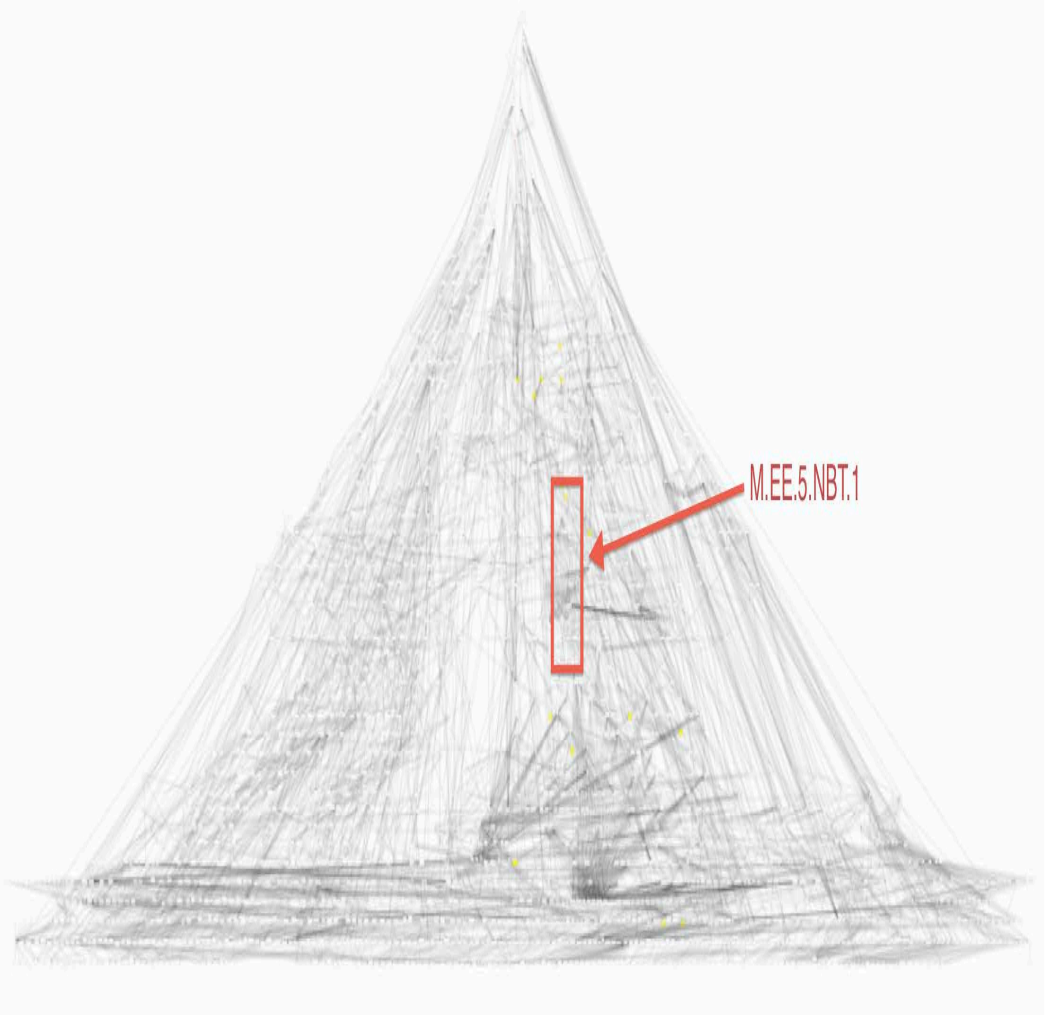


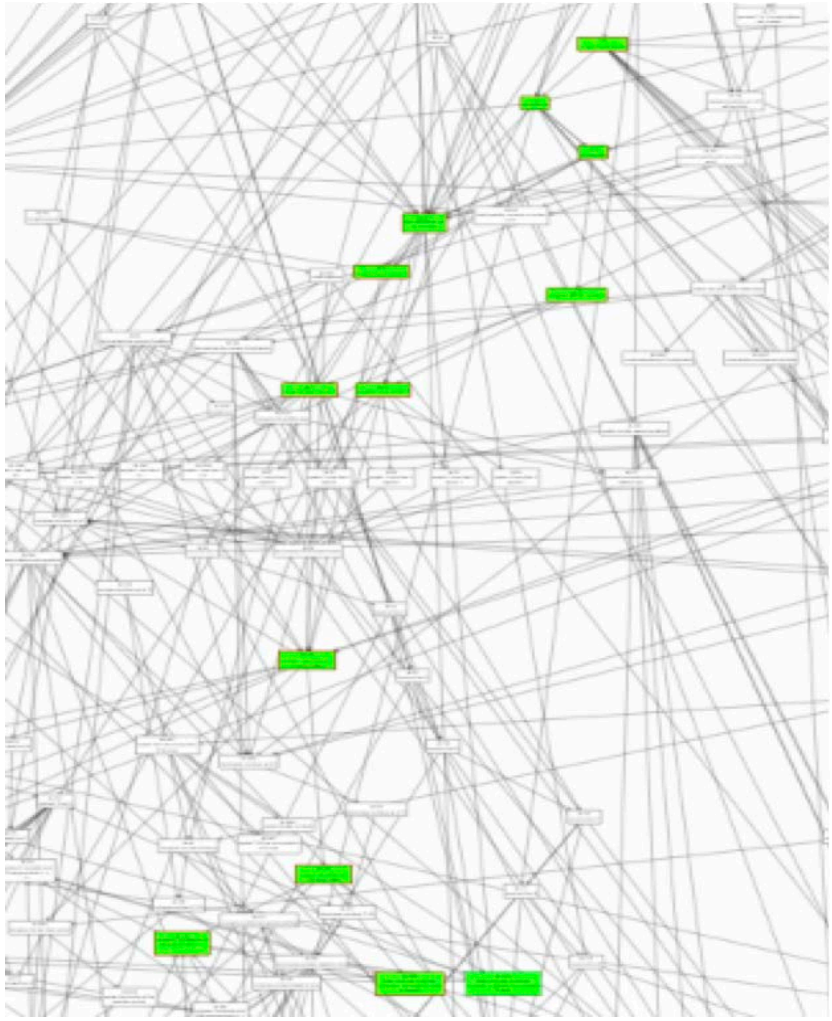
# Use picture or bar graph data to answer questions about data



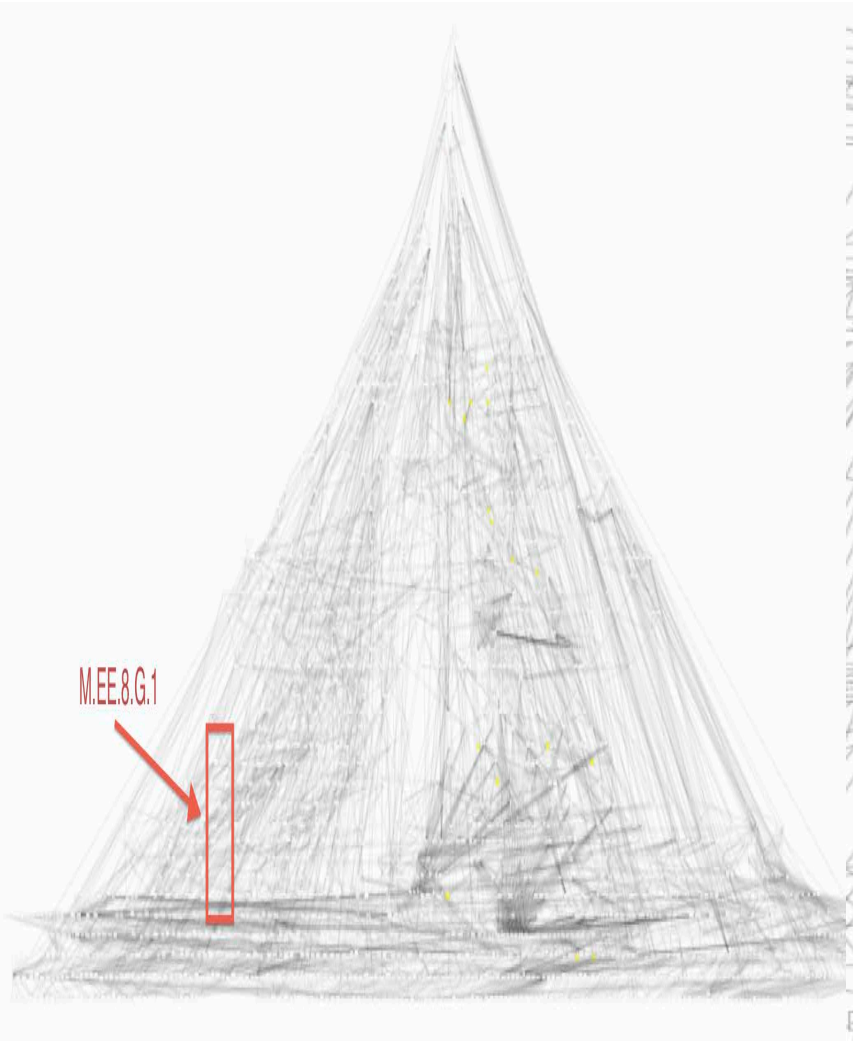



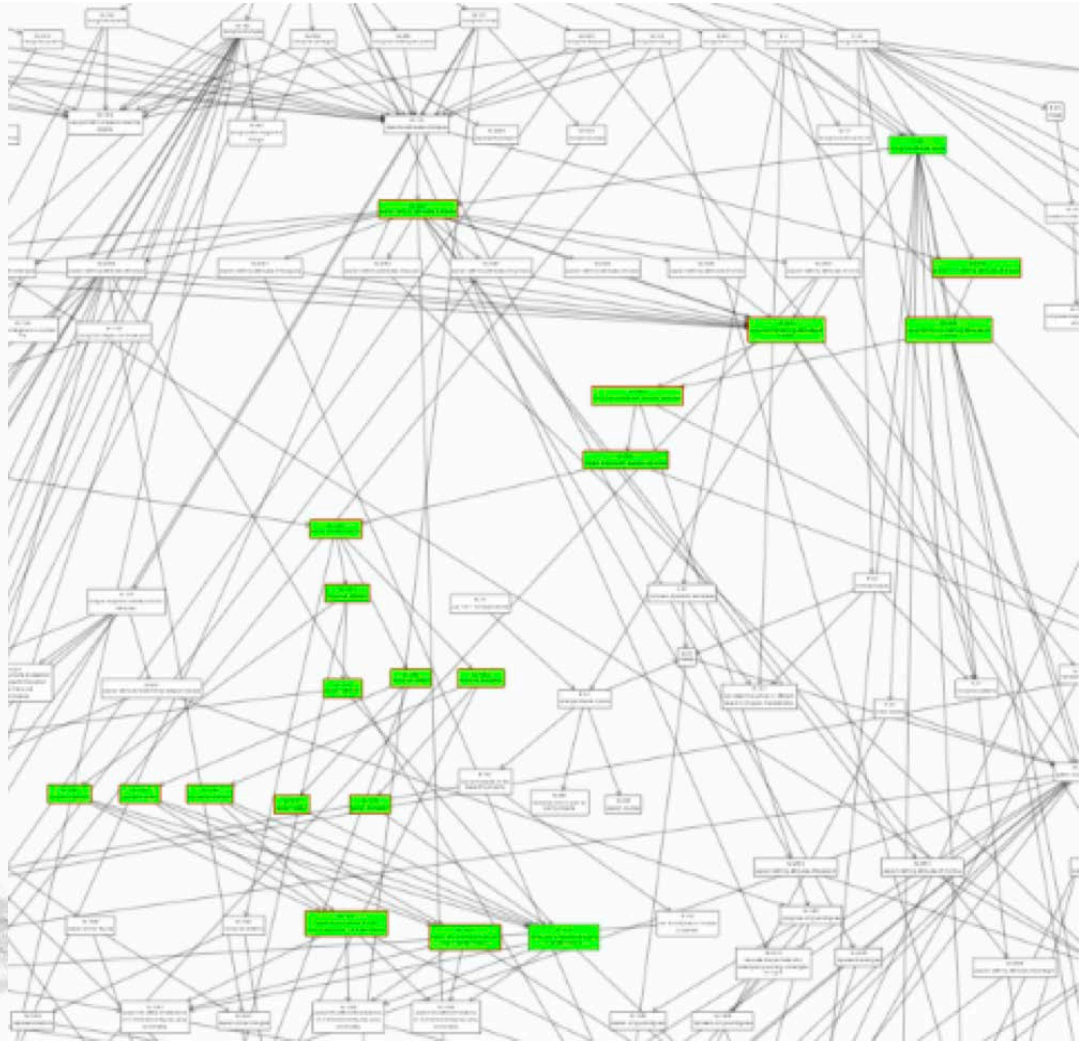
# Compare numbers up to 99 using base ten models



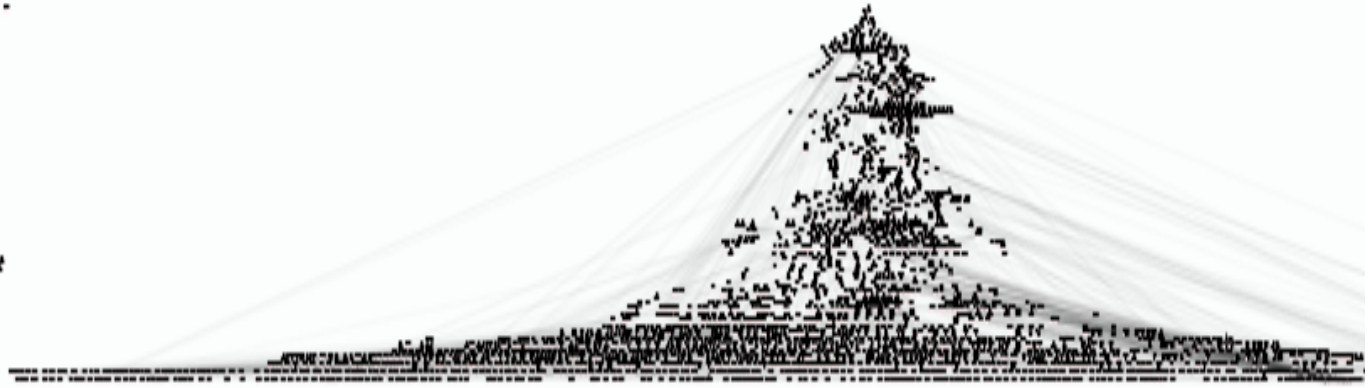



# Recognize translations, rotations, and reflections of shapes



# Quick Facts about the Map



- ELA
  - 139 foundational nodes
  - 1,300 ELA nodes
  - 2,850 edges
- Mathematics
  - 139 foundational nodes
  - 2,312 mathematics nodes
  - 4,788 edges

# DLM ASSESSMENTS

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DYNAMIC LEARNING MAPS

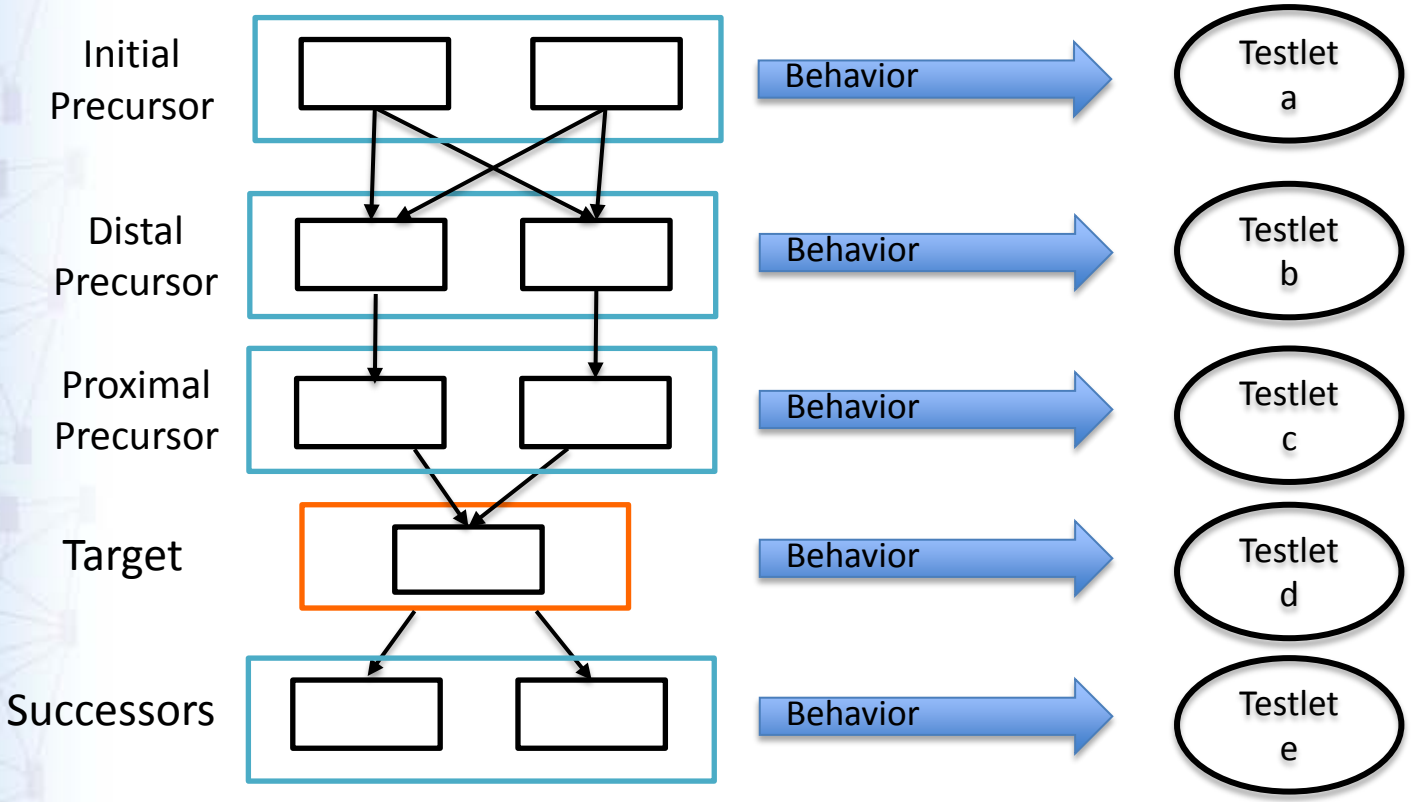
# Assessment Design

- Instructionally embedded and instructionally relevant
- Testlets
  - ELA and math
- 3 – 5 levels per EE
- Delivery method and item types

# Testlet Sets

Connect the map…

…to the items developed.

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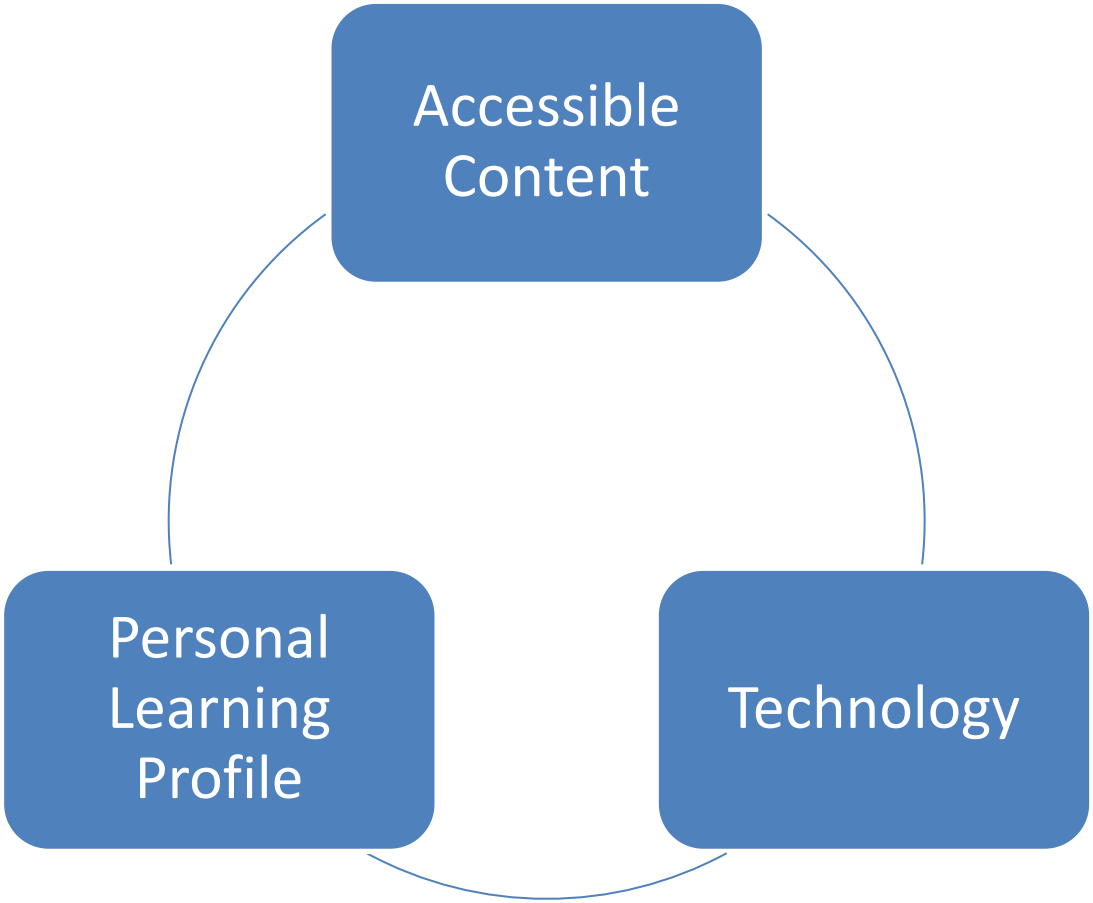
DYNAMIC LEARNING MAPS

# Accessibility



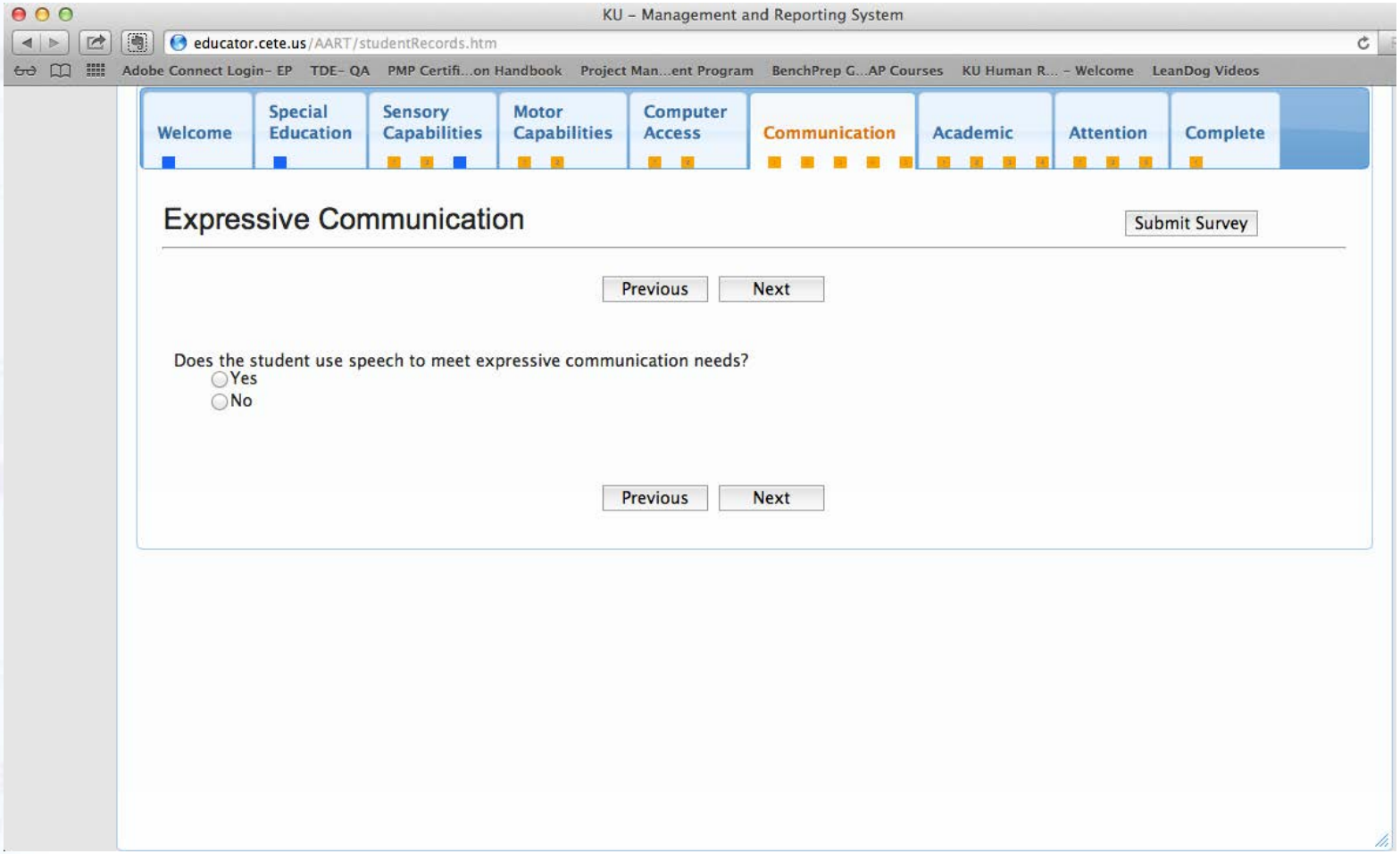
# Personal Learning Profile

**Personal Needs and Preferences (PNP)**

- Display
- Language & Braille
- Audio & Environment

**First Contact**

- Communication
- Academics
- Sensory characteristics
- Motor characteristics
- Computer access

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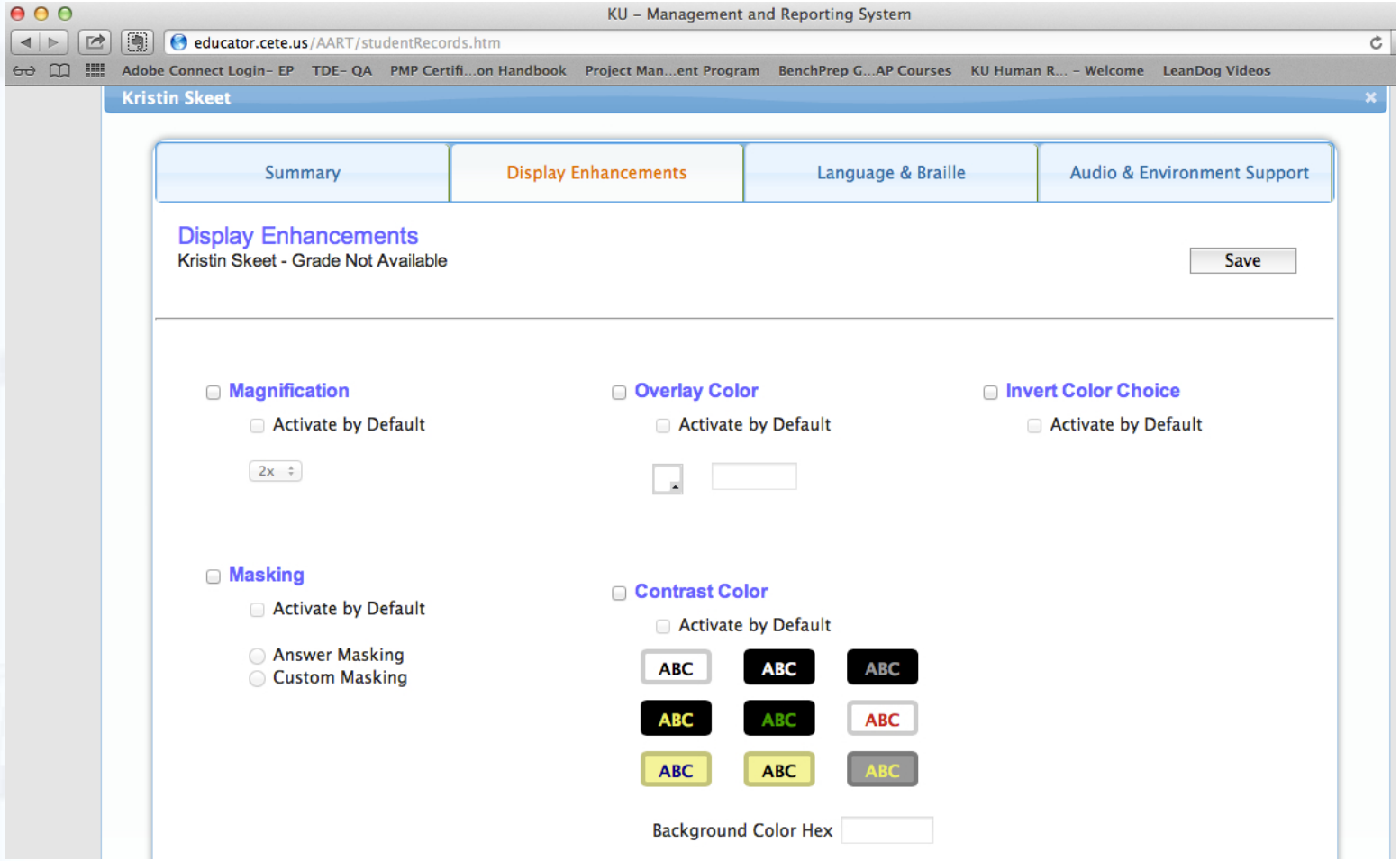
DYNAMIC LEARNING MAPS

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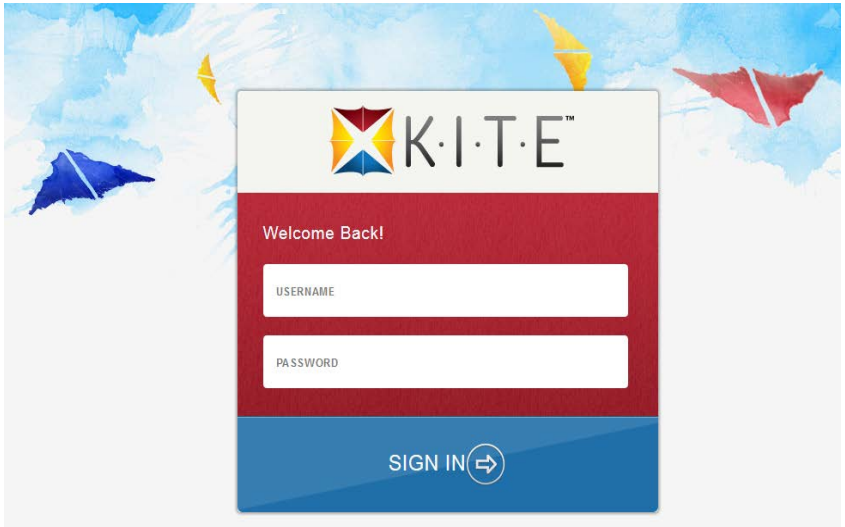
DYNAMIC LEARNING MAPS

# Accessible Content

- Testlet levels
- Vocabulary
- Multiple and alternate pathways
- Items tagged
- Item writing guidelines
  - Prior knowledge

# Technology




- Special user interface
- Dynamic routing

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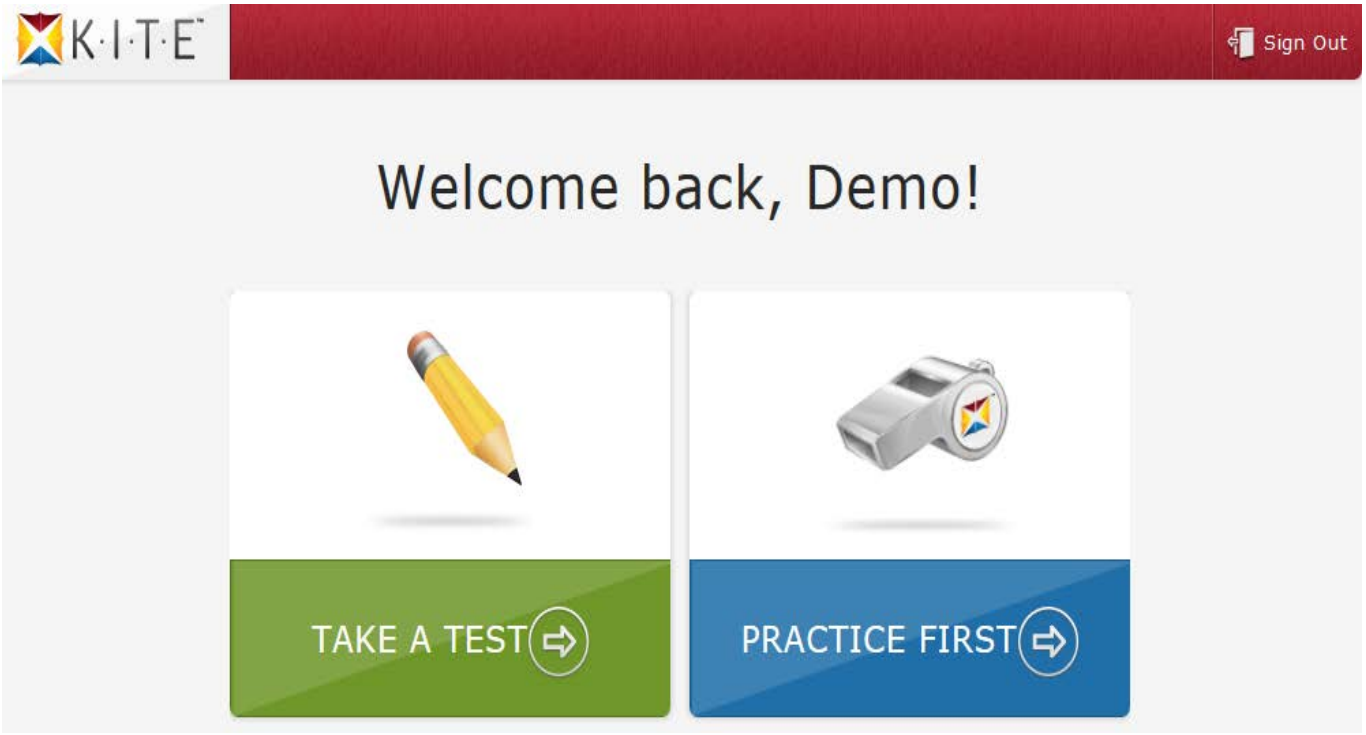
DYNAMIC LEARNING MAPS




## Sample DLM Tests

# Grade 4 Initial Level Testlet

Gather any objects you have used while reading *Omakayas the Helper.* Include a ball as one of the objects.

Read the story with the student. Maximize your interaction with the student. Point to objects in pictures while you read. Lead with comments, such as "Look at the baby," while pointing to the picture. After you read the story, you will read the story a second time and answer some questions.

BACK NEXT

*This screen displays differently in KITE

Omakayas the Helper
DLM

BACK

NEXT

Omakayas was a girl.

BACK

NEXT

Omakayas was a Native American.

BACK

NEXT

Omakayas had a baby brother named Neewo.

BACK

NEXT

Omakayas helped her mom.

BACK

NEXT

Omakayas helped Mom sew.

BACK

NEXT

Omakayas sewed buttons on shirts.

BACK

NEXT

Omakayas sewed to fix holes in socks.

BACK

NEXT

Omakayas sewed to fix holes in pants.

BACK

NEXT

Omakayas helped Mom by playing with Baby Neewo.

BACK

NEXT

Omakayas made toys to play with Baby Neewo.

BACK

NEXT

Omakayas made balls to play with Baby Neewo.

BACK

NEXT

Omakayas made dolls to play with Baby Neewo.

BACK

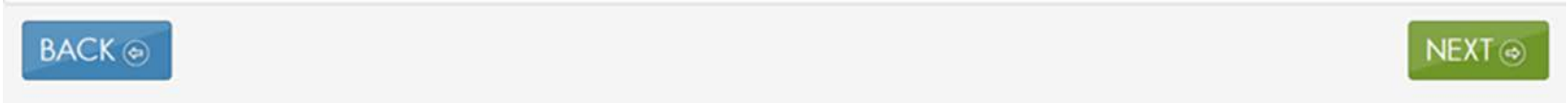
NEXT

Omakayas was a good helper.

BACK

NEXT

This is the end of the story. Now, read the story again and answer some questions. Because this testlet addresses foundational skills, the questions focus on the student's ability to demonstrate understanding of object names.




*This screen displays differently in KITE

Omakayas the Helper
DLM

BACK

NEXT

Omakayas was a girl.

BACK

NEXT

Omakayas was a Native American.

BACK

NEXT

Omakayas had a baby brother named Neewo.

BACK

NEXT

Omakayas helped her mom.

BACK

NEXT

Omakayas helped Mom sew.

BACK

NEXT

Omakayas sewed buttons on shirts.

BACK

NEXT

Educator Directions:

SAY: "**Show me buttons.**"

Record student response:

- ❑ Indicates buttons
- ❑ Indicates an object other than buttons
- ❑ Indicates multiple objects
- ❑ Attends to other stimuli
- ❑ No response

BACK NEXT

*This screen displays differently in KITE

Omakayas sewed to fix holes in socks.

BACK

NEXT

Educator Directions:

SAY: **"Show me socks."**

Record student response:

- ❑ Indicates socks
- ❑ Indicates an object other than socks
- ❑ Indicates multiple objects
- ❑ Attends to other stimuli
- ❑ No response

BACK NEXT

*This screen displays differently in KITE

Omakayas sewed to fix holes in pants.

BACK

NEXT

Omakayas helped Mom by playing with Baby Neewo.

BACK

NEXT

Omakayas made toys to play with Baby Neewo.

BACK

NEXT

Omakayas made balls to play with Baby Neewo.

BACK

NEXT

Educator Directions:

Present the student with the three objects, one of which is a ball.

SAY: "**Show me the ball.**"

Record student response:

- ❑ Indicates the ball from the collection of three objects
- ❑ Indicates the wrong object from the collection of three objects
- ❑ Indicates multiple objects
- ❑ Attends to other stimuli
- ❑ No response

BACK NEXT

*This screen displays differently in KITE

Omakayas made dolls to play with Baby Neewo.

BACK

NEXT

Omakayas was a good helper.

BACK

NEXT

**Review: ELA Grade 4 Released**

Answered Not answered
Answered and Marked for Review
Not Answered and Marked for Review

Before you click the End button:

1. If you need more time to finish this part of the test, talk to your teacher or the person giving the test now. Do not click the End button if you need more time.
2. Review the Summary. Check each question.
3. If the Summary has an ☐ or ⚑ you are not ready to end the assessment. Questions with ☐ are not answered. Questions with ⚑ might need more thought. To return to an unanswered question or a question marked for review, use the mouse to click the question's number in the Summary Table.
4. If you have more time available and would like to continue reviewing your work, click on the Go Back button.
5. Click the End button when you are ready to end the test. Remember you cannot return to this part of the assessment.

## Review Your Answers

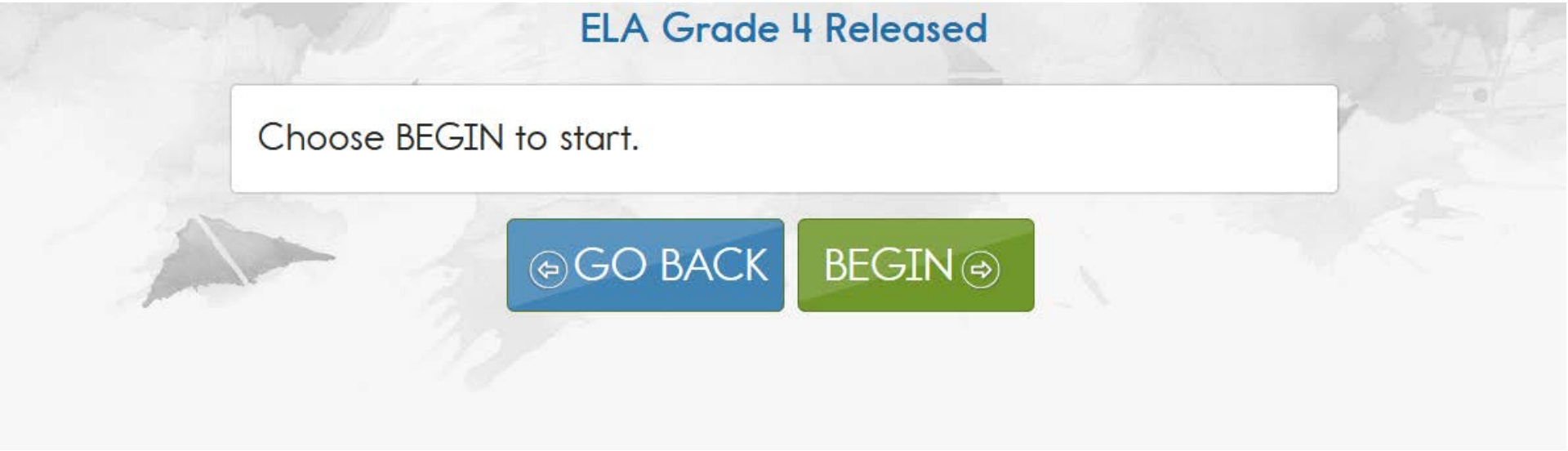
| 1 | 2 | 3 |
|---|---|---|
| ☐ | ☐ | ☐ |

**1. If you have more time available and would like to continue reviewing your work, click on the 'Go Back' button.**

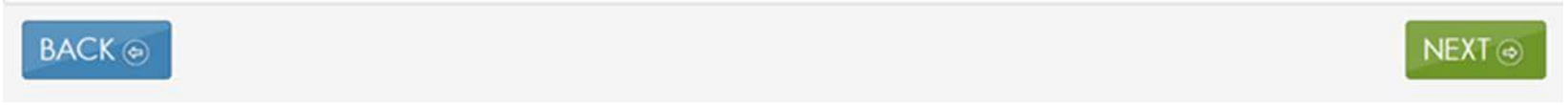
**2. Click the 'End' button when you are ready to end the test. Remember you cannot return to this part of the assessment.**

GO BACK END

# Grade 4 Target Level Testlet



Read the story *Baby Neewo*. Think about the people in the story and what they are like while you read. After you read the story, you will read the story again and answer some questions.




*This screen displays differently in KITE

This is the end of the story. Now, read the story again and answer some questions.

BACK

NEXT

Baby Neewo
DLM

BACK

NEXT

Omakayas was a girl.

BACK

NEXT

Omakayas loved Mom and Dad.  Omakayas loved Baby Neewo.

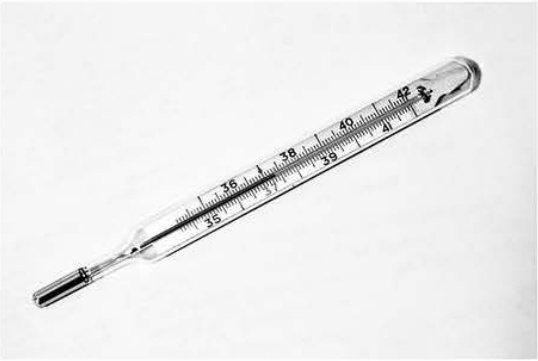
BACK

NEXT

A stranger came to visit Omakayas. The stranger was sick.

BACK

NEXT




Soon Mom and Dad were sick.

BACK

NEXT

Baby Neewo also got sick.

BACK

NEXT

Omakayas did not get sick.

BACK

NEXT


Omakayas gave Mom and Dad medicine. Omakayas gave Baby Neewo medicine.

BACK

NEXT

Omakayas gave Mom and Dad a blanket. Omakayas gave Baby Neewo a blanket.

BACK

NEXT

Omakayas gave Mom and Dad food. Omakayas gave Baby Neewo food.

BACK

NEXT

Mom and Dad got better.

BACK

NEXT

Baby Neewo did not get better.

BACK

NEXT

Baby Neewo died. Omakayas was sad.

BACK

NEXT

Omakayas always thought about Baby Neewo. Omakayas missed Baby Neewo.

BACK

NEXT

Which word tells about the stranger?

happy

sick

healthy

BACK

NEXT

Which word tells about the stranger, Mom and Dad, and Baby Neewo?

healthy

sick

mad

BACK

NEXT

How did Omakayas feel when Baby Neewo died?

hopeful

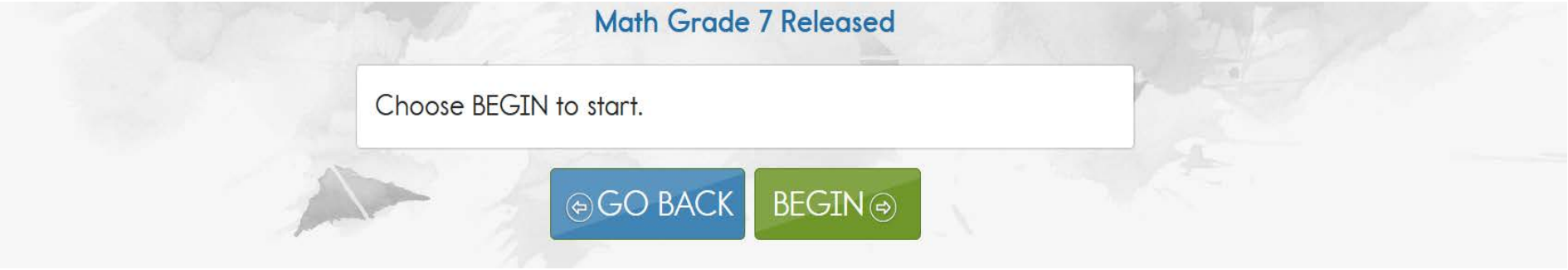
sick

sad

BACK

NEXT

# Grade 7
# Initial Precursor Level Testlet



Educator Directions:

In this testlet you will present the student with objects that are separate and objects that are in sets. It is important that separate objects are clearly separated, and objects in sets are clearly in a group (e.g., stacked, connected, touching, etc.).

Gather 8 rulers and 10 large binder clips. You may substitute other objects if required.

For the first two items, you will use the rulers. For the second two items, you will use the binder clips.

Educator Directions:

Present the 8 rulers to the student in a way that captures the student's attention. For example:

- Draw the student's attention to the presence of the rulers.
- Show the student how rulers are used.

Once the student has attended to the rulers, bundle 4 markers together with a rubber band or string and leave 4 rulers separated. Indicate to the student that the bundled rulers are in a group and the other markers are separate.

On the next screens, you will ask the student some questions about the rulers.

Educator Directions:

SHOW: the bundled rulers
SAY: **“Here some rulers.”**

SHOW: the separate rulers
SAY: **“Here are some more rulers.”**

SHOW: the bundled rulers and the separate rulers
SAY: “**Show me the separate rulers.”**

Record student response:

- ❑ Student indicates the separate rulers.
- ❑ Student indicates the group of bundled rulers.
- ❑ Student indicates one ruler or all of the rulers.
- ❑ Student attends to other stimuli.
- ❑ No response

Educator Directions:

SHOW: the bundled rulers
SAY: **“Here are some rulers.”**

SHOW: the separate rulers
SAY: **“Here are some more rulers.”**

SHOW: the bundled rulers and the separate rulers
SAY: “**Show me the group of rulers.”**

Record student response:

- ❑ Student indicates the group of bundled rulers.
- ❑ Student indicates the separate rulers.
- ❑ Student indicates one ruler or all of the rulers.
- ❑ Student attends to other stimuli.
- ❑ No response

Educator Directions:

Present the 10 large binder clips to the student in a way that captures the student's attention. For example:

- Draw the student's attention to the presence of the clips.
- Show the student how rulers are used.

Once the student has attended to the clips, group 7 clips together and leave 3 clips separated. Indicate to the student that the grouped clips are in a group and the other clips are separate.

On the next screens, you will ask the student some questions about the clips.

Educator Directions:

SHOW: the grouped clips
SAY: **“Here are some clips.”**

SHOW: the separate clips
SAY: **“Here are some more clips.”**

SHOW: the grouped clips and the separate clips
SAY: “**Show me the group of clips.”**

BACK

NEXT

Record student response:

- ❑ Student indicates the group of clips.
- ❑ Student indicates the separate clips.
- ❑ Student indicates one clip or all of the clips.
- ❑ Student attends to other stimuli.
- ❑ No response

Educator Directions:

SHOW: the grouped clips
SAY: **“Here are some clips.”**

SHOW: the separate clips
SAY: **“Here are some more clips.”**

SHOW: the grouped clips and the separate clips
SAY: “**Show me the separate clips.”**

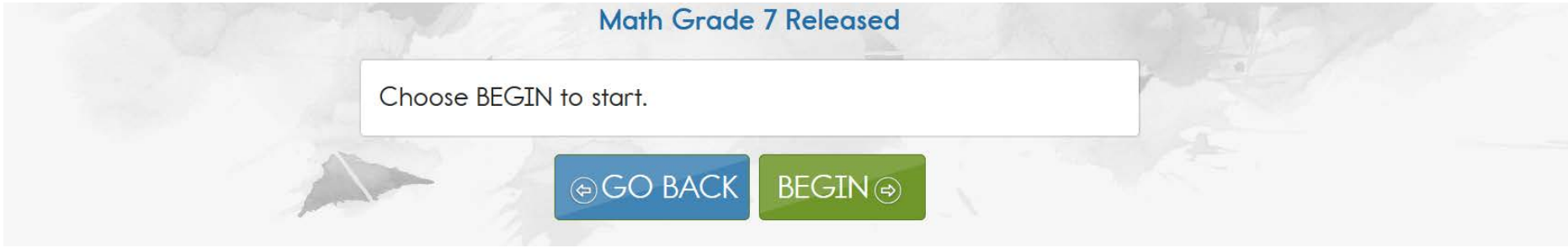
BACK

NEXT

Record student response:

- ❑ Student indicates the separate clips.
- ❑ Student indicates the group of clips.
- ❑ Student indicates one clip or all of the clips.
- ❑ Student attends to other stimuli.
- ❑ No response

# Grade 7
# Target Level Testlet



Jen has 2 cats. Tom has 2 cats. They have 4 cats altogether.

BACK

NEXT

There are 3 cats with 1 cat toy each. How many cat toys are there altogether?

2

3

4

BACK

NEXT

4 cats each have 2 balls of yarn. How many balls of yarn are there altogether?

6

8

12

BACK

NEXT

6 cats each have 7 treats. How many treats are there altogether?

13

36

42

BACK

NEXT

9 cats each have 5 kittens. How many kittens are there altogether?

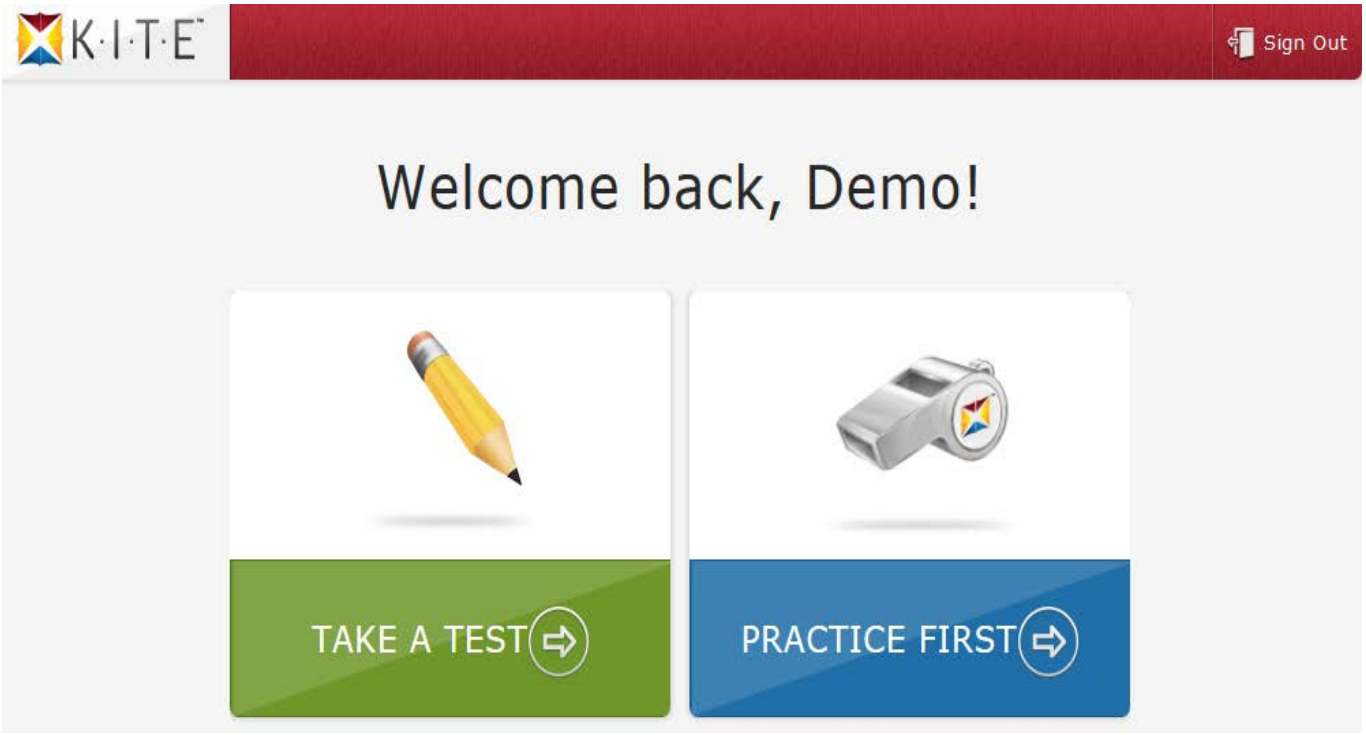
30

33

45

BACK

NEXT




## More Samples

# Educator Portal

- Professional development
- Student rosters & information
- Instructional support interface
- Reports

IDEAs that Work
U.S. Office of Special Education Programs

DYNAMIC LEARNING MAPS

# Field Test Overview

- Students will be administered 3 testlets (approximately 12-15 items) per content area during each field test
- System will still allow for exiting and returning to the assessment
- All will include teacher survey for feedback on features
- Also developing & testing technology

# Field Test 1

- January 15th - January 31st
- 2 EEs assessed per grade and content area
  - All students assessed on both EEs
- Focus: Initialization into the map using data from the pilot

# Field Test 2

- March 17th - April 11th
- 5-10 EEs assessed per grade and content area
  - Each student assessed on 2 EEs per content area
- Focus: First version of adaptivity for teachers
  - Teachers able to select testlets

# Field Test 3

- May 1* - End of academic year
- 5-10 EEs assessed per grade and content area
  - Each student assessed on 2 EEs per content area
- Focus: Usage reporting and recommendation functions for teachers

# Educator Resources for Field Tests

**Background**

- Security agreement
- Video explaining the testing event
- Video overview of the DLM system
- Glossary
- Nodes and mini-maps for the assessed EEs
- Fact sheet
- How-to guides for PNP and First Contact

**The Assessment**

- User guide/administration manual
- Practice activities (students learn the interface)
- Released testlets
- Demonstration videos

IDEAs that Work
U.S. Office of Special Education Programs

DYNAMIC LEARNING MAPS

# To Learn More

Go to: www.dynamiclearningmaps.org

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