



Mapping What Works

Thinking Maps Alignment to What Works Clearinghouse Evidence-based Practice Guides

How do we know what works in the classroom? By looking at the evidence. Thinking Maps is aligned with evidence-based practices reviewed by [What Works Clearinghouse \(WWC\)](#) and included in their [Evidence-based Practice Guides](#).

The Every Student Succeeds Act (ESSA) promotes the use of federal education dollars on programs with evidence of effectiveness. Building this evidence starts with demonstrating alignment to practices that have been proven to work in the classroom. WWC's practice guides provide specific recommendations based on reviews of available research, experiences of practitioners, and the expert opinions of a panel of nationally recognized experts. These guides, each of which focuses on a specific topic or content area, outline the strategies and practices that have the strongest evidence of effectiveness in the classroom.

Thinking Maps is aligned to many of the recommendations in the WWC practice guides, in particular those practice books focused on reading, writing, intervention, English Language Learners, and general academic achievement.

THINKING MAPS ALIGNMENT TO WWC PRACTICE GUIDES: OVERVIEW

WWC Practice Guide	Recommendations that Thinking Maps® Supports
Critical Thinking and Academic Readiness	
Organizing Instruction and Study to Improve Student Learning	<ul style="list-style-type: none"> #3: Combine graphics with verbal descriptions. #4: Connect and integrate abstract and concrete representations of content.
Reading	
Improving Reading Comprehension in Kindergarten Through Third Grade	<ul style="list-style-type: none"> #1: Teach students how to use comprehension strategies. #2: Teach students to identify and use the text’s organizational structure to comprehend, learn, and remember text. #3: Guide students through focused, high-quality discussion on the meaning of text.
Foundational Skills to Support Reading for Understanding in Kindergarten Through Third Grade	<ul style="list-style-type: none"> #1: Teach students academic language skills, including the use of inferential and narrative language and vocabulary knowledge. #3: Teach students to decode words, analyze word parts, and write and recognize words.
Improving Academic Literacy: Effective Classroom and Intervention Practices	<ul style="list-style-type: none"> #1: Provide explicit vocabulary instruction. #2: Provide direct and explicit comprehension strategy instruction. #3: Provide opportunities for extended discussion of text meaning and interpretation. #4: Increase student motivation and engagement in literacy learning.
Writing	
Teaching Elementary Students to Be Effective Writers	<ul style="list-style-type: none"> #2: Teach students to use the writing process for a variety of purposes. #4: Create an engaged community of writers.
Teaching Secondary Students to Write Effectively	<ul style="list-style-type: none"> #1: Explicitly teach appropriate writing strategies using a Model-Practice-Reflect instructional cycle. #2: Integrate writing and reading to emphasize key text features.
Math	
Teaching Math to Young Children	<ul style="list-style-type: none"> #1: Teaching numbers and operations using a developmental progression. #2: Teach geometry, patterns, measurement and data analysis using a developmental progression. #4: Teach children to view and describe their world mathematically.
Improving Mathematical Problem Solving in Grades 4-8	<ul style="list-style-type: none"> #1: Prepare problems and use them in whole-class instruction. #2: Assist students in monitoring and reflecting on the problem-solving process. #3: Teach students how to use visual representations. #4: Expose students to multiple problem-solving strategies. #5: Help students recognize and articulate mathematical concepts and notation.

WWC Practice Guide	Recommendations that Thinking Maps® Supports
Math (Continued)	
Strategies for Improving Algebra Knowledge in Middle and High School Students	<p>#1: Use solved problems to engage students in analyzing algebraic reasoning and strategies.</p> <p>#2: Teach students to utilize the structure of algebraic representations.</p> <p>#3: Teach students to intentionally choose from alternative algebraic strategies when solving problems.</p>
Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools	<p>#3: Instruction during intervention should be explicit and systematic.</p> <p>#4: Interventions should include instruction on solving word problems that is based on common underlying structures.</p> <p>#5: Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas.</p>
English Language Learners	
Teaching Academic Content and Literacy to English Learners in Elementary and Middle School	<p>#1: Teach a set of academic vocabulary words intensively across several days using a variety of instructional activities.</p> <p>#2: Integrate oral and written English language instruction into content-area teaching.</p> <p>#3: Provide regular, structured opportunities to develop written language skills.</p>
Effective Literacy and English Language Development for English Learners in the Elementary Grades	<p>#3: Provide extensive and varied vocabulary instruction.</p> <p>#4: Develop academic English.</p> <p>#5: Schedule regular peer-assisted learning opportunities.</p>

CRITICAL THINKING AND ACADEMIC READINESS

Thinking Maps helps students develop the foundational skills they need for effective learning. The Maps are used across all grade levels and content areas to support development of portable, student-owned learning strategies.

Practice Guide: Organizing Instruction and Study to Improve Student Learning

Recommendation #3: Combine graphics with verbal descriptions.

Visuals help students understand and analyze complex ideas. Combining words and images (dual coding) optimizes learning and improves comprehension, retention, and recall. Thinking Maps engages the visual processing centers of the brain with concrete visual representations of cognitive processes such as Defining, Describing, Comparing and Contrasting, Classifying, Sequencing, Cause and Effect, Identifying Part/Whole Relationships, and Seeing Analogies. Students combine both words and visual representations as they create Maps that put content into graphical form. The Maps are a “visual language for learning” that improves learning outcomes across all grade levels and content areas.

Recommendation #4: Connect and integrate abstract and concrete representations of concepts.

Thinking Maps makes thinking visible for students. The Maps are designed to make cognitive processes—including Defining, Describing, Comparing and Contrasting, Classifying, Sequencing, Cause and Effect, Identifying Part/Whole Relationships, and Seeing Analogies—concrete for students. Each Map is a concrete representation of a thinking process.

READING

Reading is a foundational skill for learning across all content areas. Thinking Maps supports reading comprehension, vocabulary development, and other important literacy skills.

Practice Guide: Improving Reading Comprehension in Kindergarten Through Third Grade

Recommendation #1: Teach students how to use reading comprehension strategies.

Comprehension strategies such as activating prior knowledge, visualization, monitoring understanding, and retelling or summarizing help students make sense of complex text and improve understanding and recall. Thinking Maps provides a structure for applying comprehension strategies while students read. For example, students may use a Map to pull details out of the text and organize them in ways that improve comprehension. Students can also use Maps to retell or summarize the big ideas from a piece of text. Teachers can use Maps in whole-class discussions to activate prior knowledge collaboratively prior to reading.

Recommendation #2: Teach students to identify and use the text’s organizational structure to comprehend, learn, and remember content.

Thinking Maps helps students understand and analyze text structure. Each of the eight Maps is aligned to a particular cognitive process, including Defining, Describing, Comparing and Contrasting, Classifying, Sequencing, Cause and Effect, Identifying Part/Whole Relationships, and Seeing Analogies. The different Maps are aligned with text structures such as Explanatory, Literary Non-Fiction, Procedural, or Argumentative/Persuasive. Students learn to recognize the different text structures and select the appropriate Map to analyze the text. The Maps provide a structure for taking notes and organizing their ideas as they read.

Recommendation #3: Guide students through focused, high-quality discussions on the meaning of text.

Thinking Maps is ideal for group discussion and collaborative learning. Students learn how to “talk off the Map,” organizing their ideas individually or in small groups into a Map form and then using the Map to communicate their ideas to peers. Thinking Maps supports critical thinking and deep comprehension, preparing students to develop, communicate, and defend their ideas about the texts they are reading.

Practice Guide: Foundational Skills to Support Reading for Understanding in Kindergarten Through 3rd Grade

Recommendation #1: Teach students academic language skills, including the use of inferential and narrative language, and vocabulary knowledge.

Thinking Maps builds a foundation for academic language development. The Maps are aligned with core cognitive skills, including Defining, Describing, Comparing and Contrasting, Classifying, Sequencing, Cause and Effect, Part/Whole Relationships, and Analogies. Students learn to listen for key vocabulary and questions that are associated with each cognitive process. As they gain proficiency with the Maps, they also gain proficiency with the academic vocabulary associated with each Map type. This creates a universal “language for learning” that crosses all content areas. Maps can also be used for general vocabulary development by defining words, comparing and contrasting related terms, classifying vocabulary words, or creating analogies that improve understanding. The *Maps as Vocabulary Word Games* module in the Thinking Maps Learning Community (TMLC) introduces game-based activities that leverage the Maps for vocabulary development.

Recommendation #3: Teach students to decode words, analyze word parts, and write and recognize words.

Thinking Maps can be used to analyze words and word parts and build word recognition skills. Young students can combine pictures and words on their Maps as they learn to recognize and define new words. The Brace Map, which is used to analyze Part/Whole Relationships, helps students understand the parts of words (such as beginning and ending sounds or prefix/root/suffix relationships). A Tree Map may be used to list and classify words in various ways (for example, words with the same beginning sound, rhyming words, or parts of speech). Using the Maps combines linguistic and visual thinking to build proficiency with word recognition and vocabulary development.

Practice Guide: Improving Adolescent Literacy—Effective Classroom and Intervention Practices

Recommendation #1: Provide explicit vocabulary instruction.

Thinking Maps can be used in a variety of ways to support vocabulary development. Students can use Maps to define, compare, and classify words and to analyze word parts (such as prefix/root/suffix relationships). The *Maps as Vocabulary Word Games* module in the Thinking Maps Learning Community (TMLC) introduces game-based activities that leverage the Maps for vocabulary development.

Recommendation #2: Provide direct and explicit comprehension strategy instruction.

Thinking Maps gives students a set of tools that make comprehension strategies concrete and explicit. Students use the Maps to analyze text features, text structure, and content. The Maps provide a visual structure for applying comprehension strategies such as summarizing, questioning, and identifying the main idea and supporting details. Using the Maps promotes active reading and builds metacognitive skills students need to monitor their own understanding, connect to prior knowledge, and think critically about what they are reading. Because the Maps are tied to

core cognitive processes and used consistently across all content areas, they are more effective in building comprehension skills than standard graphic organizers.

Recommendation #3: Provide opportunities for extended discussion of text meaning and interpretation.

Thinking Maps supports meaningful discussion between students. Students use the Maps to organize their thinking and learn how to talk “off the Map” to share their ideas with peers and teachers. Creating Maps independently or collaboratively prepares students for in-depth discussion and interpretation of complex texts.

Recommendation #4: Increase student motivation and engagement in literacy learning.

Building confidence in learning ability and comprehension skills improves motivation and engagement. Thinking Maps empowers learners with “student-owned” learning strategies that they carry with them from class to class and grade to grade. The Maps are not simply assignments; they are tools that students use to maximize their learning. As students gain proficiency with the Maps, they are learning how to access and activate their own thinking processes. The Maps have been proven to raise academic achievement and improve critical and creative thinking ability for students of all backgrounds and ability levels, including English Language Learners, Special Education students, and students from disadvantaged backgrounds. Teaching students to activate metacognitive processes “closes the gap” for struggling students and builds confidence in their learning abilities. This translates into increased engagement with academic content and motivation in the classroom.

WRITING

Effective writing starts with effective thinking. Thinking Maps and *Write from the Beginning...and Beyond* help students organize their thinking for clearer writing and communication across the content areas.

Practice Guide: Teaching Elementary Students to Be Effective Writers

Recommendation #2: Teach students to use the writing process for a variety of purposes.

Thinking Maps is used across the writing process—including planning/pre-writing, writing and reflection—as well as for analyzing written materials to understand text structure and purpose. The Maps provide a structure to help students organize their thoughts prior to writing. Different Maps can be used to analyze or organize different kinds of texts; for example, a student may use a Flow Map to plot out a narrative story, a Multi-Flow Map to develop ideas for a cause-and-effect expository piece, or a Tree Map to outline supporting arguments for a persuasive piece. *Write from the Beginning...and Beyond* training shows teachers how to apply the Maps in the writing process and includes specific strategies for narrative, expository/informative, argumentative and response to text writing.

Recommendation #4: Create an Engaged Community of Writers

Thinking Maps is a whole-school “language for learning” that builds strong communities of thinkers, learners, and writers. Students use the Maps not only to organize their thinking but also to share their ideas with teachers and peers. Thinking Maps provides an effective tool to facilitate peer discussion, shared learning, and collaborative idea generation. As students gain proficiency with the Maps, they are able to transfer these skills across content areas and grade levels to become better writers and communicators.

Practice Guide: Teaching Secondary Students to Write Effectively

Recommendation #1: Explicitly Teach Appropriate Writing Strategies Using a Model-Practice-Reflect Instructional Cycle

Thinking Maps makes the writing process visible for students. Teachers can use the Maps to explain and model the writing process for students. As students create their own Maps, they learn how to organize and reflect on their thinking prior to writing. They can also use Maps to analyze and respond to their own writing and writing products from their peers. *Write from the Beginning...and Beyond* training shows teachers how the Maps are used throughout the writing process including Goal Setting, Planning, Drafting, and Evaluating. Teachers also learn specific strategies for narrative, expository/informative, argumentative and response to text writing.

Recommendation #2: Integrate Writing and Reading to Emphasize Key Writing Features

Thinking Maps provides a clear structure for analysis of text structures and features. Using the Maps to analyze texts improves reading comprehension as well as students’ awareness of how texts are structured and how various text features (such as headings, images, and captions) relate to each other and add to the readability of the text. Careful and structured analysis of a variety of text types (such as Explanatory, Literary Non-Fiction, Procedural, or Argumentative/Persuasive) helps students translate the elements of effective writing into their own work. Using the same Maps for analysis of existing texts and organization of their own writing makes the translation more explicit and effective.

MATH

How do you develop mathematical thinking? Thinking Maps supports the development of cognitive skills that are fundamental for numeracy, mathematical logic and problem solving. Students learn to use the Maps to define and compare mathematical terms, deconstruct problem-solving processes, decompose mathematical and algebraic expressions, explore mathematical relationships, and visualize abstract mathematical concepts.

Thinking Maps is aligned with evidence-based practices for math reviewed by [What Works Clearinghouse \(WWC\)](#) and included in their [Evidence-based Practice Guides](#). WWC’s practice guides provide specific recommendations based on reviews of available research, experiences of practitioners, and the expert opinions of a panel of nationally recognized experts.

Practice Guide: Teaching Math to Young Children

Recommendation #1: Teaching numbers and operations using a developmental progression.

Students use Thinking Maps to explore numbers and operations in a variety of ways. For example, they may use a Circle Map to show all the ways a number could be represented (words, numerals, pictures, etc.), a Flow Map to sequence numbers and their representations, a Brace Map to show whole/part relationships within numbers, or a Double Bubble Map to compare number characteristics (odd vs. even, number of digits, etc.). The Maps can also be used to break down operations and problem-solving processes. Flow Maps, Multi-Flow Maps, Brace Maps, and Bridge Maps can be used to explore operations and visualize problem-solving processes in different ways. The Maps are applied in increasingly sophisticated ways across the grades to support a developmental progression in mathematical instruction. Younger children can benefit from creating simple physical Maps using manipulatives, while older students may use multiple Maps to analyze and visualize complex problem-solving processes. Teachers can scaffold the use of the Maps based on the developmental needs of their students.

Recommendation #2: Teach geometry, patterns, measurement and data analysis using a developmental progression.

Thinking Maps are ideal for exploring patterns, geometric relationships, measurement and data analysis. The Maps are used to make patterns and relationships visual and help students explore mathematical concepts. For example, the Tree Map can be used to classify shapes, while the Flow Map and Bridge Map can be used to analyze patterns. Data can be analyzed in a variety of ways using multiple Maps, such as the Tree Map (for classifying), the Brace Map (for part/whole relationships), and the Bridge Map (to explore relationships). The Maps are applied in increasingly sophisticated ways across the grades to support a developmental progression in mathematical instruction.

Recommendation #4: Teach children to view and describe their world mathematically.

The Maps are ideal for helping young children view and describe their world mathematically. Thinking Maps make abstract mathematical concepts concrete and visible. The Maps tap into the foundational cognitive skills that underlie mathematical thinking, such as seeing relationships, classifying, comparing and contrasting, sequencing, and part/whole relationships. They also help students clarify their understanding of mathematical concepts and terms.

Practice Guide: Improving Mathematical Problem Solving in Grades 4 - 8

Recommendation #1: Prepare problems and use them in whole-class instruction.

Thinking Maps are a valuable tool for whole-class instruction. Teachers can use Maps to deconstruct problems and then plan and execute their solution pathways. Maps can also be used collaboratively, providing a way for students to demonstrate their problem-solving methods visually to the class. The Maps then become a guide that students can use to move from whole-class to independent problem solving.

Recommendation #2: Assist students in monitoring and reflecting on the problem-solving process.

Each of the eight Thinking Maps is correlated with a different cognitive process, including defining, describing, comparing/contrasting, classifying, part/whole relationships, sequencing, cause/effect, and relationships. Students learn to use and combine the Maps in a variety of ways to explore different methods of problem solving, clarify and show their thinking, and demonstrate their understanding. The Frame of Reference around the Maps activates metacognitive processes and provides an opportunity for students to think about what they know and reflect on their different problem-solving methods. Students also learn how to use guiding questions for the Frame of Reference to think about their problem-solving approach systematically. Students identify the knowledge and strategies they used to solve the problem, explain the reasons they chose the strategies, and think about what they might do differently next time.

Recommendation #3: Teach students how to use visual representations.

The Maps are visual representations that can be used to visualize and clarify a broad range of mathematical terms, concepts, processes and methods. They are ideal for making abstract mathematical concepts visual. For example, the Brace Map is used to help students visualize part/whole relationships or deconstruct a problem into its component parts, Flow Maps to visualize the steps of a problem-solving process, and Bridge Maps to visualize relationships.

Recommendation #4: Expose students to multiple problem-solving strategies.

Students learn to use the Maps to think about problems in different ways (e.g., numerically vs. algebraically) and represent their thinking visually. Students may use a multiple-Map process to deconstruct a problem, plan and execute their solution strategy, justify their solution, and reflect on their process. This allows students to think about their problem-solving strategy systematically and document their thinking for others to see. As students compare the different thinking strategies represented across a class, they develop and extend their own problem-solving repertoire.

Recommendation #5: Help students recognize and articulate mathematical concepts and notation.

The Maps help students recognize and articulate mathematical concepts more effectively. Each of the Maps invites students to think about mathematical concepts in different ways: defining, describing, comparing/contrasting, classifying, part/whole relationships, sequencing, cause/effect, and relationships. Circle Maps are used to define concepts and notation, while Bridge Maps help students interpret symbols and their uses. By comparing and contrasting concepts in a Double Bubble Map, students clarify their understanding of similar concepts.

Practice Guide: Strategies for Improving Algebra Knowledge in Middle and High School Students

Recommendation #1: Use solved problems to engage students in analyzing algebraic reasoning and strategies.

Our multiple-Map problem-solving method teaches students to use parallel Flow Maps to outline a solution strategy and then execute the strategy. The application of the Frame of Reference for

Thinking Like a Mathematician provides an opportunity to connect prior knowledge to the current problem and discuss a variety of strategies that might be appropriate. By sharing their Maps, students can see a variety of strategies across the classroom and analyze the reasoning behind each application.

Recommendation #2: Teach students to utilize the structure of algebraic representations.

The Brace Map allows for decomposition of an algebraic representation into its parts. Those parts can then be moved to a Bridge Map to identify the role of each part in the current algebraic context. Multi-Flow Maps are used to analyze the effects of a specific algebraic representation. Double Bubble Maps are used to compare and contrast two different representations of an algebraic situation; for example, the similarities and differences of two function equations or graphs.

Recommendation #3: Teach students to intentionally choose from alternative algebraic strategies when solving problems.

The different Maps lend themselves to different types of problem solving. Students learn to think about problems in different ways and select different Maps for different kinds of thinking and problem solving. Maps also help students describe their thinking process to teachers and peers so they can easily compare different problem-solving styles. For example, the Brace Map is used for decomposing a problem into the question and the relevant information provided. The application of the Frame of Reference for Thinking Like a Mathematician around the Brace Map provides an opportunity to connect prior knowledge to the current problem and to discuss a variety of strategies that might be appropriate in that problem situation. Depending on the strategy and the type of mathematical thinking involved, an appropriate Thinking Map can then be developed.

Practice Guide: Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools

Recommendation #3: Instruction during intervention should be explicit and systematic.

The application of Thinking Maps provides a structure for student thinking in mathematics that serves as a visual scaffold for processing information and building conceptual understanding. These scaffolds are appropriate across grade levels and can be extended as new information is introduced. The emphasis on different types of thinking allows for differentiation based on student processing styles.

Recommendation #4: Interventions should include instruction on solving word problems that is based on common underlying structures.

Thinking Maps are ideal for breaking down and solving word problems. Students learn to use the Brace Map to decompose a problem into the question and the relevant information provided. In the Frame of Reference around the Brace Map, students discuss the prior knowledge needed for this situation and look for entry points into the problem—e.g., what clues are there in the language of the problem, what connections they see to prior knowledge and previous problems, and what formulas might apply in this situation. Using our multiple-Map problem-solving method, students use parallel Flow Maps to outline a solution strategy and then execute the strategy.

Recommendation #5: Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas.

The Maps are visual representations that can be used to visualize and clarify a broad range of mathematical terms, concepts, processes and methods. They are ideal for making abstract mathematical concepts visual. For example, Brace Maps are used to help students visualize part/whole relationships or deconstruct a problem into its component parts, Flow Maps to visualize the problem-solving process, and Bridge Maps to visualize relationships.

ENGLISH LANGUAGE LEARNERS

English Language Learners (ELLs) need extra support in the classroom to unlock their learning potential. Thinking Maps and *Path to Proficiency for English Language Learners* help ELLs improve language proficiency, build academic vocabulary, and access grade-level content.

Practice Guide: Teaching Academic Content and Literacy to English Learners in Elementary and Middle School

Recommendation #1: Teach a set of academic vocabulary words intensively across several days using a variety of instructional activities.

Thinking Maps is an effective tool for vocabulary study for English Language Learners (ELLs). The visual format makes the Maps accessible for ELLs of all English proficiency levels. Newcomers can integrate pictures and native language translations with new vocabulary words on the Maps as they build their understanding of word meanings. As their vocabulary grows, Maps can be combined to define words, compare and contrast related terms, classify vocabulary words, or create analogies. The *Maps as Vocabulary Word Games* module in the Thinking Maps Learning Community (TMLC) introduces game-based activities that leverage the Maps for vocabulary development.

Recommendation #2: Integrate oral and written English language instruction into content-area teaching.

Thinking Maps makes grade-level content accessible for students of all backgrounds and ability levels, including English Language Learners. *Path to Proficiency for English Language Learners* training shows teachers how to leverage the Maps to help ELLs expand their academic vocabulary, improve comprehension of content-area material, and meet grade-level academic standards. Combining visual and linguistic information on the Maps activates “dual coding” in the brain to improve understanding, retention, and recall. The Maps can be used by students of all language proficiency levels. As their language proficiency grows, the Maps become springboards for oral communication and written work products. Using the Maps to organize their thinking and solidify their language skills helps ELLs become better thinkers, writers, and communicators across all content areas.

Recommendation #3: Provide regular, structured opportunities to develop written language skills.

Thinking Maps helps ELLs organize their thinking and clarify their understanding of vocabulary and ideas before they write. *Write from the Beginning...and Beyond* training shows teachers how to use the Maps throughout the writing process. Students use Maps to gather and organize information and plan their writing products. They learn how to “write off the Maps” to translate their thinking into formal writing. Thinking Maps makes the writing process easier and more effective for all students, including ELLs.

Practice Guide: Effective Literacy and English Language Instruction for English Learners in the Elementary Grades

Recommendation #3: Provide extensive and varied vocabulary instruction.

Thinking Maps is an effective tool for vocabulary study for English Language Learners (ELLs). The visual format makes the Maps accessible for ELLs of all English proficiency levels. Newcomers can integrate pictures and native language translations with new vocabulary words on the Maps as they build their understanding of word meanings. As their vocabulary grows, Maps can be combined to define words, compare and contrast related terms, classify vocabulary words, or create analogies. The *Maps as Vocabulary Word Games* module in the Thinking Maps Learning Community (TMLC) introduces game-based activities that leverage the Maps for vocabulary development.

Recommendation #4: Develop academic English.

Thinking Maps builds a foundation for academic language development. The Maps are aligned with core cognitive skills, including Defining, Describing, Comparing and Contrasting, Classifying, Sequencing, Cause and Effect, Part/Whole Relationships, and Analogies. Students learn to listen for key vocabulary and questions that are associated with each cognitive process. As they gain proficiency with the Maps, they also gain proficiency with the academic vocabulary associated with each Map type. This creates a universal “language for learning” that crosses all content areas.

Recommendation #5: Schedule regular peer-assisted learning opportunities.

Thinking Maps provides a springboard for peer discussion both among ELLs and between ELLs and English-speaking peers. Thinking Maps is used by all students in the school, creating a universal “language for learning” that encompasses both ELLs and native English speakers. Students with varying language proficiency levels can all create Maps adapted to their own level of English proficiency. The Maps may look different; for example, some students may rely more on images and simple vocabulary terms while others will show a more sophisticated use of language. However, all students are able to engage with the same grade-level content through the Maps. This provides a basis for discussion between students of different language proficiency levels. Students learn how to organize their thinking using the Maps and “talk off the Maps” in peer discussions. Students can also create Maps collaboratively for small group projects and other peer-assisted learning activities.