

Intervention Taxonomy Brief: Visualizing and Verbalizing® Program for Language Comprehension and Thinking

The goal of this brief is to provide educators with information they can use to evaluate the appropriateness of the **Visualizing and Verbalizing® Program for Language Comprehension and Thinking** for a specific student or group of students who require supplemental and intensive intervention. The brief also may be used to guide decisions about the selection or purchase of a new intervention. We envision that the brief may allow users to examine the extent to which the program aligns to the Taxonomy of Intervention Intensity, a framework used by educators to categorize interventions along key dimensions. The information included in this brief is organized along the seven dimensions of the Taxonomy of Intervention Intensity and can assist educators in answering the following questions:

- Does evidence suggest that this intervention is expected to lead to improved outcomes in the identified area of need (**strength**)?
- Will the group size, duration, structure, and frequency provide sufficient opportunities for students to respond and receive corrective feedback (**dosage**)?
- Does the intervention match the student’s identified needs (**alignment**)?
- Does the intervention assist the student in generalizing target skills to general education or other tasks (**attention to transfer**)?
- Does the intervention include elements of explicit instruction (**comprehensiveness**)?
- Does the student have opportunities to develop the behavior skills necessary to be successful (**behavioral support**)?
- Can the intervention be individualized with a data-based process to meet student needs (**individualization**)?

To learn more about the Taxonomy of Intervention Intensity and find resources to support implementation, visit <https://intensiveintervention.org/taxonomy-intervention-intensity>.

Program Summary

Lindamood-Bell collaborates with schools/districts using a Professional Learning Community (PLC) model to customize a Response to Intervention (RtI) design to best meet the aggregate learning needs of all students. Visualizing and Verbalizing® Program for Language Comprehension and Thinking and its constituent components are based on ESSA Evidence-Based programs and substantive neuroscientific and applied research initiatives in public education. We accomplish this within the mandates of IDEA, state and local education policies. Each partnership is unique depending on existing school/district variables. Lindamood-Bell’s partnership and PLC philosophy is built around two main RtI concepts necessary to transform schools academically. First, instructional methodologies are based on a theory of cognition. This

process-based cognitive approach stimulates specific brain-based processes (mental representations) basic to language comprehension and critical thinking. One of the primary goals of the course is to make class members aware that concept imagery is the specific sensory-cognitive function basic to language comprehension and critical thinking. These underlying cognitive processes must be developed (Tier I) and/or remediated (Tier II & III) for all students to maximize their learning potential and benefit from standards-based instruction, strategies, materials, and curricula. Thus Lindamood-Bell adheres to and promotes a paradigm shift in how to best meet the cognitive and language processing needs of students, integrating both process and content/standards-based instruction. The skills addressed are foundational to all curricula and they cut across all standards. Second, while Lindamood-Bell’s instructional practices are necessary, they are insufficient without simultaneously controlling for certain components or practices within the school system and/or culture in which they are to be implemented. To achieve large-scale and sustainable success, Lindamood-Bell collaborates with all levels of leadership, including the school board, district administration, and site-level leaders in evidence-based practices. Lindamood-Bell’s approach is to work in a collaborative effort to address and improve the existing school framework, personnel, and practices all as applied to an RtI framework. Specifically, the main district and school leadership support components include sustained and embedded professional development, data analyses and accountability, differentiated instruction, leadership institutes, parent/community outreach, and a certification process for teachers. This model mirrors the conceptual framework of RtI. By incorporating a collaborative, problem-solving framework to increase student achievement, Lindamood-Bell’s PLC model has been shown to meet the needs of all students and sustain results over time.

Exhibit 1. Program Information

| Features of program implementation | Program recommendations |
|------------------------------------|---|
| Grade level(s) | PK–12 |
| Group size | <ul style="list-style-type: none"> • 5:1 in homogeneous groups based on diagnostic data • Whole class, developmentally |
| Intervention length | Approximately 8–12 weeks, or about 80–120 hours |
| Frequency | 4–5 days per week |
| Session duration | 1–4 hours per day |
| Cost | <ul style="list-style-type: none"> ▪ Level 1^a: <ul style="list-style-type: none"> • <i>Public Workshop</i>: \$750 + \$400 required materials = \$1,150/participant • <i>In-service Workshop</i>: \$650 + \$400 required materials = \$7,650 for a minimum of seven participants; \$1,050 per additional participant ▪ Level 2: Annual membership = \$99. Complimentary access for In-service Workshop participants. ▪ Level 3: Job-Embedded Professional Development (PD): begins at \$2,500 per classroom weekly or \$1,950 per classroom biweekly. ▪ Level 4: Comprehensive School Partnership: \$13,000 + \$2,500 per classroom. |

| Features of program implementation | Program recommendations |
|------------------------------------|--|
| Training | <p>Levels of professional development are provided based on teacher, school, or district needs.</p> <ul style="list-style-type: none"> ▪ Level 1: Introduction <ul style="list-style-type: none"> • Workshop (13 seat hours), online or in-person • Review modules (five seat hours), asynchronous ▪ Level 2: Refinement <ul style="list-style-type: none"> • 12-month membership • Skills Boost modules (three seat hours), asynchronous • Bimonthly content webinars • Online professional learning community and forum ▪ Level 3: Advanced <ul style="list-style-type: none"> • Job-embedded PD (weekly coaching sessions for one to two semesters) • Advanced training modules (six seat hours), asynchronous • Monthly professional learning community meetings • Instructional leadership development ▪ Level 4: Systemic Model <ul style="list-style-type: none"> • Job-embedded PD (weekly coaching sessions) • Instructional leadership modules (seven seat hours, asynchronous) • Diagnostic assessment training (seven seat hours, synchronous and asynchronous) • Monthly professional learning community meetings • Leadership academy |

^a Level 1 workshops are a required prerequisite for all other levels of professional learning.

Evidence of Taxonomy of Intervention Intensity Dimensions

The following section presents definitions for the Taxonomy of Intervention Intensity dimensions and a summary of intervention-specific evidence for each dimension. The evidence comes from the intervention’s vendor or developer. It is accurate as reported to the National Center on Intensive Intervention (NCII); it was not independently verified by NCII. Additional program evidence can be found on the [NCII Tools Chart](#) and might appear on the [What Works Clearinghouse](#). For specific questions about the content, contact the publisher at Gander Publishing: <https://ganderpublishing.com/>; Customer Service (customerservice@ganderpublishing.com); or Tom Mendoza (tom.mendoza@lindamoobell.com).

Taxonomy Dimension: Strength

Strength tells us how well the program works for students with intensive intervention needs, expressed in terms of effect sizes. Effect sizes greater than 0.25 indicate an intervention has value in improving outcomes. Effect sizes of 0.35 to 0.40 are moderate, and effect sizes of 0.50 or larger are strong (preferred).

Exhibit 2 provides the effect sizes for students in need of intensive intervention organized by domain and subdomain. These effect size data are calculated on low-achieving participants, those falling at or below the 20th percentile on pretest measures of achievement. If available, additional effect sizes for disaggregated data can be found on the NCII Tools Chart.

Exhibit 2. The Visualizing and Verbalizing Program for Language Comprehension and Thinking Effect Sizes for Students ≤20th Percentile by Domain and Subdomain

| Domain | Subdomain | Outcome measures | Effect size ^a |
|----------------|--|---|--------------------------|
| Language | Oral Direction | Detroit Test of Learning Aptitude, 2nd Edition | Unavailable |
| Language | Vocabulary | Peabody Picture Vocabulary Test, 3rd Edition | Unavailable |
| Early Literacy | Phonological Awareness | Lindamood Auditory Conceptualization Test, 3rd Edition | Unavailable |
| Early Literacy | Orthographic awareness | Symbol Imagery Test | Unavailable |
| Early Literacy | Word Reading | Wide Range Achievement Test, 3rd Edition | Unavailable |
| Reading | Reading Fluency: Paragraph Reading Rate | Gray Oral Reading Test, 4th Edition (GORT-4) | Unavailable |
| Reading | Reading Fluency: Accuracy | GORT-4 | Unavailable |
| Reading | Comprehension: Paragraph Reading Comprehension | GORT-4 | Unavailable |
| Writing | Spelling | Wide Range Achievement Test, 3rd Edition | Unavailable |
| Reading | Word Attack | Woodcock Reading Mastery Test, Revised Normative Update | Unavailable |

^a To ensure comparability of effect size across studies, NCII uses a standard formula to calculate effect size across all studies and outcome measures—Hedges g, corrected for small-sample bias.

Taxonomy Dimension: Dosage

Dosage is the number of opportunities a student has to respond or practice and receive corrective feedback. Dosage may be impacted by the size of the instructional group, the number of minutes each session lasts, the number of student-teacher interactions built into lessons, and the number of sessions provided per week.

Assuming a group size of five students, each student in the group has an estimated 30 opportunities to respond and receive corrective feedback.

Taxonomy Dimension: Alignment

Alignment (Exhibit 3) focuses on how well the program (a) addresses the target student’s full set of academic skill deficits, (b) does not address skills the target student has already mastered (extraneous skills for that student), and (c) incorporates a meaningful focus on grade appropriate curricular standards.

Exhibit 3. Alignment With Content Areas Addressed

| Instructional grade level(s) | Content area addressed | Skill strands |
|------------------------------|-----------------------------|--|
| Grade 6 | ELA (English language arts) | <p>Speaking and Listening</p> <ul style="list-style-type: none"> ▪ Comprehension and Collaboration ▪ Presentation of Knowledge and Ideas <p>Language</p> <ul style="list-style-type: none"> ▪ Conventions of Standard English ▪ Vocabulary Acquisition and Use <p>Writing</p> <ul style="list-style-type: none"> ▪ Text Types and Purposes ▪ Production and Distribution of Writing ▪ Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Integration of Knowledge and Ideas ▪ Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Integration of Knowledge and Ideas ▪ Range of Reading and Level of Text Complexity |
| Grade 7 | ELA | <p>Speaking and Listening</p> <ul style="list-style-type: none"> • Comprehension and Collaboration • Presentation of Knowledge and Ideas <p>Language</p> <ul style="list-style-type: none"> • Conventions of Standard English • Vocabulary Acquisition and Use <p>Writing</p> <ul style="list-style-type: none"> • Text Types and Purposes • Production and Distribution of Writing • Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> • Key Ideas and Details • Craft and Structure • Integration of Knowledge and Ideas • Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> • Key Ideas and Details • Craft and Structure • Integration of Knowledge and Ideas • Range of Reading and Level of Text Complexity |
| Grade 8 | ELA | Speaking and Listening |

| Instructional grade level(s) | Content area addressed | Skill strands |
|------------------------------|------------------------|--|
| | | <ul style="list-style-type: none"> • Comprehension and Collaboration • Presentation of Knowledge and Ideas <p>Language</p> <ul style="list-style-type: none"> • Conventions of Standard English • Vocabulary Acquisition and Use <p>Writing</p> <ul style="list-style-type: none"> • Text Types and Purposes • Production and Distribution of Writing |
| Grade 9 | ELA | <p>Speaking and Listening</p> <ul style="list-style-type: none"> ▪ Comprehension and Collaboration ▪ Presentation of Knowledge and Ideas <p>Writing</p> <ul style="list-style-type: none"> ▪ Text Types and Purposes ▪ Production and Distribution of Writing ▪ Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity |
| Grade 10 | ELA | <p>Speaking and Listening</p> <ul style="list-style-type: none"> ▪ Comprehension and Collaboration ▪ Presentation of Knowledge and Ideas <p>Writing</p> <ul style="list-style-type: none"> ▪ Text Types and Purposes ▪ Production and Distribution of Writing ▪ Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity |
| Grade 11 | ELA | <p>Language</p> <ul style="list-style-type: none"> ▪ Conventions of Standard English ▪ Vocabulary Acquisition and Use <p>Writing</p> |

| Instructional grade level(s) | Content area addressed | Skill strands |
|------------------------------|------------------------|---|
| | | <ul style="list-style-type: none"> ▪ Text Types and Purposes ▪ Production and Distribution of Writing ▪ Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity |
| Grade 12 | ELA | <p>Language</p> <ul style="list-style-type: none"> ▪ Conventions of Standard English ▪ Vocabulary Acquisition and Use <p>Writing</p> <ul style="list-style-type: none"> ▪ Text Types and Purposes ▪ Production and Distribution of Writing ▪ Research to Build and Present Knowledge <p>Reading: Informational Text</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity <p>Reading: Literature</p> <ul style="list-style-type: none"> ▪ Key Ideas and Details ▪ Craft and Structure ▪ Range of Reading and Level of Text Complexity |

Taxonomy Dimension: Teaching to Promote Transfer

Attention to transfer is the extent to which an intervention is designed to help students (a) transfer the skills they learn to other formats and contexts and (b) realize connections between mastered and related skills.

For identifying main idea (instructional target), three activities designed to explicitly teach for transfer are (a) questioning for sentence imagery from subject to verb to object, (b) questioning toward the gestalt of the paragraph, and (c) connecting higher order thinking to gestalt imagery.

Activity 1: Setting the Task: Picture to Picture/Word Imagery. By developing a student’s ability to verbalize from a given picture (simple to complex concepts), this activity begins the development of the imagery-language connection and will increase the length and complexity of the student’s expressive language and ultimately their writing (Exhibit 4). Pictures are used for introducing unknown concepts to transfer this skill to content vocabulary.

Activity 2: Word Imagery/Vocabulary Task. Students describe a simple familiar word/noun (either with or without a visual prompt), and the teacher asks questions about specific details as needed (Exhibit 5). The teacher prompts the students to use all of the 12 “Structure Words” to ensure a clear understanding of (picture for) the word/noun and to continue developing oral expressive language, chosen words progress from known, common words to unknown words, concrete unknown words, abstract words, grade-appropriate common terms, domain specific terms, and text or curriculum-level vocabulary.

Exhibit 4. Picture to Picture/Word Imagery Example



Exhibit 5. Word Imagery/Vocabulary Task Example



Activity 3: Connect Higher Order Thinking to Gestalt Imagery. After the student verbalizes a brief word summary, the teacher prompts for detail related to the main idea from the imaged gestalt/whole (Exhibit 6). The teacher helps connect higher order thinking to gestalt imagery by saying: “From all your images, what was the main idea?”

Exhibit 6. Connecting Higher Order Thinking to Gestalt Imagery Example



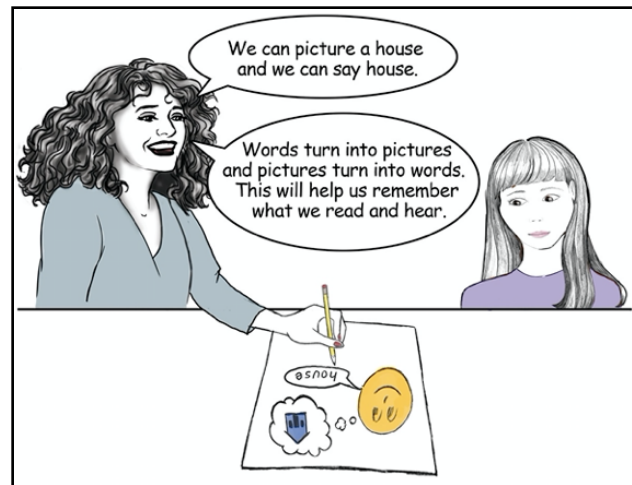
Taxonomy Dimension: Comprehensiveness

Comprehensiveness is the number of explicit instruction principles the intervention incorporates (e.g., providing explanations in simple, direct language; modeling efficient solution strategies instead of expecting students to discover strategies on their own; providing practice so that students use the strategies to generate many correct responses; and incorporating systematic cumulative review). Additional information can be found within the NCII [Explicit Instruction course content materials](#).

Dimension: Provide Explanations in Simple, Direct Language

Activity 1: Setting the Climate. Briefly explain to the student(s) what they will be doing and why, drawing and talking at the same time to illustrate expectations in the upcoming task (Exhibit 7). The teacher says: “We will picture words in our minds. We can picture a house, and we can say house. Words turn into pictures, and pictures turn into words. This will help us remember what we read and hear.”

Exhibit 7. Setting the Climate Example



Activity 2: Single Paragraph Processing-Sentence by Sentence Task.

Students describe imagery for a self-contained paragraph, broken up one sentence at a time, with the teacher questioning the student's imagery using all 12 “Structure Words” to ensure a clear understanding of (picture for) the initial sentence and to refine, re-verbalize, and clarify imagery/comprehension of text. After all sentences are completed (imaged), the teacher asks students to retell the story in their own words using their imagery, initially done orally and then extended to written language comprehension (Exhibit 8).

Exhibit 8. Language Comprehension Example



Dimension: Model Efficient Solution Strategies


Activity 1: Visualizing and Verbalizing Sentence by Sentence with Higher Order Thinking.

Automaticity in imagery and verbalization is the goal, as the student places a colored square for his/her sentence imagery and then visualizes and verbalizes each sentence. The teacher questions with choice and contrast, keeping in mind the importance of questioning for details as well as to the gestalt: The student gives a picture summary and a word summary and then verbalizes the main idea from that imaged gestalt (Exhibit 9).

Exhibit 9. Imagery and Verbalization Example

10 Salmon Mother


At the bottom of the stream, the salmon sweeps her tail in the sand to make a hole. Then she lays hundreds of little orange eggs in the hole. She digs more nests and lays eggs all day until she is so tired she cannot move. Then she guards her nests until she dies.



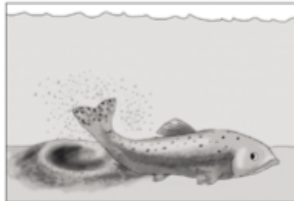
Sentence by Sentence
Date: _____

Vocabulary to Visualize:
salmon: a large fish with shiny scales and pink flesh
stream: a creek or small river
sweep: brush the ground; move back and forth
nest: place to hold eggs

A Picture This: At the bottom of the stream, the salmon sweeps her tail in the sand to make a hole.



Which best matches your picture?



Underline or write in the answer that best matches your own picture.

1. What color salmon did you picture? _____
2. What part of her did you see sweeping in the sand? her tail her side fins her belly
3. What shape did you picture for the hole she makes? _____
4. Where did you see the salmon? in a stream in the ocean on land

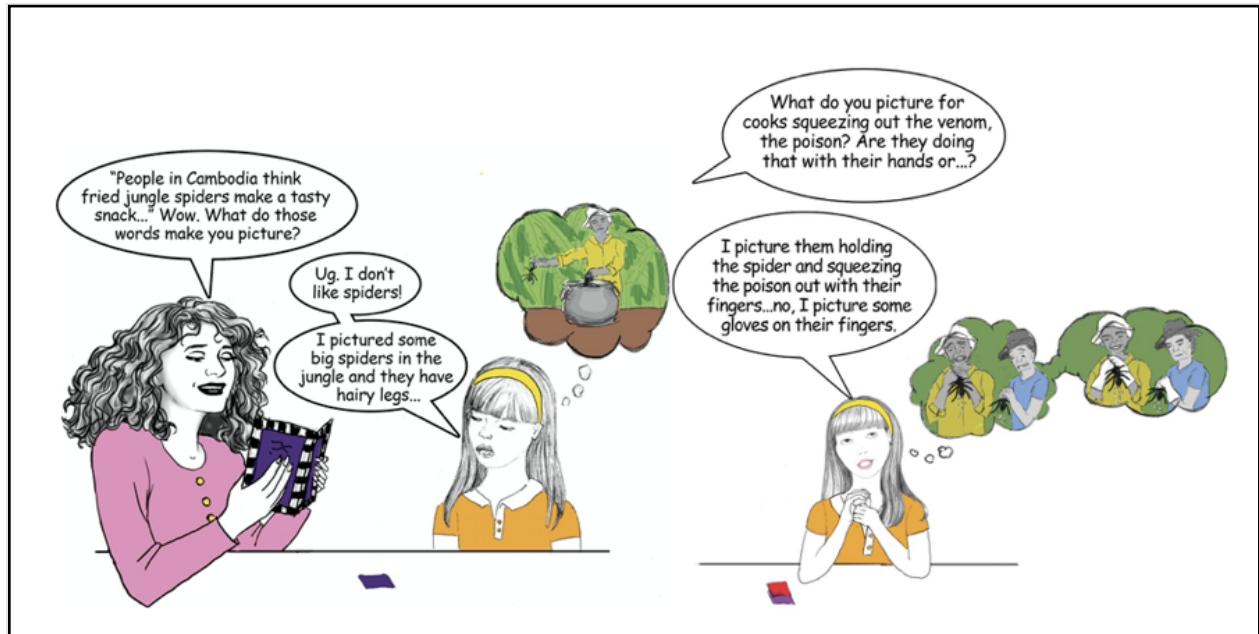
| | | | | | |
|---|---------------------------------|--------------------------------|-----------------------------------|--------------------------------------|--------------------------------|
| Did you picture all of the Structure Words? Check each one you saw in your image. | | | | | |
| <input type="checkbox"/> What | <input type="checkbox"/> Color | <input type="checkbox"/> Shape | <input type="checkbox"/> Movement | <input type="checkbox"/> Background | <input type="checkbox"/> When |
| <input type="checkbox"/> Size | <input type="checkbox"/> Number | <input type="checkbox"/> Where | <input type="checkbox"/> Mood | <input type="checkbox"/> Perspective | <input type="checkbox"/> Sound |

Activity 2: Imagery as the Basis for Grammar and Punctuation. The imagery/thinking base is used to monitor for grammar and punctuation on the basis that writing creates images. The imagery-language connection becomes the base for editing and correcting rather than solely relying on memorizing grammar and punctuation rules.

Dimension: Provide Practice So That Students Use Strategies to Generate Correct Responses

Activity 1: Socratic Questioning. Using choice/contrast language directly stimulates the sensory input of imagery—the nonverbal code. This method is repeatedly used throughout all steps of the Visualizing and Verbalizing Program. A Socratic learning environment questions and interacts with a student to help students compare their response to the stimulus (Exhibit 10).

Exhibit 10. Socratic Technique Example



Activity 2: Whole Paragraph With Higher Order Thinking. Connecting higher order thinking to gestalt imagery is key in assisting the student in answering main idea, inference, conclusion, and prediction questions. By questioning for specific images within the paragraph, the student is creating and accessing imagery rather than paraphrasing, which contributes to refining the student's expressive language skills (Exhibit 11) and improving his/her writing skills.

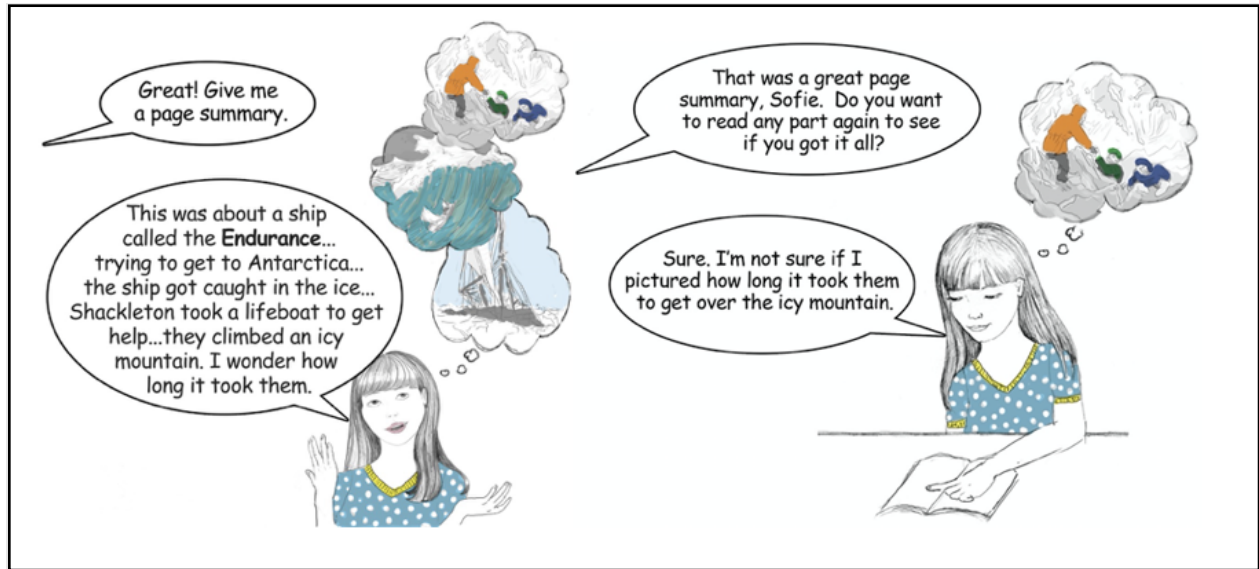
Exhibit 11. Generating Responses Example



Dimension: Incorporating Systematic Cumulative Review

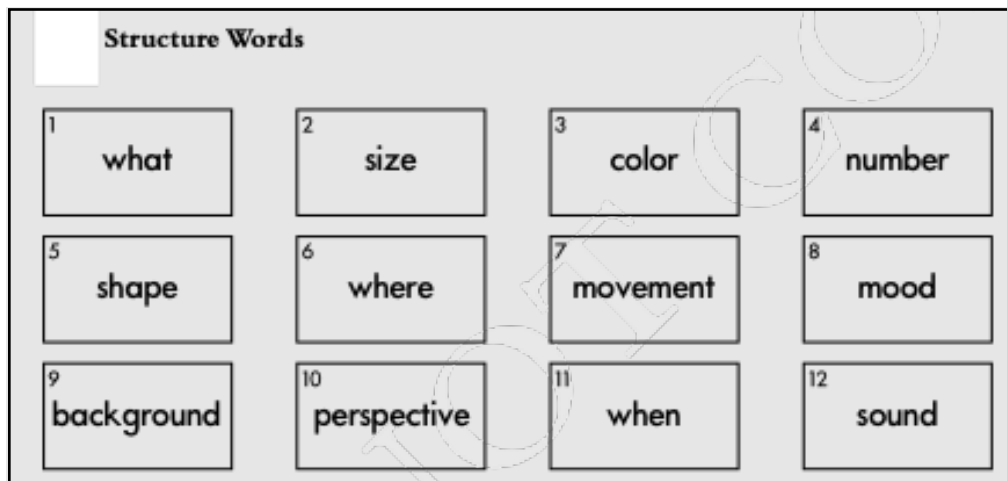
Activity 1: Page Imaging With Higher Order Thinking. The student visualizes a whole page of connected text and gives a page summary. The teacher asks specific imagery questions from the page of content just described in the page summary, by asking factual and interpretive higher order thinking questions, and continues to help the student use imagery for his/her answers. This activity should be applied to content using contextual imagery to assist with expanding oral vocabulary (Exhibit 12).

Exhibit 12. Expanding Vocabulary Example



Activity 2: Writing as Imaged Thought (Exhibit 13). Using the imagery-language connection of dual coding makes writing simple; students use picture cues on a three-by-five cards and place them next to the felt, numbering each card and reference the Structure Words for additional details. After the word summary, they place the picture cues in order and use them to write a summary. During the editing process, the student compares what they wrote to their images.

Exhibit 13. Writing as Imaged Thought Example



Taxonomy Dimension: Behavioral Support

Behavioral support addresses the extent to which the program incorporates (a) self-regulation and executive function components and (b) behavioral principles to minimize undesired behavior. Additional information can be found within the [NCII behavioral support course content](#).

Activity 1: Nonverbal Behavior Modification Tools/Reinforcement (Exhibit 14). Every student has a bucket/jar for storing Magic Stones (or any other small objects, such as beans or tokens) to reinforce positive behavior: Take away stones when behavior needs to be redirected. Stones may be traded in for Star Cards or a prize immediately after the bucket is full, and stones should be given frequently and consistently.

Exhibit 14. Nonverbal Behavior Modification Tools/Reinforcement



Activity 2: Magical Learning Moment Cards (Exhibit 15): On-the-spot recognition is given to a student to recognize effort and tasks done well. Cards go in the Magical Learning Moment box, and a schedule for drawing a winner is set. If possible, coordinate with the principal to make a schoolwide announcement.

Example 15. Magical Learning Moment Cards

