

**MORE THAN BRIDGING
LEARNING GAPS...
FORGING PATHWAYS
TO SUCCESS.**



SUMMITK12.COM

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THE SCIENCE OF LEARNING

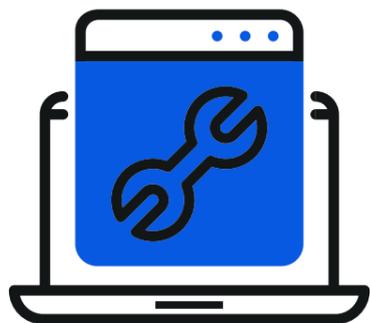
SUMMIT K12: EMPOWERING MULTILINGUAL LEARNERS THROUGH THE SCIENCE OF LEARNING

Meeting the Needs of a Growing Student Population

Between 2010 and 2020, the percentage of Multilingual Learners (MLLs) in U.S. public schools rose from 9.2% to 10.3%—now totaling over 5 million students. Summit K12 responds to this growing need by combining cutting-edge technology, responsive pedagogy, and the science of learning to unlock each student’s academic potential.

GROUNDING IN THE SCIENCE OF LEARNING

Summit K12 solutions are built upon research that supports best practices for language learning and development. Research-based recommendations for instructing MLLs include building on students’ home languages and cultural assets, integrating content and language, focusing on oral language development, using formative assessment and feedback, understanding and analyzing challenging texts, and engaging in structured, academic discussions.



ASSET-BASED INSTRUCTIONAL DESIGN

Summit K12 employs an asset-based instructional design, embracing students’ linguistic and cultural strengths by connecting academic tasks to real-world contexts and offering MLLs ample chances to listen, read, speak, and write at their current language development levels, while gradually increasing the linguistic complexity of the academic language they read and hear and are expected to speak and write. Design Lessons highlight relevance and meaning, boosting motivation and ensuring students learn and relearn content to store and retrieve information from long-term memory.

CONTENT & LANGUAGE INTEGRATION

By embedding language functions across disciplines, Summit K12 enables MLLs to develop both content mastery and academic language. Lessons prompt students to draw on background knowledge, enhancing recall and boosting comprehension and success in school and beyond.

PERSONALIZED LEARNING PATHWAYS

With embedded **ELD Assessments**, students receive individualized learning plans aligned to their language proficiency, along with regular low-stakes quizzes to track student progress. Personalized pathways break down tasks into manageable, sequential steps, offering exemplary models to prevent students from feeling overwhelmed by new topics—reducing cognitive strain and increasing confidence.

• **TECHNOLOGY-ENABLED SUCCESS**

A distraction-free, intuitive platform helps students focus on what matters—rich academic content, feedback, and reflection. Built-in supports help learners monitor performance, transfer strategies, use critical thinking so they replicate processes in future assignments, and reframe mistakes as opportunities to become better learners.

• **SPEAKING & WRITING AI AUTO SCORING & REAL-TIME FEEDBACK**

After leveraging AI for the past four years to support MLLs, this next-generation C2L solution, strengthened by six years of curated K–12 data across 120+ languages, combines proven innovation with thoughtful design to meet learners where they are—and help them advance further.

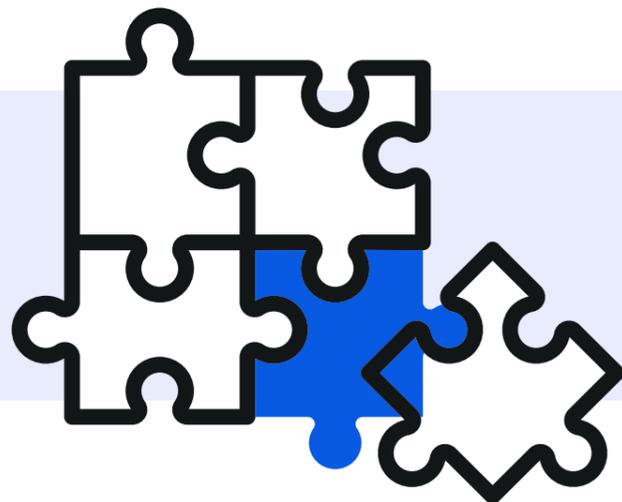
Effective feedback is often essential to acquiring new knowledge and skills. AI-driven assessment engine provides immediate, formative feedback that's reliable and growth-oriented. Students develop metacognitive awareness, building perseverance with the belief: "I can't do this... yet."

“THE ABILITY TO MONITOR THEIR *OWN* THINKING CAN HELP STUDENTS IDENTIFY WHAT THEY DO AND DO NOT KNOW, BUT PEOPLE ARE OFTEN UNABLE TO ACCURATELY JUDGE THEIR *OWN* LEARNING AND UNDERSTANDING.”
DEANS FOR IMPACT, 2015

EVIDENCE-BASED INSTRUCTIONAL STRATEGIES

The instructional design in C2L aligns with the **10 Principles of Instruction** (Rosenshine, B.), offering an evidence-based framework to support language development rooted in cognitive-science research on how students learn, and connecting it to practical implications for teaching. Our robust design ensures meaningful student engagement by applying incremental learning and ensures student mastery by addressing misconceptions all along the way.

- 1. DAILY REVIEW**
Learning starts with structured review activities that activate prior knowledge, reinforce key vocabulary, and help learners connect concepts across lessons—building long-term retention and schema development.



“STUDENTS LEARN *NEW IDEAS* BY REFERENCE TO IDEAS THEY ALREADY KNOW.”
DEANS FOR IMPACT, 2015

- 2. CHUNKING INFORMATION**
Content is broken into manageable, sequenced steps, aligned to each student’s English Language Proficiency level. To learn, students must transfer information from working memory (where it is consciously processed) to long-term memory (where it can be stored and later retrieved). Scaffolded tasks reduce cognitive overload while ensuring clarity and progress toward mastery.

- 3. QUESTIONING & PARTICIPATION**
Lessons embed rich, academic questioning strategies that ensure all students are engaged, checked for understanding, and encouraged to think critically supporting routines like “Think-Pair-Share” and “Cold Calling.”

- 4. MODELING THROUGH COGNITIVE APPRENTICESHIP**
Lessons provide consistent modeling, worked examples, sentence frames, and explicit think-alouds to guide learners through complex tasks. Lesson structures instruction using **Gradual Release of Responsibility (GRR)**, deliberate practice approach: explicit modeling, spaced repetition, and performance feedback to solidify learning and generalization.

5. GUIDED PRACTICE
Structured lesson design includes ample **opportunities for supported student practice**, enabling teachers to identify misconceptions early and adjust instruction on the spot.

6. CHECKS FOR UNDERSTANDING
Throughout instruction, **low-stakes formative** checks and embedded progress monitors ensure students grasp key ideas and get immediate feedback to recalibrate their learning in real-time.

7. SUCCESS THROUGH MASTERY
Design promotes a **high success rate**, aiming for 80% accuracy before moving on to new material. This sweet spot supports both confidence and challenge, driving measurable gains.

8. SCAFFOLDS FOR COMPLEX TASKS
Embedded supports—like sentence starters, language frames, and visual cues—are built into every lesson, and gradually removed as students gain independence and fluency.

9. INDEPENDENT PRACTICE
Lessons reinforce learning with **independent assignments that match guided instruction**, promoting deep fluency and long-term knowledge transfer—while teachers monitor and support actively.

10. WEEKLY & MONTHLY REVIEW
Design leverages **interleaved and spaced retrieval practice** to extend and deepen learning over time. Students revisit essential content through reviews, comparisons, quizzes, and cumulative tasks that support retrieval and performance growth.



“MANY OF THE SKILLS TAUGHT IN CLASSROOMS CAN BE CONVEYED BY PROVIDING PROMPTS, MODELING USE OF THE PROMPT, AND THEN GUIDING STUDENTS AS THEY DEVELOP INDEPENDENCE.”

DEANS FOR IMPACT, 2015

THE SCIENCE OF READING

Connect to Literacy™ uses a functional approach to language development focused on the purposeful use of language. A comprehensive instructional approach connects the language and code-based skills necessary to build upon MLLs broad language-based skills and related knowledge.

C2L also supports meaning-making and learning of the English language through code-based skills that build upon alphabet knowledge, phoneme awareness, sound-spelling knowledge, decoding, encoding, and spelling.

ORAL LANGUAGE FOUNDATION

MLLs need expanded opportunities for accelerated oral language development, exposure to print-based language, and purposeful language-based skills instruction to build language comprehension.'

C2L ensures MLLs use and develop receptive and expressive language through activities that integrate multiple modalities - including oral, written, and visual modes of communication. As MLLs apply their developing listening and speaking skills, they learn:

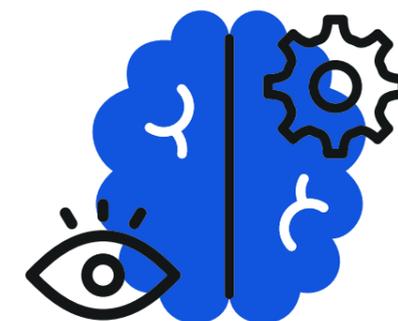
- the sounds of the language, the structure of sentences, & general norms of discourse
- the pronunciation and meaning of words, including words for specific objects
- listening comprehension (making sense of syntax, vocabulary, & background knowledge)

C2L strongly emphasizes developing oral language skills, enabling students to interpret and access information, develop ideas, and derive concepts from diverse sources.

• CODE-BASED SKILLS

Foundational skills development builds on language-based skills as well as code-based skills and is closely linked to the earliest experiences children have with books and/or interactions with adults. The oral language ability - vocabulary skills and phonological sensitivity - that children acquire in the years before school supports the direct role that code-based skills play in the early stages of reading.

C2L helps students gain insight into the English language system to make sense of phonics instruction - connecting the correspondence between graphemes or letters to speech sounds (phonemes) when learning to read. It supports readers with the ability to hear, recognize, and manipulate individual sounds into words (phonemic awareness). They will also be able to grasp the relationship between sounds and letters (phonics), understand word meaning (vocabulary), read more fluently (fluency), and understand what the text is saying.



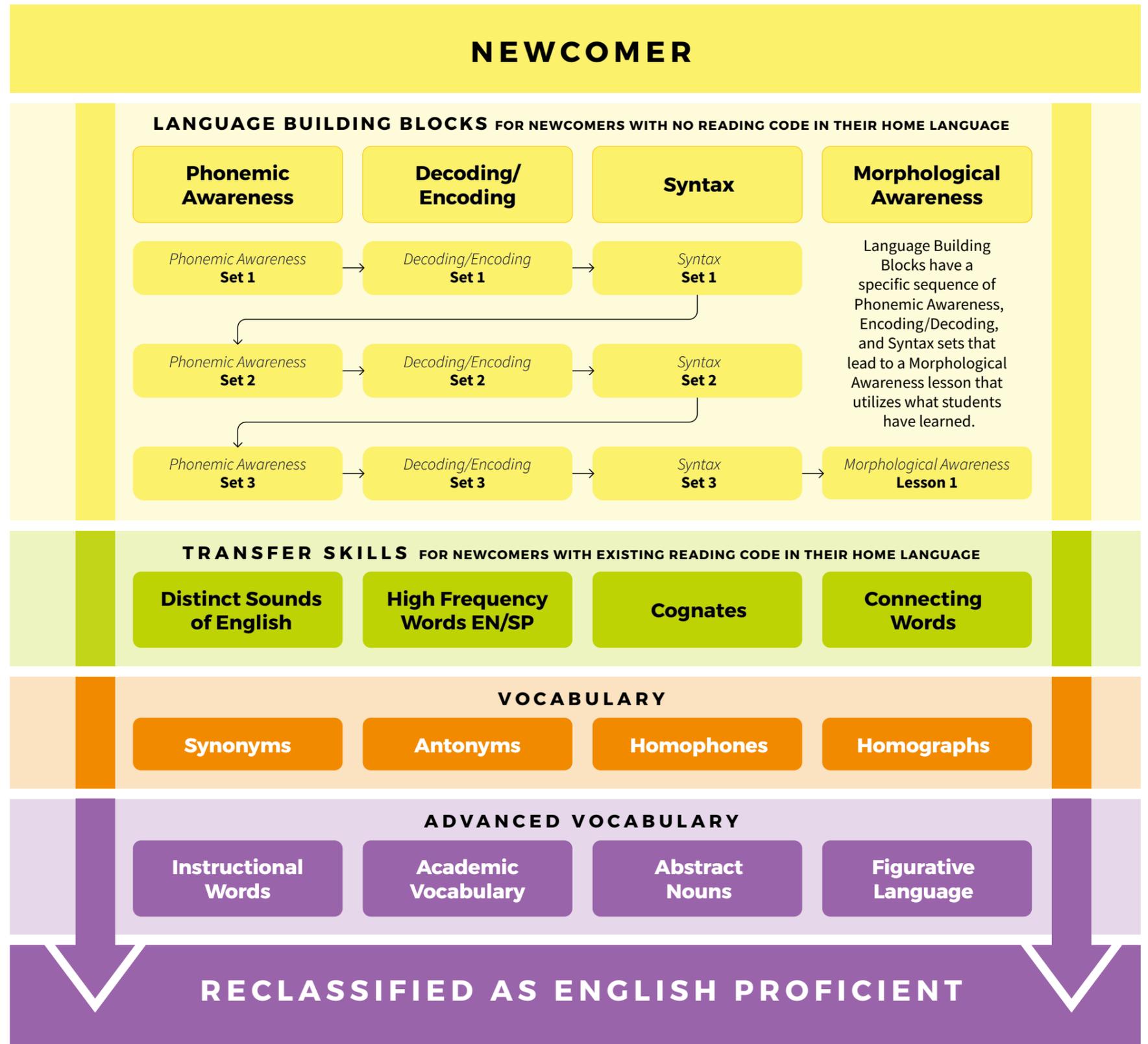
LANGUAGE-BASED SKILLS

C2L instruction of oral language development is connected with other language-based skills to deepen MLLs' understanding of how English works in order to accomplish many purposes. Activities focus on structure to develop familiarity with the basics of English grammar needed to comprehend the spoken word, and to produce language to convey thinking.

With C2L, MLLs are provided with ample opportunities to use and develop the language skills necessary for meeting grade-level academic content standards, including direct instruction for new vocabulary words.

“Given the absolute necessity of foundational word reading skills, it is tempting to think that instruction should begin with a focus on developing those and later turn to comprehension. However, research has supported a simultaneous, rather than sequential, model of reading instruction. Along with the development of phonological awareness, print concepts, and alphabet knowledge, young learners in preschool and early elementary school benefit from efforts to develop oral language comprehension, including efforts to develop oral comprehension of written language (i.e., through read-alouds).”

(CERVETTI, 2020; SWANSON ET AL., 2011)



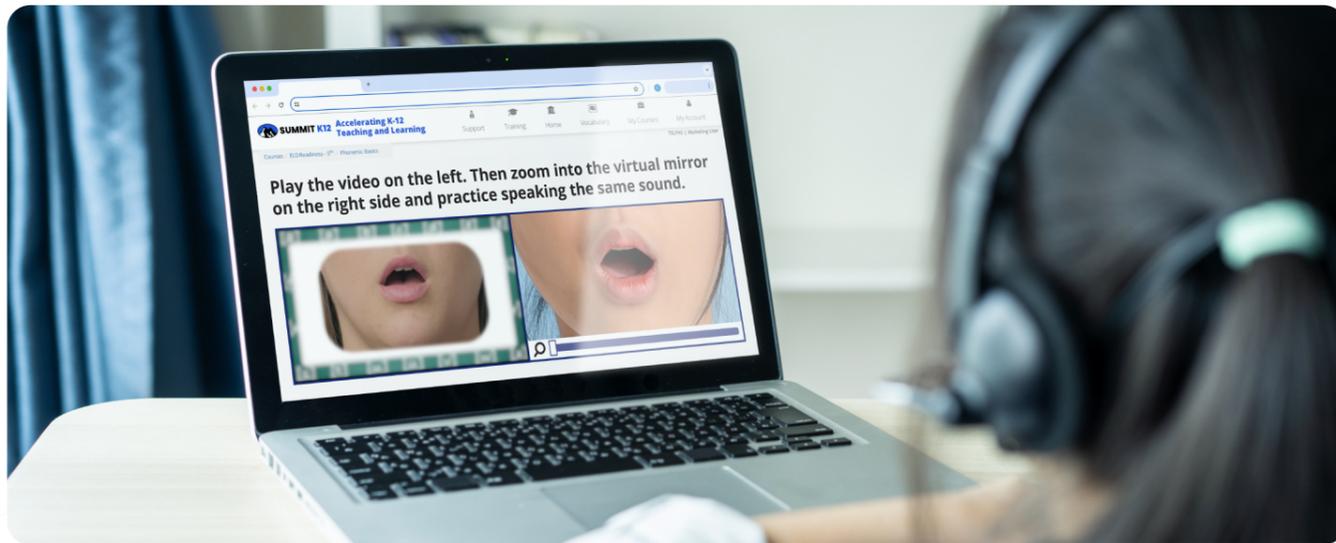
KEY DESIGN FEATURES:

Oral Language Development: Provides opportunities for conversation and articulation allow multilingual learners to become familiar with sounds that may not exist in their home language. Focused, repetitive articulation activities in meaningful context support the oral language skills necessary for strong language development and word recognition.

Cross-Linguistic Connections: Highlights cross-linguistic connections, capitalizing on students' existing language knowledge to facilitate literacy development. By showcasing similarities and differences between home languages and English, C2L empowers students to leverage their linguistic assets for decoding.

VIRTUAL MIRROR

Using the Virtual Mirror, students can practice articulatory gestures by first watching an example video and then using their webcam to zoom in on their mouth and repeat the gesture.

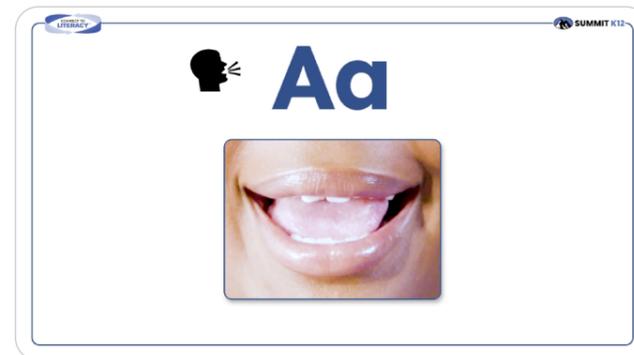


Connecting Meaning to Code-Based Instruction: Provides opportunities to connect phonemes and graphemes to the meaning of words to enhance students' ability to purposefully apply their knowledge of letters and sounds to understand a text's meaning. Without a focus on meaning, multilingual learners—especially those still building oral language skills in English—may struggle to create the neural connections necessary for word recognition.

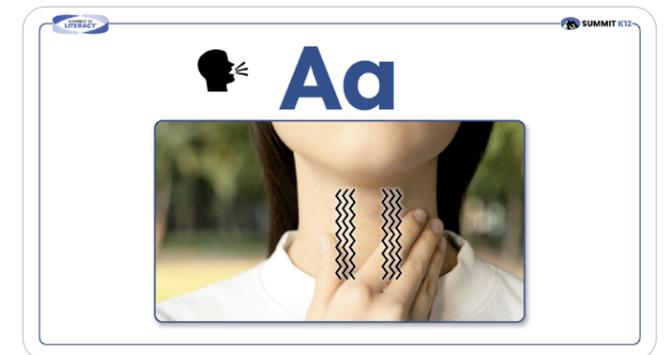
LANGUAGE BUILDING BLOCKS

Consisting of Phonemic Awareness, Encoding/Decoding, Syntax, and Morphological Awareness, Language Building Blocks address newcomer needs using an explicit and systematic approach.

Video example from Phonemic Awareness: Short Aa



First, students are introduced to the phoneme and shown the articulatory gestures.



Next, students are instructed to practice making the sound and sense how making the sound feels.



After being shown a visual of a practice word, students practice segmenting and blending.



Next, the practice word is given additional context through an image and a full sentence.

Aligned Formative Assessments: Incorporates consistent formative assessments to identify students' strengths and areas for growth and plan targeted support. These assessments help pinpoint where students may need additional support or practice, ensuring continuous growth through targeted practice opportunities.

Metalinguistic Awareness: Fosters metalinguistic awareness by explicitly drawing students' attention to sound patterns and relationships within words. This metacognitive approach empowers students to become independent readers and problem-solvers. This is especially important when multilingual learners are already literate in their home language and don't need a full dose of phonics because of the overlaps and transference of these kinds of skills from one language to another.

Advanced Phonics and Morphological Patterns: Provides advanced phonics opportunities that encourage students to analyze patterns in words and strengthen their ability to decode multisyllabic words and develop vocabulary. Instruction should provide opportunities for students to explore word morphology—examining prefixes, suffixes, and root words.

Fluency Development: Provides explicit fluency instruction that is informed by multilingual learners' unique process of English language development. – alongside reading comprehension and oral language development. Recognize that fluency rates may vary due to cognitive load, cross-linguistic connections, and background knowledge gaps.

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