Sheltered Instruction Principles & Scaffolding Techniques Underpinning HELP Features

Key Sheltered Instructional Principle	HELP Methods and Features
Increase content comprehensibility without simplification of the content (Gersten, Chard, Janaynthi, Baker, Morphy, & Flojo, 2009;; Krashen, 1992)	• Provides visual representation • Synchronizes audio, visual, text, and interactivity (every page) to create a visual connection between words and meaning. For example, corresponding vocabulary, symbols or pictures flash in sync with audio. • Models and demonstrates activities, followed by interactive practice using engaging manipulative tools (e.g., number lines, base ten blocks, hundreds charts, balance scales, geo-boards, spinners, etc.) and interactive math tools (e.g., calculator, protractor, rulers, thermometers, etc.). • Sequences from easy to difficult, with repetition and reinforcement. • Clear explanation of academic instructions. • Virtual teacher/coach has a slow and articulate speaking pace.
Direct, targeted vocabulary development: technical & academic English. (ASCD, 2007; Marzano, 2004; Collier, 1987; Cummins 1979, 1981)	• Explicitly teaches vocabulary includes a bilingual & pictorial dictionary & contextual hyperlinks (every page). Includes key concept vocabulary (fractions, tessellation), supporting vocabulary (numerator, plane) & academic English (simplify the expression, which of the following, if not X then Y). • Read-aloud throughout. • Language load factored into content design and development. • Integrated content and language objectives for each lesson.
Build background concept knowledge and pre-requisite skills. (Marzano, 2004)	• Computer adaptive and grade level placement tests find each student's level and progresses student through content. • Grade level and prior grade content is seamlessly integrated into a student's personalized curriculum, effectively building a bridge between what students know

	and need to learn and making explicit links between past learning & new concepts. • Scaffolds the learner by providing the correct academic and/or cognitive support to move student just beyond what they can learn unassisted (e.g., Home language translation, key terms dictionary, Need More HELP hints, etc.). • Scaffolds the math content by sequencing problems and concepts from easy to more difficult and procedural and problem solving strategies develop from teacher (program) modeled to student-directed. • Provides teachers with comprehensive foundational lessons and tools to individualize & customize lessons and curriculum. • Provides visual & contextual hints and clues and "Need More HELP" buttons.
Review and assess throughout with frequent comprehension checks. (Heward, 2009)	• Provides immediate, constructive, and descriptive feedback consistently. • HELP interactivity with unobtrusive testing and feedback is provided shortly after each instruction and demonstration.
Break down math procedures and concepts into small "learning chucks". (Miller, 1956)	• Systematic and discrete nature of skill presentation. • Demonstrates procedural steps and algorithms associated with problem solving.
Home language support and translations to make content comprehensible. (Franco, 2005)	• Provides Spanish audio and full bilingual translation, which may be turned on or off or phased out as needed. • Optional Spanish-only quizzes.
Increase connections to student lives. (Lock, 1997; Short and Echevarria, 1999)	• Provides "Real World" scenarios, at the start of each lesson. • Language of scenario is situated rather than abstract, with explicit links to current learning objectives.
Increase Higher Order Thinking Skills. (Short and Echevarria)	• Explicitly teaches problem solving approaches & test-taking skills – how to read, comprehend and answer 'look alike' questions from state standardized math tests. • Integrative NCTM process standards (e.g., communication, representation, approximation, etc.) are woven into each lesson.