



# HELP MATH

## THE INTEGRATION OF ACADEMIC LANGUAGE IN HELP MATH – ACADEMIC SUCCESS DEPENDS ON ACADEMIC LANGUAGE MASTERY

- Research-based strategies in HELP Math:
  - **Pre-teach essential vocabulary in context**– Building background knowledge (Marzano); KEY WORDS Activity in each lesson
  - **Repeat and practice of essential words in various different contexts** – Academic language is included in every activity in every lesson presented in a variety of contexts
  - **Integrate Academic Language throughout the instruction and interactivity** – simultaneous development of math concept and language mastery
    - **Academic Language is modelled** with guided practice, repeated, visualized, explained, and practiced again so that it is rendered understandable/comprehensible, and can be mastered so that the language is ready to be used to develop additional concepts (when a new concept is introduced, key vocabulary is additionally scaffolded, ensuring mastery)
    - **Synchronicity** – of audio, visual, and text, which creates connection between words, symbols, and meaning
    - **Visual representations** - HELP Math provides a visual illustration of concepts (e.g., a figure), as well as English and native language (Spanish) audio and interactivity (e.g., *click the butterfly*).
    - **Extra and content-specific vocabulary explained in English and Spanish through hyperlinks and key terms dictionary** - always includes text, audio and visual; function included in “Formulas” tab and “Need More Help” scaffolds
    - **Scaffolding the linguistic load through repeated exposure to Academic Language in a variety of contexts** (e.g., during instruction, learning games, etc.)
      - Clear description of academic tasks
      - Appropriate speech (pace of virtual math coach, sentence structure, paraphrasing)
    - **Interactive Notepad** - building students’ reasoning and writing skills using academic language
      - **Use Notepad for KWL activities** -
        - *What is my objective for today* (know and understand by the end of the class)?
        - *What do I know about this already* (prior knowledge)?
        - *What new vocabulary was introduced today?*
        - *One question that I would like to ask my teacher is...?*