**BASIC READING SKILLS:**Phonological Awareness

Processing Speed/Perceptual Speed

Rapid Naming

-Relates to need for automaticity in decoding

Working Memory/Short-term memory of meaningful material

(Sentence repetition)

Paired-associate learning(important for learning phoneme-grapheme relationships/letter naming – Rebus

Oral Language skills: Vocabulary, listening comprehension, verbal reasoning

**READING FLUENCY**:  
Processing Speed

Working Memory

Rapid Naming

Mental Control (KABC II Planning)

**READING COMPREHENSION:**  
Working memory/Short-term memory

Listening Comprehension

General language development and vocabulary

Auditory processing

Quick and automatic processing of letters and words, as well as word reading speed

**ARITHMETIC AND MATH COMPUTATION:**

Working Memory

Processing Speed/Perceptual Speed (RAN, counting speed, numerical processing fluency, ability to engage in subitizing)

Phonological processing (because counting requires phonological codes for number words)

Language Skills/comprehension/knowledge (development of number concepts)

Fluid Reasoning, Quantitative Reasoning, Deductive Reasoning

**MATH PROBLEM SOLVING**

Working Memory

Phonological processing (at younger ages)

Language skills/comprehension/knowledge (relates to linguistic demands of complex problems)

Processing Speed/Perceptual (including rapid processing of numbers and counting speed; apparently facilitates reasoning by freeing up resources in working memory)

Fluid Reasoning, Quantitative Reasoning, Deductive Reasoning

**WRITTEN LANGUAGE**  
Comprehension/knowledge

Processing Speed

Short-term Memory/Working Memory

Long-term retrieval (for early writing development only)