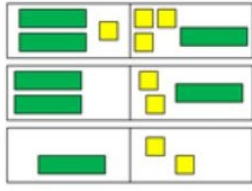
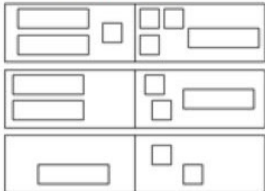


A note from the Instructional Coach

What is the Concrete, Representational, Abstract (CRA) Model in mathematics?

CRA is a three-part instructional strategy, with each part building on the previous instruction. CRA promotes student learning and retention and addresses conceptual knowledge.

1. **Concrete**- Each mathematical concept is modeled with concrete materials. This level is referred to as the "doing" stage because students manipulate the hands-on concrete objects to model the math concept/skill.
2. **Representational**- The teacher moves from the concrete model into a representational (semi-concrete) level that involves drawing pictures. This level is referred to as the "seeing" stage because students draw pictures that represent the concrete objects previously used to solve a math problem.
3. **Abstract**- This is the "symbolic" level which only uses numbers, notation, and mathematical symbols to represent the number of circles or groups of circles. The teacher and students use operation symbols to indicate addition, subtraction, multiplication, or division.

Concrete	Representational	Abstract
<p>Student uses algebra tiles to solve the equation.</p> $2x + 1 = 3 + x$ 	<p>Student solves the equation by drawing representations of the concrete model.</p> $2x + 1 = 3 + x$ 	<p>The student connects the concrete models and the pictorial representation to the algebraic methods.</p> $2x + 1 = 3 + x$ $2x + 1 - 1 = 3 + x - 1$ $2x = 2 + x$ $2x - x = 2 + x - x$ $x = 2$

To help build your child's math skills, I have included some games below!

Play Math Jeopardy - [Click here](#) to access math Jeopardy games on a variety of topics. Your child can play independently or against siblings on negative exponents, multiplication and division, and so much more!



Math Games for Kindergarten to 6th grade - [Click Here](#)

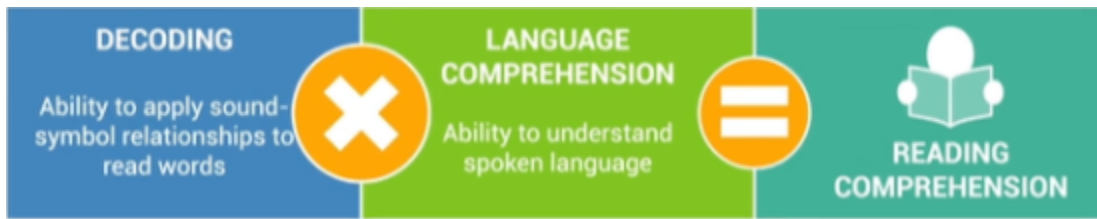


Basic Math Card Games - [Click Here](#)

If you would like math activities for home, please email me and let me know. I would be happy to offer some ideas and help! For instance, a card game to help your child learn their multiples or become fluent. This weekend you could solve equations based on player or team stats for the Superbowl!

What is the Science of Reading?

Reading is a complex process, but it can be explained with a simple equation.



Reading comprehension is the product of decoding and language comprehension. Therefore, strong reading comprehension cannot take place if decoding or language comprehension are low.

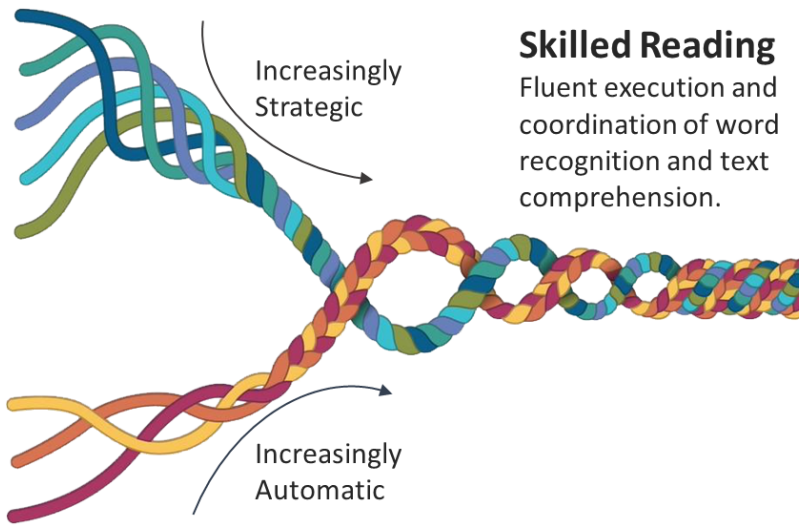
Below you will see Scarborough's rope which shows the development of skills over time that leads to a skilled reader. All the skills are intertwined because reading is a multifaceted skill gradually acquired over years of instruction and practice.

Language Comprehension

- Background Knowledge
- Vocabulary Knowledge
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

Word Recognition

- Phonological Awareness
- Decoding (and Spelling)
- Sight Recognition



Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press.

To help your child build their fluency skills, have your child practice re-reading texts of their choice. A variety of texts can be used such as magazine articles, newspapers, non-fiction texts, and fiction texts.

To help your child build their language comprehension skills, read books to them above their level. This will help improve their vocabulary, broaden their understanding of content areas, and build their understanding of grammar! Ask your child questions and discuss confusing parts and parts you enjoy!

Please reach out to me, if you have any questions!

-Kelly Bahre kbahre@canterburypublicschools.org