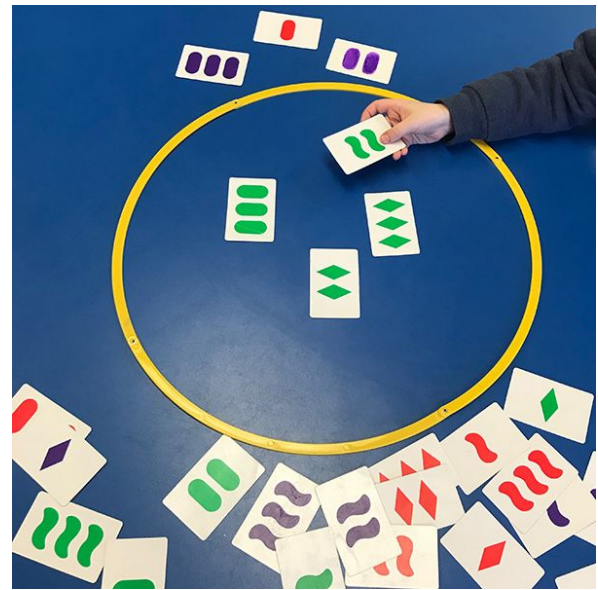


Foundational Cognitive Program

Foundational Cognitive Intervention is a hands-on, developmental approach to building the cognitive skills which facilitate academic growth. The foundational program targets development in the following cognitive domains: logical reasoning, gross motor coordination, and visual thinking.

Helping students with these key cognitive skills directly impacts their ability to read, comprehend, write, and problem solve. The goals of the foundational program are two-fold: to identify and address cognitive domains of need for each student, and to foster independent thinking and problem-solving in how the student approaches their work.



Logical Reasoning - *Problem solving flexibly and efficiently by making inferences and testing hypotheses*

Academic Implications: Logical reasoning is foundational to language comprehension, conceptual understanding of mathematics, and the development of independent thinking skills. A student with well-developed logical reasoning sees connections between concepts, makes efficient use of information to draw logical conclusions, and generates multiple solutions to a problem. A student with less-developed logical reasoning skills may recall isolated details, but struggle to apply them meaningfully. Logical reasoning skills help students to apply learned strategies in context, integrate new information with prior learning, sustain engagement with challenging work, think deeply rather than guess, and stand behind their own reasoning with confidence.

Gross Motor Coordination - *Coordinating the body axes in complex, spatial, goal-directed activities*

Academic Implications: Gross motor coordination is a concrete application of spatial awareness. The understanding of how to coordinate one's body is foundational to the development of other significant cognitive skills. Gross motor coordination supports the social and executive functioning skills of body awareness, maintaining socially expected space, and keeping belongings organized. Additionally, the visual thinking domain builds directly upon skills developed through gross motor coordination. The experience of picturing the body's orientation and movement in space serves as a concrete model which is later applied to the visualization and mental manipulation of abstract visual information.

Visual Thinking - *Representing and manipulating visual experiences, mentally constructed images, spatial environments, and abstract concepts*

Academic Implications: Visual thinking is the set of skills used to construct mental images which represent learned content and symbols. Reading, writing, and math make direct use of the visual thinking skills of spatial orientation and directional awareness, which are critical to recognizing and discriminating between similar letters and numerals. A student with well-developed visual thinking skills will picture in useful detail what is being read or discussed, rather than relying exclusively on auditory memory to retain the information. The visual thinking domain builds visual memory capacity and the ability to replicate or manipulate that visual information in response to specific cues (transpose horizontally or vertically, rotate by degrees, etc.). Strong skills in manipulating visual information help a student to integrate new information flexibly and efficiently during learning experiences.