



## Processing and Cognitive Enhancement

PACE (Processing and Cognitive Enhancement) is a twelve-week, intensive program for children ages six through eighteen who demonstrate difficulty with reading, spelling, attention, comprehension and math. PACE strengthens or develops the underlying thinking processes that support academic skills. Unlike other learning disabilities programs that focus on specific academic skills, PACE targets the brain's overall processing abilities.

The purpose of the intense PACE program is to establish stronger neurological pathway connections, produce significant changes quickly, and to ensure measurable cognitive changes. Through fast-paced, fun activities, cognitive skills are developed in areas of auditory and visual processing, working memory, processing speed, attention, logic and reasoning, and phonemic awareness. Skills are highly integrated throughout the program, as successful academic learning requires integration of the skills.

### 24 Underlying Processing Skills that PACE Works On

1. **Auditory Processing:** to process sounds. The major underlying skill needed to learn to read and spell.
2. **Auditory Discrimination:** to hear differences in sounds such as loudness, pitch, duration, and phonemes.
3. **Auditory Segmenting:** to break apart words into their separate sounds.
4. **Auditory Blending:** to blend individual sounds to form words.
5. **Auditory Analysis:** to determine the number, sequence, and which sounds are within a word.
6. **Auditory- Visual Association:** to be able to link a sound with an image.
7. **Comprehension:** to understand words and concepts.
8. **Divided Attention:** to attend to and handle two or more tasks at one time. Such as: taking notes while listening, carrying totals while adding the next column. Required for handling tasks quickly as well as handling complex tasks.
9. **Logic and Reasoning:** to reason, plan, and think.
10. **Long Term Memory:** to retrieve past information.
11. **Math Computations:** to do math calculations such as adding, subtracting, multiplying, and dividing.
12. **Processing Speed:** the speed which the brain processes information.
13. **Saccadic Fixation:** to move the eyes accurately and quickly from one point to another.
14. **Selective Attention:** to stay on task even when distraction is present.
15. **Sensory-Motor Integration:** to have the sensory skills work well with the motor skills - such as eye-hand coordination.
16. **Sequential Processing:** to process chunks of information that are received one after another.
17. **Simultaneous Processing:** to process chunks of information that are received all at once.
18. **Sustained Attention:** to be able to stay on task.
19. **Visual Discrimination:** to see differences in size, color, shape, distance, and orientation of objects.
20. **Visual Processing:** to process and make use of visual images.
21. **Visual Manipulation:** to flip, rotate, move, change color, etc. objects and images in one's mind.
22. **Visualization:** to create mental images or pictures.
23. **Visual Span:** to see more/wider in a single look.
24. **Working Memory:** Holding information in your memory while deciding what to do with it.