



School to Home Connection

Grade 4

Teachers expect their students to bring to the classroom certain levels of mental processing to empower mastery of reading, spelling, handwriting, mathematics and other basic and advanced curriculum content. So all students may improve their academic performance by developing the cognitive abilities that are foundational to all learning and behavior. Cognitive development is the purpose or by-product of the age-appropriate activities and products listed below. Depending on the student's developmental level and interests, the activities and products on our other lists (Grades K-2, 3, 5-6, Secondary) may also be appropriate.

Figural Thinking

Figural thinking is the ability to process information in the form of images, shapes and simple sounds. It appeals to the senses of sight, sound and touch - what we can directly see, hear and touch. It may be a photo, a sound, a gesture. This is a very important ability for beginning learners. Figural thinking is required to learn such subjects as Science and Drama.

- 3D Insect, by Theresa Greenaway (DK)
- Jacks
- Praise for remembering
- Designing cars, clothes, buildings, etc.
- Everything Is Somewhere*, by Marcea Vasiliu
- Tri-Ominos* game
- Racquet sports
- Perfection* game
- Building scale models
- LEGO Technic* products

Symbolic Thinking

Symbolic thinking is the ability to process information in the form of numbers, letters, signs, musical notation and other code systems that combine their elements in many diverse ways. Symbolic thinking is required to learn such subjects as Math and Computer Programming.

- Desktop publishing
- Bridge
- Pets and pet-care magazines
- Music lessons
- Biographies
- Goosebumps* books (various)
- Repair kits
- Fractions software

Semantic Thinking

Semantic thinking is the ability to process information in the form of words and ideas. Semantic information is abstract because one person's interpretation of an idea can differ from another's. Nevertheless, this conceptual difference is usually not great enough to interfere with communication. Semantic thinking is required to learn such subjects as Language Arts and Social Studies.

- Crossword puzzles
- Mythology and fairytales
- 'What if?' discussions
- Committee work
- Vocabulary programs
- National Geographic World* magazine

Comprehension

Comprehension is understanding - the immediate awareness or recognition of new information in any form. Students must be able to comprehend before they can learn. Comprehension is required to learn all school subjects.

- Martial arts
- Dewey Decimal System
- Using tape measure, measuring cups, etc., to determine distances and quantities
- Bird-watching
- *Future Problem Solving* competitions
- *Math for Smarty Pants*, by Marilyn Burns
- Sort and put away laundry, groceries, etc.

Memory

Memory is the retention or storage of information - and the ability to recall it when needed. Memory is required to learn any subject that involves memorization of rules, vocabulary, formulas, etc.

- Jump-rope rhymes
- Summarize books, TV shows or movies for family
- *Flags*, by DK Publishing
- Writing 'While You Were Out' notes
- Foreign-language lessons or software
- USA states and capitals games

Evaluation

Evaluation is decision-making - the process used to judge, evaluate, prioritize and analyze. It requires that an individual be able to compare what is to what should be. Evaluation is not often taught in school, but it is critical to most life skills.

- Fraction dominoes
- *Field Guide* books (various)
- Math materials from Dale Seymour Publications
- Mechanical and electronic repairs
- *Monopoly* games or software
- Almanacs
- Semaphores
- Shorthand lessons

Problem-Solving

Problem-Solving is working out the answer to a problem that requires more than mere retrieval from memory. The student is asked to interpret information and derive the accepted correct solution. Problem-Solving is required to learn all school subjects.

- Logic and reasoning games or software
- Maze books by Larry Evans
- Hobby magazines
- Adventure software games
- 'Thinking games' software
- 'Brain teasers' and 'brain ticklers'
- Easier reading books to build reading speed
- Oil paints or watercolors

Creativity

Creativity is the production of unique or novel information where the emphasis is on variety and quality of output. It requires fluency, flexibility, originality, quality and discipline. There are no predefined correct answers, no rules to follow, so people use their creativity to invent something new. Creativity is not often taught in school, but it is the basis of the movies, music and art that we enjoy, and likewise of prize-winning discoveries in science and medicine.

- Joke books
- *Put Your Mother on the Ceiling*, by Richard Demille & Robert De Mille
- 'Magic square' math puzzles
- Art lessons
- *Mad* magazine