

Building Thinking Skills (BTS) Program
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Building Thinking Skills - Grades: K-3

Purpose of Building Thinking Skills (BTS):

The Beginning (K-1) and Building (2-3) Thinking Skills Programs are built on developing the analysis skills and critical thinking mental models for children that will provide a foundation for all children to be successful in school as they advance through grade levels. The main purpose for selecting this program for Project Bright IDEA for nurturing the potential in underrepresented populations was the evidence gathered in student achievement and teacher, student and parent satisfaction with the knowledge and advances that the children made in vocabulary development and on the NC Literacy and Math Assessments. The Pilot Program was implemented in 2001-2004. Based on the pilot, the Javits Award was granted to further study how to “scale up” the program across a larger population of students. After three years in Project Bright IDEA 2, teachers report that Building Thinking Skills is the important set of skills and processes that have helped make Project Bright IDEA successful.

When the Department of Public Instruction was searching for a K-2 Thinking Skills Program as part of a nurturing program, the recommendation was made to look at the model that Miami-Dade and Palm Beach Schools were using and to evaluate their results. After reviewing the literature on other programs, BTS was selected because of the achievement results in Florida Schools, the developmental nature of the program and the competence and quality of the authors and the respect for their work in the field of Critical Thinking Researchers.

Building Thinking Skills Nurturing Potential Goals:

- 1. Promotes foundational and advanced k-2 cognitive skills and mental models for acquisition of the Standards in Language Arts and Math in the North Carolina Course of Study.**
- 2. Builds a large, universal vocabulary of English usage across all the disciplines. (BBTS = 1000 universal words. BTS=2000 universal words.)**
- 3. Develops and produces descriptive writing paragraphs by end of Kindergarten because of the focus on speaking and writing in complete sentences.**
- 4. Develops early understanding of geometry and number sense.**
- 5. Teaches learners the Piagetian Theory to proceed from the concrete to semi-concrete to abstract verbal form.**
- 6. Builds students' competence and confidence in taking assessments.**
- 7. Provides success for all learners, including ESL and other Exceptionalities.**

Skills and Processes

The five cognitive skills (describing, finding similarities and differences, sequencing, classifying and forming analogies) outlined in the program are research-based on the relevance and prevalence in academic disciplines and found on Standardized Tests. These analysis skills are required in all content areas and are all aligned with the Language Arts, Math, Science and Social Studies Standards in the North Carolina Course of Study.

Major Components

1. Student Workbook Approach

Paper and pencil tasks alone do not offer the same cognitive benefit as combining thinking skills tasks in all three forms—using picture cards, manipulatives, having discussion and providing answers and choices through the paper and pencil form. BTS is based on the student practicing the cognitive task in concrete form first with the manipulatives, then practicing the tasks in paper and pencil form and with a partner in a think, pair, share approach selecting the correct response as each sees it, explaining it in their own language to each other and supplying correctly the right choice. These exercises together provide the rich language and contextual meaning for the students. As the teacher introduces content standards, students can provide a collection of responses through a rigorous discussion for each lesson as seen in examples of group responses from lessons.

Building Thinking Skills Programs teach a rigorous lesson through the content lessons as children move beyond the Figural and Concrete activities. The lessons are integrated into local curriculum and pacing guides. The BTS lessons should be taught when the teachers are introducing new content or reviewing standards. This program can be adapted to meet local initiatives and used as another high-level resource for teaching analytical thinking.

In both figural and verbal strands, exercises are sequenced in the order that a developing child learns: cognition, evaluation and convergent production processes. The processes for all activities include: Select, Explain and Supply—all three processes provide an excellent strategy for doing tasks and activities for any lesson.

2. Training Approach

The training can be conducted in a half-day session on each of the levels to help teachers and administrators understand how to use the Teacher Manuals and how to teach the lessons. This training requires that the teachers read and understand the Teacher's Manual and that they use the recommended methods of instruction for the students. This training does not take the place of follow-up classroom visits by mentors, principals and curriculum specialists to assist with support and additional training. Mentors from Bright IDEA 2 can provide on-site classroom or school visits to assist teachers with strategies for task rotations and model lessons, when requested. Funding for the initial training has been provided from Javits funds for disseminating the program.

3. Individual Learning Needs

The BTS materials, when used appropriately, provide the teacher with built-in high level content strategies for meeting the individual needs of all children, including those identified as Exceptional Children. Some children will be able to move through the lessons quickly or may not need some of them at all. ESL children and those with learning disabilities or exceptionalities have been highly successful with BTS and in the pilot program--the gap was closed for these populations. The research underway with Bright IDEA 2 continues to show evidence that all children are highly successful with this program. Identified gifted children can move beyond these lessons into thinking skills infused into content using gifted methodologies. This program provides teachers with guidance on differentiating instruction for all children. For data on all populations from Project Bright IDEA 1, the pilot program, see www.aagc.org.

Summary

Building Thinking Skills is internationally recognized as superior in the field of cognitive-based critical thinking research. This program is one-of-a-kind best practice for K-3 children especially, even though it is a program for K-12 and materials are available for all grade levels. Project Bright IDEA 2, the Javits Research program, is expanding the project across many districts based on principals, teachers and parents requesting it for all of the students in our Cohort schools. Much of the evidence to support expansion has been through observations and test scores, including high scores on the IOWA's. For truly understanding the program, a classroom observation is highly recommended.

For an in-depth view of the Instructional Design of the BTS Program, see Building Thinking Skills, Teacher Manuals.

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