GATE Aduisory Committee Meeting #2 Apr11, 2025

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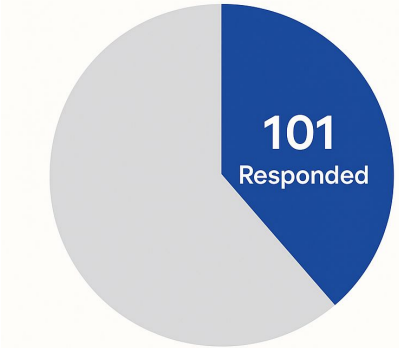
01

A Glimpse Into Secondary Student Survey Results

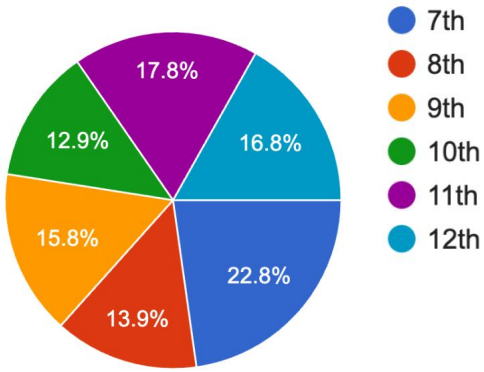
Student Demographics

29.4% Responded

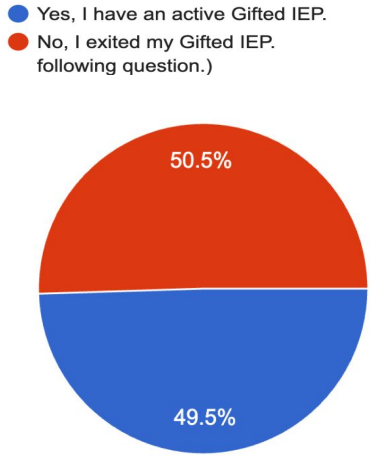
Out of 343 students, 101 responded



Current Grade Level

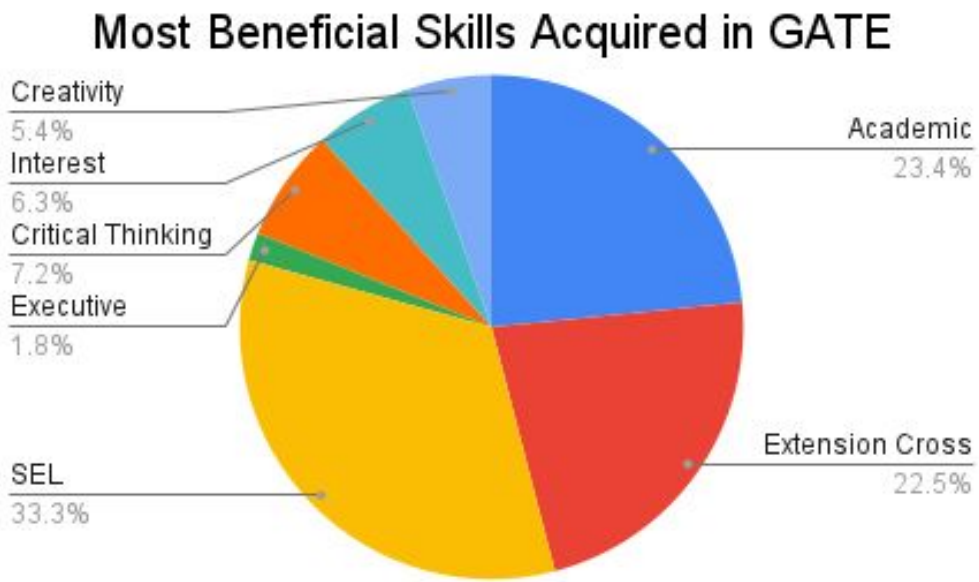


Current Status in GATE Prog.



Most Beneficial Skills Acquired in GATE.

Key
Extension and Cross Curricular Activities: Units explored cross-curricularly, getting exposure to new skills, such as phenology, economics, personal finance, etc.
Interest Development: Explore and discover personal areas of interest
Academic Enrichment: learning more advanced academic skills in reading or math
Executive Functioning: time management
Critical Thinking: problem solving, higher order thinking skills
Creativity: Out-of-the box thinking, abstract expression, etc.
SEL: interpersonal skills, self-advocacy, communication skills, perseverance, self-understanding



Students Appreciated

the gifted program because it offered valuable skills, including:

Skills Acquired

- academic enrichment
- critical thinking
- Social-emotional learning
- interpersonal

Students Appreciate

creative projects, real-world skills, and the chance to connect with like-minded peers for support and understanding.

02

Elementary GATE Program

How CogAT Data is Used to Drive Instruction
Academic Instruction

CogAT Differentiation Report

Differentiated Instruction Report

Recommendations

Profile Explanation

Students with these profiles have a relative strength in nonverbal (spatial) reasoning. Their median age stanine for all three *CogAT* batteries is in the low-average (stanine 4), average (stanine 5), or high-average (stanine 6) range.

Characteristics of Students with These Profiles

Overall, the reasoning abilities of these students fall in the average range. However, for most, their preferred mode of thinking (using visual mental models) often runs counter to the predominantly linear and verbal modes of thinking required at school.

For other students, however, the higher score on the Nonverbal Battery indicates strength in solving novel problems that are unlike the sorts of verbal and mathematical problems they typically encounter in school. If the strength in nonverbal reasoning is particularly large, suggestions for distinguishing among the different reasons why students show a relatively higher or lower score in nonverbal reasoning should be consulted. (See the suggestions in "For Additional Information.")

Students with a relatively higher score on the Nonverbal Battery tend to obtain lower than expected scores on achievement tests. At the primary grades, the deficit tends to be largest on the vocabulary, social studies, and science subtests. At the elementary level, the lowest scores tend to be on the vocabulary, reading comprehension, and usage/expression subtests. At the secondary level, the deficit includes math computation as well.

Instructional Suggestions for Profiles 4B (N+), 5B (N+), 6B (N+)

For most students, the N+ profile reflects a strength in spatial reasoning. Learning is easiest for these students when they can readily connect each new concept or relationship with a mental or physical model (e.g., a schematic drawing) of the situation. For young children, comprehension improves markedly when the text contains detailed illustrations. The tendency to rely on pictures and illustrations emerges whenever these individuals cannot readily envision a mental model of the situation or the problem. This commonly occurs when material is presented verbally at a rapid or inflexible rate (as, for example, in a video presentation). Allowing the student to control the rate at which verbal information is presented by a mechanical device is helpful. It also occurs when the student has no clear mental model of the situation. In all areas of the curriculum, but especially in science and mathematics, metaphors and analogies that allow the student to connect unfamiliar, abstract concepts to a more familiar physical system will not only enable them to understand but will greatly facilitate retention and transfer.

Although students with these score profiles have resources that are adequate for learning, they will nonetheless often have to work at the limits of their capacity when problems are complex or abstract. Students who score in the low-average range (stanine of 4) will experience this more frequently than individuals whose levels of verbal and quantitative reasoning abilities are in the high-average range (stanine of 6). Students who also have difficulties with spelling, grammar, and tasks such as writing and speaking that require verbal fluency will more frequently experience these frustrations as well.

Whenever students must work at the edge of their capacity, even small reductions in the burdens placed on working memory can have substantial benefits. Students who have relatively strong spatial reasoning abilities will especially benefit from strategies that help them create drawings when solving problems in mathematics, or concept maps when taking notes, or mental models of a scene when reading passages. For young children especially, encourage this by asking, What do you see? Older students can be asked to construct the scene--perhaps using computer images or cut-oufigures. When teaching writing, encourage these students to try descriptive rather than narrative prose. Help them first envision a scene before they attempt to describe it. Giving them examples of good descriptive prose is also helpful.

Finally, it is important to encourage the continued development of these student's spatial reasoning and thinking abilities. At all ages, they will learn most readily when the concepts described in textbooks and other media have previously been experienced concretely and can subsequently be applied concretely.

The implications for instruction are somewhat different if the N+ profile stems from a strength in solving unfamiliar problems rather than a relative strength in spatial reasoning. These students tend to be creative and to enjoy inventing new ways to solve problems. Such abilities can be capitalized upon and further developed if student's creative and inventive contributions are valued. On the other hand, a pattern of underachievement is suggested if the student also shows lower than expected scores on an achievement test as well. For these students, the score on the Nonverbal Battery will be higher than their scores on the Verbal and Quantitative batteries. These scores, in turn, are generally somewhat higher than corresponding scores for verbal and mathematical achievement. Understanding the reasons for the student's lag in development of verbal and quantitative abilities requires further investigation.

General Instructional Suggestions for All Students with a Median Stanine of 4, 5, or 6

Build on Strength. These students often display high levels of interest and achievement in particular domains. At all ages, but especially in adolescence, students strive to achieve individuality. One route is through recognition of excellence from peers and adults. Although such recognition is commonly attained through nonacademic activities such as sports, music, and other extracurricular activities, teachers should find ways to encourage student's particular academic accomplishments. Students who have average levels of reasoning ability can be recognized for their high levels of knowledge in particular domains. Sometimes they excel in other ways, such as in leading discussions, presenting reports, creating science projects, writing essays, or assisting other students in learning. Finding and nourishing the islands of excellence in all student's schoolwork spreads encouragement.

Focus on Working Memory. Students with levels of reasoning abilities that are typical for their age frequently must learn at the limits of their working memories, especially when tasks are new or require the simultaneous execution of several processes. Changes in instructional methods that reduce these burdens on working memory can, therefore, have a significant impact on their success in learning. For example, if a task involves comparing two concepts, it will be much easier if both are simultaneously in view. Have students put all the needed information in one place--on a single sheet of paper or a single concept map.

Educators can also reduce working-memory burdens for these students by using familiar concrete concepts rather than unfamiliar abstract symbols. Familiarity is greatest for overlearned concepts and skills. Practice on low-level skills can free working memory for higher-level processing. Self-monitoring skills are especially troublesome for these students, particularly in the primary grades. Offloading monitoring to another individual by having students work in pairs can be especially effective early in the process of acquiring a new skill or strategy.

Scaffold Wisely. Students with average levels of reasoning abilities tend to learn more effectively in school environments that are somewhat, but not highly, structured. These students tend to learn best when instruction is moderately paced and when there is frequent monitoring and feedback on their progress. The goal of this instruction is to provide students with enough support in the form of strategies, memory prompts, and task structure to enable them to infer, deduce,connect, and elaborate--in short, understand--for themselves. Highly structured activities that disallow such thinking may succeed in the short run but leave students less able to reason well on the next occasion.

Encourage Strategic Thinking. Memory burdens can be reduced and thinking made more systematic if students learn to be more strategic in their thinking. Since they may make errors when carrying out learning strategies, these students need frequent monitoring as they practice a new strategy, so that errors can be corrected. Modeling how to perform a strategy is likely to be more effective than describing it to students. Individuals who have average levels of reasoning abilities will generally need help in developing more effective and sophisticated strategies as learning materials and tasks become more difficult and complex. This help is likely to be most effective if it is given in the context of a realistic learning task, such as a specific reading or mathematical task that is a part of ongoing instruction. Supervised practice in identifying other situations where the use of the strategy is appropriate will also be beneficial.

Students with average levels of reasoning abilities tend to benefit from direct instruction in certain types of study skills such as note taking, outlining, diagramming, planning use of time, and formulating questions to guide the study of new material. These students need help to learn how to break up complex problems into simpler units so that they can work on the complex materials more effectively. They also need assistance in learning how to keep track of their progress in solving complex problems. These planning and self-monitoring processes are often ignored when instruction is structured by the teacher or by a text, as it often must be for such students. Ultimately, however, the goal is to help students become aware of their own strengths and weaknesses and of the effectiveness of different strategies for learning in different contexts. Such knowledge and skills are not acquired unless they are routinely exercised in situations where feedback is provided.

When Grouping, Aim for Diversity. Students typically learn how to think in new ways by first enacting new skills externally. Only after much overt practice can a skill be executed internally, that is, cognitively. Many cognitive skills seem to be acquired by first observing other students or adults model an interaction and, then, gradually learning to participate in the same sort of exchanges. Frequently, these exchanges proceed as conversations between a more knowledgeable participant and a less skilled participant. A critical aspect of learning new ways of thinking, then, is the availability of persons who can converse in ways that capture the type of processing one hopes the less skilled participants will eventually internalize. This is unlikely to occur when all group members are at the same level of competence. Diversity of cognitive competence is thus an essential requirement for groups if less skilled students are to learn how to think in more sophisticated ways.

Much more is required than simply gathering students into groups, however diversResearch shows that students of average ability are sometimes overlooked in groups. More-able students learn because they assume the role of teacher. Less-able students profit if they ask questions and receive good explanations. Students in the middle are easily left out of such exchanges. Therefore, it is often helpful to provide structures that ensure greater participation by all students in group activities. For example, one can rotate students through the position of discussion leader or summarizer. Then, at the conclusion of the discussion, provide feedback on things that the student did well and give one suggestion for improvement.

Student Break Down by Score

1-3	4	5	6	7	8	9
	Sue 4A	Sue 5B (V-)	Sue 6B (Q+)	Sue 7A	Sue 8E (Q+)	Sue. 9A
	Sue 4A	Sue 5B (N-)	Sue 6B (V-)	Sue 7C	Sue 8B (V-)	
	Sue 4A	Sue 5C (V-, Q+)		Sue 7B (Q-)	Sue 8C (V+, Q-)	
		Sue 5B (V-)		Sue 7B (V-)		
		Sue 5A				

Key:

A→About the same across subtests

B→One area of relative strength or weakness

C→One area of relative strength AND and area of relative weakness

E→Show exceptional qualities in one or more areas.

V verbal

Q quantitative

N nonverbal

Group 1 Stanine 1, 2, 3

- Process information slowly
- Trial and error instead of strategy
- Lower working memory capacity
- Difficulty transferring information

Group 2 Stanine 4, 5, 6

- Adequate knowledge but difficulty with recall
- Do not analyze tasks to find relationships with previous
- Learn strategies but difficulty implementing

Group 3 Stanine 7 & 8

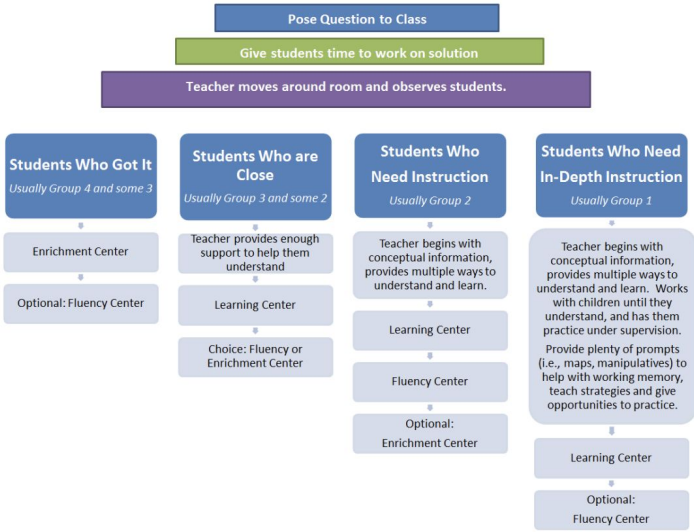
- Good memory
- Effective learning strategies
- See connections between new concepts and previously learned

Group 4 Stanine 9

- Organize and store knowledge differently
- Superior problem-solving
- Effective strategies
- Good at making meaning of new information
- Negative affect; lack of persistance

Source: Broward County Schools

Group	Group 4	Group 3	Group 2	Group 1
Environment	Discovery	Guided Discovery	Semi-Structured	Structured
Group for Diversity	Diversity of perspectives	Opportunity to *learn* as well as teach	Ensure participation	Opportunity to *teach* as well as learn
Scaffold	Negative Affect Persistance	Teach to obtain feedback and direction	Provide enough but not too much support	Direct attention to important aspects of task
Reduce load on Working Memory	Automatize lower-level skills	Automatize lower-level skills	Use concrete instead of abstract concepts; provide visual materials	Reduce number of things to attend to simultaneously
Strategy Use	Provide opportunies to observe models but allow to use own strategies	Teach different strategies and have them monitor effectiveness	Model strategies and have students practice	Direct instruction and plenty of practice



Academic Instruction

Math Differentiation

- **Flexible, small group**

Students have the opportunity for weekly differentiated math instruction K-6

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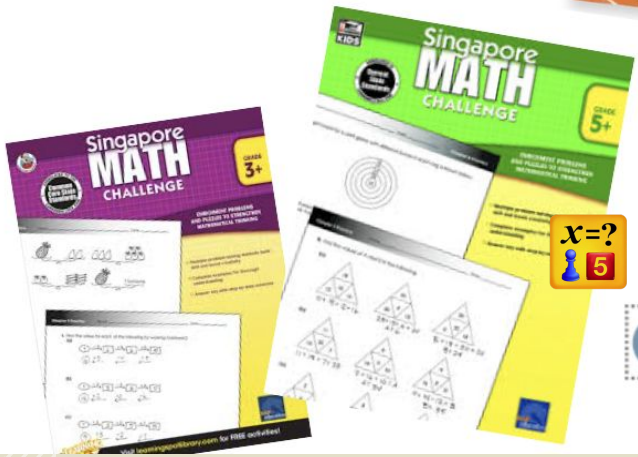

TANG MATH

Byrdseed.TV

BORENSON MATH POWERFUL WHOLE-BRAIN LEARNING

OPEN MIDDLE

ELA Differentiation

- Flexible, small group

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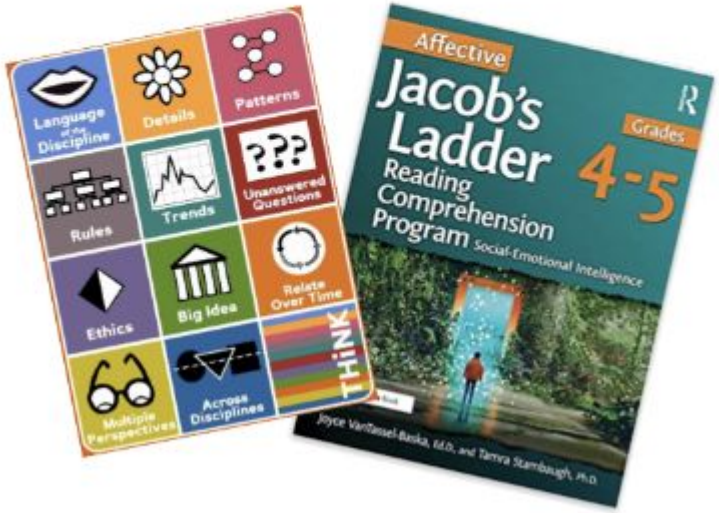
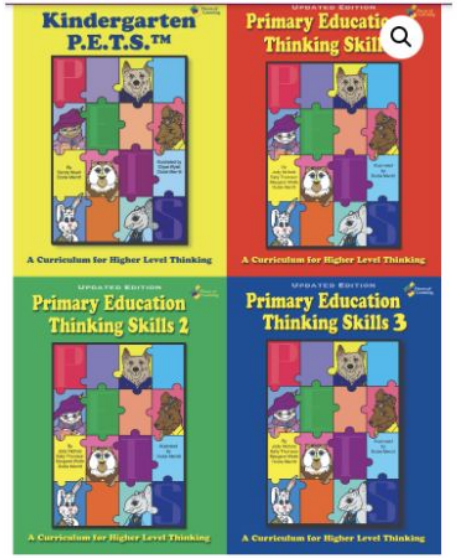


Third Grade CKLA

UNIT 1: Classic Tales: The Wind in the Willows					EXTENSION IDEAS
Lesson	**Text Analysis/ Comprehension**	**Speaking and Listening**	**Language and Vocabulary**	**Writing**	**Idiom book** **Personification poetry** **Opinion Essay:** Read **The Three Little Pigs and the True Story of the Three Little Pigs**. Write an opinion essay on whether or not the wolf is innocent or guilty. Give at least three supporting details for your opinion.
1	**Wind in the Willows** Character Analysis: Compare & Contrast 2 characters	**River Bank** Main Idea & Supporting Details	Short Vowel Review		
2	**The Thief** Ask and Answer questions for understanding	**River Bank** Main Idea & Supporting Details	Long Vowel Review	Perspective: rewrite a scene from Rat's perspective.	
3	**All's Well That Ends Well** Character Analysis/ Themes Chart	**Open Road** Themes	Syllables and consonants		
4	**Hungry Troll** Ask-and-answer questions for understanding	**Wild Wood** Identify theme	Long Vowels	Alternate endings to the story	**In class differentiation:** Alliteration

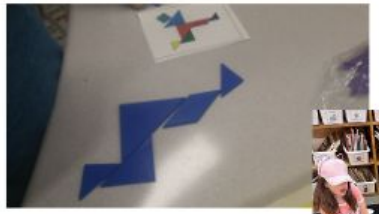
K-3rd Whole Group



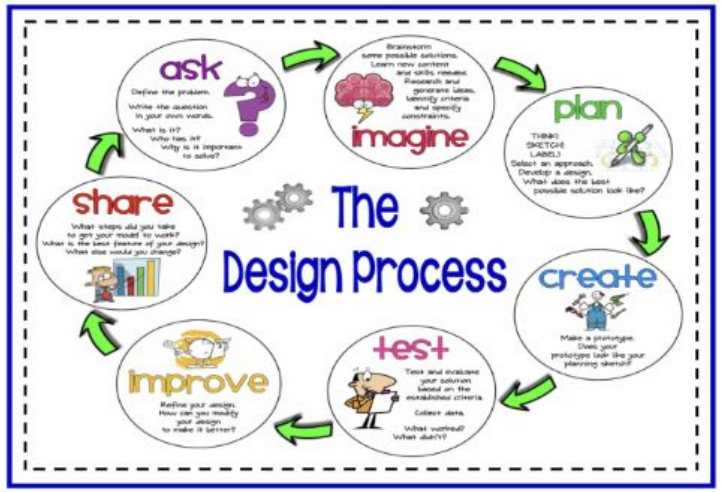
PETS = Primary Education Thinking Skills

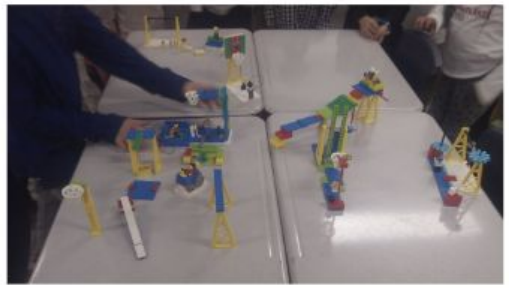
Teachers use this program to teach critical thinking, convergent and divergent thinking to students in grades Kindergarten through third grade. The activities are lots of fun and engage the students.

P.E.T.S with STEAM



Practical application of “Max the Magician” thinking using tangrams and pattern blocks.





Using divergent thinking skills to create a new playground.

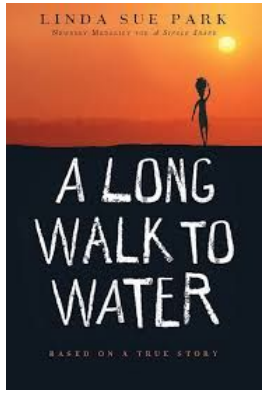
Putting convergent thinking to the test using rotation dominoes.

“SCAMPER” process =
Substitute something
Combine things
Add something
Make parts bigger or smaller
Put to another use
Eliminate something
Rearrange parts

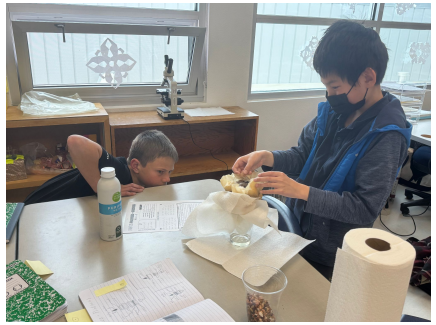
Overarching Concepts

Power		Symbols		Change	
Math & Science	**Society**	**Math & Science**	**Society**	**Math & Science**	**Society**
-Electricity -Exponents -6 Simple Machines -Erosion	-Self Advocacy -Leadership -Consumer Power -School System	-Chemistry -Coding -Algebra -Animal Tracks -Color	-Countries -States -Government -Dia de los Muertas	-Energy Transformation -Rube Goldberg Machines -Landscapes and Environments	-Government -Structures -Traditions
Communication	**Design**	**Communication**	**Literature**	**Communication**	**Literature**
-Arguments and Debate	-Architecture -Art -City Planning -Storytelling	-Color -Cryptograms -Braille	-They All Saw a Cat -Nursery Rhymes	-English Language -Can you change a mind?	-Fairy Tales -The Last Cuentista -The Barren Grounds

Project Based Learning (PBL)



Book study: A Long Walk to Water, followed by a water filtration challenge

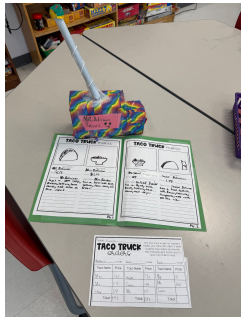


An extension on the study of the Maya, followed by a recreation of a Mayan city

PBL Continued

Students created complex machines

Students created taco truck businesses and opened for their classmates to order from their food trucks



PBL Continued

Participation in New Mexico Electric Car Challenge

Design and research report competitions

Race competition

Researching and making slide shows about animals from the continent.

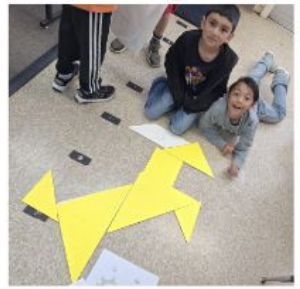
Then displaying these at the White Rock Multicultural Fair.

STEAM Projects

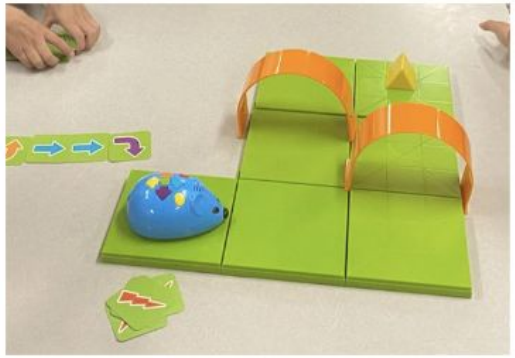
Chain Reactions Divergent Thinking

Lava Lamp Experiments Using Convergent Thinking

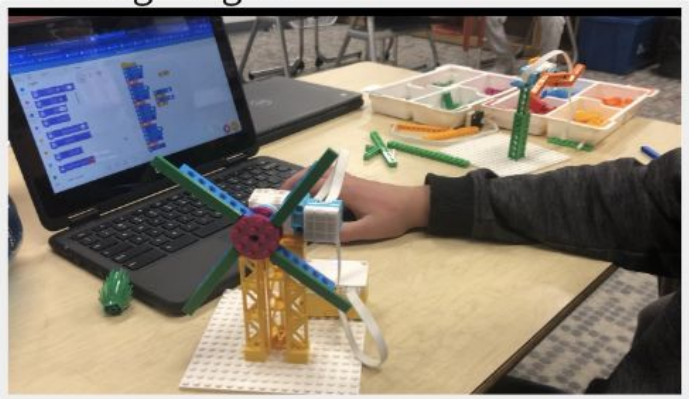
Big Tangrams Using Convergent/Divergent Thinking



Putting convergent thinking to the test using coding robotic mice.



Using Divergent thinking using Legos



More STEAM Projects

WeDo Lego Robotics kits - and mentoring younger students on their use.

Lego Mindstorms Robotics kits with upper elementary students.

03

Q&A

GATE Advisory Committee Meeting #3

Date: Thursday, May 8, 2025
Time: 4:15-5:45
Place: Zoom Zoom Link Meeting #3
Agenda:
Meeting social/emotional needs of gifted students
Transition of gifted students from elementary to middle to high school
Gifted program at the middle school
Gifted program at the high school

Thank you!