Visual–Spatial

What does it mean to be gifted in nonverbal reasoning?
What is Nonverbal Reasoning?

- Ability in spatial and abstract thinking
- Ability to solve problems using shapes and figures

Items on these subtests of the Cognitive Abilities Test involve neither words nor numbers.
There are two main ways people learn

- **Visual–spatial learners** think in pictures rather than words. They have a different brain organization than auditory–sequential learners. They learn better visually than auditorily.

- **Auditory–sequential learners** think in words. They learn better by hearing information and following a logical sequence.
Tendencies of the Visual-Spatial Learner

- Thinks primarily in pictures
- Has visual strengths
- Whole-to-part learner
- Creates unique methods of organization
- Arrives at correct solutions intuitively
- “Gets” difficult concepts, yet can struggle with easy concepts
- Relates well to space
- Learns concepts all at once
**Visual-Spatial**

- Does well with geometry
- Good at math reasoning
- Synthesis
- Sight words
- Prefers keyboarding to writing
The Visual–Spatial Learner

- Sees how things exist in space
- Sees how parts go together to make a whole
- Develops asynchronously (unevenly)
- Is a late bloomer
- Loses track of time
- May struggle with public speaking
The Visual–Spatial Learner

- When the light bulb goes on, the learning is usually permanent.
Gifted in Nonverbal

- How do we know this?
  - Your child scored at or above the 97th percentile on the subtest of the Cognitive Abilities Test (or other state-approved assessment) that measures nonverbal reasoning.
What does this mean?

- Your child is very good at reasoning with spatial stimuli or particularly adept at solving novel problems.
Spatially gifted students have the ability to draw conclusions based on a set of given information. They often learn by thinking or “seeing through their mind’s eye” instead of listening verbally.
Gifted in Nonverbal

Puzzles, manipulative games, pattern, and building/creating things come easily for kids who are gifted in this area. They can “see” how things go together and are able to “see” what is missing.

Their thinking is often in the form of patterns or pictures.
STEP 1: ASSEMBLE PART A TO PART B. STEP 2: GLUE THESE PIECES SECURELY. STEP 3: FIND PART C AND CONNECT TO PART D...
Traditionally, instruction in schools has tended to be geared to the auditory-sequential style of learning.
What Are the Implications for Learning and School Success?

- Students with strong spatial skills often experience difficulties in school. They may have difficulty in verbal fluency (as when writing under time pressure or speaking extemporaneously) or difficulties in remembering sequences of words or letters (as in spelling).
Teachers are now much more aware of brain-based research. We know that the left side of the brain is responsible for language, for breaking words and thoughts apart, and for details.
Brain-Based Research

The right side of the brain is responsible for feeling and rhythm, for blending words and thoughts, and for getting the big picture.
Teaching Strategies

- Teachers in Kyrene are provided ongoing training on strategies by which they can tap into the exceptional abilities of students who are identified as gifted in nonverbal reasoning.

- Teachers of the gifted at each school are a resource to regular classroom teachers to advise them on those particular teaching strategies that tend to be the most successful with students who are gifted in nonverbal reasoning.
Teaching Strategies

- What are some of these?
  - Visual directions
  - Models, charts, tables, graphs, pictures
  - Hands-on learning experiences
  - Visualization techniques
  - Whole-to-part approach
  - Use of color
  - Organization strategies
  - Computers and other technology
  - Use of context clues
  - Timing strategies
  - Wait time
  - Questioning techniques
  - Disciplining strategies
Spatial reasoning is not a subject area like language arts, math, or science.

It is a learning modality, a way that people learn.
What Can Parents Do?

Provide Support

- Become informed about visual-spatial learners
- Assist your child with organization
- Provide time for your child to complete homework assignments
- Maintain collaborative communication with your child’s teachers
What Can Parents Do?

Provide Opportunities

- Art museums
- Science museums
- Hands-on experiences
- Classes (e.g., drawing, art, computer)
- Clubs (e.g., chess, Lego, Odyssey of the Mind, robotics)
- Time to explore, draw, build, take things apart, invent
- Toys, games, puzzles
- Websites
Some Commercial Materials for the Visual-Spatial Learner

- Logic Links
- Noodlers
- Connect 4
- Hexed
- Rack-O
- Master Mind
- Simon
- Battleship
- Set
- Chess
- Checkers
- any skill card game
- Bridge
- Canasta
- Hearts
- many Discovery Toys
- any construction material
- Erector sets
- K’Nex
- Capsela
- Legos
For More Information...

- **Books**
  - *Upside-Down Brilliance: The Visual-Spatial Learner* by Linda Kreger Silverman, Ph.D.
  - *Visual-Spatial Learners* by Alexandra Shires Golon

- **Websites**
  - [www.visualspatial.org](http://www.visualspatial.org)
  - [www.visual-learners.com](http://www.visual-learners.com)
  - [www.gifteddevelopment.com](http://www.gifteddevelopment.com)