### The Brain

The human brain is divided into regions that control various motor and sensory functions. Some of these regions are depicted here.

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The left side of the brain controls the motor and sensory functions of the right side of the body, and is responsible for scientific functions, understanding written and spoken language, number skills and reasoning.

The right side of the brain controls the motor and sensory functions of the left side of the body. It also controls artistic functions such as music, art awareness and insight.



#### **LEFT BRAIN FUNCTIONS**

- Uses Logic
- Detail Oriented
- Facts and Rules
- Words and language
- Present and Past
- Math and Science
- Can Comprehend
- Knowing
- Acknowledges
- Order/Pattern/Perception
- Knows Object Name
- Reality Based
- Forms Strategies
- Practical
- Safe

#### **RIGHT BRAIN FUNCTIONS**

- Uses Feeling
- "Big Picture" Oriented
- Imagination Rules
- Symbols and images
- Present and Future
- Philosophy & Religion
- Can "Get It" (i.e. meaning)
- Believes
- Appreciates
- Spatial Perception
- Knows Object Function
- Fantasy Based
- Presents Possibilities
- Impetuous
- Risk Taking





http://www.news.com.au/perthnow/story/0,21598,22 492511-5005375,00.html

### The Right Hemisphere is Not Good At:

- •Verbal control
- Making logical propositions
- •Sequencing
- •Keeping a sense of time
- •Categorizing and Naming
- •Analyzing and Abstracting Striking Characteristics

#### **Linear Vs. Holistic Processing**

- The left side of the brain processes information in a linear manner.
  - It processes from part to whole.

 It takes pieces, lines them up, and arranges them in a logical order; then it draws conclusions.

- The right brain however, processes from whole to parts, holistically. It starts with the answer.
  - It sees the big picture first, not the details.
  - If you are right-brained, you may have difficulty following a lecture unless you are given the big picture first.
  - That is why it is absolutely necessary for a right-brained person to read an assigned chapter or background information before a lecture or to survey a chapter before reading.
  - If an instructor doesn't consistently give an overview before he or she begins a lecture, you may need to ask at the end of class what the next lecture will be and how you can prepare for it.

- If you are predominantly rightbrained, you may also have trouble outlining (You've probably written many papers first and outlined them latter because an outline was required).
- You're the student who needs to know why you are doing something. Leftbrained students would do well to exercise their right-brain in such a manner.

### **Symbolic Vs. Concrete Processing**

- The left brain has no trouble processing symbols. Many academic pursuits deal with symbols-such as letters, words, and mathematical notations.
  - The left brained person tends to be comfortable with linguistic and mathematical endeavors.
  - Left-brained students will probably just memorize vocabulary words or math formulas.

# The right brain, on the other hand, wants things to be concrete.

- The right brain person wants to see, feel, or touch the real object.
- Right brain students may have had trouble learning to read using phonics.
- They prefer to see words in context, to see how the formula works.
- To use your right brain, create opportunities for hands-on activities, use something real whenever possible.
- You may also want to draw out a math problem or illustrate your notes

#### **Logical Vs. Intuitive Processing**

- The left brain processes in a linear, sequential, logical manner.
  - When you process on the left side, you use information piece by piece to solve a math problem or work out a science experiment.
  - When you read and listen, you look for the pieces so that you can draw logical conclusions
  - In writing, it is the left brain that pays attention to mechanics such as spelling, agreement, and punctuation.

## If you process primarily on the right side of the brain, you use intuition.

- You may know the right answer to a math problem but not be sure how you got it.
- You may have to start with the answer and work backwards.
- On a quiz, you have a gut feeling as to which answers are correct, and you are usually right.
- In writing, the right side pays attention to coherence and meaning; that is, your right brain tells you it "feels" right.

**Reality-Based Vs. Fantasy-Oriented Processing** 

- When left brain students are affected by the environment, they usually adjust to it.
- Not so with right brain students. They try to change the environment!
- Left brain people want to know the rules and follow them. In fact, if there are no rules for situations, they will probably make up rules to follow!
- Left brain students know the consequences of not turning in papers on time or of failing a test.
- But right brain students are sometimes not aware that there is anything wrong.

- So, if you are right brain, make sure you constantly ask for feedback and reality checks.
- It's too late the day before finals to ask if you can do extra credit.
- Keep a careful record of your assignments and tests.
- Visit with your teachers routinely.
- While this fantasy orientation may seem a disadvantage, in some cases it is an advantage.
- The right brain student is creative.
- In order to learn about the digestive system, you may decide to "become a piece of food!
- And since emotion is processed on the right side of the brain, you will probably remember well anything you become emotionally involved in as you are trying to learn.

- These are just some of the differences that exist between the left and right hemispheres, but you can see a pattern.
- Because left brain strategies are the ones used most often in the classroom, right brain students sometimes feel inadequate.
- However, you now know that you can be flexible and adapt material to the right side of your brain.
- Likewise, those of you who are predominantly left brain know that it would be wise to use both sides of the brain and employ some right brain strategies.

- Experiments show that most children rank highly creative (right brain) before entering school.
- Because our educational systems place a higher value on left brain skills such as mathematics, logic and language than it does on drawing or using our imagination.
- Only ten percent of these same children will rank highly creative by age 7.
- By the time we are adults, high creativity remains in only 2 percent of the population.