|  |  |
| --- | --- |
| **LEFT (Analytic)** | **RIGHT (Global)** |
| **Successive Hemispheric Style** | **Simultaneous Hemispheric Style** |
| **1. Verbal** | **1. Visual** |
| **2. Responds to word meaning** | **2. Responds to tone of voice** |
| **3. Sequential** | **3. Random** |
| **4. Processes information linearly** | **4. Processes information in varied order** |
| **5. Responds to logic** | **5. Responds to emotion** |
| **6. Plans ahead** | **6. Impulsive** |
| **7. Recalls people's names** | **7. Recalls people's faces** |
| **8. Speaks with few gestures** | **8. Gestures when speaking** |
| **9. Punctual** | **9. Less punctual** |
| **10. Prefers formal study design** | **10. Prefers sound/music background while studying** |
| **11. Prefers bright lights while studying** | **11. Prefers frequent mobility while studying** |

|  |  |
| --- | --- |
| **Left Brain People*** Like structure
* Easily learn math facts
* Analytical
* Auditory learner
* Likes details or step-by-step instruction
* Likes textbooks and workbooks
* Can learn with black and white
 | **Right Brain People*** Spontaneous
* Imaginative
* Intuitive
* Visual leaner
* Understands the whole picture and concept easily
* More of a hands on learner
* Needs color and pictures to learn
 |

**COMMON CHARACTERISTICS OF A LEFT BRAIN LEARNER**

* Tends to seek structure in the school day.
* Memorizes best by repetition (auditory or writing).
* Likes to know the plan for each day, week, etc.
* Tends to work well independently.
* Likes to make lists, and check them off as tasks are completed.
* Thinks things through with multiple pieces of evidence before coming to a conclusion.
* Tends to find math interesting, and is very good at it.
* Likes the predictability and conciseness of workbooks.
* Can do well with self-paced and computer curriculum.

**COMMON CHARACTERISTICS OF A RIGHT BRAIN LEARNER**

* Likes spontaneous events, versus planned events each day. Seeks change.
* Memorizes best by using meaning, color, pictures, story, or emotion in material.
* Does not plan ahead regularly.
* Prefers much involvement with parent while doing daily lessons.
* Does not do items sequentially, but skips around in his or her work.
* Makes quantum leaps when learning. Figures things out from scanty evidence.
* Finds math quite repetitive and somewhat boring.
* Prefers projects and discussions rather than workbook learning.
* Does not do well with self-paced or computer curriculum, but rather one that requires more parent and teacher involvement, such as unit studies, or any curriculum that is more hands-on and interactive with the adult.

How Can Educators Help the “Right-Brained”/“Left-Brained” Student?

You can observe students’ “ways” of thinking, behaving, speaking, and functioning to understand

Their natural learning preferences. Certain characteristics or abilities from your students may appear to be “right-brained” or “left-brained.” Once you see what those natural strengths and preferences are, you can tailor activities to their learning styles. Keep in mind, though, that using many different teaching

techniques can benefit all your students, both “right-” and “left-brained.” It is also important to remember that an individual can exhibit both “right-” and “left-brained” traits.

For many students, particularly those who are “right-brained,” a

visual, such as a picture or 3-D model, can help them better

understand a concept. Another way to help “right-brained” students is

to pair music with learning. Have students make up a song about

history facts and sing it to the melody of a familiar song such as “On

Top of Old Smoky.” Let these students see, feel, and touch things.

“Right-brained” students also seem to thrive when doing group or

hands-on activities, such as (Quantum Learning, 1999, p. 31):

 Shared learning

 Group discussions

 Role-play/simulations

 Experiments

 To help “left-brained” students, provide information in very

logical sequences—for example, make (numbered) lists for them.

Another way to help students with a left-brain preference is to give

them typed or printed directions. Let these students do their work step

by step. “Left-brained” students seem to thrive when following plans

and having structure with activities, such as (Quantum Learning, 1999,

p. 31):

 Analysis

 Research

 Realistic projects

 Worksheets

### ****The Left-Brain Teacher****

Teachers with left-brain strengths generally prefer to teach using lecture and discussion. To incorporate sequence, they put outlines on the board or overhead, and they like to adhere to prepared time schedules. They give problems to the students to solve independently. Teachers with left-brain preferences assign more research and writing than their right-brain peers. A reasonably quiet, structured classroom is preferred. The classroom tends to be clean, with items in their place.

### ****The Left-Brain Student****

Left-brain students prefer to work alone. They like to read independently and incorporate research into their papers. They favor a quiet classroom without a lot of distraction.

Dorothy scores "strong left" on a brain preference test for children. Though Dorothy is not learning disabled, her right hemisphere is significantly weaker than her left. She has great difficulty understanding lessons with a visual-spatial orientation. Dorothy is also a perfectionist. When the fourth-grade teacher initiates an art project, Dorothy believes that she cannot do the work successfully. She is afraid to fail and consequently becomes nauseous. Seeing the nurse accomplishes two things: It gets her away from an unpleasant situation and gives her time to regroup herself prior to Reading time.

Let's say, for example, that you are introducing a unit on the solar system. Here are some left-brain teaching techniques that will help Dorothy and other strong to moderate left-brain students feel engaged during your lesson:

* Write an outline of the lesson on the board. Students with left-brain strengths appreciate sequence.
* Go ahead and lecture! These students love to listen to an expert and take notes.
* Discuss vocabulary words. Students like Dorothy have a large vocabulary and are interested in words. Make a crossword puzzle on the Solar System.
* Discuss the big concepts involved in the creation of the universe, how the solar system was formed, and so on. Left-brain students love to think about and discuss abstract concepts.
* Assign individual assignments so students may work alone.
* Ask the students to write a research paper on the solar system that includes both detail and conceptual analysis.
* Keep the room relatively quiet and orderly. Many students with left-brain strengths prefer not to hear other conversations when working on a stimulating project.

### ****The Right-Brain Teacher****

Teachers with right-brain strengths generally prefer to use hands-on activities over a lecture format. In concert with the right-brain preference of seeing the whole picture, these teachers incorporate more art, manipulatives, visuals, and music into their lessons. They tend to embrace Howard Gardner's multiple intelligences. They like to assign more group projects and activities, and prefer a busy, active, noisy classroom environment. The classroom of a strong right-brain teacher will typically have materials and books scattered all over.

### ****The Right-Brain Student****

Right-brain students prefer to work in groups. They like to do art projects, industrial arts electives in middle school, and graphic design. They would prefer to design and make a mobile rather than write "another tedious term paper."

Sam scores "strong right" on a brain preference test for children. His left hemisphere, though healthy, is significantly weaker than his right. Though Sam does not have a learning disability, he has difficulty processing information that is presented verbally. When the teacher lectures, or talks in compound, complex sentences, Sam gets anxious and overwhelmed and shuts down. The teacher's words run together, and the meaning becomes garbled. Sam's drawings comfort him; they are something he knows he can do well. Right-brain activities such as painting and drawing are activities that he can do easily and with pride.

Taking the solar system example, here are some right-brain teaching techniques that will help Sam, and other students with moderate to strong right-brain strengths, get the most out of your lesson:

* During the lecture, either write the main points on the board or pass out a study guide outline that students can fill in as you present orally. These visual clues will help students focus even though you are lecturing.
* Use the overhead, the white board, or the chalkboard frequently. Since the students are apt to miss the points discussed verbally, the visual pointers will help the students "see" and comprehend the points.
* Have some time for group activities during the week of the solar system study. Right-brain students enjoy the company of others.
* Let the students create a project (such as a poster, a mobile, a diorama, or paper mache planets of the solar system) in lieu of writing a paper. Students like Sam often have excellent eye-hand coordination.
* Play music, such as the theme from *2001: A Space Odyssey*. Discuss how space might feel to an astronaut. Students with right-brain strengths are intuitive and like to get in touch with their feelings during the day.
* Bring in charts and maps of the universe and let the students find the Milky Way. Maps and graphs make use of the students' strong right-brain visual-spatial skills.

### ****A Teaching Challenge****

Students with strong left- or right-brain tendencies much prefer to be taught to their neurological strengths. Although they can learn by different methods, they get most excited and involved when they can learn and do assignments in their area of strength.

The good news is that we can all strengthen the weaker parts of our brains. Researchers tell us that our brains are always searching for new meanings and adding new neural circuits to make connections.

I am a left-brain teacher who, by nature, strongly prefers to teach using lecture and discussion based upon research and experience. I typically put an outline of the lesson on the board and distribute packets of handouts to accompany each lesson. Twelve years ago, I began reading brain-based research and realized that by being left-brain dominant, I was only engaging my left-brain learners and some students with middle-brain strengths. The poor right-brain learners, and many middle-brain students, must have been overwhelmed from all of the auditory input.

Over the past ten years I have gradually added overheads, videos, role-playing, simulations, group work, group assignments, and end-of-the-year group projects into my classes. I now feel that I am making my best effort to reach my left-, middle-, and right-brain learners. In doing this, I have mastered some exciting right-brained techniques as well.

Why not incorporate a new "neurological teaching method" into your classes this fall? If you are a left-brain teacher, try adding at least one right-brain methodology (overheads, videos, music, role playing, dance, or group projects) into your lessons. If you are a right-brain teacher, try adding more direct teaching, lecturing more often, or assigning more individual and/or research-oriented projects. If you are a middle-brain teacher, select and incorporate something new from either area.

I also recommend giving your students a variety of assignments to choose from each week. For example, let's say you plan to assign a book report. Let each student choose from one of the following: write the report using an outline; present the report from an outline; draw and color a major scene from the book; design and create a mobile, poster, or diorama; dance a scene from the book; or create a different ending to the book. It is fascinating to watch students gravitate towards their neurological strengths when given a choice of assignments. Those with moderate to strong right-brain strengths will choose to draw, act, or create. Those with the left-brain preference will write or speak.

I believe that it is good practice to tell our students that we each have our own individual neurological strengths and weaknesses. Feel free to use your own results as an example, explaining that you do not expect everyone to be perfect in every area. These messages will help students see that you are on their side. They will be grateful that you understand them enough to assign projects and assignments in their area of strength, and they will be relieved to know it is okay to learn the way they most enjoy learning.

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### ****Cognitive-Style Quiz****

Choose the one sentence that is more true. Do not leave any blanks.

1. A ) It's fun to take risks.
B ) I have fun without taking risks.
2. A ) I look for new ways to do old jobs.
B ) When one way works well, I don't change it.
3. A ) I begin many jobs that I never finish.
B ) I finish a job before starting a new one.
4. A ) I'm not very imaginative in my work.
B ) I use my imagination in everything I do.
5. A ) I can analyze what is going to happen next.
B ) I can sense what is going to happen next.
6. A ) I try to find the one best way to solve a problem.
B ) I try to find different answers to problems.
7. A ) My thinking is like pictures going through my head.
B ) My thinking is like words going through my head.
8. A ) I agree with new ideas before other people do.
B ) I question new ideas more than other people do.
9. A ) Other people don't understand how I organize things.
B ) Other people think I organize well.
10. A ) I have good self-discipline.
B ) I usually act on my feelings.
11. A ) I plan time for doing my work.
B ) I don't think about the time when I work.
12. A ) With a hard decision, I choose what I know is right.
B ) With a hard decision, I choose what I feel is right.
13. A ) I do easy things first and important things later.
B ) I do the important things first and the easy things later.
14. A ) Sometimes in a new situation, I have too many ideas.
B ) Sometimes in a new situation, I don't have any ideas.
15. A ) I have to have a lot of change and variety in my life.
B ) I have to have an orderly and well-planned life.
16. A ) I know I'm right, because I have good reasons.
B ) I know I'm right, even without good reasons.
17. A ) I spread my work evenly over the time I have.
B ) I prefer to do my work at the last minute.
18. A ) I keep everything in a particular place.
B ) Where I keep things depends on what I'm doing.
19. A ) I have to make my own plans.
B ) I can follow anyone's plans.
20. A ) I am a very flexible and unpredictable person.
B ) I am a consistent and stable person.
21. A ) With a new task, I want to find my own way of doing it.
B ) With a new task, I want to be told the best way to it.

#### ****To Score****

1. Give yourself one point for each time you answered "A" for questions: 1, 2, 3, 7, 8, 9, 13, 14, 15, 19, 20, 21.
2. Give yourself one point for each time you answered "B" for questions: 4 ,5, 6, 10, 11, 12, 16, 17, 18.
3. Add all points. Totals imply:
0-4: strong left brain
5-8: moderate left brain
9-13: middle brain
14-16: moderate right brain
17-21: strong right brain

*from* The Alert Scale of Cognitive Style, *by Dr. Loren D. Crane, Western Michigan University, 1989. Reprinted with permission*.

I am a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-brain thinker

This means that I…

|  |  |
| --- | --- |
| Left-Brain | Right-Brain |
| Teacher | Teacher |
| Student | Student |

To be successful in learning new things l will…