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Chapter 7

Cherishing and Challenging Children to Fit God's Design of Their Brain Orientation

A Teacher with HEART recognizes that all truth is God's truth and strives to learn from the wisdom of others.

Scripture: "But as for you, continue in what you have learned and have become convinced of, because you know those from whom you learned it, and how from infancy you have known the holy Scriptures, which are able to make you wise for salvation through faith in Christ Jesus" (2 Timothy 3:14, 15).

Teaching Objective: To see God's truth in the collective wisdom of various researchers and to apply this wisdom in the Christian classroom.

Brain Orientation

The world of brain research is an exciting dimension. The teacher with HEART will use this amazing information to enhance the teaching process. There is so much information on the market today, and it can be overwhelming. It is my heart's desire to provide practical nuggets of information and to help you digest and apply them to your teaching. I want to provide some brief facts and then supportive practical information to help you in your journey to reach children and to shape young hearts with God's Word.

Before we examine current research on this topic, let us again look to one of the pioneers of child development research—Jean Piaget. Through some of the conclusions of his research, we will learn how we can cherish and challenge our students more effectively.

Piaget believed that all children progress through the developmental stages in the same order. The skills developed at one stage form the foundation for further development in the next stage. For decades the results of this research have been used by educators to enhance physical, social, and emotional learning. Why should we not utilize this valuable information to teach God's Word more effectively? As we examine each stage, we will see how this research is useful in preparing classroom environments and learning experiences for children, in order to maximize their spiritual learning.

Sensorimotor/Practical Intelligence

The first stage is identified as the Sensorimotor, or Practical Intelligence, stage and occurs from birth to ages 1 to 2. Piaget states that during this stage a baby's actions are their thoughts, and in their thoughts they slowly begin to connect cause and effect to obtain desired results.

A baby's first move is by accident and the result of a simple reflex action. When a baby or toddler sees a positive response too their actions, they repeat them, thus discovering the first level of cause and effect. Babies and toddlers continue to learn through sensory channels (see, smell, taste, hear, and touch) until their verbal skills begin to develop. At the beginning when a baby drops a toy, they do not search for it because they think since it cannot be seen, it does not exist. As they begin to develop and realize that objects can exist without being seen, their anxiety about Mom and Dad dropping them off at the nursery or with a babysitter ceases to be as intense. Teachers can use games such as Peek-a-Boo to help children in this stage see the fun in things appearing and disappearing.

In our church nurseries, childcare programs, Mother's day out events, etc., it is essential that we demonstrate the love of Jesus Christ to each baby and toddler. In this first stage we are able to plant seeds that teach them that Jesus loves them and that church is a safe and loving environment. We can talk to them and sing to them about Jesus. We can hold them and comfort them. Our actions at this stage speak volumes as we hold them, feed them, change their diapers, and take care of them while their parents are away.

Your actions speak volumes to children from birth to age 2.

Preoperational/Intuitive

As children learn to walk and talk they move into the next stage. The Preoperational, or Intuitive, stage begins between ages 1 and 2 and lasts until age 7 or 8. During this stage of development, children amaze both parents and teachers. There is no other stage or age at which a person learns at such a rapid rate. Preschoolers are the brightest people on the planet and certainly have the most energy. It is unfortunate that they lack wisdom, or we could let them take care of everything.

If you have ever observed preschool children, especially around age 4, you notice that they tend to talk continually. They see inanimate objects as if they were alive and able to carry on a continuous, collective monologue. Children in this stage have an egocentric perspective. They assume that everyone thinks as they do. According to Piaget, they think intuitively rather than logically. Research shows that they do not connect the dots in a logical sequence, however, when presented with sensory information in an orderly fashion, they seemingly do connect the dots. Their learning is sensorimotor and this leads to them knowing.

Volumes of sensory information are coming in via the senses. A young child needs to create a memory file cabinet for this information in order to retrieve it. As teachers we can help them to order these many multisensory experiences by providing names, labels, and categories. After hearing *ball,* touching *ball,* tasting *ball,* and throwing *ball,* they begin to know what a ball is. As language develops they will begin to know what a red ball is, a big ball, a football, etc.

Piaget's research reveals that young children are perception bound. This means that they center on one concept and become completely absorbed in it. Dr. Maria Montessori also observed this unique quality of young children to completely absorb their surroundings. Dr. Montessori was the first woman physician in Italy. She studied (including Piaget's work) and worked with children.

She wrote books based upon her ministry with children including *The Absorbent Mind* (1980) and *The Secret of Childhood* (1966). She writes of the profound ability of a young child from birth to age 6 to completely absorb the language, culture, and customs of their world, and reflect them back. This truly is one of the secrets of childhood—the absorbent mind.

Children at this stage seemingly teach themselves as they explore, discuss, create, and absorb their environment. As a teacher with HEART, recognize this profound stage and lay a banquet of sensory experiences before children from which they can learn. Help children organize the vast amounts of information they absorb so that they can effectively access their new knowledge.

Children at this second stage continually ask questions. They live in the present and cannot perceive the past or the future. For example, as I was teaching a lesson on Noah, one of the children asked, "Why didn't Noah take Jesus on the ark"? Great question! In order to cherish and challenge children in our teaching, we must patiently answer the myriad of questions children ask in their efforts to integrate volumes of information. Assisting children in successfully accomplishing this task helps to move them into the third stage.

Children ages 2 to 8 seem to teach themselves. Lay a banquet of sensory experiences before them.

Concrete/Intellectual Operations

Concrete Operations, or Concrete Intellectual Operations, is the third stage and begins between ages 7 and 8 and lasts until age 11 or 12. WOW! Here we find a big developmental breakthrough as children begin to move from thinking intuitively to thinking logically. Children are now able to begin considering, connecting, and coordinating different perspectives. They can also begin to understand the concept of time and history because they now possess the skill of reversible thinking. They can look back!

History is *His*-story. History reveals the providential hand of God as He works through people and events to carry out His plan.

Kohlberg and Piaget state, "during this period of concrete operations, children learn to place events in sequential order with a duration of time inserted between them and that a timeline would provide a picture of the sequential ordering" (Piaget 1967). Thus, history begins to come alive and have relevance for this day and time. Students begin to see that actions have consequences and that this concept applies to their actions as well.

The world of child development is so exciting. I have always loved children. I love to observe children. They never cease to

amaze me! I am thankful that the Lord has allowed me to work with children for over 30 years as a teacher, principal, minister to children, and headmaster. While I have not provided a rich research base such as what is provided by Piaget, Montessori, Erickson, and Kohlberg, I do have consistent views about children that have developed through my years of experience.

Nowhere, in anyone's research, does it say that children learn best by doing work sheets all day!

I believe passionately that we must teach children in the ways they learn best. As teachers with HEART, we must provide learning environments that are consistent with the research provided for us in order to help children develop to their full potential at each developmental stage. I may be preaching to the choir, but I must communicate this point. Nowhere, in anyone's research, does it say that children learn best doing work sheets all day, day after day. Yet if you walk into most classrooms, that is often what you will find. A teacher with HEART adapts to the students' developmental stages and prepares lessons with the needs of the students in mind.

Let's take a moment to look into the world of current brain research. The following factors are rooted in the results of brain development research and dramatically affect the learning process for children. A teacher with HEART will benefit from these research results and apply this information to the classroom experience in order to maximize learning!

There is so much research on the market right now and it can be overwhelming as you begin the journey to see what is available. You may be asking how teachers in the Christian classroom can utilize this information to enhance their teaching? I will offer some practical suggestions in the following section. I have also listed some resources in the bibliography that are reader friendly. I heartily recommend books by Eric Jensen such as *Teaching with the Brain in Mind* (1998).

ABC's of Brain Development

ARTS: Studying the arts enhances brain connections, increases language development, boosts reading readiness, and encourages social development. In addition, students excel and learn better in all areas when the arts are incorporated.

ATTENTION: Anything that captures students' attention and gets their minds engaged has the potential to produce learning. If there is no attention and engagement, learning will not take place. A teacher can provide a puppet for younger children to help grab their attention. Similarly, a hands-on activity to introduce a concept works for students of all ages. The teacher can also dress in a way that represents the lesson in order to initiate questions and immediate interest. These are just a few ways to grab the attention of your students.

BALANCE: Helping students learn to use both hemispheres of the brain in a balanced manner is one of the many goals of teaching. As we come to better understand our students and how they learn, we are better able to employ a learning style approach to teaching, which helps students to make brain connections more effectively.

BRAIN DEVELOPMENT: Stages of brain development are especially critical in the early years. Take advantage of this learning time by creating exciting, multisensory learning environments for young children.

CHOICES: The corpus callosum is made up of 250 million nerve fibers that enable connections in the brain to transfer information from the left hemisphere to the right hemisphere. When a child is given choices in the learning process it alters the brain chemistry, allowing the neural transmitters to connect more effectively. Help children learn by challenging them with choices!

CONNECTIONS: By connecting the dots in the brain, learning occurs and memory is built. When teaching new material, connect it to something that the students already know. These connections help move the information from the short-term to the long-term memory.

DISCIPLINE: Discipline is very important in the learning process. When discipline is perceived as part of the discipleship process, it can become a positive impetus in the learning experience. The use of fears and threats in discipline will diminish the learning process.

DRAMA: Drama can be a very exciting addition to the learning process. Having children act out their lessons or create dramas, commercials, or other related activities that involve the entire body can be very effective in the classroom.

EMOTIONS: In Chapter 6 we explored the concept of multiple intelligences. There has been much research showing that emotional intelligence is a vital intelligence. Emotions are a distillation of learned wisdom. Children who have a strong emotional intelligence have great people skills and can do much to serve in the kingdom of God. These children are easy to cherish because they are so very lovable. We can challenge them to use their gifts by giving them opportunities to welcome new students and to help with conflict resolution and peace keeping in the classroom. If you have a student with emotional intelligence who may not feel as smart as someone else, you may encourage them by saying, "People are smart in different ways. You are so smart with people and that is a very special intelligence that is hard to teach. People can study harder for tests and do better, but you have God-given smarts in this area." (EQ as apposed to IQ is emotional quota instead of intellectual quota.)

ENVIRONMENT: There is much that we can do to enrich the learning environment. For further information on enriching the learning environment, see Chapter 8.

FEAR: Studies show that when a student is fearful, the learning process is inhibited. Teachers have extraordinary power over children in the classroom. Younger children take every word that the teacher says as absolute truth. With this comes the responsibility to use words that encourage children and not put them down. If a child of any age fears that a teacher might embarrass him in front of his peers by teasing, ridicule, or put-downs, he will experience internal fear and the learning process will be inhibited.

FEEDBACK: Feedback is vital in the learning process. For all of us, we like to know how we are doing. Without some mechanism in place for feedback, we begin to doubt ourselves. Frankly, for many, negative feedback is better than none at all. It is the absence of feedback that eliminates behaviors. While this might be a helpful technique with discipline, it is destructive in the learning process. When we smile and provide words of encouragement, students are energized and empowered to want to do more.

GAMES: Games provide an excellent avenue through which the brain can be challenged. Enhance brain development through challenging learning games.

GIFTEDNESS: I believe strongly that each child is gifted by God for His purpose. When we as educators can find this giftedness, we can cherish and challenge children to be all that they can be.

HELPLESSNESS: When children feel helpless, they sense that they have no control. Helplessness can be a result of a trauma, or it can be a learned behavior. If a child is allowed to use helplessness to prevent him from acquiring new skills or digesting new information, in time it can literally rewire the brain. Learning comes from doing and trying. If a child feigns helplessness to keep from trying, it may be because his earlier attempts were heavily criticized, a parent or caretaker does everything for him, he may be afraid of failure, or he may simply be exhibiting a lazy spirit. In any of these cases, I say to the child: "Have you ever watched a baby trying to learn to walk? Do you know how many times a baby falls before he begins to really walk? When you were a baby, if you gave up every time you fell you would never be able to walk today. It's by trying, sometimes falling, and trying again that we learn."

HEMISPHERICITY: While there is no such a thing as a person being left brained or right brained, there is evidence to show that certain brain functions occur in the left side of the brain such as logical, linear processing, doing one task at a time, and analyzing. Students are considered left brained who like specific assignments, working independently, specific feedback, and competition.

There is no such thing as being left brained or right brained.

Students are considered more right brained who are more creative, work best relationally, can work on several projects at one time, and like human interest stories to remember facts. As educators we need to provide both kinds of learning experiences in the classroom to facilitate the learning strengths of both. Most of us move back and forth using a combination of each hemisphere's strengths.

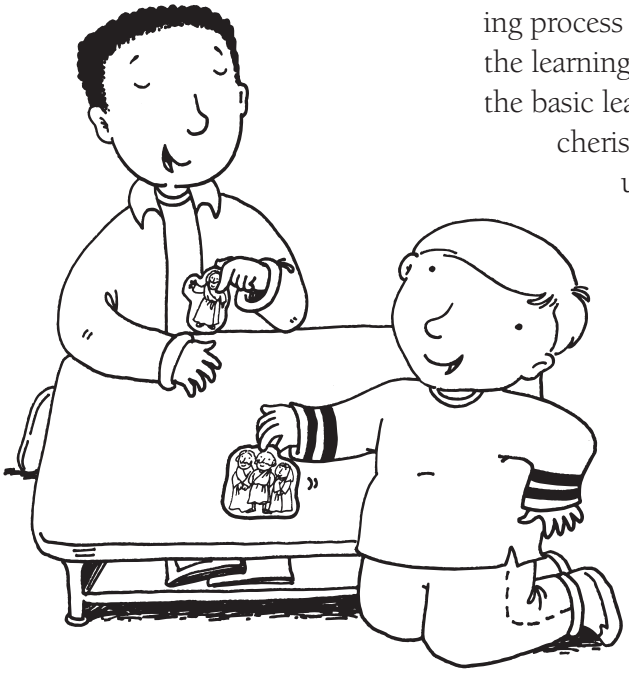
INTEGRATION: It is wise to examine curriculum in light of current brain research. Does the curriculum integrate active learning with multisensory learning techniques? Active learning is when we engage the learner in the process. This is best done with multisensory, hands-on teaching. Passive learning is when the teacher lectures and the students listen. While there is a small minority

of students who can learn this way, most young children need to be actively involved in the process. Since children learn via their senses, this is the best way to teach.

INTERCONNECTIVITY: This is a similar concept. Think of the brain like a string of Christmas lights. As one lights up, they all do. Likewise when one goes out, they all do. Brain research shows us that when we provide learning opportunities that are multisensory and learner engaged, it causes the parts of the brain to light up and brain connections between isolated pieces of information begin to form.

JOBS: As children come to understand how they learn, it leads them to see what kinds of jobs are better for them. If they are more global and creative, they may not enjoy being an accountant. If they like things to be very analytic, they may not make good artists or musicians. God has a plan for each of our lives and the more we learn about how we learn, the more we come to see that He has wired us for His purpose. This helps us as educators with HEART to shape the hearts of our students.

JOY: When the learning environment is a joyful place, the learning process is facilitated. This does not imply that every aspect of the learning process needs to be fun or silly. It simply means that the basic learning environment is a joyful place, where children feel cherished and challenged. Humor heals. The Scriptures tell us that the joy of the Lord is our strength (Nehemiah 8:10).



KINESTHETIC LEARNING: Kinesthetic learning involves muscle memory. There is much in this book on the value of kinesthetic learning. It is often the area where most teachers feel uncomfortable since it may appear to be out of control. As we study and work with kinesthetic learners, we see many great deeds that can be accomplished by those who must move in order to learn.

KINESTHETICS IN THE LEARNING ENVIRONMENT: Kinesthetics is the study of touch, space, and motion. Research at St. John's University by Dr. Rita Dunn and Dr. Ken Dunn clearly demonstrated that the room arrangement, lighting, degree of kinesthetic learning involved, temperature, and time of day made a significant impact on learning (Dunn & Dunn 1972).

LATERALS: Through forming cross laterals, the brain is able to connect different points of information. This can be done by having the students stand and cross their arms in the air, march by crossing their arms back and forth, and/or pretending to swim. Outdoor activities such as swimming, marching, playing tennis, and roller skating enhance the ability of the brain to make cross lateral connections.

LIGHTING: Lighting is another factor in the learning process that must be examined. Students who feel more comfortable processing information from the left hemisphere of their brains tend to learn more efficiently under bright light. This may include overhead lights, lamps, and windows. Students who are more comfortable functioning from the right side of their brain usually do not learn as well under bright, fluorescent lights. In fact, studies show that bright light may actually fragment the learning process for these students. Try using just a soft lamp or natural lighting.

MOTOR STIMULATIONS: Motor stimulation activates the neural connections in the brain to facilitate learning and long-term memory. For many of us we learn best when we do it ourselves. We build in this muscle memory. For example, with cell phones and programming in the frequently used phone numbers, many of us can no longer remember certain numbers when asked. Before we used programmed numbers and our fingers did the talking, one could put their hand over the phone buttons and the muscle memory in our fingers could retrieve a number. Children in a classroom sometimes move their fingers. I encourage teachers to allow this because if you look more closely you will see that children may be literally typing the words as the teacher says them or doing math on their fingers. This is a positive use of muscle memory. If it facilitates the learning process, why not use it?

Music is the one activity that utilizes the left and right hemispheres of the brain equally.

MUSIC: While the brain does have two sides, it is not accurate to say that a person is left brained or right brained. The two halves work in conjunction to create a complicated learning network. It is important that we understand what functions are produced on each side while understanding that they work in conjunction with one another. For example: the left hemisphere is more analytic in nature and processes information in a very logical, linear fashion. This is the part of the brain that perceives details first, then patterns, and finally the big picture. The right hemisphere is more global and tends to see the big picture before the details. It tends to be the part of the brain that is more creative. Interestingly, music

is the one activity that utilizes the left and right hemispheres of the brain equally. Therefore, music training is a key component in the learning process. Studies have even shown that classical music enhances brain development. By incorporating music into your classroom you are enhancing the learning environment.

NEGATIVES: Negative ionization is actually what you want in the learning environment! Stuffy classrooms actually have a positive ionization count of 1000. However, a waterfall has a negative ionization of –100,000! Fresh air creates a negative ionization, which has a powerful effect on the learning process. This may seem contrary to what we might think, but indeed it is negative ionization that facilitates the learning process. Make sure the air in your classroom isn't stuffy or stale. Get some fresh air moving and enhance the learning environment!

NOVELTY: New situations simply wake the brain up! Let's plan something completely different and out of the ordinary when our students seem to be growing lethargic.

ODORS: Most of us can be immediately transported back to a place that we recall by the odor. This can be both positive and negative. Brain research provides a lengthy explanation of why this is true. Eric Jensen writes in *Teaching with the Brain in Mind* that "our olfactory memory has minimal erosion and smells go directly to the frontal lobe on the direct expressway to the brain" (1998). Brain research shows that when there is a subtle, good odor in the classroom, it sends the brain a message that this is a positive place to be and learning is enhanced. A word to the wise, wonderful teachers have taken this so to heart that they have used scented candles or the plug-in scents. This is a great idea for most children, but for those who may have an allergic response to the smells, it becomes negative. A soft and subtle smell is best. Beware of strong scents, perfumes, or flowers that are too strong and keep in mind that the plug-in smells for children may be too intense.

OPENNESS: Being open to new ideas is one of the brain's best ways to enhance learning. People who are closed minded and say, "But I have always done it this way," are not being open to change and may inadvertently cause learning to slow down.

PERIPHERY LEARNING: Periphery learning occurs when teachers preview new lessons and provide stimulating learning charts, bulletin boards, and other visuals as part of the learning environment.

PLANTS: Living plants have been shown to have a positive impact on learning environments.

QUESTIONS: Students need to feel comfortable asking questions in order to facilitate their own learning processes. A teacher with HEART will remember to allow time for questions and answers.

QUIET TIMES: These are very necessary components in the learning process. Times of active learning need to be balanced with quiet times in order to maximize long-term memory.

REPITITION: In order for neurons to function properly, they need repetition. Therefore, use multisensory learning techniques in order to build the neuron patterns that make these important learning connections. You could read a Bible verse and then sing it, sign it (with sign language or hand signals), sing and sign it, sign in silence, chant it, and even clap to it. In time your students will know the verse completely.

REST: This is the common denominator that is involved in long-term memory. In order for the brain to function at an optimum level, it requires periods of rest. Provide a variety of learning activities in order to allow children's minds to rest rather than bombard them with lesson material for the entire class time.

SENSORY LEARNING: The senses are the avenues through which learning takes place. When there is sensory stimulation, learning is enhanced. When there is sensory deprivation, learning diminishes. Incorporate activities into your lessons that require your students to use different senses to maximize learning.

SMELLS: Gentle and soft aromas have a very positive effect on the learning environment. Smells conjure up positive memories, which enhances learning. Smells that positively influence learning include lavender, lemon, peppermint, and cinnamon. Smells have a direct expressway to the brain, which is why they are so important in the learning process. They are literally only a synapse away!

TEMPERATURE: Some people learn best when the room is cool, others when the room is warm, and others have no preference. This makes it difficult in any learning environment because there is no way to please everyone. Teachers may take an informal survey of the students in upper elementary and high school to see what the preferences are and from this, set students in different places depending upon where the vents are located.

TIME: Research shows that students learn differently according to the time of day. Research results indicate that older students (high school) actually do better with difficult material after 10:00 A.M. Younger children, on the other hand, do better in the early morning and start winding down as the day progresses.

UNDERSTAND that things take time. As the saying goes, Rome wasn't built in a day! Be patient with yourself as you are trying to incorporate some of these ideas into your teaching. There is a chart at the back of this chapter to help you organize your favorite ideas. Try one a week and by the end of the year you will see that your teaching has dramatically changed. Also, current brain research is developing new ideas all the time. But what keeps your brain alive and well is trying new ideas! So you will enhance your own brain development as well as your students' by incorporating new ideas.

Language develops as children interact with adults. Use more active language with your students.

VIDEOS: Videos, DVDs, tapes, and television do not help children develop language skills. True language development comes from young children interacting with adults. There are four lobes in the brain, and parts of the parietal lobe are not being developed in young children today. The parietal lobe is the top of our upper brain. It is one of the four major areas of the cerebrum and deals with receiving sensory information. It also plays a part in reading, writing, language, and calculation. The other three lobes are the occipital, temporal, and frontal. Encourage teachers to use more active language with their students and less time using videos or tapes.

VISUAL learning is one of the sensory gateways. This can be used to enhance learning by teaching your students how to visualize information in their brain. Color coding can be used to enhance their retrieval process. For example, they can think of the colored note card that they wrote the information down on, or the color highlighter they used on a particular word. As they use these visual cues, they enhance their memories.

Use games and physical activities in your lesson planning to boost your students' moods and enhance memory.

WATER: The brain must have water in order to function properly. When the brain is fully hydrated, the learning connections are dramatically facilitated and learning is enhanced. Make sure the children in your class are given rest periods and provide drinks or drink breaks. It is not enough to assume that children are getting these needs met at home before coming to class.

eXERCISE: Exercise is vitally important in the learning process because it produces a hormone that facilitates nerve growth. Exercise also enhances neural connections and elevates the mood of the learner. This important process assists in developing long-term memory for children. Incorporate games and physical activities into your lesson planning to help boost the moods of your students and enhance long-term memory for what you're teaching!

YAWNING is misunderstood in our culture. Most people think that yawning is a sign of sleepiness but actually yawning is a method of self arousal. *The Owner's Manual for the Brain* states, "The yawning response appears to be triggered when dopamine falls below acceptable levels in the brain. The yawn exercises jaw muscles that affect the flow of blood to the brain. A good yawn reoxygenates the brain, leading to increased arousal and alertness" (Howard 1994).

ZOOS are rich in multisensory experiences. A student can see, smell, hear, and sometimes touch the animals. It makes for a great field trip for children. Some churches bring in petting zoos for the children on special Sundays.

Understanding Brain Orientation

Answer the following questions regarding your personal views about the children you teach and how current research on brain orientation applies to your classroom.

1. What is the value of secular research in child development?

2. How does this relate to the understanding that all truth is God's truth?

3. What do you love about children in general?

4. What do you especially enjoy about the age of the children you teach?

5. Has this chapter caused you to consider teaching another age? Why or why not?

6. What do you know of how Jesus feels about children?

7. What are some ways you can apply the attitude of Christ to your teaching ministry to children?

8. As a teacher with HEART, what are some practical ways you can apply child development research to your teaching?

9. List three brain dos and don'ts that you will implement in your classroom (see page 102).

10. What does creating a brain-friendly environment mean to you? How can you go about achieving this? What are three areas of change you want to try for this year?

Brain Based Dos and Don'ts

The following chart is to help you remember what to do and what not to do in your classroom based on how children's brains function.

Because the brain . . .	We do . . .	We don't . . .
functions better with lots of water resulting in enhanced alertness . . .	allow students to have access to water and allow appropriate rest room breaks.	discourage drinking water because of the need for more rest room breaks.
performs many functions simultaneously . . .	present material through a variety of ways in an enriched environment.	teach to only one modality resulting in a dull classroom environment.
needs both focused attention and peripheral perception for an ideal learning environment . . .	provide a learning environment that is positive, offers peripheral learning aids, and encourages the learner.	provide a sterile classroom that is void of encouragement, enrichment, or empowerment via the senses.
is designed to perceive and generate patterns . . .	present information so children can identify patterns and connect them with previous, real-life experiences.	waddle in the wasteland of work sheets.
uses emotions for crucial storage and recall of information . . .	provide an environment that encourages, energizes, and empowers students.	teach as if the feelings of the students are an invalid component to the learning process. ignore the validity of color in the teaching process.
reacts to colors that enhance brain activity . . .	think about the impact of color when planning an activity.	ignore the validity of color in the teaching process.
responds to plants that increase productivity in learning . . .	carefully select plants such as philodendrons, fichus, yellow chrysanthemums,and gerbera daisies to place in the classroom environment.	only put artificial plants in our classroom, even though they do provide needed color and variety. Remember to add live plants also.
does not function solely on the left or right side . . .	provide integrated learning activities.	label our students as being right or left brained.
simultaneously perceives and creates wholes and parts . . .	design learning activities that depict the whole and then break it into parts.	teach only the analytic parts without the context of the whole.
has at least two types of memory: the spatial, which records daily experiences, and rote learning, which deals with skills and facts . . .	teach information and skills based on prior experiences in order to provide frame on which to hang new information to facilitate learning and to promote long-term retention of the information.	overlook rote learning because it does not take into account the learner's personal understanding and retention of the material.
is stimulated by aromas that enhance alertness and memory . . .	provide aromas like peppermint, lemon, cinnamon, and rosemary to stimulate alertness and lavender, orange, and chamomile to regulate stress.	ignore this important point because it seems too feminine.
is affected by lighting in regards to alertness and responsiveness . . .	find ways to provide the best lighting for our students.	rely on the traditional, fluorescent lighting only.
is unique from child to child and its structure is changed by learning . . .	use a wide variety of teaching strategies that include projects, demonstrations, and integrating the information into genuine experiences.	provide information in a boring manner, in only one teaching style, and neglect taking the time to relate it to the personal experience of the learner.