



University Learning in Schools

Biology

**My Brain During the Day:
Infosheet**

Lesson 1



Preferences of the Two Sides of the Brain

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

The Alert Scale of Cognitive Style by Dr. Loren D. Crane, Western Michigan University, 1989

Description of the Left-Hemisphere Functions

- Constantly monitors our sequential, on-going behaviour
- Responsible for awareness of time, sequence, details, and order
- Responsible for auditory receptive and verbal expressive strengths
- Specialises in words, logic, analytical thinking, reading, and writing
- Responsible for boundaries and knowing right from wrong
- Knows and respects rules and deadlines

Description of the Right-Hemisphere Functions

- Alerts us to novelty; tells us when someone is lying or making a joke
- Specialises in understanding the whole picture
- Specialises in music, art, visual-spatial and/or visual-motor activities
- Helps us form mental images when we read and/or converse
- Responsible for intuitive and emotional responses.
- Helps us to form and maintain relationships

Case Study: The Left-Brain Pupil

Left-brain pupils prefer to work alone. They like to read independently and incorporate research into their papers. They favour 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 pupils feel engaged during your lesson:

- Write an outline of the lesson on the board. Pupils with left-brain strengths appreciate sequence.
- Go ahead and lecture! These pupils love to listen to an expert and take notes.
- Discuss vocabulary words. Pupils 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 pupils love to think about and discuss abstract concepts.
- Assign individual assignments so pupils may work alone.
- Ask the pupils to write a research paper on the Solar System that includes both detail and conceptual analysis.
- Keep the room relatively quiet and orderly. Many pupils with left-brain strengths prefer not to hear other conversations when working on a stimulating project.

<http://www.scholastic.com/teachers/article/left-brainright-brain>

Case Study: The Right-Brain Pupil

Right-brain pupils 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 pupils 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 pupils can fill in as you present orally. These visual clues will help pupils focus even though you are lecturing.
- Use the overhead, the white board, or the chalkboard frequently. Since the pupils are apt to miss the points discussed verbally, the visual pointers will help the pupils "see" and comprehend the points.
- Have some time for group activities during the week of the Solar System study. Right-brain pupils enjoy the company of others.
- Let the pupils 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. Pupils like Sam often have excellent hand-eye coordination.
- Play music, such as the theme from *2001: A Space Odyssey*. Discuss how space might feel to an astronaut. Pupils 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 pupils find the Milky Way. Maps and graphs make use of the pupils' strong right-brain visual-spatial skills.

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