INTRODUCTION

In this lesson, you will learn about different ways of thinking and how these ways affect how you learn. You will also learn how to generate, organize, and prioritize information.

WHAT YOU WILL LEARN

In this lesson, you will

- learn about different styles of thinking
- identify and describe your learning preferences
- identify your learning strengths and learning challenges by analysing past successes and failures
- set goals for your learning based on your understanding of your thinking style

THINKING STYLES

"If you think you can, you can. And if you think you can't, you're right."

—Author Unknown

In 1981, Dr. Roger Sperry won the Nobel Prize for discovering that each half of the brain thinks in a different way. Sperry's work suggests that the left side of the brain—referred to as the **verbal** side—thinks in words, and that the right side of the brain—referred to as the **visual** side—thinks in pictures. Are you a right-brain or a left-brain thinker? Is one way of thinking better than the other?

Before you started school, you were probably more right-brained in your thinking. Like many pre-school children, you may have enjoyed unstructured play and lived in a world of make-believe and fantasy. It is possible that you thought in pictures, since it is likely that you hadn't learned to read yet. Later, when you went to school, your teachers taught you another way of thinking. You learned how to read and how to solve problems using specific kinds of logic. In fact, if you answered a question using your intuition, the teacher may have asked you to explain how you arrived at your answer.

Schools often forget to value right-brain thinkers. In fact, right-brain thinkers are often perceived as weird, ridiculous, or outrageous. It is important to point out that historically, right-brain thinkers have been responsible for the inventions and theories that have changed the way we think and live.

No one is totally right-brained or left-brained in their thinking. Everyone uses both sides of their brains. It is true, however, that one side of your brain will tend to dominate the other. In the workplace, employers like to have both types of thinkers because there are excellent qualities in each. They know that there are advantages to having right-brain and left-brain thinkers work together, as each kind of thinker tends to focus on different aspects of a task. However, when right-brain and left-brain thinkers are asked to work together, they can irritate each other. Since a left-brain thinker prefers to organize tasks in specific ways, he or she may not enjoy having to work with the spontaneous and inventive tendencies of a right-brain thinker. As you begin to understand how you think and how the people around you think, you can adjust your behaviour to build positive relationships with people who think differently than you.

Neither side of your brain is more valuable than the other. In fact, it is advantageous to use both sides of your brain. Albert Einstein, known as one of the smartest people that ever lived, saw many of his theories as images in his "mind's eye," meaning that these theories were conceived with the right side of his brain. He then used left-brain thinking processes in order to explain, in words, the images he saw. Einstein was famous for effectively using both sides of his brain.

SUPPORT QUESTION

(Do not send for evaluation.)

3. a) Complete the Discover Your Thinking Style questionnaire on the following page, to help you discover whether you think more with the right side or the left side of your brain.

   b) Were you surprised by the results of the thinking style questionnaire? Explain your answer in your notebook.

   c) What does right-brain or left-brain thinking have to do with how you learn best? Explain your answer.

   d) Describe a time that you had success with learning something new. Why do you think the learning went so well? Was it because of the setting, the subject, the teacher, or something else? Did your success have anything to do with your right- or left-brain strengths?

   e) Think about a time that you had trouble learning something. Why do you think you had such difficulty? Do you think that your difficulty had anything to do with your right- or left-brain strengths? Describe the situation and suggest ways that might have helped to make your learning experience more successful.

There are Suggested Answers to Support Questions at the end of this unit.

Discover Your Thinking Style

Circle the number beside the statements that best describe you. Choose only one number from each row.

Left-Brain Thinker (Verbal)	Right-Brain Thinker (Visual)
1. You recognize and remember names.	1. You recognize and remember faces.
2. You respond best to verbal instructions.	2. You respond best to visual and demonstrated instructions.
3. You can control your emotions.	3. You have strong emotional responses.
4. You listen to words for meaning.	4. You interpret body language.
5. You have "logical" thoughts and ideas.	5. You have "funny" thoughts and ideas.
6. You seem to process information in a sequence, or orderly fashion.	6. You seem to process information as you see it, in your own way, in patterns and pictures.
7. You prefer a serious, systematic problem-solving approach.	7. You prefer a playful problem-solving approach.
8. You respond to logical requests.	8. You respond to emotional requests.
9. You learn best when you can think critically and analytically about what you read or hear.	9. You learn best by applying and practising what you read or hear.
10. You remember through language.	10. You remember with images, or pictures.
11. You read for details and facts.	11. You read for main ideas or overviews.
12. You prefer realistic stories.	12. You prefer fantasy, poetry, and myths.
13. You think about improving existing things or ways of doing things.	13. You think about inventing new things or ways of doing things.
14. You learn best with systematic plans.	14. You learn best through exploration.

continued

15. You prefer to create an outline of detailed information, rather than summarize it.	15. You prefer to summarize detailed information, rather than create an outline of it.
16. You like activities that are mentally challenging.	16. You like activities that are physically challenging.
17. You are impatient with guesswork, or trial and error.	17. You are impatient with systems and structures.
18. You prefer structured assignments.	18. You prefer open-ended assignments.
Total Left-Brain Responses: ____	**Total Right-Brain Responses: ____**

Total your choices in each column.

PLUS MINUS INTERESTING: THE PMI FORMULA

The **PMI** formula is one method of reviewing information or activities. Apply the PMI formula to review the previous thinking style activity.

Plus	What was good about the thinking style activity?
Minus	What was not good about the thinking style activity?
Interesting	What was interesting about the thinking style activity?

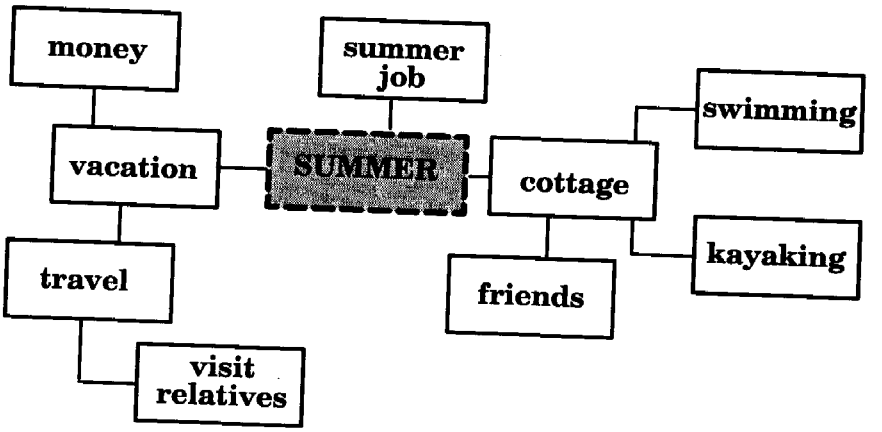
Your review might look like this: The Thinking Style activity made me think about myself in a different way. I didn't like the choice of only two options because sometimes neither of them was a good choice. I'd like to share this with other people to compare results.

Mind Mapping

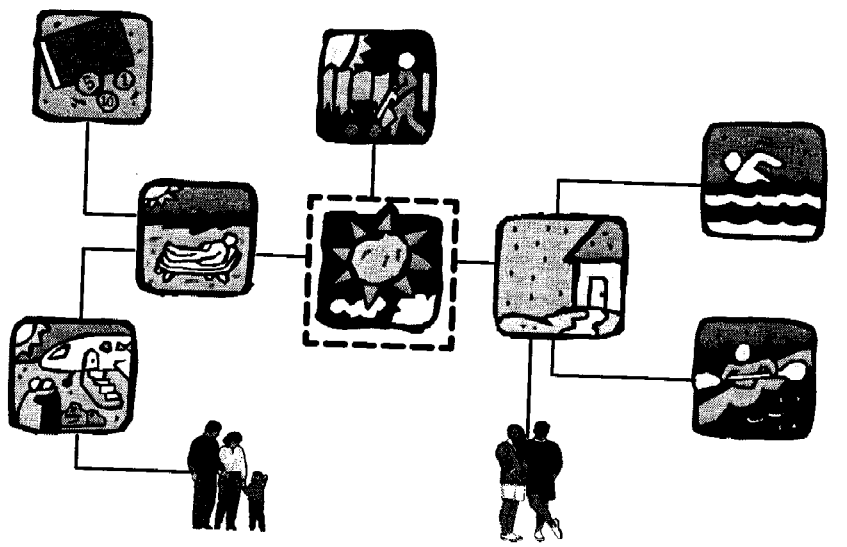
If you are a right-brain thinker, you might consider **mind mapping** to help you generate and organize your ideas. A mind map consists of a web of words that branch out from a central word or idea (see the example below). Mind mapping enables you to generate related words and ideas with little mental effort. Some people even find it to be a cure for writer's block.

Right-Brain Thinker

Word Based Mind Map



Picture Based Mind Map



Keys to Mind Mapping

- Relax. Let your mind run freely. No need to get too serious. Focusing too much on the task will stifle your creativity. Let yourself dream a little.
- Speed it up. Think of as many ideas as you can, as quickly as possible.
- Get crazy. Write down everything you think of no matter how crazy it may seem at the time. This is not the time to judge whether it is a good idea or not; that will come later.
- Be creative. This is your chance to let loose. Don't just sit at your desk or table with a sheet of paper. Go outside and write on the driveway with some chalk. Get a large sheet of butcher paper or flip-chart paper and mind map all the ideas you have. Try to fill up as much of your page as you can.
- Start in the middle. Start your mind map with a focal point in the middle of your page. Your middle point is the topic, problem, or important issue that you are thinking about.
- Synergize. Build on each thought or word that comes to mind and spend some time exploring related thoughts and words. Include everything in your mind map. Try not to evaluate it at this stage.
- Stay active. Don't let your hand stop moving. If you cannot think of a new word or symbol to draw, then add some colour to other words and pictures while you think.

In a way, mind mapping is a way of brainstorming. It can be used to organize information and ideas for assignments, presentations, novels, poems, party supply lists, vacation planning, note taking and so on. The possibilities are endless.

Support Questions

(Do not send for evaluation.)

4. Write the words **My Ideal Weekend** in the middle of a two-page spread in your notebook. Create a mind map to describe your ideal weekend. What would you do? Where would you go? How would you get there? Who would you invite? Try to generate as many different ideas as you can.

5. When you have finished the mind-mapping activity, use the **PMI** formula to write a reflective journal entry.

Plus	What was good about the mind-map activity?
Minus	What was not good about the mind-map activity?
Interesting	What was interesting about the mind-map activity?

There are Suggested Answers to Support Questions at the end of this unit.

Creating an Annual Education Plan

"Choice is the exploration of desire and then the selection of action."

—Chérie Carter-Scott

While creating your Annual Education Plan (AEP), you need to list items and goals that are important to you. You then need to decide which item on your list is most important, which item is next important, and so on. This is called **prioritizing**.

In Support Question 4, you created a mind map of your ideal weekend. The ideas that you listed were your criteria for having a good time. Presumably, you listed these ideas because they were important to you. How can you prioritize your ideas for an ideal weekend? Which ideas are essential? Which ones can you live without? Consider the following method for setting your priorities:

1. Take a piece of paper and tear it up into the same number of pieces as you have ideas. Write each idea on a separate piece of paper.
2. Arrange the pieces of paper in a column or row, in order of importance. If you mix the pieces of paper up again, will you put them in the same order?
3. Number the pieces of paper according to their importance.

SUPPORT QUESTION

(Do not send for evaluation.)

6. a) In your notebook, list all of the things that are important to you, such as family, friends, sports, possessions, and so on. Then, use a priority-setting method of your choice to order your list. Keep in mind that an item is ordered correctly if it is more important than all of the items below it, and less important than all of the items above it.

   b) In a short paragraph, explain why you ordered your list as you did.

There are Suggested Answers to Support Questions at the end of this unit.

KEY QUESTIONS

Answer the key questions and save your answers in your Course Journal or e-Journal.

3. Review the thinking style questionnaire on page 5. Based on what you learned from this questionnaire, write a two-paragraph reflective journal entry describing **two** changes that you want to make in your study habits.

   You may incorporate the following additional information in your answer:

   - Left-brain thinkers generally prefer bright light and quiet while they are learning. They tend to be persistent and academically motivated. They learn best alone or with authorities.
   - Right-brained people generally prefer soft, dim light and some noise while they are learning. They are not as academically motivated as left-brain thinkers. They learn best with their peers.

4. The following words and phrases are descriptions of right-brain **and** left-brain behaviours. Decide which words describe right-brain thinkers and which words describe left-brain thinkers. Organize the words by creating a mind map, a list, or a table. Feel free to add more words, if you wish.

List of Words

curious	serious
playful	holistic
fantasy	rational
intuitive	flexible
logical	imaginative
impulsive	conforming
spatial ability	thinks in pictures
erratic	knowledgeable
illogical	linear, sequential
uncomfortable with change	thinks in words and numbers
"common-sense" approach	art, music, dance, mime, theatre
book learning	language, math, law
rules, systems	facts

Evaluation Criteria for Key Question 3

Your reflective journal entry will be evaluated using the following rubric. Level 1 is considered a pass. Level 3 is the provincial standard.

Category	Level 1	Level 2	Level 3	Level 4
Content	Few details are provided. Ideas and experiences are stated with little clarity.	Some details are provided. Ideas and experiences are stated with some clarity.	Sufficient details are provided. Ideas and experiences are stated with overall clarity.	Comprehensive details are provided. Ideas and experiences are stated with precision.
Insight	Reflection is mostly about likes and dislikes instead of student's learning.	Reflection is about student's learning, but is superficial.	Reflection shows insight into learning. Plans are included for further learning development.	Reflection includes assessment of learning as well as specific plans for further learning development.

Evaluation Criteria for Key Question 4

Your mind map, list, or table will be evaluated using the following rubric. Level 1 is considered a pass. Level 3 is the provincial standard.

Category	Level 1	Level 2	Level 3	Level 4
Knowledge of facts	Demonstrates limited knowledge of facts by sorting few of the words into the correct category.	Demonstrates some knowledge of facts by sorting some of the words into the correct category.	Demonstrates adequate knowledge of facts by sorting most of the words into the correct category.	Demonstrates comprehensive knowledge of facts by sorting all of the words into the correct category.
Presentation	Presents information with little clarity.	Presents information with some clarity.	Presents information with overall clarity.	Presents information with precision.

Now go on to Lesson 3. Remember, you do not send your journal to the Independent Learning Centre until you have completed Unit 1 (Lessons 1 to 5).