Understanding Critical Thinking

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Define critical and non-critical thinking
- ✓ Identify your critical thinking style(s), including areas of strength and improvement

Understanding Critical Thinking

What is Critical Thinking?

Defining Critical Thinking

According to the 21st Century Lexicon, critical thinking is, "the mental process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information to reach an answer or conclusion."

In other words, it's about using a specific set of systems and tools to look at a problem, find several alternatives, and choose the best one.

In order to understand critical thinking, let's compare it to non-critical thinking:

Non-Critical Thinking…	Critical Thinking...
• Sees the world as black and white	• Accounts for shades of gray
• Is uninformed and indifferent	• Is informed and curious
• Is passive or aggressive	• Is assertive
• Is lazy	• Is active
• Looks at only the superficial aspects of a problem	• Looks deeply at a problem and its surrounding issues
• Is reactive	• Is proactive
• Is stubborn and rigid	• Is flexible
• Is closed-minded	• Is open-minded

A Closer Look

Let's look at a simple example. You're working on a project with a team of co-workers. You are at lunch one day when one of them comes up to you in a complete panic and says, "I've heard that the CEO isn't happy about our approach! If we don't change course, we'll all be fired soon!"

A non-critical thinker might accept this statement at face value and react. A critical thinker would look at the different parts of their co-worker's statement and evaluate it objectively, considering both the statement's correctness and relevance.
One of the key ideas behind critical thinking is logic. If your argument is logical, a reasonable person should be able to follow your line of thinking and reach the same conclusion – or at least see how you got there.

Let's take an example. Suppose that I give you these two statements:

- All fruit is good for you.
- Apples are fruit.

What conclusion would you come to? Apples are good for you. Even if you disagree, you should be able to see where I got my conclusion. (A good critical thinker, however, would want to see some proof for those two statements!)

Glossary
When talking about critical thinking, we're going to use some special terms. Let's go over them right now.

Term	**Definition**
Argument	The framework that a critical thinker uses to convince someone of a particular *conclusion* with *evidence.*
Conclusion	The position that a thinker takes on an *issue*.
Evidence	Facts or reasons that support a particular *conclusion.*
Issue	The statement or situation under evaluation.

Characteristics of a Critical Thinker
Choose how often each statement applies to you.

	Never	**Rarely**	**Sometimes**	**Usually**	**Always**
I pay attention to the world around me and try to be observant.					
I am open-minded and listen to other people's point of views.					

I am able to admit when I am wrong.					
I am able to admit that I am not perfect.					
I know that I see the world through a particular set of glasses, and that these glasses may distort my perception.					
I welcome criticism from others.					
I listen actively.					
I speak with impact.					
I have independent opinions.					
I communicate and think assertively.					

Common Critical Thinking Styles

There are some commonly accepted styles of critical thinkers. Unlike other style assessments, you may have one or more predominant styles. To become a better critical thinker, focus on strengthening your weak areas.

The Investigator

- Questions everything
- Very self-aware and honest
- Concerned about facts and figures

The Pilot

- Looks at the big picture and the future
- Good at guiding others through the issues
- Spends majority of time on planning

The Pioneer

- Good at looking at all sides of a problem and identifying the key issues
- Is very curious and adventurous
- Looks for new ideas and approaches to problems

The Learner

- Looks at things very carefully and meticulously

- Spends majority of time on research
- Concerned about doing things correctly and fixing problems

The Soldier

- Good at solving difficult problems
- Perseveres to get to the truth
- Willing to take on challenges

Test your Knowledge

What is your strongest style?

What is your weakest style?

What other styles do you use?

How can you develop your critical thinking skills?

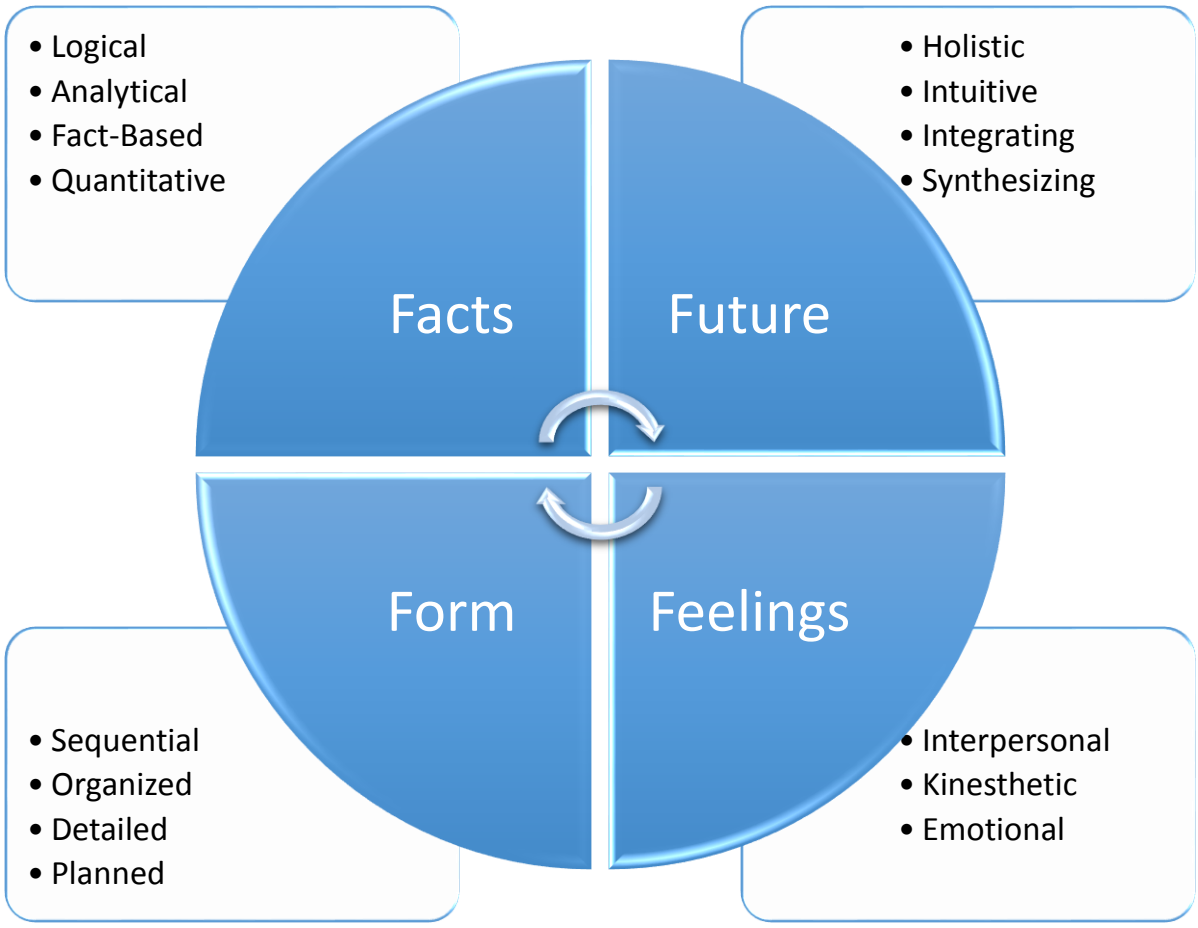
Where Do Other Types of Thinking Fit In?

Left- and Right-Brain Thinking
The concept of different characteristics for the left and right brain was explored and explained by scientist Roger Sperry. His theory can be summed up in his own words: "The great pleasure and feeling in my right brain is more than my left brain can find the words to tell you."

Left-Brain Thinkers…	Right-Brain Thinkers…
• Work with words	• Work with images
• Prefer to talk and write	• Prefer creative methods of expression, such as drawing and music
• Think logically and sequentially	• Think intuitively
• Control feelings	• Allow feelings to affect their lives
• Look for differences	• Look for commonalities and patterns
• Are planned and structured	• Are spontaneous and random
• Are objective	• Are subjective
• Look at the parts	• Look at wholes and think holistically

Think of it this way: with only the left side of your brain, you would be able to read the word "snow" but you wouldn't be able to picture it.

Whole-Brain Thinking
The whole-brain model was developed by Ned Hermann in 1979. It outlines four thinking styles.



(Source: The Whole Brain Business Book, Ned Hermann)

We can use this model as a checklist to ensure we're covering all the bases and thinking critically.

Pitfalls to Reasoned Decision Making

An important part of critical thinking is learning how to use various reasoning techniques to avoid falling into illogical traps. It can help to understand what those traps can look like so we know when we encounter them.

	Definition	Example	Coping Strategies
Building a house on sand			
Circular reasoning			
Red herring			
Emotional manipulation			
Negative arguments			
Omitting facts			

	Definition	Example	Coping Strategies
Overgeneralizing			
Oversimplifying			
The slippery slope			
Using the straw man			