

# Critical Thinking Tool Kit



Neither the hand nor the mind alone would amount to much without aids and tools to perfect them.  
– Francis Bacon, *Novum Organum* (1623)

### Acknowledgement

The information developed in this tool kit is inspired and developed from the research of Roland Case and Ian Wright.

#### Source:

Case, R., & Wright, L. (1997). Taking seriously the teaching of critical thinking. In R. Case & P.

Clark. (Eds.). *The Canadian Anthology of Social Studies*. Burnaby, BC: Field

Relations and Teacher In-service Education, Simon Fraser University.

**1. What component do you struggle with the most in your assignments?**

- Analysis
- Applying teacher feedback
- Subject content
- Writing mechanics

**2. What is critical thinking?**

- Analysis
- Evaluating
- Intelligence
- Making connections
- Synthesizing

**3. What makes critical thinking relevant to your life?**

- It's on the rubric
- My teacher says it's important
- I'm never going to use it except for in English
- It provides a deeper understanding

# Critical Thinking

## What Is It?

**Critical thinking** often is misinterpreted as a skill when in fact it is more a “quality of thinking” (Case & Wright, 1997, p. 2)

Task/Operation	Quality/Characteristic
Interpreting a passage	Superficially or in-depth
Writing a report	Discerningly or blindly
Predicting a result	Rashly or cautiously
Preparing a talk	Carefully or hurriedly
Analyzing an issue	Seriously or frivolously

### The Intellectual Tools of Critical Thinking

- possession of relevant **background knowledge**—the information about a topic that is required for thoughtful reflection;
- understanding of appropriate **criteria for judgment**—the criteria or grounds for deciding which of the alternatives is the most sensible or appropriate;
- possession of **key critical thinking vocabulary**—the range of concepts and distinctions that are helpful when thinking critically;
- fluency with **relevant thinking strategies**—the repertoire of strategies, heuristics, organizing devices, models and "tricks" that may be useful when thinking through a critical thinking problem;
- possession of essential **habits of mind**—the values and habits of a careful and conscientious thinker.

### SOURCE

Case, R., & Wright, L. (1997). Taking seriously the teaching of critical thinking. In R. Case & P. Clark. (Eds.). *The Canadian Anthology of Social Studies*. Burnaby, BC: Field Relations and Teacher In-service Education, Simon Fraser University.

# Critical Thinking

## Tools for Critical Thinking

### **Tool #1: Background Knowledge**

Background knowledge is the context to any given situation or scenario that you are asked to research. It is what you need to know about the topic to make a solid judgment. For example, if you are reading *To Kill a Mockingbird*, you would need to have a strong understanding of the historical period it was set in and the time period it was written to interpret and analyze effectively the events, themes and setting of the story.

### **Tool #2: Criteria for Judgment**

Criteria for Judgment refers to the tools you are using to evaluate the quality of your information. Case and Wright give the following example:

People will judge a movie as “good” because it was funny or it moved them emotionally—these are the criteria for their assessment of movies. Although we will not always share identical criteria when judging something, students will need help in thinking more carefully about the criteria to use when judging various alternatives and when judging the adequacy of their own reasoning.

### **Tool #3: Critical Thinking Vocabulary**

Critical Thinking Vocabulary is knowing and understanding the appropriate terms and using them effectively. Types of critical thinking terms can include a bank of terms relevant to analysis in general such as bias, faulty reasoning, classify, analyze, synthesize, evaluate, etc.

### **Tool #4: Thinking Strategies**

Thinking Strategies are the tools you use to process the information. You are not going to use all the strategies, but only what is applicable and useful for you.

Examples from Case and Wright:

- “when struggling or blocked, stand back from a situation to get the total picture
- talk through a problem or confusing issue with another person
- double check responses before deciding that the task is complete
- use models, metaphors, drawing or symbols to simplify the problem
- use various graphic organizers (t-charts, Venn diagrams) to represent information
- before deciding on a course of action that affects others, put oneself in their position and imagine how they might feel about the situation”

### **Tool #5: Habits of Mind**

You must have the correct state of mind before approaching a task. Attitude is essential to all learning.

Examples from Case and Wright:

- “when struggling or blocked, stand back from a situation to get the total picture
- talk through a problem or confusing issue with another person
- double check responses before deciding that the task is complete
- use models, metaphors, drawing or symbols to simplify the problem
- use various graphic organizers (t-charts, Venn diagrams) to represent information
- before deciding on a course of action that affects others, put oneself in their position and imagine how they might feel about the situation”

# Critical Thinking

## Tool Kit Template

Name: \_\_\_\_\_

Date: \_\_\_\_\_

<b>Question:</b>		
<b>Purpose</b>	<b>Interpreting</b>	<b>Analyzing</b>
<b>Background Knowledge</b>		
<b>Criteria for Judgment</b>		
<b>Critical Thinking Vocabulary</b>		
<b>Thinking Strategies</b>		
<b>Habits of Mind</b>		



### for *Frankenstein*

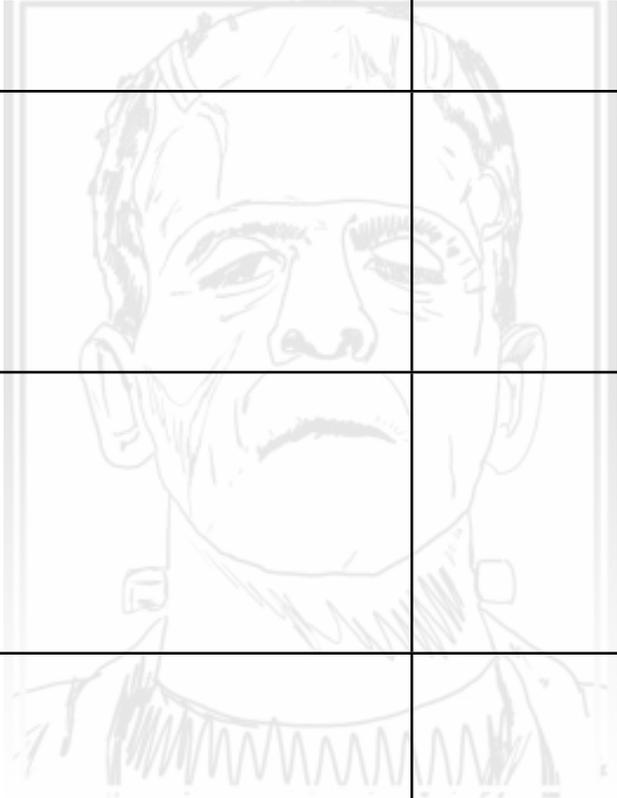
Question:	<b>How does Mary Shelley's life influence her novel, <i>Frankenstein</i>?</b>	
Purpose	Interpreting	Analyzing
<b>Background Knowledge</b>	<ul style="list-style-type: none"> <li>• Research the life of Mary Shelley</li> <li>• Research the time period (Romantic, Gothic, Enlightenment, etc.)</li> <li>• Influential people</li> <li>• Scientific developments</li> <li>• Education</li> <li>• Parents</li> <li>• Early life</li> <li>• Social, political, cultural context</li> <li>• Knowledge of the text</li> </ul>	<ul style="list-style-type: none"> <li>• Have I gathered enough data to answer the question?</li> </ul>
<b>Criteria for Judgment</b>	<ul style="list-style-type: none"> <li>• Evidence of the time period in the text</li> </ul>	<ul style="list-style-type: none"> <li>• Do I</li> <li>• Support arguments with reasons</li> <li>• Use evidence and examples to substantiate</li> <li>• Consider all reasonable alternatives/ perspectives</li> </ul>
<b>Critical Thinking Vocabulary</b>	<ul style="list-style-type: none"> <li>• Is there any new terminology in the sources that I do not understand?</li> </ul>	<ul style="list-style-type: none"> <li>• Can I apply the terminology used to interpret the data?</li> </ul>
<b>Thinking Strategies</b>	<ul style="list-style-type: none"> <li>• Have I summarized the content in my own words?</li> <li>• How can I display the information?</li> <li>• Have I clarified any misunderstandings? With a classmate? With a teacher?</li> </ul>	<ul style="list-style-type: none"> <li>• Have I answered the question?</li> <li>• How have I organized my information?</li> </ul>
<b>Habits of Mind</b>	<ul style="list-style-type: none"> <li>• Am I committed to producing an educated, academic response to the question?</li> </ul>	<ul style="list-style-type: none"> <li>• Am I confident that I have enough support to answer the question?</li> </ul>

# Critical Thinking

## Tools for Interpreting/Analyzing Data

### for *Frankenstein*

Question:		
Purpose	Interpreting	Analyzing
Background Knowledge		
Criteria for Judgment		
Critical Thinking Vocabulary		
Thinking Strategies		
Habits of Mind		



# Critical Thinking

## Tools to Critical Thinking

### Tool #1: Background Knowledge

Background knowledge is the \_\_\_\_\_ to any given situation or scenario that you are asked to research. It is what you need to know about the topic to make a \_\_\_\_\_.

For example, if you are reading *To Kill a Mockingbird*, you would need to have a strong understanding of the \_\_\_\_\_ it was set in and the time period it was written to \_\_\_\_\_ and \_\_\_\_\_ effectively the events, themes and setting of the story.

### Tool #2: Criteria for Judgment

Criteria for Judgment refers to the tools you are using to \_\_\_\_\_

\_\_\_\_\_.

Case and Wright give the following example:

People will judge a movie as “good” because it was funny or it moved them emotionally-these are the criteria for their assessment of movies. Although we will not always share identical criteria when judging something, students will need help in thinking more carefully about the criteria to use when judging various alternatives and when judging the adequacy of their own reasoning.

### Tool #3: Critical Thinking Vocabulary

Critical Thinking Vocabulary is \_\_\_\_\_

the appropriate terms and using them effectively. Types of critical thinking terms can include a bank of terms relevant to thinking such as: \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_, and

\_\_\_\_\_.

### Tool #4: Thinking Strategies

Thinking Strategies are the tools you use to \_\_\_\_\_.

You are not going to use all the strategies, but only what is applicable and useful for you.

Examples from Case and Wright:

- “when struggling or blocked, stand back from a situation to get the total picture
- talk through a problem or confusing issue with another person
- double check responses before deciding that the task is complete
- use models, metaphors, drawing or symbols to simplify the problem
- use various graphic organizers (t-charts, Venn diagrams) to represent information
- before deciding on a course of action that affects others, put oneself in their position and imagine how they might feel about the situation”

### Tool #5: Habits of Mind

You must have the correct state of mind before approaching a task. Attitude is essential to all learning.

According to Case and Wright, these habits include things such as:

- 
- 
- 
- 
- 
-

### Tools for presenting information

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
<p>Has a basic understanding of the following forms of presentation:</p> <ul style="list-style-type: none"> <li>• Various types of graphic displays (e.g., collages, murals, overheads);</li> <li>• Small and large group presentation approaches (e.g., debates, lectures);</li> <li>• The mechanics of formal written presentations (e.g., titles and headings, report structure);</li> <li>• The principles and techniques in making short video presentations.</li> </ul> <p>Understands that presentations serve different purposes (e.g., create awareness, inform, persuade).</p> <p>Has some knowledge of audience needs and how to respond to different audiences.</p> <p>Can present on same topic from significantly different perspectives (e.g., victim/advocate) and for different purposes (to promote, to critique, to inform).</p> <p>Knows the elements and principles of a formal debate.</p>	<p>Is familiar with the following criteria:</p> <ul style="list-style-type: none"> <li>• Presentation is interesting and appropriate to the audience;</li> <li>• Oral and visual communication is clear and accurate—does not distort the information;</li> <li>• Presentation is thoughtfully sequenced;</li> <li>• Topic is focussed and keeps to the point;</li> <li>• Medium is suitable for the message;</li> <li>• Integrates various media within a presentation.</li> </ul>	<p>Understands the following concepts:</p> <ul style="list-style-type: none"> <li>• Media as “representation;”</li> <li>• Media as “construction.”</li> </ul>	<p>Generates titles and subheadings to classify/organize information.</p> <p>Uses rehearsal techniques and mock-ups to prepare presentations.</p> <p>Develops appropriate outlines to sequence presentations.</p> <p>Prepares speaking notes and other aides to support familiar presentation.</p> <p>Uses graphics (e.g., timelines, charts, graphs) to present information.</p> <p>Carefully edits written reports.</p> <p>Makes use of relevant and illustrative examples in oral and written communication.</p> <p>Uses accepted bibliographic style to reference sources of ideas.</p> <p>Uses recognized techniques of persuasion (e.g., focus on the positive, appeal to authoritative figures).</p>	<p>Considers needs of the audience.</p> <p>Is flexible in adjusting presentation as needed.</p> <p>Takes pride in preparing quality work.</p> <p>Is willing to engage respectfully in group discussion.</p>

### Tools for interpreting data

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
<p>Understands that documents can be read beyond their surface meaning.</p> <p>Has knowledge of the range of symbols used in maps and other graphic representations.</p> <p>Understands that interpretations may be from different perspectives or lenses (e.g., from feminist perspective, employer/employee perspective).</p> <p>Understands that the past is often different from the present in many subtle and undetected ways.</p>	<p>Is familiar with the following criteria:</p> <ul style="list-style-type: none"> <li>• Justifies interpretations in light of consistency with evidence in text with other known beliefs and theory;</li> <li>• Recognizes ambiguity and vagueness;</li> <li>• Recognizes bias.</li> </ul> <p>Judges the reliability of observations in light of the following criteria:</p> <ul style="list-style-type: none"> <li>• First-hand and not hearsay;</li> <li>• Good access to event;</li> <li>• No conflict of interest;</li> <li>• Is corroborated;</li> <li>• Is representative coverage of situation/population.</li> </ul> <p>Judges the credibility of an authority in light of the following criteria:</p> <ul style="list-style-type: none"> <li>• No conflict of interest;</li> <li>• Has solid reputation;</li> <li>• Is well-informed about the topic;</li> <li>• There is general agreement among experts;</li> <li>• Used proper methods to research topic.</li> </ul>	<p>Understands the following concepts:</p> <ul style="list-style-type: none"> <li>• Inference and direct observation;</li> <li>• Cause and effect;</li> <li>• Point of view;</li> <li>• Bias;</li> <li>• Stereotype;</li> <li>• Hypothesis;</li> <li>• Primary and secondary source;</li> <li>• Degrees, minutes, seconds;</li> <li>• Types of scale (i.e., RF, stated, linear);</li> <li>• Global position index–six-figure coordinates;</li> <li>• Propaganda;</li> <li>• Deconstruction;</li> <li>• Cause versus correlation;</li> <li>• Impartial versus neutral.</li> </ul> <p>Can distinguish the following forms of bias:</p> <ul style="list-style-type: none"> <li>• Eurocentricism;</li> <li>• National chauvinism;</li> <li>• Cultural chauvinism;</li> <li>• Presentism;</li> <li>• Anthrocentricism.</li> </ul>	<p>Looks to identify author’s purpose or hidden intentions.</p> <p>Summarizes ideas in one’s own words.</p> <p>Sequences or translates information into various forms to assist in interpretation.</p>	<p>Does not take everything at face value—is inclined to question when warranted.</p> <p>Is willing to consider alternative points of view/interpretations.</p> <p>Is willing to evaluate information when it is important to do so.</p> <p>Withholds reaching a conclusion when the evidence is inconclusive.</p> <p>Has historical empathy—the capacity to place oneself in the minds and times of historical persons.</p>

### Tools for analysing issues

Background knowledge	Criteria for judgment	Vocabulary	Strategies	Habits of mind
<p>Has substantive knowledge about the issue at hand.</p> <p>Has some knowledge of the types of concerns that should be considered when defending a position on a social/ethical issue.</p>	<p>Is familiar with the following criteria:</p> <ul style="list-style-type: none"> <li>• Avoids ambiguous language;</li> <li>• Supports arguments with reasons;</li> <li>• Uses evidence and examples to substantiate reasons;</li> <li>• Fairly considers all reasonable alternatives/ perspectives;</li> <li>• Judges whether an explanation is oversimplified;</li> <li>• Judges whether the evidence is sufficient to establish the claim.</li> </ul> <p>Avoids most basic informal fallacies</p> <ul style="list-style-type: none"> <li>• Ad hominem;</li> <li>• False appeal to tradition;</li> <li>• False appeal to popularity;</li> <li>• False dichotomy;</li> <li>• Slippery slope;</li> <li>• Straw person;</li> <li>• Begging the question;</li> <li>• False appeal to authority;</li> <li>• Vagueness.</li> </ul>	<p>Understands the following concepts:</p> <ul style="list-style-type: none"> <li>• Assumption;</li> <li>• Justification and evidence;</li> <li>• Argument, premise, and conclusion;</li> <li>• Factual and value claims;</li> <li>• Generalization;</li> <li>• Pro and con;</li> <li>• Justice/fairness;</li> <li>• Eyewitness;</li> <li>• Fallacy;</li> <li>• Generalization and overgeneralization;</li> <li>• Unstated assumptions;</li> <li>• Truth, validity, and soundness;</li> <li>• Deductive and inductive reasoning.</li> </ul>	<p>Can follow a five-step issue analysis model:</p> <ul style="list-style-type: none"> <li>• Define the issue and explain why it is important;</li> <li>• Research and explain several pro and con arguments;</li> <li>• Evaluate reasons from all sides of a debate;</li> <li>• Formulate a defensible position;</li> <li>• Offer counter-arguments to defend position.</li> </ul> <p>Thinks of counter-arguments.</p> <p>Creates pro and con charts.</p> <p>Uses role taking to understand other perspectives.</p> <p>Can follow a complex issue analysis model:</p> <ul style="list-style-type: none"> <li>• Define the issue and explain why it is important;</li> <li>• Research and explain all major pro and con arguments;</li> <li>• Evaluate the comparative strength of competing reasons;</li> <li>• Formulate a defensible position that considers the interests of all who are affected;</li> <li>• Offer counter-arguments in defence of position.</li> </ul> <p>Uses diagrams to trace structure of arguments.</p>	<p>Is willing to tackle an issue.</p> <p>Is open to points of view other than one's own—especially those that are counter to one's own position.</p> <p>Is fair-minded—will judge ideas on their merits and not simply enforce personal interests and biases.</p> <p>Is independent minded—resists the pressures to adopt and espouse opinions merely because they are popular.</p> <p>Has an intellectual work ethic—is committed to thinking in a thorough and careful manner.</p> <p>Is tentative in one's belief until there is sufficient evidence to warrant a more definitive position.</p>

### I. Life and Times of Mary Shelley

Mary Shelley was born Mary Wollstoncraft in 1797 to William Godwin and Mary Wollstoncraft—both very prominent and liberal writers. Her mother had written *A Vindication on the Rights of Woman*, which was a very popular feminist work. Mary spent much of her teen years writing stories in Scotland until she returned to London at age 16. She met and fell in love with Romantic poet Percy Bysshe Shelley and became pregnant. The two continued their affair until his estranged wife committed suicide, at which point they married. They lost all three of their children, and in 1822 Percy drowned in the Gulf of Spezia in Italy. At the age of 24, she was an impoverished widow, and she supported herself with her writing.

Frankenstein was published in 1818 when she was only 20 years old. It is considered a huge feminist feat because it was written by the female child of a world-renowned early feminist. However, there are very few female characters, and other than Safie (the wife of one of “the cottagers”) they are not particularly strong female roles.

### Historical Events:

- **1789:** the start of the French revolution (an attempt of the French people to rid themselves of their absolute monarchy). British liberals were excited that the common people were standing up to their oppressors, but they quickly became disillusioned when the revolution became very bloody and its leaders became tyrants themselves.
- **1793 through 1794:** the French Reign of Terror under Robespierre. British liberals lost all hope for true justice and equality in that year.
- **1804:** Napoleon is crowned Emperor.

During this whole time, Romantic writers were turning towards nature as an escape from the harsh realities of their world. Nature was someplace where human tyranny did not reign.