



## **Critical Thinking**

Int@E UG

**Training Materials** 

### What is critical thinking?



- Good thinking is hard work.
- Learning to think clearly and carefully takes training, patience, and practice.
- Thinking carefully with clarity, depth, precision, accuracy, and logic is thinking critically.
- Great scientists, like Albert Einstein, who discover amazing things about the world, have trained themselves to think critically.
- Critical thinking is the process of thinking in a certain way.



### What is critical thinking?



- Critical thinking is the process of thinking clearly, with accuracy and precision; of thinking carefully, with logic and depth; and of thinking open-mindedly, by examining points of view and acknowledging assumptions and biases within a given viewpoint.
- The point is that everyone can learn how to think critically if the time is taken to learn

### Tools of critical thinking

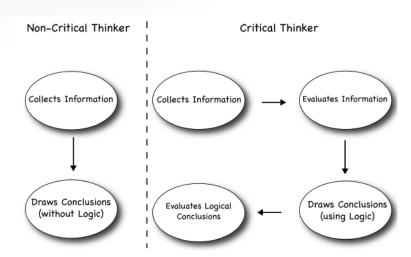


- What does it take to think critically? What are the nuts and bolts of critical thinking?
- Critical thinking has necessary tools and a method for using those tools.
- There are two main activities we do all the time when we think
- 1. Gathering information or collecting data
- 2. Drawing a conclusion based on the information

### Tools of critical thinking



 To evaluate both information and conclusions, the critical thinker must use the most important tools in the critical thinking toolbox: questions. Such as s it important?" "Is it relevant?" "Is it applicable?" "Is it significant?" But that's not enough



### Tools of critical thinking



- There are tools for Getting the Facts, Evaluating the Facts, Drawing a Conclusion, and Evaluating the Conclusion.
- 1. Tools for getting the facts
- 2. Tools for evaluating the facts
- 3. Tools for drawing a conclusion-using logic
- 4. Tools for evaluating a conclusion

### 1. Tools for getting the facts



Tools for Getting the Facts include questions like
 ""Who?" "What?" "Where?" "When?" and "How?"
 The facts need to be accurate, clear, and precise.
 Questions that get to the details of facts, with
 words like "exactly," "how much," "what time," etc.,
 help to clarify the facts.

### 2. Tools for evaluating the facts



- We know the facts, it is important to evaluate the facts
- Tools for Evaluating the Facts include questions that explore the relevance and significance of the facts and questions that explore whether or not the facts are substantial, crucial, or applicable to the conclusion.

# 3. Tools for drawing a conclusion-using logic



- we have collected the facts and evaluated the facts, we can "draw a conclusion." A conclusion is a statement that sums up all of the information collected in order to make a point or a decision
- Tools for Drawing a Conclusion use logic (a method that investigates arguments) to help the critical thinker avoid making

### 4. Tools for evaluating a conclusion



- Sometimes it's not enough to have a logical conclusion. Sometimes it is necessary to evaluate your conclusion. We need to ask the following types of questions: "Is my conclusion fair?" "Has my conclusion taken into account all the information available?" "Is my conclusion reasonable?" and "Is there more information that should be considered?"
- Tools for Evaluating a Conclusion include questions that explore the fairness, reasonableness, depth, and breadth of a conclusion.

### Putting it all together- critical thinking



- The four main types of critical thinking tools are:
  Getting the Facts, Evaluating the Facts, Drawing a Conclusion using Logic, and Evaluating a Conclusion.
- Asking questions is the key for critical thinking
- The critical thinking tools are different kinds of questions that explore different aspects of the information

### Putting it all together- critical thinking

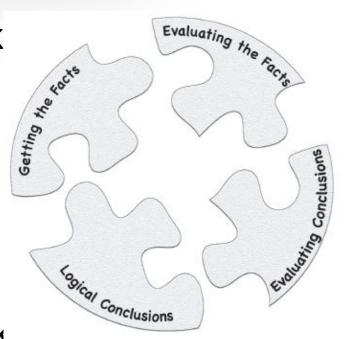


 One of the most important questions you can ask another person is, "Let me understand what you are saying. Are you saying...?" Then in different words, repeat what you think the other person is saying, or repeat what you think you are saying in a different way. To admit you may not understand what someone else is saying is a way to open up more critical thinking questions.

### Building a critical thinking lens



- One way to envision all of the critical thinking tools is to think about a lens.
- If our eyes do not function properly, a lens helps us see objects more clearly.
- In the same way, a critical thinking lens can help you think through problems more clearly.



### Building a critical thinking lens



- Constructing a critical thinking lens is not very difficult.
- Asking questions using the four critical thinking tools.
- As you improve your ability to ask good questions, your critical thinking lens will improve.
- A critical thinking lens can help you decide what kinds of statements are scientifically valid, and what kinds of statements may not be scientifically valid



#### Summary



- Critical thinking tools are questions.
- There are four main types of critical thinking tools (questions): Getting the Facts, Evaluating the Facts, Drawing a Conclusion using Logic, and Evaluating a Conclusion.
- Tools for Getting the Facts include questions like "Who?" "What?" "Where?"
  "When?" and "How?"
- Tools for Evaluating the Facts include the following types of questions: "Is this fact relevant or significant?" "Is this fact substantial, crucial, and applicable?" and "Does it support the conclusion?"
- Tools for Drawing a Conclusion use logic to help the critical thinker to avoid making errors by asking: "Is this valid and consistent with other information?" and "Are there any logical flaws in this conclusion?"
- Tools for Evaluating a Conclusion include the following types of questions: "Is this fair and reasonable?" and "Does my conclusion have the necessary depth and breadth?"



• Quelle: John C Johnson III, Interpreting The Facts . 2015, The Advocacy Foundation, Inc.



## Thank you for your attention