

## How To...

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### How to Improve Your Critical Thinking Skills

#### Introduction

Critical thinking is an important skill that you will need to succeed in life. Being able to think critically will make you a better learner. And as you know, being a good learner is helpful not only in school, but in all aspects of your life! Being a good critical thinker will also help you in the workplace.

The dictionary defines "critical" as "characterized by careful analysis." It also points out that the word critical "implies an attempt at objective judging so as to determine both merits and faults."

In education, the term "critical thinking" describes special teaching and learning methods, used in all sorts of courses. These methods were developed in response to concerns that students were not thinking effectively.

Since then, the term has been incorporated into the titles of many college courses, where it has been substituted for what used to be called philosophy or logic courses. This has caused some controversy, as people dispute the relationship between critical thinking and what is known as "formal logic."

In this article we will take a look at critical thinking as a common-sense term for day-to-day learning and decision making. We will examine what activities are encompassed by critical thinking and apply these activities to thinking critically about a specified topic.

#### Learning Goals

When you're finished reading this article, you should be able to:

- Discuss the importance of critical thinking skills
- Describe several specific ways in which the term "critical thinking" is used currently
- Learn a 13-step method for thinking critically
- Use the included Internet links to get additional information about the topics of critical thinking, logic and skepticism

#### How To ...

Do you suffer from information anxiety? Do you feel overwhelmed by the amount of facts, data, statistics and news you're supposed to absorb? Are you able to process all the information you're getting to be able to complete school, to stay competitive in the job market and to make good decisions about your personal life?

Critical thinking is a survival skill for today's fast-paced, knowledge-driven world. The book *Mastering the Information Age*, by Michael J. McCarthy, includes a chapter on how to think critically about information. This book takes a 13-step common-sense approach to dealing with personal and social issues.

We will apply these steps to a particular scenario – that of extraterrestrial activity in the Nevada desert! Here are some details:

On April 18, 1996, Governor Bob Miller of Nevada dedicated a stretch of Highway 375 as the Extraterrestrial Highway. This road runs through a remote desert area next to an air base so secret that its existence is denied by the government. The site is known as Area 51 or Groom Lake. It is also recognized by students of unidentified flying objects to be the landing site of many alien aircraft.

Tourists have been flocking to the town of Rachel for years to explore for themselves. There are conflicting stories about mysterious lights in the night sky and unusual aircraft that have been observed by locals and visitors alike. The base is very heavily guarded and numerous articles have appeared about the strict security. Proponents, skeptics, humorists and journalists of many specialties continue to voice their opinions and argue with each other on the subject of what is really going on at the mysterious base in the desert.

Now, let's apply the 13-step critical thinking method to this news story.

- [Get All the Information You Need](#)
- [Check the Source of Information](#)
- [Be Flexible and Open-Minded](#)

- Be Sure You Understand
- Make Connections
- Consider Alternatives
- Think Ahead
- Organize Your Thoughts
- Use Writing and Mind Mapping to Help Clarify Your Thoughts
- Read to Stimulate Your Thinking
- Analyze and Learn from Setbacks
- Tune In to Your Intuition and Inner Knowing
- Be Patient

### Get All the Information You Need

Before you can decide on a course of action or make a judgment about a controversial issue, you need to gather sufficient information to make sense of the problem. You have to consider what you already know and what other pieces of the puzzle are missing. Knowing how much information to gather can also be difficult. How do you decide that you have enough?

In the case of UFO landings in the Nevada desert, consider what hard information is available and think about what else you would like to know about it.

#### Check the Source of Information

Before you evaluate the worth of the information you've gathered, consider your sources. Where did the information come from? How do you know? Has it been verified? What kinds of authority, training, credentials or other qualifications does the source of the information have? Does the source of the information have a vested interest in the outcome of your decision?

There are hundreds of sources for UFO stories. What kinds of qualifications should authorities speaking on this subject have? Who profits from publicizing UFO stories?

#### Be Flexible and Open-Minded

It is important to consider all sides of an issue. Consider whether you are looking at a problem based on your belief systems or based on a variety of information sources. Be willing to entertain new information even when it contradicts long-held beliefs.

Is the existence of UFOs a suitable subject for scientific inquiry? Do you have a set of beliefs about UFOs? Are you willing to entertain the possibility that the contradictory view may be correct?

#### Be Sure You Understand

Young children are willing to ask hundreds of questions until they get a satisfactory answer. Sometimes, as we get older, we become embarrassed about admitting ignorance about a subject. In order to make good decisions you must have a firm grasp of the subject matter. You have to keep asking questions, investigating and clarifying, until you're sure you understand.

Do you understand why the Governor of Nevada named a road the Extraterrestrial Highway? Why were some people opposed to his doing this? Who will benefit from this designation?

#### Make Connections

When you get new pieces of information about a topic, you have to incorporate them into what you already know. You have to recognize the connections between new ideas and old concepts and see what aspects of the situation are changed because of the new information.

Had you been aware of UFO literature before you read this story? Did your understanding of UFO sightings change because of what you've found out? How have these new bits of information modified what you knew already?

#### Consider Alternatives

Life is filled with many, many choices. Even the same set of information may carry with it the possibility of many different options for action. You can use a variety of techniques to generate even more ideas. When you have a sufficient number of alternatives, you can decide on a solution.

In the case of the UFO sightings in Nevada, you could ask, what are all the possible explanations for the reported phenomena? Who may be presenting what information for what kinds of uses?

#### Think Ahead

Use available information to plan ahead. When you consider alternatives, imagine the possible outcomes for each course of action. Examine the information you've collected to discern patterns and evaluate whether these patterns are predictors of the future.

If there are a lot of people interested in UFOs in Nevada, do you want to go there as a tourist? Do you think there is so much activity around UFO stories that this is something that you want to read about in the future? Do you see opportunities for yourself? Is there a developing UFO industry?

#### Organize Your Thoughts

Are you able to make sense of what you know? It is important to keep organizing your thoughts as you gather information. You have to figure out the relationships among the bits of information you've collected. You have to examine what information has high value and what is of little importance.

What is the probability that there is a secret airbase in Nevada? Does this concern you in any way? Does the existence of an airbase have anything to do with UFO stories? What information makes sense and what is questionable?

### **Use Writing and Mind Mapping to Help Clarify Your Thoughts**

Writing down possible action plans, formulating "to do" lists or drawing mind maps to show the relationships of various pieces of a problem can help you figure out where you are in dealing with the problem. This is especially true when you are faced with a goal-oriented task.

You may not consider the question of alien intelligences in the universe and the possibilities of communicating with them to be of importance, so you may not need to take any action to clarify your thoughts. If you're feeling intrigued, interested or confused, you can use writing techniques to help you devise further paths of exploration.

### **Read to Stimulate Your Thinking**

Reading about a topic is a great way to gather information. Sometimes you reach a block in your ability to absorb anything more on a subject or coming to a satisfactory conclusion about it. In such cases it can be helpful to read about totally unrelated subjects that are of interest to you to stimulate your thinking. Consciously ignoring a problem sometimes lets your unconscious deal with the areas where you feel blocked.

The exploration of space and the possibility of discovering and communicating with aliens from other worlds has been a subject of interest not only for scientists and UFO believers but also for people in all walks of life. The subject has been covered objectively and in fiction and there is lots of material to support multiple points of view on these topics.

### **Analyze and Learn from Setbacks**

One of the key elements of critical thinking is to learn from all experiences, both positive and negative. Analyzing failures can give you invaluable lessons and insights for future action.

All science and exploration is filled with experiments that don't pan out, theories that are proved incorrect and evidence that is later overturned. Space exploration and the belief in UFOs are driven by humanity's need to know whether we are unique in the universe. Much more evidence is needed before we come to a certain conclusion.

### **Tune In to Your Intuition and Inner Knowing**

Information gathering, data analysis and step-by-step problem solving are all required for critical thinking. All of the information you've collected and processed can sometimes be reinterpreted through new insights brought by intuition. Not all critical thinking is rational.

Many of the people writing about UFOs and extraterrestrials testify to their existence based not on scientific observation but rather on belief or intuition. When you choose to make a decision based on intuition, it is important to be able to adapt the basis for your decision.

### **Be Patient**

Completing these steps in the critical thinking process takes time. It is important to devote the necessary time in order to be able to make effective decisions.

The Extraterrestrial Highway celebrates a cultural phenomenon. The truth about what is happening in the Nevada desert has not been fully explored and illuminated. You have to draw your own conclusions about how satisfied you are with current explanations.

### **Resources**

#### **Links**

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#### **Critical Thinking Puzzles**

A fun warm-up exercise before exploring the 13-step method

- <http://tinyurl.com/oefnvy>

#### **The Critical Thinking Community**

An organization that promotes educational reform using critical thinking

- <http://tinyurl.com/yomekw>

#### **The Institute for Critical Thinking**

Check out the discussion areas

- <http://tinyurl.com/lgroahl>

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