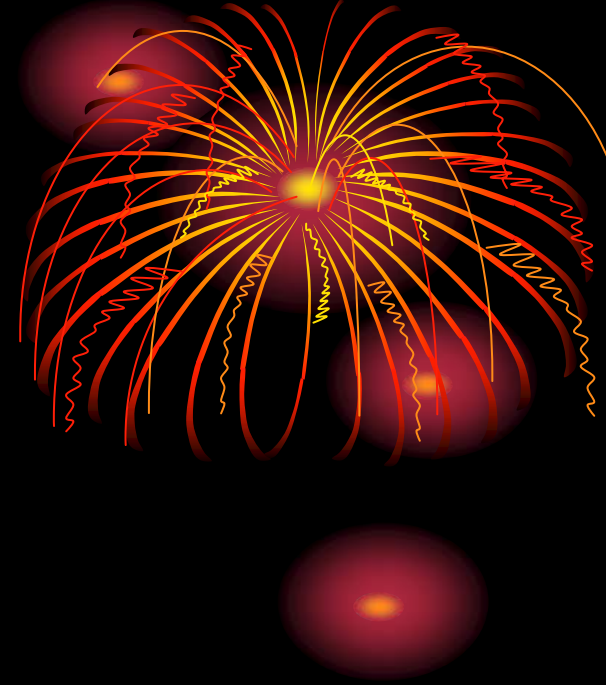




CRITICAL THINKING

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CRITICAL THINKING OVERVIEW

What is Critical Thinking?



- Essentially critical thinking is the act of carefully considering a problem, claim, question, or situation in order to determine the best solution.
- When you think critically, you take the time to consider **all** sides of an issue, evaluate evidence, and imagine different scenarios and possible outcomes.

Why is Critical Thinking Important?

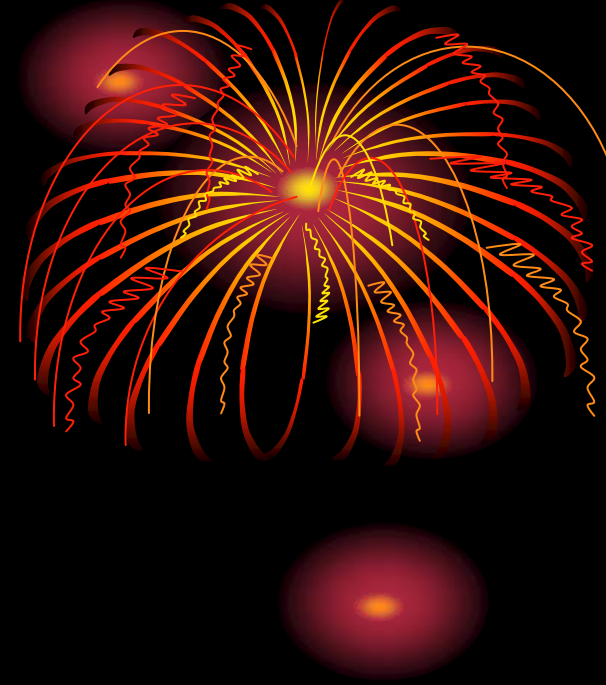


- Critical thinking allows you to discover:
 - How to best solve a problem
 - Whether to accept or reject a claim
 - How to best answer a question
 - How to best handle a situation
 - Compose and support strong, logical arguments
 - Assess the validity of other people's arguments
 - Make more effective and logical decisions
 - Solve problems and puzzles more efficiently and effectively

Suppose this...



- It's Tuesday. You have an essay due tomorrow at noon, and you haven't started it yet. It's 2:00 in the afternoon, and you're scheduled to work from 5:00pm to 10:00pm in the Media Centre.



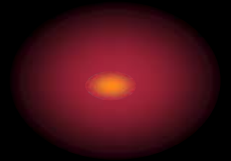
How would you deal
with this?



Putting Critical Thinking Skills in Action....

What are your options?

- Get someone to cover your shift at work
- Call in sick
- Just not show up for work
- Just not do the paper
- Stay up all night and get the paper done
- Ask the professor for an extension
- Not talk to the professor and just hand the paper in late

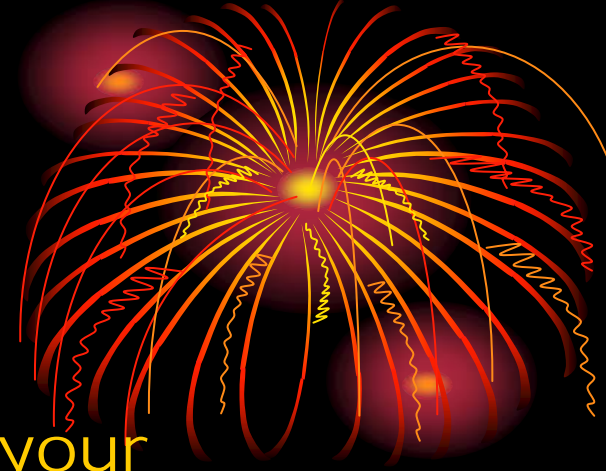


What is the evidence or the facts of the case?



- You usually write well when you're under pressure
- You have a good idea of what you want to write about
- Your professor has given other students extensions in the past
- You've already called in sick three times in the last month
- You really need the money
- Tuesday nights are usually very slow at the Media Center
- The only person who could cover for you at work is Stacey, and she's in your class, so she'll probably also be working on her essay.
- You've never been late for class and you've handed in all of your assignments on time.
- You're doing well in the class so far and getting along with the professor
- Your professor may not accept your essay if it's late and you don't ask for an extension
- The essay is worth 20% of your grade for this class

What are possible outcomes



- You may not get in touch with your professor
- You may get in touch with your professor and she may say no to an extension
- You may lose your job if you call in sick again
- Stacey may have already finished her paper and be willing to cover for you
- You may be very busy at work
- You may have some kind of emergency that would keep you from getting your paper done tonight
- You may fall asleep while working

Your turn...

- A Common Recent Application
 - Attending CSUCI
 - Complete Handout
 - Share with group



Tools to begin your Critical Thinking Journey...



Be An Active Listener and Observer



- You can begin building your critical thinking skills right away by becoming an active listener and observer.
- Also...
 - Keep an open mind
 - Consider all sides
 - Separate feelings from facts
 - Think before you acti

Active Listening



- "People often make mistakes and miss opportunities because they come to conclusions based on what they think or feel rather than on the evidence before them. They make decisions based on what they *want* to hear rather than what is really being said; they take action based on what they *imagine* to be true rather than what is actually the case. But by really listening to what people say and *how* they say it, you help ensure that you will be reacting to what's really being said, not just what you want to hear."

Chesla, E. (1999). *Critical Thinking and Logic Skills for College Students* (p. xii). New Jersey: Prentice Hall.

Listening Tips



- **Face the speaker.** Sit up straight or lean forward slightly to show your attentiveness through body language.
- **Maintain eye contact,** to the degree that you all remain comfortable.
- **Minimize external distractions.** Turn off the TV. Put down your book or magazine, and ask the speaker and other listeners to do the same.
- **Respond appropriately** to show that you understand. Murmur ("uh-huh" and "um-hmm") and nod. Raise your eyebrows. Say words such as "Really," "Interesting," as well as more direct prompts: "What did you do then?" and "What did she say?"
- **Focus solely on what the speaker is saying.** Try not to think about what you are going to say next. The conversation will follow a logical flow after the speaker makes her point.

More Listening Tips



- **Minimize internal distractions.** If your own thoughts keep horning in, simply let them go and continuously re-focus your attention on the speaker, much as you would during meditation.
- **Keep an open mind.** Wait until the speaker is finished before deciding that you disagree. Try not to make assumptions about what the speaker is thinking.
- **Avoid letting the speaker know how you handled a similar situation.** Unless they specifically ask for advice, assume they just need to talk it out.
- **Even if the speaker is launching a complaint against you, wait until they finish to defend yourself.** The speaker will feel as though their point had been made. They won't feel the need to repeat it, and you'll know the whole argument before you respond. Research shows that, on average, we can hear four times faster than we can talk, so we have the ability to sort ideas as they come in...and be ready for more.
- **Engage yourself.** Ask questions for clarification, but, once again, wait until the speaker has finished. That way, you won't interrupt their train of thought. After you ask questions, paraphrase their point to make sure you didn't misunderstand. Start with: "So you're saying..."

How Well Do You Listen?



What techniques do you use to ensure you are actively listening?

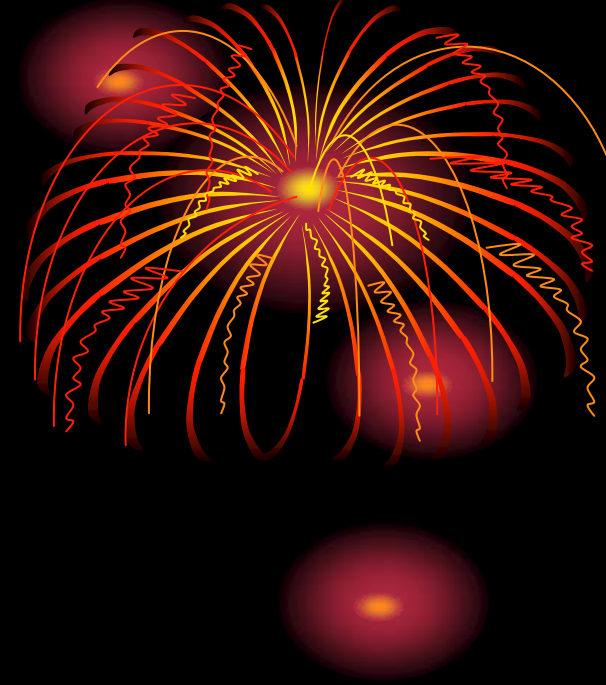
- Let's see how well we actively listen....
 - 4 volunteers 😊

Attributes Of A Critical Thinker



- asks pertinent questions
- assesses statements and arguments
- is able to admit a lack of understanding or information
- has a sense of curiosity
- is interested in finding new solutions
- is able to clearly define a set of criteria for analyzing ideas
- is willing to examine beliefs, assumptions, and opinions and weigh them against facts
- listens carefully to others and is able to give feedback
- sees that critical thinking is a lifelong process of self-assessment
- suspends judgment until all facts have been gathered and considered
- looks for evidence to support assumption and beliefs
- are able to adjust opinions when new facts are found
- looks for proof
- examines problems closely
- are able to reject information that is incorrect or irrelevant

Ferrett, S. *Peak Performance* (1997).



ANALYZING AN ARGUMENT

Components Of An Argument



- **Argument**
 - An attempt to support a claim or assertion by providing a reason or reasons for accepting it.
- **Conclusion**
 - An attempt to support a claim or assertion by providing a reason or reasons for accepting it
- **Premise(s)**
 - The claim or claims in an argument that provide reasons for believing the conclusion

Argument Example



- What the devil does that fellow think he is doing? He is going to hurt himself seriously if he doesn't watch out! I'd better tell him he should wear shoes.
- Premise: If this person doesn't wear shoes, he could be badly hurt
- Conclusion: Therefore, I should tell him to wear shoes.

Identifying The Problem



- Real life situations are often not obvious and it's easy to lose sight of the real problem at hand
 - Makes things more complicated because you end up focusing on secondary issues
- Once you've identified the problem, break it down into parts – this provides a scope of the problem.
 - How big is it? How many issues are there?
 - You may find out it's not as big a problem as you thought – or that it's much more complicated than you initially anticipated

Can you guess?



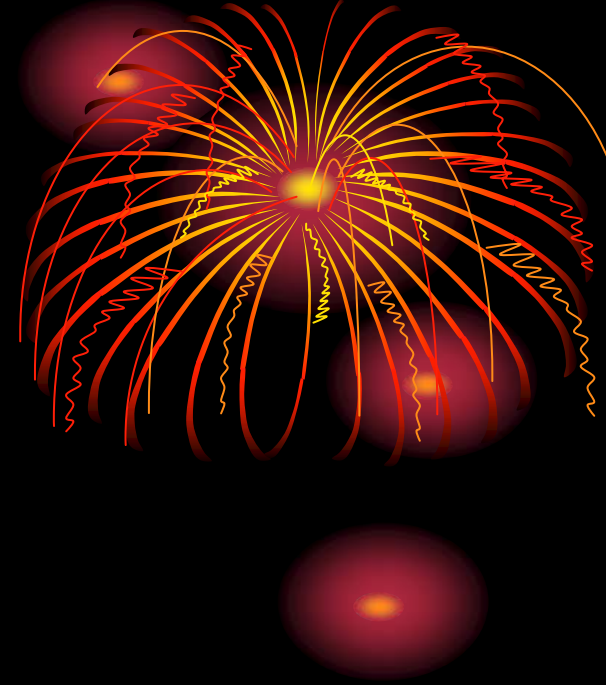
It's risky to speed on I-75 in Cincinnati,
since the police like to set up speed
traps for folks up from Kentucky

What is the conclusion?

It's risky to speed on I-75 in Cincinnati

What is the Premise?

The police like to set up speed traps for
folks driving up from Kentucky



CREDIBILITY

What Is Credibility?

- Quality of being trustworthy and believable
- Three qualities to consider in evaluating credibility



Reliability

- The source can be relied upon to give correct information



Bias

- An opinion or feeling that strongly favors one side over others; a predisposition to support one side or a prejudice against other sides.
 - Advertisers have an obvious bias which is making money.



Expertise

- The more a person knows about a subject
 - Education
 - Experience
 - Job or position
 - Reputation
 - Achievements



The News Media



- Newspapers offer the broadest coverage of general news (with the exception of the internet)
- Radio and TV offer the most severely edited and least detailed coverage
- News reports, especially from major metropolitan newspapers, national magazines and television and radio news programs are generally credible
- It is important to remember that the news media in this country are private businesses

Reporting The News



- A large majority of news is *given* to reporters, not necessarily dug up after weeks or days or even hours of investigation
- Commentators these days are paid to attract attention, not to provide factual information
- "Because amazing feats are entertaining, the media often plays up amazing events for all (or more than) they are worth, distors many not-so-amazing events to make them appear extraordinary, and sometimes even passes on complete fabrications from unreliable sources."

-Thomas Gilovich

Talk Radio

- Much of the information is based on rumor, hearsay and gossip from heavily biased sources



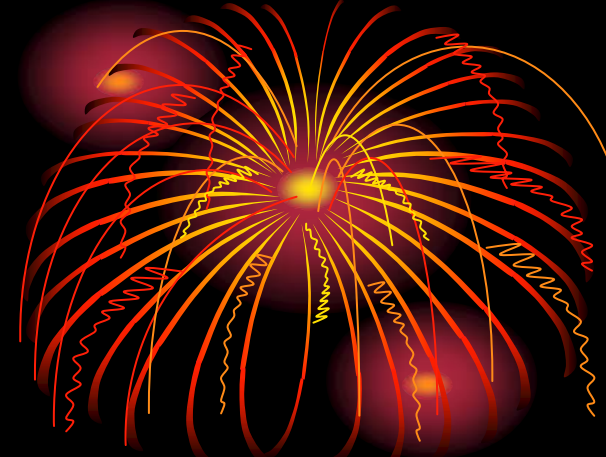
Bizarro

by Dan Piraro

Tonight on UNEXPLAINED MYSTERIES OF THE UNIMAGINABLE we will examine you, the UNIMAGINABLY gullible viewer, & the MYSTERIOUS, UNEXPLAINABLE popularity of shows like this one...



The Internet



- Two kinds of information sources
 - Commercial and institutional sources
 - Individual and group sites on the web
- The Internet offers great benefits, but the information must be evaluated with even MORE caution than information from the print media, radio or television.

FREE MONEY!



- If you have an email account, you've probably heard from somebody in Nigeria, South Africa or Lagos who is trying to get millions of dollars out of the country and wants your help. You will get a very large sum for furnishing your bank account number so they can temporarily put the funds there. Of course the only transfer that occurs is *out* of your account.
- It only takes one in a million gullible takers to make this scheme profitable.

HOAXBUSTERS

[Hoax Info](#)[Hoax Categories](#)[Hoax Index](#)[Search](#)[CIAC Home](#)

Welcome to the CIAC Hoax Pages

Last modified: 09/02/05

You are the 21288130th visitor to the CIAC Internet Hoax and Chain Letter pages since February 1995.

Interspersed among the junk mail and spam that fills our Internet e-mail boxes are dire warnings about devastating new viruses, Trojans that eat the heart out of your system, and malicious software that can steal the computer right off your desk. Added to that are messages about free money, children in trouble, and other items designed to grab you and get you to forward the message to everyone you know. Most all of these messages are hoaxes or chain letters. While hoaxes do not automatically infect systems like a virus or Trojan, they are still time consuming and costly to remove from all the systems where they exist. At CIAC, we find that we spend much more time de-bunking hoaxes than handling real virus and Trojan incidents. These pages describe some of the warnings, offers, and pleas for help that are filling our mailboxes, clogging our mailservers, and that generally do not have any basis in fact.

In addition to describing hoaxes and chain letters found on the Internet, we will discuss how to [recognize hoaxes](#), [what to do about them](#), and some of the [history of hoaxes](#) on the Internet.

Users are requested to please not spread chain letters and hoaxes by sending copies to everyone you know. Sending a copy of a cute message to one or two friends is not a problem but sending an unconfirmed warning or plea to everyone you know with the request that they also send it to everyone they know simply adds to the clutter already filling our mailboxes. If you receive any of this kind of mail, please don't pass it to everyone you know, either delete it or pass it to your computer security manager to validate. Validated warnings from the incident response teams and antivirus vendors have valid return addresses and are usually PGP signed with the organization's key. Alternately, you can and should get the warnings directly from the web pages of the organizations that put them out to insure that the

Advertising



- "Advertising [is] the science of arresting the human intelligence long enough to get money from it." ~ Stephen Leacock
- Advertising firms understand our fears and desires and they have the expertise to exploit them

Two Kinds of Ads



- Those that offer a reason for buying and those that do not
- Those that do not, fall mainly into three categories
 - Bring out pleasurable feelings
 - Depict the product being used or endorsed by people we admire or think of ourselves as being like
 - Depict the product being used in situations in which we would like to find ourselves

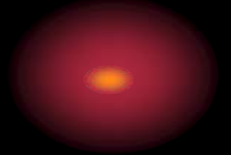
Questions To Ask Yourself

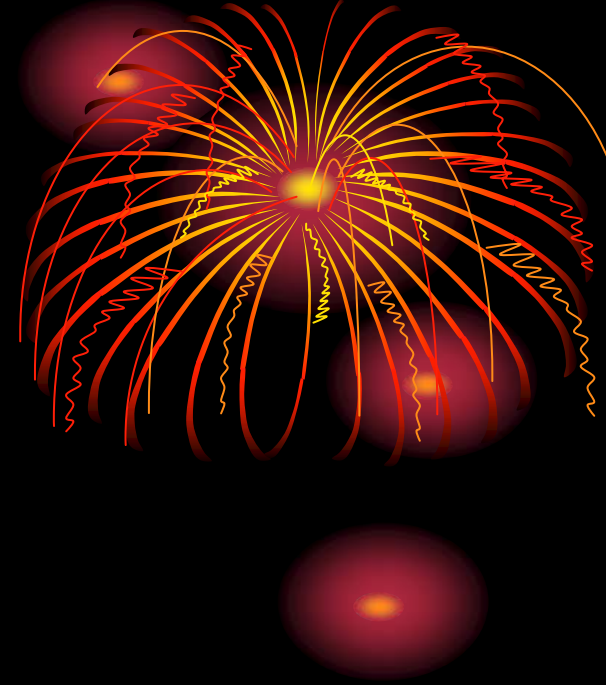


- Does this ad give us a good reason to buy the product?
 - The only good reason to buy anything is to improve our lives
- Do we know if we will be better off with a product than without it?
- Do we really want, or need, a bagel splitter or an exercise bike?

Rule Of Thumb

- If you're suspicious, don't buy it.
- Our suspicions about advertising in general should undercut our willingness to believe in the honesty of any particular advertisement.





RHETORICAL DEVICES AND FALLACIES

What Is Rhetoric?



- The study of persuasive writing
- Employs persuasive power of words, or their rhetorical force or emotive meaning – their power to express and elicit images, feelings, and emotional associations.
- As Critical Thinkers, we must be able to distinguish the *argument* from the *rhetoric*

Euphemisms & Dysphemisms



- Euphemism
 - A neutral or positive expression instead of one that carries negative associations
- Dysphemism
 - Used to produce a negative effect on a listener's or reader's attitude toward something or to tone down the positive associations it may have.
- Example:
 - Neutral word - Inexpensive
 - Euphemism – Economical
 - Dysphemism - Cheap

Your turn...



Stereotype

- A thought or image about a group of people based on little or no evidence
- Example
 - All Catholics are conservative.



Innuendo

- An insinuation of something belittling
- Example
 - Ladies and gentlemen, I am proof that there is at least one candidate in this race who does not have a drinking problem.



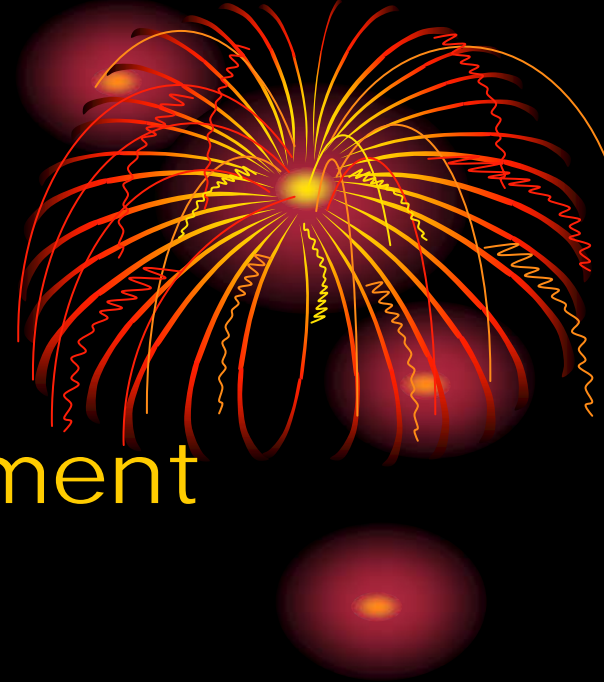
Loaded Question

- Rests on one or more unwarranted or unjustified assumptions
 - Example
 - Have you stopped beating your wife?



Hyperbole

- Extravagant overstatement
- Example
 - "Oscar Peterson is an unbelievable inventive pianist." vs "Oscar Peterson is the most inventive musician that ever lived."



Some Fallacies Based on Emotions



- “Argument” from pity
 - When feeling sorry for someone drives us to a position on an unrelated matter
- Scare tactics
 - Trying to scare people into doing something or accepting a position
- “Argument” from outrage
 - Inflammatory words followed by a “conclusion” of some sort
- Scapegoating
 - Blaming a certain group of people or even a single person

Advertisements



- Examples...
- We are all influenced by the media and advertising. What types of advertising are most effective on you personally?

SAFE, QUICK, EASY & NO EPHEDRINE! 100% MONEY BACK GUARANTEE!

LOSE UP TO 30 POUNDS IN 30 DAYS WITH **FAVANIL!**

ARE YOU TIRED OF ALL THE HYPE, FALSE CLAIMS AND OUTRAGEOUS PRICES? IF SO, THEN THIS IS THE DIET PILL FOR YOU! YOU WILL NOT LOSE 80LBS IN A MONTH, BUT YOU CAN LOSE 7-10 POUNDS A WEEK EASILY AND SAFELY!

FAVANIL

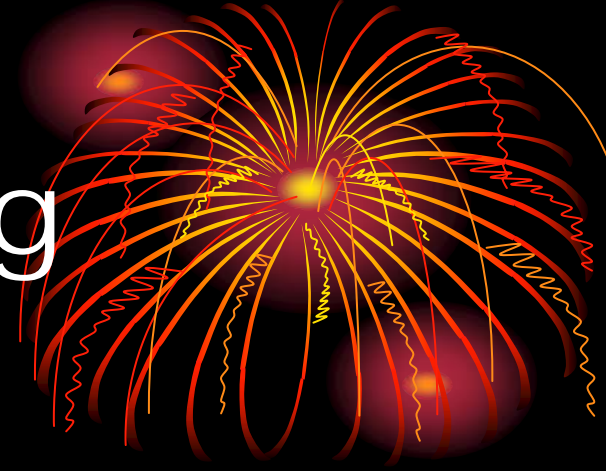
The Rapid Action Weight Loss Solution!



Favanil is a lipotropic - a formula designed to prevent excessive accumulation of fat in the liver. With its combination of Inositol, L-Carnitine, Betaine and L-Methionine, Favanil can also be an aid in burning unwanted body fat quickly and efficiently. Some ingredients in Favanil have also been shown to suppress the appetite without the harmful side effects that are sometimes encountered with other weight-loss products.

Certified Natural's Favanil contains a unique proprietary blend of

Looting vs. Finding



- Review the article
- Can anyone name the specific rhetorical device used?
- Does this cause you to have an emotional reaction?
- Have you noticed the press using differing words like these?

Question

- Many of us have been "tricked" by the use of rhetoric in advertising. Can rhetoric ever be used for positive influence (other than persuading you to purchase an item) in advertising? What are some examples you can think of?



Give us a fighting chance

Allergies

Bronchitis

Asthma attacks

Sudden infant death syndrome

Eye irritation



Coughing

Low birth weight

Ear infections

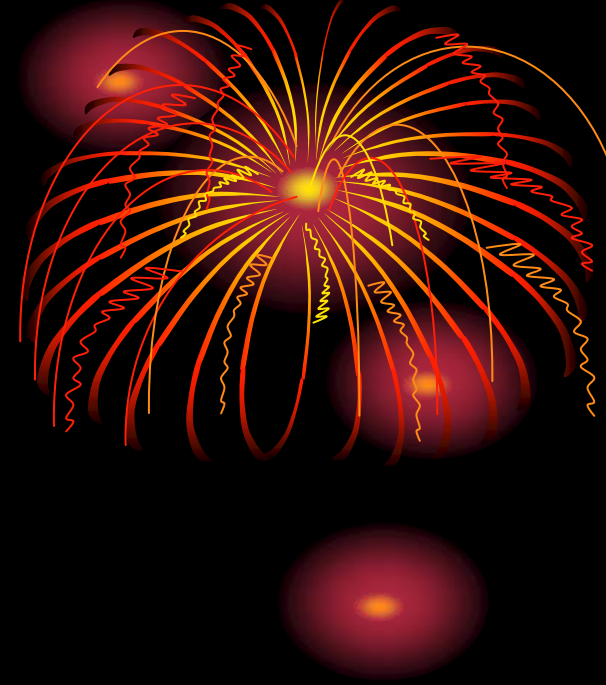
Pneumonia

Birth defects

Colds

Don't smoke





MORAL REASONING

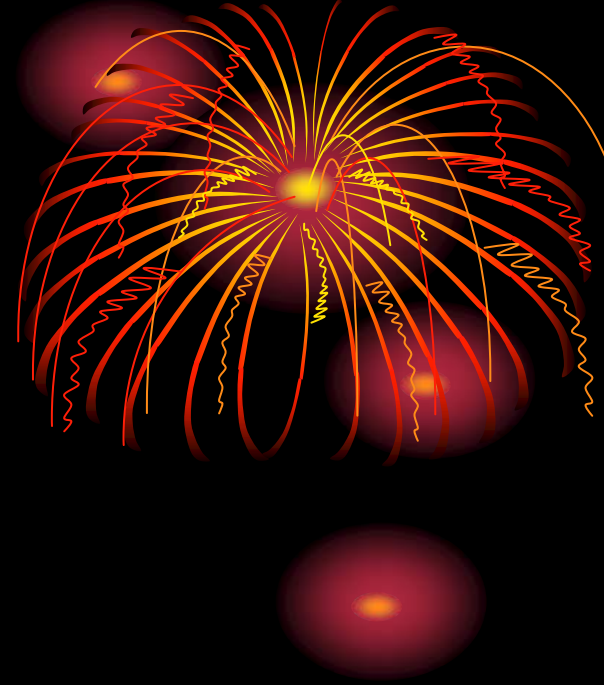
Moral Reasoning



- Moral reasoning is distinguished from other kinds of reasoning by the fact that the conclusions it tries to reach are moral value judgments
 - Gina is a really good person
 - It was wrong of Senator Kennedy to have withheld the information
- Usually employs words like "good," "bad," "right," "ought," "proper," and "justified."

Decision Making Scenarios

- What would you do?





CHECK YOURSELF

How do you ensure that you're using your critical thinking skills?



- Justify your decisions and actions by asking yourself the following questions:
 - Why did you do what you did?
 - Why did you make that decision?
 - Why did that seem like the best solution?
- Try justifying even your most everyday decisions and actions, like what you chose to eat for lunch or where you decide to sit in class. You'll get to know your current decision-making process, and you'll be able to determine where in that process you can be more effective.

Are You ALWAYS Right?



- "It is rarely the case that there is only *one* possible answer to a problem or only *one* "right" way to think or act. Even in math, where things seem to be black and white, there are always many ways to solve a problem. When it comes to making decisions, especially those that involve other people, remember that between black and white there are a thousand shades of gray. You may prefer one shade over another, but that doesn't mean the others can't also be valid.
 - Chesla, E. (1999). *Critical Thinking and Logic Skills for College Students* (p. xii). New Jersey: Prentice Hall.
- Are you the type of person that feels like you're always right? If so, how do you ensure you are keeping an open mind? If not, how do you navigate a situation in which the other party insists he/she is always right?

Emotions?



- "What often clouds people's ability to reason effectively is their emotions. It is natural, of course, to be led by emotions, but when you let feelings overwhelm your sense of reason, you often end up making poor decisions. This is not to say that you shouldn't consider your feelings - of course you should - but just be sure they're not overriding the facts."

Chesla, E. (1999). *Critical Thinking and Logic Skills for College Students* (p. xii-xiii). New Jersey: Prentice Hall.

- Are you the type of person that is often guided by emotion?
- How do you manage this characteristic in order to ensure you make the best, most logical decision?

Looking back...



- Looking back on your life, was there a situation in which you put your critical thinking skills to such good use that the result was different than if you would not have employed them? Is there a time when you should have thought more logically upon a situation? Are there ever times when it's best NOT to use critical thinking skills?

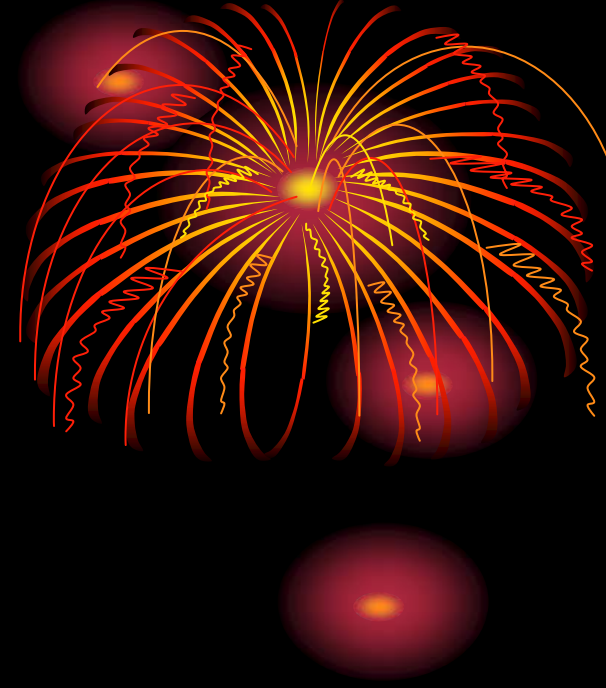
Looking Ahead...



- "As a college student, you will be expected to master a great deal of information in the form of facts, ideas, terms and techniques. While it's important to be able to remember that information, your success - both in college and beyond - rests on your ability to think critically and logically about that information. Critical thinking and reasoning skills may, in fact, be the most important skills you can develop during your college career."

Chesla, E. (1999). *Critical Thinking and Logic Skills for College Students* (p. 17). New Jersey: Prentice Hall.

- Do you agree that critical thinking skills may be the most important skills you develop during your college career?
- How do you think enhancing these skills in this course will affect your success in college and beyond?



Challenge information

THE END

- Questions?

- Resources:

- Chesla, E. (1999). *Critical Thinking and Logic Skills for College Students*. New Jersey: Prentice Hall.
- Parker, R. (2004). *Critical Thinking*. New York: McGraw Hill.

