Scene 1: MoDeD

In 2006, researchers at Newcastle University uncovered a potentially devastating new epidemic called Motivational Deficiency Disorder (MoDeD). The results were first reported in the reputable British Medical Journal.¹ Watch the following video, read the original article from BMJ and be prepared to discuss your findings with the class. Perhaps you have MoDeD.

The British Medical Journal articles are open access and available online at www.bmj.com. Go to the website and in the top, right-hand corner, search for the author’s last name,” Moynihan”, the volume number “332” and the page number “745”.

Motivational Deficiency Disorder:  http://www.youtube.com/watch?v=RoppJOtRLe4

Baloney Detection: Scene 2

Baloney Detection?

By now you’re probably asking yourself, “Just what is a Baloney Detection Kit and does it have anything to do with identifying lunchmeat?” Unfortunately, it has nothing to do with lunchmeat. Actually, a Baloney Detection kit is nothing more than a set of tools used for skeptical thinking. And what would skeptical thinking be defined as?...The late astronomer, Carl Sagan, may have explained it best in his book *The Demon-Haunted World* in which he wrote:

"What skeptical thinking boils down to is the means to construct, and to understand, a reasoned argument and -- especially important -- to recognize a flawed or fraudulent argument. The question is not whether we like the conclusion that emerges out of a train of reasoning, but whether the conclusion follows from the premise or starting point and whether that premise is true."¹

Our goal today is to begin assembling the pieces of what will become your “Baloney Detection Kit”. You will select, at random, a few concepts, ideas or fallacies of logic that you must know if you wish to become skilled in the “Fine Art of Baloney Detection”.

**In your group, you are to investigate each item and for each term:**

1. *In your own words, explain what the concept, idea or fallacy of logic and why it is important to beware of these ideas in science or otherwise.*

2. *Demonstrate your understanding of the concept by providing a unique example or scenario in which it could be applied. Major bonus points for being creative!*

*Example:* **Appeal to Authority or Argument from Authority** are fallacies of logic that can be used to support a bogus argument by claiming that someone in a position of authority agrees with it. For example:

– “Dr. Leth Argos’ ideas on Motivational Deficiency Disorder must be true because he is a doctor and they were published in a reputable medical journal.”

Simply because research is published in a scientific journal, it does not make it true. In science, ideas are only accepted after careful consideration. Also, while Dr. Leth Argos may have a greater probability of being correct in matters dealing with neurology, it does not guarantee it.

Ovulation vs. Cretinism: Scene 3
Fulton County Board of Education to Decide the Fate of “Stork Theory”

The Fulton County Board of Education will decide next month whether or not to allow Health education classes in the county to teach the Theory of the Stork. The Theory of Scientific Storkism contrasts the largely accepted ideas concerning human reproduction. The “Ovulation vs. Cretinism” debate has gained increasing attention over the last few months as Emory University scientists have uncovered a startling correlation between decreasing stork populations in Atlanta and the decreasing number of newborn babies (Fig. 1).

![Storks vs. Newborns (2000-2005)](image)

Figure 1. Graph demonstrating the correlation between the number of storks in Atlanta and the number of newborn babies

The Board of Education has asked young scientists from Centennial High School (you) to critically evaluate the Theory of the Stork and determine if it is indeed an appropriate topic for Health education classes in the county. In particular, the Board has asked that you review a recent article from the journal *Paediatric and Perinatal Epidemiology* that discusses new evidence for the Theory of Storks.¹

Using the Baloney Detection Kit that you have constructed, you are to critically dissect the article “New Evidence for the Theory of the Stork” and prepare a report to the Board of Education stating your findings. Try to find as many examples from the text of the article that illustrate concepts you have investigated in constructing your Baloney Detection Kit. For starters, what do we now know about the difference between correlation and causation? Also, be sure to state whether or not your group believes that this theory is an appropriate topic for a Health *Science* class. i.e. Is this theory really *Science*?

From the Desk of the President of the United States of America

To: Young Scientists of Chamblee High School  
   3688 Chamblee Dunwoody Road  
   Chamblee, GA 30341

Greetings and Salutations, young scientists. You have been selected to participate in creating a policy that will, without a doubt, solidify the United States position as the Leader of the Free World for centuries to come.

We need your help to convince NASA to embark on the most important space mission of our lifetime. The destination: The Moon.

You may be asking yourself, “Didn’t we already go to the Moon?” The answer, of course, is yes however; we feel that the original lunar space missions did not adequately investigate all of the potential resources the Moon may have to offer. It has recently been brought to my attention that the Moon may, in fact, be made of green cheese. If this is indeed the case and we successfully return to the lunar surface, we stand to be the world’s lone supplier of green cheese. The evidence is sketchy, at best, but I think it is a worthwhile pursuit. Ladies and gentlemen, we are potentially in the midst of a 21st century space race with the prize being a lifetime supply of green cheese. Do you have any idea how huge the market is for green cheese? Just look at the popularity of Blue cheese. Green cheese salad dressing, green cheese spread, green cheese crackers, etc. The possibilities are endless.

By now, I am sure you are asking, “How can I help the United States secure its stranglehold on the Green Cheese Market?” It’s simple. We need you to draft a report outlining all of the evidence supporting the theory that the Moon is made of green cheese. This report will be presented to NASA’s board of directors. If you succeed in convincing them of the Moon’s green cheese make-up, they will proceed in planning the space mission that will forever change our nation and the world.

Best of luck,

George W. Bush
Using the ideas contained in your “Baloney Detection Kits” you are to construct a false compelling presentation (PowerPoint) designed to convince others that the Moon is, in fact, made of green cheese and that we must return to the lunar surface. Also, prepare a brief (2 pages) written report that outlines your arguments to be handed in.

**Beware! In essence, you will be using your keen baloney detection skills to deceive rather than to enlighten. It is your responsibility to make it clear as to where you have attempted to lead your audience astray.** This should not be difficult as we are all aware that the Moon is NOT made of green cheese. Right?

In order convince NASA that we must return to the Moon, you must display a good understanding of your baloney detection abilities. Figures, pictures, graphs, etc. are all encouraged as long as they are both creative and convincing. For example, if we don’t return to the Moon, then the terrorists have won! Try to use as many ideas, concepts or fallacies of logic that you can from your Baloney Detection Kit. The more the better!