

How Things Work-Laboratory
A Can of Bull
February 15, 2007

Name: _____

Part 1: Research

1. Research the individual components on the energy drink labels and categorize them into groups (ie. sugar, amino acid, vitamin, etc.). See Table 1 below. *You may use the handout, your book (Chapter 22), and the internet as resources.*
2. What is the physiological role of each group in the human body (ie what do vitamins do?)?
3. Which ingredients provide energy?
4. Which ingredients contribute to body repair, i.e., which help build or rebuild muscle tissue?
5. Which ingredients are added to improve taste but serve no nutritional purpose?

Table 1: Ingredients found on Energy Drink Labels

Name of Energy Drink	Sources of Energy	Amino Acids	Stimulants and Vitamins	Artificial Sweeteners	Other
XS Citrus Blast					
Red Bull					
Sobe Adrenaline Rush					

Name of Energy Drink	Sources of Energy	Amino Acids	Stimulants and Vitamins	Artificial Sweeteners	Other
Impulse					
Coke/Dr. Pepper					
Other					

Part 2: Discuss and answer the following questions with your group. Each member must turn in his/her own answers.

1. a) When we say that something gives us “energy,” what does that mean?

b) Which component(s) in the energy drinks provide us with biochemical energy?

2. What is the source of biochemical energy in a sugar-free energy drink?

3. What is the role of caffeine in energy drinks?

4. Is the *kick* received from energy drinks physiological or psychological? On what basis can you make this evaluation? Can any of the drink components contribute to either kind of kick?

5. Why are these drinks so expensive? Why are energy drinks attractive to young people, despite their cost?

6. Should you simply buy a can of Coke[®] instead of one of these energy drinks? Why or why not?

7. Should a runner consume an energy drink “on a run”? Why or why not?

8. Do you think there are sufficient amino acids in the energy drinks to affect muscle repair? Is there any way to determine this by looking at the ingredients?

9. Does your analysis substantiate the claim that these are “energy drinks?”

Part 3: Individually, write a paragraph evaluating the accuracy of the marketing claims for energy drinks. Support your conclusion with evidence collected in this lab.