“Boost Juice” Nutritional Smoothie Creation Taste Test Lab

Day 1 - Part A (Taste Test Competition)

Goal *- Come up with recipe for the world’s best tasting, nutritional smoothie and understand the benefits that it can be for an athlete who is training or participating in a game*

1. In groups of 2-5 develop a smoothie that not only tastes good but also meets the nutritional needs of your athlete.
2. Write down the exact quantities of your ingredients you put in the smoothie as this will be very important when you are doing calculations when producing your nutritional fact label.
3. Put all your ingredients in the silver bullet blender and blend all your ingredients together and when you are happy with your creation pour the smoothie into 7 shot plastic glasses and write the same number on each glass to identify your shot glass
4. Choose a taste tester from each group
5. Have the shot glasses placed in a group with the numbers exposed away from the taste tester on desks that have a letter A -G. Make sure the teacher knows which smoothie letter corresponds to which smoothie number. This is so the taste tester doesn’t know which group’s smoothie they are tasting, but the teacher still does
6. After the taste testers have tasted each smoothie and filled in the sheet provided and rated each smoothie between 1 and 5, with 5 being delicious and 1 being dreadful. They can hand their sheet into the teacher.
7. While the teacher is adding up the scores, the groups should be developing a name for their smoothie and working on a brief presentation to the class (2 minutes tops) of their creation that describes the benefits of the smoothie for an athlete. For example Ginkgo Biloba A potent antioxidant, that improves blood and oxygen flow to the brain and extremities while supporting memory function and mental sharpness. - Do this for each beneficial ingredient
8. From the presentation the teacher will judge the how much nutritional value the shakes have and give them a score that is worth 50% the total score. The teacher will then combine this score with the taste testers score to figure the boost juice champ.
9. Once you have established the final scores, articulate this to the class from the lowest score to the final score where you will present and congratulate the best combine score with the boost juice certificates for best overall smoothie.

Day 2 - Part B (C

1. Chart the ingredients of your smoothie creation in the chart below and then use the following URL to figure out the different amount to complete the chart

http://caloriecount.about.com

Ingredients	Cals	Aprox. grams used	Carb per gram	Fat per gram	Protein per gram	Choles terol	Sodium Na+	Vitamen A	Vitamen C	Calcium Ca+	Iron	Fibre
Total (s)												

2. Once you decided on the ingredients then record them in the chart below and calculated the amounts of nutritional information and totaled them up you can produce a food label with nutritional information about your creation. Example of ingredients is My go-to smoothie recipe: orange juice, frozen raspberries, whey protein, Acidophilus, Udo's oil 3,6,9 and vanilla yogurt.

3. Once you total up all the columns you can now begin to create a food label for your Smoothie drink. Put the food labels information in the section of the nutrition facts label where the weights are required

4. Now take this weights and divide them by the daily amounts we should consume if we are consuming 2000 calories a day. These numbers are in the chart below

Food Component	**DV (Based on 2000 calorie diet)**
Total Fat	65 grams (g)
Saturated Fat	20 g
Cholesterol	300 milligrams (mg)
Sodium	2,400 mg
Total Carbohydrate	300 g
Dietary Fiber	25 g
Protein	50 g
Vitamin A	5,000 International Units (IU)
Vitamin C	60 mg
Calcium	1,000 mg
Iron	18 mg

For Example say your smoothie had 100g of carbs, then you would divide 100g / 300 g (total carbs from table above) and then multiply by 100 and this gives you a percentage that you can enter into your nutritional label for your smoothie. Do this for each until all Daily Value % (DV%) are complete

Nutritional Value Fact Label (working copy)

Nutrition Facts

Per _____ mL (_____g)

Amount	% Daily Value
Calories _____	
Fat _____ g	_____ %
Cholesterol _____ mg	
Sodium _____ mg	_____ %
Carbohydrate _____ g	_____ %
Fibre ____ g	_____ %
Sugars _____ g	
Protein _____ g	
Vitamin A _____ %	Vitamin C _____ %
Calcium _____ %	Iron _____ %

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Nutritional Value Fact Label (Final Copy)

Nutrition Facts

Per _____ mL (_____g)

Amount	% Daily Value
Calories _____	
Fat _____ g	_____ %
Cholesterol _____ mg	
Sodium _____ mg	_____ %
Carbohydrate _____ g	_____ %
Fibre ____ g	_____ %
Sugars _____ g	
Protein _____ g	
Vitamin A _____ %	Vitamin C _____ %
Calcium _____ %	Iron _____ %

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Part C - Take away Questions

Take away questions - (use the Exercise Science text to complete the rest of the questions in the lab, except the last two p.152-159)

"Answer questions on a separate piece of paper"

1. How is nutrition important with respect to athletic performance, does your smoothie meet this goal? How?
2. What are other factors that athletes need to consider when when looking at nutrition
3. Why is it necessary to maintain an adequate daily protein intake, with respect to muscle tissue?
4. Does your smoothie have Carbohydrates and why are they important with respect to the muscle
5. More specifically describe what carbo-loading is and can your shake achieve this goal
6. Does you smoothie have good fats, why is this an important ingredient in your shake.
7. What is the purpose of a pre-exercise meal and would your shake accomplish this goal ? Why?
8. What is the function of meals during exercise ? Would your shake accomplish this goal ? Why?
9. What is the function of the post-exercise meal? Would you shake accomplish this ? Why ?
10. For your shake particularly, where would it best be taken pre-session, during the session or post session?
11. Why is a constant replacement of fluids required during exercise?
12. What is the best fluid to take to rehydrate the body?
13. What are three outcomes of dehydration? Explain each problem and how these problems can be avoided by drinking fluids pre-session, during session and post-session
14. Explain how your smoothie can help with dehydration ? Why?
15. List the benefits that your smoothie has for a training athlete?
16. How did your smoothie stack up with regards to the DV %'s
17. Were there any surprises and would you modify your smoothie recipe if you were going to make it again? Why ?