Activity 3 Resources

1 can of caffeinated cola

Nutrition Facts

Serving Size 1 can 12 fl oz 368g (368 g)

Amount Per Serving	
Calories 136	Calories from Fat 1
	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 15mg	1%
Total Carbohydrate 35g	12%
Dietary Fiber 0g	0%
Sugars 33g	
Protein 0g	

Vitamin A	0%	• Vitamin C	0%
Calcium	1%	• Iron	2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

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1 large apple with skin on

Nutrition Facts

Serving Size 1 large 3-1/4" dia 223g (223) T

Amount Per Serving

Calories 116 Calories from Fat 3

	% Daily Value*
Total Fat 0g	1%
Saturated Fat 0g	0%
Trans Fat	
Cholesterol 0mg	0%
Sodium 2mg	0%
Total Carbohydrate 31g	10%
Dietary Fiber 5g	21%
Sugars 23g	
Protein 1g	

Vitamin A	2%	• Vitamin C	17%
Calcium	1%	• Iron	1%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

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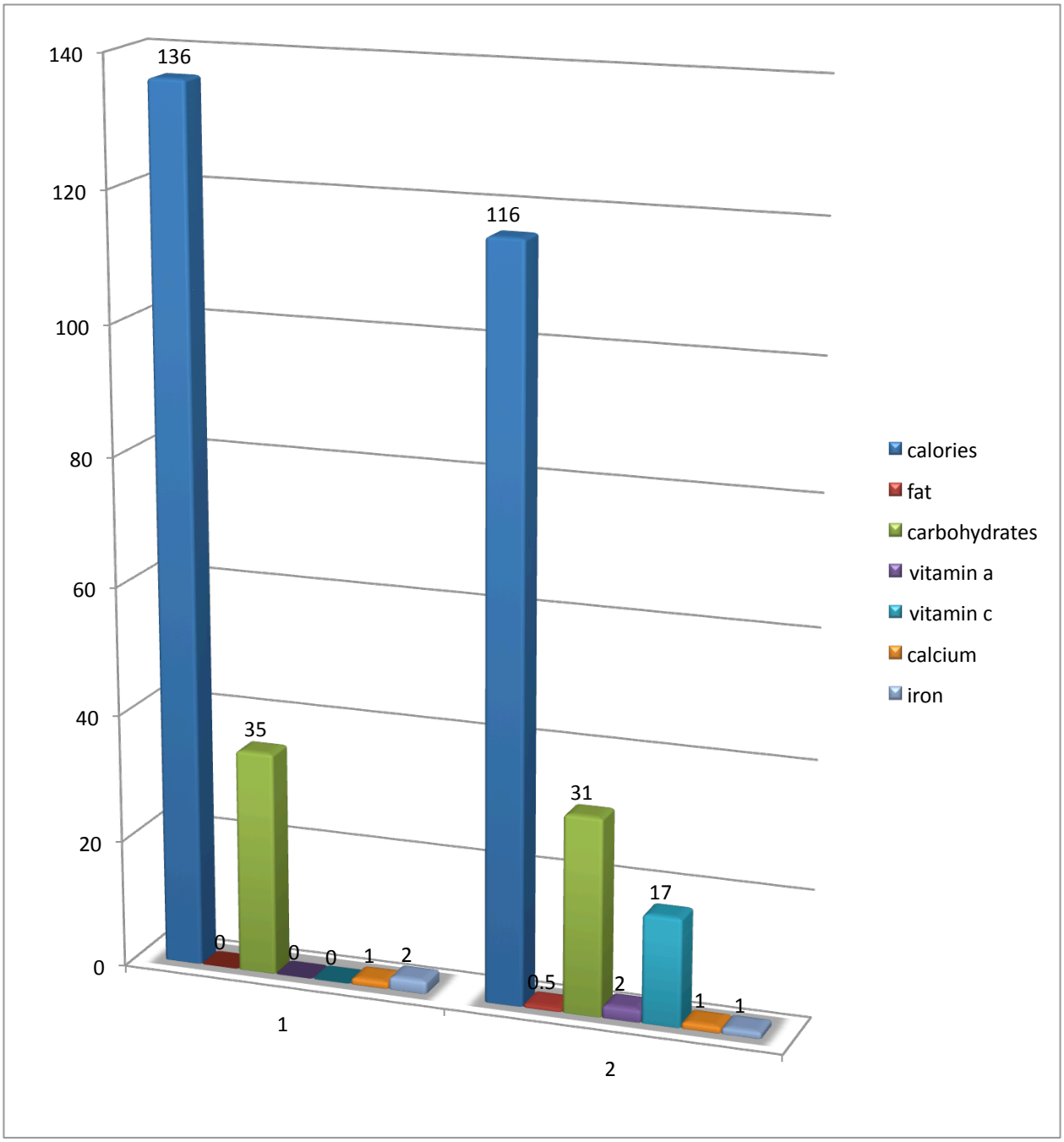
Comparison of Cola (1) vs. Apple (2)



The soda has more calories and more carbohydrates but little else, while the apple has less calories, almost the same amount of carbohydrates, vitamins and minerals. The apple is clearly the better, nutritionally denser choice.

CALORIMETER DIRECTIONS

Materials: ring stand or other type of hanger support, aluminum can, aluminum foil, clay, straight pins, graduated cylinder, Celsius thermometer, matches, and water

1. Use ring stand with a hook to hold the can.

2. Put the can on a hook with tab or other hanger with the bottom of the can about 6 cm above ring stand base.

3. Wrap the ring stand with aluminum foil. Leave an opening to slide clay in under the can.

4. Measure 100 milliliters of water and place it in the can.

5. Take the temperature of the water. Record your measurement.

6. To find out how many calories are stored in the nut, burn it and use the heat produced to warm the water.

7. Place the head of a pin in a hunk of clay. Place a nut on the point.

8. Light the peanut with a match.

9. As soon as it starts to burn on its own, place it under the can in the calorimeter, and allow it to burn.

*If a nut goes out before it looks as if it burned up, get a new nut and freshwater, and start the process over.

*When the nut looks as if it burned up and goes out, take the temperature of the water again. Record the temperature.

*Knowing how many grams of water were warmed and how many degrees the temperature of the water rose, we can calculate the calories.