**Elements of a Great Christmas Dinner!**

Introduction: There are currently 25 elements identified by the FDA as “essential” for good health. These elements, classified as “major,” “lesser,” and “trace,” are listed in the table below.

|  |  |  |
| --- | --- | --- |
| MAJOR  (Make up 99% of  your body mass) | LESSER  (Build body tissues and  maintain cell processes) | TRACE  (Essential to important functions  such as forming bones, teeth & red  blood cells) |
| H – Hydrogen | Fe – Iron | V - Vanadium Sn – Tin |
| O – Oxygen | K – Potassium | Cr – Chromium Si – Silicon |
| C – Carbon | Zn – Zinc | Mo- Molybdenum Se – Selenium |
| N – Nitrogen | Na – Sodium | Mn – Manganese F – Fluorine |
| P – Phosphorus | S – Sulfur | Co – Cobalt I – Iodine |
| Ca – Calcium | Cl – Chlorine | Cu – Copper |
|  | Mg – Magnesium | B - Boron |

**INSTRUCTIONS:** Around the room several tables are set-up containing items that represent different phases of your Christmas celebrations.

1. Visit the table for each phase of the celebration (except dessert!). Begin at any phase.

2. Read the nutrients and / or ingredients listed on the labels of several items on each table. Identify 3 different elements listed on 3 different items. (12 different elements in all!)

3. Record item name, element identified, Group Name or # to which that element belongs (1A-8A or transition metal). Classify the element as a major, lesser, or trace nutrient in the Data Collection Tables below.

**NOTE:** Elements may be combined in chemical compounds. For example, the ingredient“calcium chloride” contains both Ca and Cl. The ingredient “sodium phosphate” contains Na, P, and O. The elements C, H, and O are contained in most acids, fats, carbohydrates, and proteins.

**Phase 1: APPETIZERS & SNACKS**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Element Name (ingredient/nutrient) | Group # or Name | Major, Lesser, Trace |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Element Trivia:** Identify one transition metal in any can of nuts. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Phase 2: SALADS, VEGGIES & BEVERAGES**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Element Name (ingredient/nutrient) | Group # or Name | Major, Lesser, Trace |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Trivia:** Correctly name of the transition metal compound used to color ranch dressing and write its formula.

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**Phase 3: MAIN COURSE**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Element Name (ingredient/nutrient) | Group # or Name | Major, Lesser, Trace |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Element Trivia:** Write the correct formula for the “anti-caking” compound of elements in the Carbon and Oxygen families used in instant potato flakes or gravy powder.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Phase 4: CLEAN-UP & UH-OH, I ATE TOO MUCH!**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Element Name (ingredient/nutrient) | Group # or Name | Major, Lesser, Trace |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Element Trivia: Write correct formulas for the Halogen compounds that help disinfect toilet bowls and whiten your laundry?

Toilet\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Laundry\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Element Trivia: What Nitrogen family member in “Pepto” settles your stomach? \_\_\_\_\_\_\_\_\_\_