BASICS OF NUTRITION

NAME _____ SCHOOL _____

DATE STARTED _____ DATE COMPLETED _____

PREREQUISITES: A basic understanding of the circulatory and digestive system. A knowledge of basic chemistry (some knowledge of molecules and chemical reactions) is recommended.

HOW TO DO THIS COURSE: Do the steps one at a time, in order. When you finish a step, put your initials and the date on the sign-off line on the right. A split line means to get a pass (and an initial) from another student (or your Academic Supervisor if it says that). A * means get a checkout. All written work is turned in to the Academic Supervisor.

PURPOSE: Learn nutritional basics so you can choose healthy food items and plan a balanced diet.

ESTIMATED TIME: 9–12 course hours, plus trip to grocery and one day on diet plan.

MATERIALS NEEDED FOR THIS COURSE

Study booklet, *Basics of Nutrition*, with these data sheets (DS):
3959 7191 3963 3962 3960
Exam: 3965, 8637 (answers) 3961 (review), 8638 (answers)
Other materials:
Access to supermarket; access to food items of menus determined in final section, cooking facilities (optional); 14 index cards

A. BASIC NUTRITION

1. PRACTICAL APPLICATION: This is the beginning of a practical step that you will be doing throughout this course. Write down as well as you can what you ate for breakfast, lunch and dinner yesterday (including any snacks). Then write down what your meals (and snacks) have consisted of so far today. Include everything you can remember.[1]

   (Call this list your "diet diary" and keep it with your course. You will be updating it several times while doing this course.) _____

2. READ: DS #3959 Food, to heading "Basic Terms for Nutrition." _____

*3. READ: DS #3959, section "Basic Terms for Nutrition." ____ ____

4. DEMONSTRATE: Three definitions of nutrition. (3 demonstrations) _____

[1] Example: Tuesday: Breakfast—eggs, cereal, milk, orange juice; Lunch—chef's salad, lentil soup, milk; Snack—peanut butter on toast; Dinner—ham, potatoes, peas, milk

*5. READ: DS #3959, section "Nutrition Is about Molecules." ____ ____

6. DEMONSTRATE USING CLAY: (3 demonstrations)
   a) a "chunk" of an element and a few atoms of the element. ___
   b) a "chunk" of a compound and a molecule of the compound showing how that is different from just an atom. ___
   c) how atoms, molecules and food are related. ___ ____ ____

*7. READ: DS #7191 Nutrition and Food Groups, section "Nutrients." ____ ____

8. DEMONSTRATE: Why each of these kinds of nutrients is needed in your diet: carbohydrate, protein, fat, vitamins and minerals. (5 demonstrations) ____ ____

9. DEMONSTRATE: Why water and fiber are important in nutrition. ____ ____

10. READ: DS #7191, section "Food Groups" to the end of the data sheet. _____

11. DEMONSTRATE: The four food groups discussed in the data sheet. (4 demonstrations) ____ ____

12. PRACTICAL APPLICATION:
    a) Update your diet diary. ___
    b) Look at the food items you have listed in your diet diary. Using the tables at the end of DS #7191, figure out the food group(s) that each food item belongs to. Then write the food group numbers (I through IV) next to each food item you listed. (For food items that have ingredients from more than one food group, include all the food groups that you are sure of.) Get another person who knows the data of the course to check your work at this step. ___ ___
    c) Try to determine if you are eating from the first three food groups in the recommended ratios. Also determine if you are eating more of group IV than perhaps you should. Write down what you decided in your diary. ___

    Save your diet diary so that you can add to it later. _____

13. PRACTICAL APPLICATION: Read step D.1 now. (Do the step before you complete this course.) _____

B. MENU PLANNING

1. READ: DS #3963 Planning a Diet, to heading "Some Tips for a Healthy Diet for Young People." _____

2. PRACTICAL APPLICATION: Look at the list of foods you wrote down in your diet diary and make an estimate of the percentage of carbohydrate, protein and fats that you are eating (by weight). Write this down in your diet diary and compare your estimate with the recommended percentages. Decide if you think you should be eating more or less of any of them. _____

3. READ: DS #3963, section "Some Tips for a Healthy Diet for Young People," subsection "Carbohydrates." _____

4. DEMONSTRATE: Show a tip for eating carbohydrates. _____

5. READ: DS #3963, section "Some Tips for a Healthy Diet for Young People," subsection "Protein." _____

6. DEMONSTRATE: Show how to make a complete protein. ____ ____

7. READ: DS #3963, section "Some Tips for a Healthy Diet for Young People," subsection "Fat." _____

8. READ: DS #3963, section "Some Tips for a Healthy Diet for Young People," subsection "Fiber." _____

9. DEMONSTRATE: Show how you can get enough fiber. _____

10. READ: DS #3963, section "Some Tips for a Healthy Diet for Young People," subsection "Combining Protein and Starchy Carbohydrate." _____

11. DEMONSTRATE: Show why it is a good idea to avoid eating large amounts of protein and starchy carbohydrate at the same time. ____ ____

12. READ: DS #3963, section "Meals" to heading "Especially Healthful Food Items." _____

13. DEFINE: guideline _____

14. DEMONSTRATE: Show a guideline for breakfast, for other meals, and for snacks. (3 demonstrations) _____

15. PRACTICAL APPLICATION: Use guidelines in DS #7191 and DS #3963 to work out a brief set of guidelines for your own diet plan. Then write them down. Explain why you chose them. **Supervisor pass**. ____ ____

16. PRACTICAL APPLICATION:

    a) Update your diet diary. ___

    b) Using the diet guidelines you worked out, your diet dairy and data you have learned from this course, plan out a diet for yourself for five full days (three meals per day plus snack). Save your plan for review later. ___ _____

17. READ: DS #3963, section “Especially Healthful Food Items” to the end of the data sheet. _____

18. ESSAY: Answer these questions:

    a) Do you plan to use special foods or supplements in your diet? If you answer yes, explain which ones you are interested in and explain why. ___

    b) Are you interested in trying to alter your diet to stay physically young longer? If you answer yes, explain some simple things you might do to start and what questions on this subject you might wish to research further. ___ _____

19. PRACTICAL APPLICATION: Look at your diet guidelines again and see if you want to change any of them. Then see if you need to change any food items to fit your guidelines. Make any changes needed. _____

C. MORE ON NUTRITION

1. READ: DS #3962 Refined Foods and “Junk Foods,” to heading “Processed Foods.” _____

2. DEMONSTRATE: Show the difference between refined and unrefined carbohydrates. ____ ____

3. DEMONSTRATE USING CLAY: How the general nutritional content of a food is affected by the refining process. (Show at least three things that might be reduced or removed.) ____ ____

4. READ: DS #3962, section “Processed Foods” to end of the data sheet. _____

5. ESSAY: Make a list of five foods that you think could be called junk foods and five somewhat similar foods that would not be junk foods. Explain why they aren’t junk foods. **Supervisor pass.** ____ ____

6. PRACTICAL APPLICATION: Read step D.2 now. (Do it before you complete this course.) _____

7. PRACTICAL APPLICATION: Review your diet plan from section B. Take into account the data learned in this section and make any changes that you think are now needed. Save the plan for review again. _____

*8. READ: DS #3960 Vitamins and Minerals, to heading “Vitamins.” ____ ____

9. DEMONSTRATE: Show two general things that vitamins and minerals do. ____ ____

10. READ: DS #3960, section “Vitamins,” including the table “Vitamins in Nutrition.” _____

11. DRILL: Get six index cards. On each card write the name of a vitamin from this list: Vitamin A, Vitamin D, Vitamin E, Vitamin K, Vitamin C, Vitamin B complex. On the other side summarize in your own words what the vitamin does. (Use the table “Vitamins in Nutrition” for data.)

    Drill the cards until you can correctly tell what each vitamin does. Get a final pass from another student. ____ ____

12. READ: DS #3960, section “Minerals,” including the table “Minerals in Nutrition.” _____

13. DRILL: Get eight more index cards. Write the name of each mineral from the table “Minerals in Nutrition” on a card. On the other side of each card summarize in your own words what the mineral does.

    Drill the cards until you can correctly tell what each mineral does. Get a final pass from another student. ____ ____

14. PRACTICAL APPLICATION: Review your diet plan again. Take into account any additional data studied since step C.7 and make any changes that you think are now needed. Then write out:

    a) the guidelines of your diet plan.

    b) five days of daily menu based on it (three meals plus snack each day).

       In the final section of this course you will need to follow your diet plan for one full day, so make sure that the food items are available now. If you can’t get the original items you planned, revise the menu for that day to foods you can get, but make sure the menu is still consistent with the guidelines of your diet plan.

    c) Explain how each meal and snack contributes to the diet plan.

    Supervisor pass. (You may start practical application D.3 after the supervisor approves this step.) ____ ____

D. FINAL APPLICATION SECTION

1. PRACTICAL APPLICATION: Do this at a grocery store: Using the tables at the end of DS #7191,

    a) List 10 food items that are in each of the three food groups. For this part omit packaged food which contain ingredients from several different food groups. ___

    b) List 10 food items that are fats and oils (or are mostly fat or oil). ___

    c) List 10 food times that are sweets (mainly sugar). ___ _____

2. PRACTICAL APPLICATION: Make a list of these refined ingredients: sugar, corn sweetener, starch, oil. Then do this at a grocery store: Look at the labels of 20 or more packaged foods and drinks that you might be interested in eating or drinking. Tally the number of times each ingredient appears. Tell another person what you found and why the frequency of these refined ingredients might be of concern. ____ ____

3. PRACTICAL APPLICATION: Follow your diet plan for one full day (three meals and a snack). This could mean preparing food for yourself or not. _____

I have done all of the steps on this course. I understand what I studied and can use it.

Student _____ Date _____

The student has completed the steps of this course and knows and can apply what was studied.

Academic Supervisor _____ Date _____

This student has passed the exam for this course.

Examiner _____ Date _____

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