

T H E S I S

on

**A Course of Study in Home Economics
for the Korean Middle Schools.**

Submitted to the

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by

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INTRODUCTION

With the introduction of Home Economics into the field of education in Korea comes the need for an outlined course of study. This thesis, which includes outlines for all of the main divisions of Home Economics, has been prepared with the hope that it may meet such a need in the Middle Schools in Korea.

FOODS

COURSE IN FOODS**I. Objectives.**

The following may be helpful to the teacher in determining her objectives. As a result of her work in foods a girl should:

- A. Be able to plan economically, prepare and serve adequate meals for her own family.
- B. Be able to market for family meals.
- C. Be able to make good food combinations.
- D. Be able to plan the best use of equipment.
- E. Be able to make economical use of foods.
- F. Be able to make good use of leftovers.
- G. Recognize sanitary conditions in home and market.
- H. Be able to judge time to allow for preparation of foods.
- I. Judge when to buy and when to prepare foods.
- J. Know common types of meal service.
- K. Practice good table manners.
- L. Practice habits of personal cleanliness.
- M. Have made some improvement in diet of her family.
- N. Know how to prepare foods to suit individual tastes.
- O. Use judgment in arrangement and care of kitchen and equipment.
- P. Practice habits of speed, accuracy and neatness.

- Q. Have a desire to cultivate right habits of living.
- R. Know necessity for care of foods.
- ✓ S. Be able to arrange equipment for convenience in meal preparation and service.
- ✓ T. Judge what equipment is necessary and what is best type for purpose.
- ✓ U. Make best use of minimum equipment.
- V. Be able to judge quantity to buy.
- W. Be able to properly care for foods.
- ✓ X. Be able to judge the quality of foods.
- Y. Practice good eating habits.

II. Outline of subject matter.

A. Relation of food to health and functions of food.

1. Ways of judging good health.

a. Feeling

- (1) Sufficient ability to think clearly.
- (2) Full of life.
- (3) Not nervous.
- (4) Not easily tired.

b. Appearance

- (1) Good color, with absence of dark circles under eyes.
- (2) Smooth and clean skin.
- (3) Eyes bright.
- (4) Shining and smooth hair.

c. Functioning of body.

- (1) All parts of the body are able to function properly.

d. Weight.

- (1) Weight is normal for height and for age.

e. Good muscle tone.

2. Factors contributing to a state of good health.

a. Proper food.

- (1) Correct amount.
- (2) Adequate in variety to take care of all the needs of the body.

(3) Properly cooked.

(4) Nicely served.

b. Good habits of eating.

(1) Regularity of meals.

(2) Chewing food thoroughly.

(3) No eating between meals, except fruit.

c. Psychological attitude in eating.

(1) Not eccentric in food habits.

(2) Pleasant attitude at meal time.

d. Freedom from defects and diseases.

e. Proper hygiene.

(1) Clean and comfortable dress.

(2) Good posture.

(3) Good care of the body.

(4) Proper amount and kind of exercise.

(5) Sufficient sleep and rest.

(6) Fresh air.

(7) Regular habits of elimination.

3. Functions of food.

a. To supply energy. The human body is an ever-working machine, for which food is the fuel. Carbohydrates, fats, and proteins have the common function of supplying the body with energy (the power to do work).

(1) Carbohydrates.

(a) Starchy foods are cereals, such as wheat, rice, cornmeal, and products made from them, potatoes, and some dried vegetables.

(b) Sugar foods are molasses, honey, sugar itself, and candies.

(2) Fats are foods which contain animal fats or vegetable oils. Foods which are rich in fats are lard, butter, oils, fat meats, egg yolk, milk, and nuts.

(3) Proteins are foods which contain nitrogenous organic material. Egg white, milk, lean meat, fish, legumes, and soy beans and their products are examples of protein foods.

(4) Energy measurement. Since energy is easily transformed into heat, a heat unit, the calorie, has been adopted as the measure of energy. One calorie is the amount of heat required to raise one kilogram (2.2 pounds) of water one degree Centigrade, or one pound of water four degrees Fahrenheit.

(a) The average fuel value of each foodstuff is as follows:

- 1- Protein, 4 calories per gram.
- 2- Fat, 9 calories per gram.
- 3- Carbohydrates - 4 calories per gram.

b. To build the body substance.

(1) Foods which perform this function are:

(a) Proteins - are the essential material for the protoplasm of all active cells, especially for the making of muscle.

(b) Ash constituents - calcium, phosphorus, iron, sulphur and some other minerals are necessary elements for building the body tissues. Milk and milk products, green vegetables, fruits, eggs, and whole grains are the best sources of minerals.

c. To regulate body processes. The chief constituents of food in the regulation of body processes are the minerals, vitamins, and water. Vitamins are elements which play a very important part in

growth, good health, and protection
against disease. Milk, green vege-
tables, fruits, and germinating grains
are rich in vitamins.

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4. Suggested laboratory work.

a. Assign the students to working tables.

b. Give the general directions.

(1) Should wear uniform.

(2) Should wear hair net.

(3) Wash hands before beginning work.

(4) Explain the equipment and utensils
for certain purposes.

(5) Care of utensils.

(6) All materials dropped or spilled on
the floor must be cleaned up as soon
as spilled, or as soon as possible.

(7) Keep drawers closed tightly except
when getting out or putting away
utensils.

(8) Care of supply table.

(9) Care of sinks and stoves.

(10) Have the towels in order at the end
of the class period.

(11) Dish washing.

c. Energy value of foods

(1) Group I, fruits and vegetables.

(2) Group II, Proteins.

- (3) Group III, Cereal grains and products.
- (4) Group IV, sugar and sugary foods.
- (5) Group V, fats and fatty foods.

d. Calculations.

- (1) Find the 100-calorie portions, weight, measure and cost in the Group I, fruits and vegetables.
- (2) Find the 100-calorie portions, weight, measure and cost in Group II, protein rich food.
- (3) Let the students work on Groups III, IV, and V as they have done on Groups I and II.
- (4) Make the 100-calorie portions of each of the above-mentioned groups of food material and use them as an illustration of 100-calorie portions of energy that are supplied to the body.
- (5) Plan a day's menu for yourself supplying the correct number of calories.
- (6) Prepare a breakfast of 100-calorie portions of the following foodstuffs:
 - (a) Rice.
 - (b) Bean curd.
 - (c) Cabbage soup with meat.
 - (d) An egg.

B. Food requirement.

1. Factors influencing energy requirement.

a. Muscular activity. One of the most important factors which raises food requirement. Active people, therefore, require more food than quiet ones.

b. Regulation of body temperature. Climate, housing, and clothing are factors influencing energy used. The output of heat may be regulated in two ways:

(1) The quantity of blood brought to the skin, which tends to control the loss of heat by physical regulation, radiation, conduction, and sweating.

(2) The rate of oxidation in the body in response to the stimulus of external cold. More food should be taken if the rate of oxidation increases.

c. Age and growth. Children must have a greater amount of food per unit of weight than adults because of the growth of the body and their higher activity.

2. Protein requirement.

a. Kinds of proteins. Some proteins support growth, some serve to maintain the body at constant weight, and some neither maintain

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the body nor support growth. It is necessary to choose carefully in childhood. A brief study of proteins follows.

(1) Complete proteins. These are capable of maintaining adults and providing for normal growth of the young when used as sole protein food. Examples are proteins found in milk, eggs, soy beans, and cereal grains. Animal proteins are better than vegetables.

(2) Partially incomplete proteins.

These are capable of maintaining life but not of supporting growth in the young. Gliadin, one of the proteins of wheat, is an example of the class.

(3) Incomplete proteins. These are incapable of either maintaining life or of supporting growth. Zein, one of the proteins in corn, is an example.

b. The amount of protein needed.

Standards have been worked out to show the amount of protein which should be taken.

(1) Adult.

(a) Ten to fifteen percent of total calories should be from protein.

(b) One gram of protein per kilogram of body weight.

(c) About .5 gram of protein per pound of body weight.

(2) Child. In the child the protein requirement is higher, owing to the use of protein for building body tissues. $2\frac{1}{2}$ grams of protein should be used for each kilogram at the time of most rapid growth.

(3) Conclusion. If a sufficient amount of fat and starch is given to the person, a little less amount of protein may cause no harm. If an excess of carbohydrates or fat is added to the diet, it may cause an actual storage of protein because of protein protecting power of carbohydrates and fats, protein being used chiefly for the building up of the body. Muscular exercise does not affect the metabolism of protein; therefore, it is not necessary to add more meat or egg for the hard workers.

3. Fat and carbohydrate requirement. Assuming that from 10 to 15 percent of the total requirement of the body should be protein, the remainder of the daily supply will be provided from carbo-

hydrates and fats. The amount of fat which can be digested varies with the individual. The amount needed for an adult to maintain the best health should not be less than 75 grams per day. The rest of the calories will be from carbohydrates.

4. Mineral requirement. For body building and body regulating, ash constituents are important. Calcium, phosphorus and iron are especially necessary to be studied because they are not always supplied in the ordinary diet.

a. Calcium or lime**(1) Some functions.**

- (a) Building hard tissues of the body, such as bones and teeth.
- (b) Necessary for coagulation of blood.
- (c) Necessary for normal action of heart.

(2) Results of lack of calcium.

- (a) A factor in rickets.
- (b) Interferes with growth and formation of teeth.

(3) Amount required.

- (a) For an adult .67 gram of calcium or 1 gram of Calcium oxide daily.
- (b) For a child 1 gram of calcium daily.

(4) Foods high in calcium: milk, peas, beans, cabbage, cucumbers, and radishes.**(5) Foods low in Calcium: meat, potatoes, and finely polished grains.****b. Phosphorus****(1) Functions**

- (a) Cell multiplication

(b) Reproduction.

(c) Transference of nerve stimuli.

(d) Neutrality.

(e) Starts enzyme action, etc.

(2) Foods rich in phosphorus: egg yolk, meats, fish, clams, oysters, milk, cheese, spinach, tomatoes, turnips, green peppers, peas, cucumbers, carrots, and whole cereals.

(3) Amount required: 1.44 grams of Phosphorus or 3.3 grams Phosphorus Oxide daily.

c. Iron

(1) Functions.

(a) Essential element of hemoglobin.

(b) Secretion of glands.

(c) Reproduction.

(2) Foods rich in iron: egg yolk, clams, oysters, cabbage, celery, green peppers, squash, radishes, beans, meats, molasses, nuts, fruits, and raisins.

(3) Foods low in iron: sugar, starchy foods, fats, and fatty meat.

(4) Amount required.

(a) For adult men .015 grams daily.

(b) For children and pregnant women .018 grams daily.

5. Vitamin requirement. There are four kinds of vitamins which have been discovered, and possibly a fifth, Vitamin E.

a. Vitamin A

(1) Functions

- (a) Promotes growth.
- (b) Prevents ophthalmia.
- (c) Aids in resistance to diseases.
- (d) May be a factor in disorders of respiratory tract.

(2) Physical and chemical properties.

- (a) Fairly stable to heat. Is influenced by oxidation. More stable than Vitamin C, but less stable than Vitamin B.
- (b) Is not affected by acids and alkalies.
- (c) Readily soluble in fats.

(3) Foods rich in Vitamin A: egg yolk, whole milk, butter, cod liver oil, cabbage, carrots, sweet potatoes, spinach and other green leafy vegetables.

(4) Foods poor in Vitamin A: lard, vegetable oils, lean meat, fine cereals and their products.

b. Vitamin B.**(1) Functions.**

- (a) Aids in resistance to disease.
- (b) Prevents beri-beri in man and polyneuritis in fowls.
- (c) Aids in promoting good health.
- (d) Helps the appetite.
- (e) Is a factor in some digestive disturbances.

(2) Physical and chemical properties.

- (a) Stable at ordinary cooking temperature, but value is decreased by the use of the pressure cooker.
- (b) Soluble in water.
- (c) More stable in acid than in alkalies.

(3) Foods rich in Vitamin B: yeast,

eggs, milk, germ of grains, vegetables, fruits, seeds, and nuts.

This vitamin is more widely distributed than the others.

(4) Foods poor in Vitamin B: oils and refined cereals, like polished rice.**c. Vitamin C****(1) Functions.**

- (a) Prevents scurvy.

(b) Aids in good health.

(c) Affects the gums and tooth structure.

(2) Physical and chemical properties.

(a) Very unstable and is destroyed by oxidation, drying, heat, and alkali, but is more stable in acid; hence, canned and cooked tomatoes contain it.

(b) Soluble in water.

(3) Foods rich in Vitamin C.

(a) Fresh fruits, such as oranges, lemons, tomatoes.

(b) Raw green leafy vegetables, such as cabbage, spinach, etc.

(c) Germinating grains.

(4) Foods low in Vitamin C: meats, cereals, oils, fats, and nearly all cooked foods.

d. Vitamin D.

(1) Function. Prevents rickets, so it is called the anti-rachitic vitamin. Direct sunlight and ultra-violet rays have the function.

(2) Sources. Cod liver oil is an excellent source. Ordinary foods,

except butter and egg yolk, do not contain it, though it is probable that they are less effective than is cod liver oil.

e. Vitamin E

(1) Function. Sterile rats will reproduce when given foods possessing Vitamin E.

(2) Physical and chemical properties.

(a) Stable to heat, light, air, and oxidation.

(b) Soluble in fat, and almost insoluble in water.

(3) Foods rich in Vitamin E: whole wheat or wheat germs and some other whole grain cereals, lean meat, leaves of lettuce, peas, and tea.

(4) Foods which have been tested and have been found low in Vitamin E: cod liver oil and milk fat.

6. Suggested Laboratory work.

- a. Work out the measure or weight of common foods which will give 10 grams of protein.
- b. Plan and prepare a day's menu adequate in protein, including recipes.
- c. Write a day's menu inadequate in protein.

- d. Work out the measure or weight of 100-calorie portions of starchy and sweet foods as you eat them.
- e. Summarize fuel values of foods.
- f. Prepare 100-calorie portions of foods as we eat them in breakfast dishes: bread, cereals, eggs, and beverages. Types of dishes for beverages: chocolate, cocoa, eggnog, milk. Find the measure, serving portion, and the cost.
- g. Prepare cereals: oatmeal, rice, puffed wheat. Find the measure, serving portion, and cost.
- h. Prepare breads: mando, rice bread, and muffins. Find measure, serving portion, and cost.
- i. Plan a breakfast for a normal high school girl. Measure and 100-calorie portions to be found in vegetables, soup, meat, fish, egg, cakes, etc.
- j. Plan a day's menu adequate in protein, fat, and carbohydrates, considering measure, cost, and calories, for yourself.
- k. List the foods in your local market which are rich in phosphorus.
- l. List the foods in your local market which are rich in calcium.

- m. Write a day's menu for your school adequate in these three kinds of food material: calcium, phosphorus, and iron.
- n. Why does finely polished rice have less nutritive value? Why is milk so highly recommended by Western countries?
- o. Report the kinds of food and number of calories you have had the last two days. Consider whether you are getting sufficient calories for yourself, and whether you are getting enough nutritive food values according to the standard figures.
- p. Plan a menu adequate in Vitamin A.
- q. Plan a menu inadequate in Vitamin A.
- r. Cook or prepare the foods which are adequate in Vitamin A in the list of foodstuffs given by your teacher.
- s. Prepare the foods which are inadequate in Vitamin A in the list of foodstuffs given by your teacher.
- t. Plan a menu adequate in Vitamin B.
- u. Plan a menu inadequate in Vitamin B.
- v. Compare the cost of each dish. Are they practical foodstuffs for us to get the adequate supply of Vitamin B for every day?
- w. Prepare a dinner which is adequate in

Vitamin B in the list of foodstuffs given by your teacher.

- x. Prepare the foods which are inadequate in Vitamin B in the list of food material given by your teacher.
- y. Plan a menu for each adequate in Vitamin C and inadequate in Vitamin C. Put the measure, cost, and calories on your menu.
- z. Compare the cost and calories in each dish.
- a2. Prepare a dinner which is adequate in Vitamin C.
- b2. Prepare a dinner which is inadequate in Vitamin C.
- c2. Why are the raw vegetables and fruits necessary?
- d2. State the reasons why milk and milk products play an important part in the diet.

C. Food Selection, Preparation and Serving.

1. Factors to consider in the selection of food.

a. Optimum diet.

- (1) Sufficient digestible organic food-stuffs to supply the body's needs for energy, usually measured in terms of calories.
- (2) Enough protein of suitable kinds to meet all needs for maintaining the body and growing.
- (3) Adequate amounts and proper proportions of the mineral elements or ash constituents of the food.
- (4) Enough of at least three kinds of vitamins.
- (5) Bulky foods should be taken to aid in the elimination of waste.

b. Economy of food.

(1) Factors in the market cost of food.

(a) The cost of production. The amount of money spent for labor and price of material required to produce it.

(b) Distribution. The amount of money spent for transportation, packing, handling, wrapping, and delivery.

(c) Aesthetic appeal. The size and shape, color, flavor, and texture.

(d) Preparation. The cost of fuel, loss in preparation, and waste in digestion.

(e) Season. The price of the food in season compared with out of season.

(2) Comparison of costs of foods having same nutritive value.

2. Marketing.

a. Grade of food.

(1) Fresh fruits.

(a) Well matured and sound.

(b) Uniform in size and shape.

(c) Good color.

(d) Fresh, clean, and well packed.

(2) Meat. The appearance of:

(a) Beef should be firm and fine grained in texture, bright red in color, and well mottled with fat, which should be firm and yellowish.

(b) Veal should be a pinkish color and fine-grained. The fat should be firm and white.

- (c) Mutton should be bright pink color and fine-grained. The fat should be firm and flaky.
- (d) Pork. The skin should be white and clear; the flesh should be of a pinkish tint.
- (e) Chicken and duck should have soft fat, a smooth skin, and soft cartilage at the end of the breast bone.

(3) Green vegetables.

- (a) Buy green vegetables as directly as possible from the garden.
- (b) Select vegetables in season. Vegetables out of season do not have the fullest flavor and are very expensive.
- (c) See that they are crisp and fresh.

3. Care of food in the home.

a. Meat.

- (1) Should be removed from the wrapping paper as soon as it comes from the market, since the paper absorbs some of the juices.
- (2) Before the meat is cooked, it should be wiped with a cloth wrung out of cold water.

- (3) Meat should never be allowed to stand in a pan of cold water, since the juices will be drawn out.
- (4) Meat should be kept cool in a cellar or in a well.
- (5) When canned meats are opened, they should be taken out of the can as soon as possible.
- (6) Fish should be covered so that its odor may not affect other food.

b. Fruits.

- (1) Remove fruit from sacks and keep it in a cool place uncovered.
- (2) Wash or wipe all fruit when it comes from the market. Rinse berries quickly and drain.
- (3) Change position of fruit occasionally, as decomposition begins earlier where fruits press together.
- (4) Do not soak fruit, as soaking destroys its flavor.
- (5) Pare peaches just before serving, as they discolor quickly.
- (6) Dried fruit should be kept in a tight container to guard against the dangers of dust and vermin.

- (7) Canned fruits and vegetables should be removed as soon as the cans are opened.

c. Vegetables.

- (1) Wash vegetables in cold water thoroughly, using a small brush for this purpose.
- (2) Discard any discolored portions.
- (3) Drain celery, lettuce, watercress, and radishes and place in a wet cloth bag in the ice-box until ready to use.
- (4) If greens are wilted, let them soak in cold water to freshen them.

d. Cereals.

- (1) Remove from the bag to a tight container.
- (2) Never put it in the storeroom in a bag, because rats may spoil it.

e. Left-over food.

- (1) Cover the container and put in the ice-box or other cool place.

4. Menu planning.

- a. Food should suit the ages of the members of the family.
- b. Food combinations.

- (1) Concentrated foods should be served with something which will serve to dilute them, as meat and green vegetables, thin cake and bean sprouts, etc.
- (2) Foods which stimulate digestive juices should precede those which are negative or tend to retard the flow of digestive juices. For example, soup precedes other foods and meat is served near the beginning of the meal.
- (3) Foods which promote appetite are placed early in the meal, as fresh fruit for breakfast. Highly spiced dishes or pickles may irritate the delicate walls of the alimentary tract and should be used sparingly.

c. Well balanced food should be served because the body needs various food. Both fruits and green vegetables should be served adequately; each one of them should be eaten twice a day.

5. Preparation of food.

a. Cereals. Are foods of great importance and should have a regular place in the daily meals.

- (1) Kinds. There are many kinds of cereals. The ones most commonly used are rice, cornmeal, wheat meal, and small grains.
- (2) Composition. They contain all the foodstuffs: a large quantity of starch, a considerable portion of protein, and minerals if whole grain is used, and the germ of the grain contains some vitamins.
- (3) Principles of cooking.
 - (a) Softening of the fiber by long-continued low temperature with a supply of water present. This makes the protein available to use.
 - (b) Complete opening of the starch granules by the boiling temperature.

b. Meats.

- (1) Sources. The flesh of all animals used for food, as beef, veal, mutton, pork, fish, and poultry.
- (2) Structure. Meat consists of muscle, connective tissue, bone, and fat.
- (3) Composition. The quantity of protein is about the same in all meat. Fats

in meat vary widely in amount in cuts of some animals and in different animals. Mineral matter is less than one percent. Water and bone make up the weight of the meat. The approximate composition of meat is:

Protein	20%
Fat	2 - 5%
Ash matter	1%
Water	70-75%

(4) Cuts of meat.

(a) Tender cuts are the ribs and loin because these muscles are less used. The unexercised muscles of the young animal give a softer meat.

(b) Tough cuts come from the neck and legs, and the toughness decreases as the cuts approach the leg portions. The most exercised mature animal furnishes the tough meat, because exercise strengthens the muscles.

(5) Principles of cooking.

(a) The affect of heat upon meat.

-1- The fat of meat is melted by heat.

-2- The meat shrinks and hardens with intense heat.

-3- The meat softens at a temperature which is below the boiling point of water.

(b) Tender cuts. The juices should be retained; therefore, a high temperature coagulating the meat albumin and hardening the fiber of the surface should be used. Broiling and roasting are good methods.

(c) Tough cuts. Boiling in water, stewing, and pot roasting are the best methods for cooking tough cuts in order that the texture of the meat may be soft and the taste better.

c. Vegetables. There are three general classes of vegetables: green, or leafy vegetables, starchy or root vegetables, and legumes.

(1) Composition of vegetables.

(a) Green, leafy vegetables.

-1- Cellulose. All vegetables are made up largely of a network of woody fiber which forms the framework of the

plant. The cellulose is much coarser and harder in some vegetables than in others and in older than in younger.

-2- Ash constituents. Mineral salts, especially calcium, iron, and phosphorus exist abundantly in green vegetables.

-3- Vitamins. Green vegetables are rich in all classes of vitamins, especially in Vitamin C.

-4- Water. There is a large amount of water in green vegetables, as high as 70-90%.

(b) Starchy vegetables contain a large amount of starch, together with much cellulose, mineral salt, some vitamins, and water.

(c) Legumes are high in protein and starch and low in water content.

(2) Principles of cooking vegetables.

(a) Green vegetables.

-1- The time for cooking vege-

tables depends upon the quantity and coarseness of the cellulose fiber. A short period of time is desirable to preserve color, flavor, and texture.

- 2- Save all water in which mild flavored vegetables are cooked and use in some way. Discard stock and water in which strong flavored vegetables are cooked.
- 3- Acid in the water makes red vegetables redder and alkali water makes green vegetables more green.

(b) Starchy vegetables.

- 1- Pare vegetables thinly, if pared, because mineral salts exist in the layers directly under the skin.
- 2- Best method is baking when possible.

(c) Legumes.

- 1- Soak dried peas, beans, and lentils in water for several hours.

-2- Cook them a long time at moderate heat to soften the fiber.

6. Serving. The atmosphere of the dining room is largely affected by the art of serving. This point is generally overlooked by the majority of Koreans. Many times a formal feast is given and many courses are served, but the decoration of the dining room and the table, and the utensils used on the table, are not pleasing to the esthetic sense. The feeling and appetite of the people may be depressed. The way of serving undoubtedly needs to be improved. However, it is an easy matter to pass from simple to extravagant. Be sure that the persons who are trying to improve the esthetic points in arranging and equipping the dining room keep the beauty of simplicity and economy in mind.

a. Table cloth and napkins. A simply and neatly made table cloth should be used. The material may be linen or cotton, preferably the former. The napkins should match the table cloth.

b. Utensils used on the table. Dishes, spoons, and chopsticks should be neatly arranged. A vase of fresh flowers may be put in the center of the table.

c. Table service. All hot dishes should be hot and cold dishes cold. The number of courses ought to be reduced, but should include enough for everyday comfort and health.

7. Food for the sick. Food is often more important than medicine in illness. The intelligent preparation of diet and attractive serving in the treatment of disease are very necessary.

a. Quantity. The quantity of food required must be varied according to the nature of the disease. In severe cases, the doctor's advice should be acquired.

b. Kinds of diet. In feeding the sick, four kinds of diet are recognized outside the restricted dietaries in diseases due to improper metabolism, such as diabetes and kidney diseases.

- (1) Liquid diet. Includes milk, ice cream, animal broth in which the yolk of eggs may be put, beef juice, strained gruels, rice water, bean milk, and other fluid foods. Tea should be avoided.
- (2) Soft diet. Includes soft cooked eggs, ice cream, apple sauce, cereals, potatoes, bean curd, etc.
- (3) Light diet. Includes soft cooked eggs, custard, short fibered meats, such as chicken and boiled fish, fresh tomato, and some green vegetables.
- (4) Full diet. Consists of anything the patient desires that is not indigestible. Soups, meats, fish, eggs, cereals, and green vegetables are all foods which may be taken, but boiled tough cabbage and dried beans should be avoided.

c. Special diets are ordered by a physician for special cases, and they must not be given without his order.

d. Rules for serving invalids:

- (1) All food should be cooked carefully and thoroughly.

- (2) Meals should be served punctually.
- (3) Dishes should be covered in transit to the bedside.
- (4) Hot food should be served hot and cold should be served cold.
- (5) The tray should be attractive.
- (6) The room should be well ventilated and the patient should be comfortable while she is eating.
- (7) Before serving, the face and hands of the patient should be washed.
- (8) Be cheerful and ready to attend to the wants of the patient while the meal is being served.
- (9) Never ask the sick directly what she likes and dislikes.

8. Suggested problems.

- a. List vegetables commonly eaten at home and ways they are prepared.**
- b. Plan an arrangement of the utensils and equipment in our kitchen to make the work easiest.**
- c. Apply principles of cooking in the home.**
 - (1) Prepare breakfast one week.**
 - (2) Prepare dinner one week.**
 - (3) Prepare supper one week.**
- d. In cooking breakfast at home report on each day's progress.**
 - (1) Order of work.**
 - (2) Length of time.**
 - (3) Results.**

II. Outline of subject matter (continued).

D. Digestion.

1. Functions of mouth.

a. Mechanical.

(1) Breaks and grinds up coarse foods and softens or possibly dissolves them.

(2) Mixes foods with saliva.

(3) Helps in the flow of digestive juices.

b. Chemical. Starch is changed to maltose to some extent by the action of salivary secretion.

c. Advantages in thorough mastication.

(1) Gives a good effect on teeth and muscular tone of digestive tract.

(2) Gives a better chance for saliva to act.

(3) Makes digestion easier, and hard particles are being thoroughly chewed; therefore, no discomfort may be caused in the stomach.

(4) Aids in stimulating the flow of digestive juices.

(5) Leads to eating slower and less in case of persons who wish to reduce the amount eaten.

2. Functions of stomach.

- a. The digestion of starchy food in the stomach continues for some time after being received until it comes in contact with the acid gastric juices.
- b. Protein is partially digested; the compound protein is converted into simpler ones by the reaction of an enzyme pepsin in the gastric juice.
- c. Emulsified fats are partially digested.
- d. Germs in the food are destroyed by the germicidal action of hydrochloric acid secreted from the walls of the stomach.

3. The time the foods stay in the stomach is affected by:

- a. The length of the interval between meals.
- b. The amount of food.
- c. The character of food. Some foods may disappear in from one to four hours and others may take from six to seven hours.

(1) Protein food stays longer in the stomach than carbohydrates because protein may combine with the free acid in gastric juice and delay the evacuation.

(2) Fat remains longer than protein.

Fat tends to retard both the motility

of the stomach and the secretion
of the acid gastric juice.

- (3) Mixtures of fat and protein leave
the stomach more slowly together
than either alone.

4. Ways of making foods easy to digest.

a. Fats

- (1) Avoid high temperature in cooking.
- (2) Avoid excess fat in diet.
- (3) Avoid soaking other foods in fats.
- (4) Emulsified fats may be used more.

b. Proteins.

- (1) Avoid excess of protein.
- (2) Avoid cooking at too high temperature.

c. Carbohydrates.

- (1) Cook starch until grains are broken
down in order to hasten digestion.
- (2) Foods high in cellulose should be
well cooked.

5. Functions of the small intestine.

a. Mechanical. When the food, liquid chyme,
is projected into the upper part of the
small intestine from the pylorus, the
mass becomes segmented by contractions of
the intestinal walls. The effects on the
food are:

(1) A further mixing of food and digestive juices.

(2) The bringing of the digested food into contact with the absorbing membrane.

b. Chemical. There are three kinds of digestive juices which pour into the small intestine.

(1) Pancreatic juice. Contains three important enzymes.

(a) Converts starch to maltose.

(b) Splits fats to fatty acid and glycerol.

(c) Splits proteins to simple proteins, peptones, peptids, and amino acids.

(2) Bile.

(a) Accelerates the action of pancreatic juices on digesting fat.

(b) On account of alkaline reaction it increases the solubility of the fatty acids.

(c) Diminishes the surface tension between watery and oily fluids.

(3) Intestinal juice.

(a) Converts sugars into the simplest form, glucose.

(b) Splits protein to the simplest form, amino acids.

4. The length of time the food stays in the small intestine is from 9 to 23 hours.

5. Functions of the large intestine.

a. The walls of the large intestine furnish an alkaline secretion which further aids the completion of digestion.

b. Water is absorbed.

c. Residual material becomes more solid and ready to be excreted.

6. Appetite and hunger.

a. Hunger is the fundamental urge toward food.

This is not merely due to the emptiness of the stomach, but also due to the contractions of stomach muscles. These contractions are periodic, rhythmic, and produce a painful feeling. The intensity of contractions is more vigorous in youth than in aged persons, well nourished than malnourished, active than sedentary, healthy than sick.

b. Appetite is caused by taste, smell, and sometimes even thought of food relating to the memory of previous pleasant sensations. It is not periodic, and it may be had without hunger.

(1) Significance of appetite. Appetite is not absolutely essential, but is desirable. It is an indication of

healthy conditions of the digestive tract.

(2) Ways to train the appetite of the child.

(a) Begin when child is born.

(b) Meals should be served regularly.

(c) Good quality of food should be given.

(d) Older people should not give a hint showing either their likes or dislikes.

(e) Establish good general health habits.

(f) Avoid constipation.

c. Methods of inducing appetite. It is necessary to induce appetite in case of chronic illness or wrong food habits.

(1) Mental attitude toward food should be cultivated by a general knowledge concerning food which should be eaten.

(2) Good food habits should be created.

(a) Regularity.

(b) No eating between meals.

(3) Attention should be paid to general health habits, as sleeping in fresh air, suitable exercise, etc.

(4) Palatable food should be served.

7. Suggested Laboratory work.

- a. Point out some foods which are hard to digest. How do you improve them?
- b. Prepare a meal in courses which is easy to digest, palatable, and economical.
- c. Describe the methods of taking care of the digestive tract.
- d. Plan a menu for a soft diet which is palatable and contains about 2,000 calories.
- e. Plan a menu for a person who has trouble with digestion in the stomach.

III. References.

- Carlson ----- The Control of Hunger in Health
and Disease.
- Sansum ----- Normal Diet.
- Kinne and Cabley-- Food and Household Management.
- Andrews ----- Economics of the Household.
- Bailey ----- Meal Planning and Table Service.
- Bailey ----- Food Preparation and Serving.
- Wellman ----- Food Planning and Preparation.
- Rose ----- Laboratory Handbook for Dietetics.
- Winchell ----- Food Facts for Every Day.
- Rose ----- Feeding the Family.
- Sherman ----- Chemistry of Food and Nutrition.
- Sherman ----- Food Products.

CLOTHING

I. Objectives.

- A. To give a realization of the importance of knowledge of selection and care of clothing to aid in developing a new viewpoint that will lead women to select clothing on the basis of its aesthetic, hygienic, and economic values rather than on the basis of its conformity to fashion.
- B. To give a knowledge of selection of textiles, tests for textiles, and uses of textiles.
- C. To know the selection of designs.
 1. Suitable designs.
 2. Suitable material.
 3. Appropriate garments.
- D. Ability to construct the garment.
 1. Construction.
 - a. Pattern study.
 - b. Use of sewing equipment.
 - c. Cutting.
 - d. Basting.
 - e. Fitting.
 - f. Finishing.
 2. Laboratory housekeeping.
- E. To give the knowledge of economic standpoint.
 1. Cost of material.
- F. Ability to care for clothing.
 1. Laundering
 2. Removal of stains.

3. Storage - winter, summer and for daily clothes.

G. To develop standards of personal hygiene.

1. Care of hair, skin, and teeth.

II. Outline of subject matter.

A. Importance of clothing study.

1. Personality and clothing. The amount of education one has obtained, the occupation one has, the esthetic taste one possesses, and social standard, wealth and rank, are often indicated by the clothes one wears.
2. Economics and clothing. The fashion of clothes changes very rapidly in many countries and is a growing problem in Korea. The garments which are very up-to-date this year, sometimes are not worn the next year. The tragedy of discarding the fairly new clothes is recognized as a cause of poverty.
3. Hygiene and clothing. The importance of hygienic clothing is ignored by the majority of people. As a result, many physical defects are caused by incorrect clothes; therefore, clothes should meet both esthetic and hygienic needs.
4. Beauty and clothing. The good points of the appearance may be emphasized by the well designed clothes, and bad points may be concealed. For the sake of being beautiful the study of clothing is very essential.

B. Design. Design is a pleasing and orderly arrangement of material in accordance with a carefully worked out plan.

1. Principles of design.

a. Proportion. Proportion is the pleasing relationship of all the parts of an object to the whole and to each other. It may be obtained by:

- (1) Planning the object as a whole.
- (2) Creating the parts in relation to the main object.
- (3) Designing the type of dress suited to the wearer, so that an appearance of harmony and unity will result, and the defects of body proportion will be concealed.

b. Balance. Balance is the principle by which a sense of rest is obtained. The types of balance are:

- (1) Symmetrical or formal balance. The parts of the clothing are arranged exactly alike on both sides of the axis; for example, the collar and sleeves on both sides, taking the vertical line of the body as the axis.

(2) Occult or informal balance. The parts of clothing are arranged to satisfy the eye through the equal value in the design of both sides, even though the designs of the two sides are not exactly alike.

- c. Dominant interest. The face is the most attractive part of the body. It should be emphasized as the center of interest. All other parts are subordinated to the face. The eye should be led to the face by lines of the clothes.
- d. Rhythm. By rhythmic arrangement the eye is led easily from one part of the design to another.

2. Basis of design in dress.

a. Human figure.

- (1) Principal parts of the body are the head, the trunk, the arms, and the legs.
- (2) The joints of the body are the neck, the shoulders, the elbows, the wrists, the waist, the hips, and the knees.
- (3) Ideal proportion of the standard figure. (American mature woman)
 - (a) Height

Whole height	8 heads
Length of head	1 head
Chin to breastbone	1/3 head
Breastbone to waist-	
line	1-2/3 heads
Waistline to floor	5 heads

(b) Breadth

Neck	1/2 head
Shoulders	1-2/3 heads
Bust across fullest	
part	1-1/2 heads
Waist	1-1/4 heads
Hips across widest	
part	1-3/4 heads

(4) The minor defects of the body may be compensated through careful designing.

b. Age.

c. Occupation.

d. Personality. The types of women may be classified into ten kinds:

- (1) Junoesque. She should avoid all but abstract, classical, and conventional designs. Elegant and richly colored materials are becoming to her.
- (2) Athletic type. Her clothes should be simply constructed, of durable materials, and should allow freedom

of movement. The lines should be straight.

- (3) Comfortable type. She should avoid ornate design and decorations.
- (4) Dolly Varden type. She should wear simple clothes which will, however, express her buoyancy. Soft materials in delicate colors are becoming to her.
- (5) Home type. She should wear calm and simple lines. Ruffles especially should be avoided.
- (6) Boyish type. No elaborated ornaments or lace should be used.
- (7) Elfin type. Clothes should be dainty in form, but suited to a swinging grace and movement.
- (8) Willow type. Should strive most of all for graceful lines.
- (9) Regal type. She should wear sweeping lines and elegant materials, but should avoid fluffy designs.
- (10) Mysterious type. Her clothes should avoid any suggestion of elfin "sweetness." They should be neatly designed and tidy. Rich materials in subdued colors are the best.

C. Color

1. Importance of studying colors.

- a. It helps the person who wishes to be well-dressed, because certain colors are becoming to certain persons.
- b. It helps the person who designs garments for others.
- c. It helps the wearer and beholders to satisfy their sense of beauty.

2. Classification of colors.

- a. Primary colors: red, yellow, and blue.
- b. Secondary colors. The secondary colors are produced by combining or mixing two primary colors, such as orange, green, violet, and purple.
 - (1) Red and blue - purple.
 - (2) Red and yellow - orange.
 - (3) Yellow and blue - green.
- c. Tertiary colors. The tertiary colors are produced by combining or mixing secondary colors.

3. Quality of colors.

- a. Hue is the quality which distinguishes one color from another.
- b. Value is the quality which denotes the amount of darkness and of lightness.
- c. Intensity is the quality which represents the purity or the strength of the color.

4. Characteristics of colors.

- a. Warm colors. A warm color is a color which is suggestive of warmth, such as red, orange, and yellow.
- b. Cold colors. Blue, blue-violet, or blue-green are cold colors.
- c. Silent colors. A silent or retiring color is one which is inconspicuous, such as seal-brown, bottle-green, plum, gray, and tan.
- d. Aggressive colors. Any intense color which makes the wearer appear more lively is an aggressive color.
- e. Harmonious colors. The combination of colors which is pleasing to the eye and gives the impression of unity is said to be color harmony. The types of color harmony may be classified as:
 - 1. Dominant harmony. Produced by combining different values of the same color.
 - 2. Analagous harmony. Produced by combining neighboring hues.
 - 3. Complementary harmony. Produced by combining contrasting colors.

5. Color in dress.

- a. Color and individuality. The color in the dress should express the wearer's individu-

ality; therefore, the color should be so selected that it enhances the real beauty of face, and proves an aid in clarifying and idealizing unattractive qualities of face and figure. In selecting colors some points should always be borne in mind:

- (1) It should be in harmony with the color and texture of the skin.
- (2) It should be in harmony with the hair and eyes.
- (3) It should be in harmony with the age and personality.

b. Color and light. Some colors are lessened or increased in richness by artificial light; therefore, the materials for evening dress should be examined under artificial light and those for day wear in daylight.

c. Color and season. Climate and season are closely related to the colors.

- (1) Cool colors should be worn in summer.
- (2) Warm colors should be worn in winter.

6. Suggested laboratory work.

- a. List as many articles as you can in which principles of design play an important part.
- b. Describe one of the people now in the room whose appearance exemplifies the principles

of dominant interest. Describe someone whose appearance violates it. Tell why in each case.

- c. From a fashion magazine trace two designs that are good because they conform to the natural divisions of the body. Trace two that are bad. Tell why in each case.
- d. Collect as many different samples of colors as you can. Arrange the samples of each color according to their values, then according to their chromas. Make similar groups of each principal color and its intermediates.
- e. Plan three complementary color schemes of one value of one color and one value of the other.
- f. Plan three analagous color schemes using two values of two neighboring colors.
- g. Working in groups of three, try on samples of colored materials. Decide which are most becoming to you and make out a chart of these colors.
- h. Bring to class as many samples as possible. Decide after class discussion which are becoming and why, which are not and why.
- i. Plan a color scheme for a waist, skirt and scarf that would be becoming to your mother. Give reasons for your choice.

- j. Make as long a list as you can of minor variations from the standard figure.
- k. Take your own measurements, vertical and horizontal, with tape line and tailor's square. Reduce them to head lengths. Compare them to the measurements of the standard figure.
- l. Take similar measurements of a person who is noticeably tall and thin; one who is short and stout. Where do you find the chief differences in proportion?

D. Textiles and Construction. Texture and pattern are important factors in garment planning, because their modifying qualities may either emphasize or destroy the effect of line, mass, or color. One who wants to select and use textiles properly should study them.

1. Classification of textiles.

- a. Wool. Flannels, tweeds, twills, crepe, etc.
- b. Silks. Satin, brocades, soft silks, wash silks, crepe, artificial silk, etc.
- c. Cotton. Native, Japanese, and other kinds.
- d. Linen.

2. Chemical tests.

- a. Linen vs. cotton. Immerse the fringe in a concentrated solution of H_2SO_4 for one to two minutes and then wash quickly in cold

water. The fringe of linen will remain, and the cotton will be dissolved.

- b. Wool and silk vs. cotton and linen. Boil a piece of fabric for five minutes in a 5% solution of NaOH. Wool or silk will be dissolved, whereas cotton and linen will remain.
- c. True silk vs. artificial silk. Burn a piece of fabric for the test. The odor of burning wood is from artificial silk.

3. Physical tests.

- a. How to know cotton. Cotton has certain characteristics. It is generally described as being soft in feeling and dull in appearance. Examine the cotton fiber in a cotton boll and you will understand why cotton cloth has a soft feeling and dull appearance.

Another way to distinguish cotton is to unravel a piece of yarn from some cloth. Then untwist the yarn until the fibers are separated. The cotton fiber has a wavy appearance under the microscope and varies in length from about $\frac{1}{8}$ -inch to $2\frac{1}{2}$ inches.

A more definite way of recognizing the cotton fiber is to look at it under the microscope. It looks like a twisted ribbon,

- b. How to know wool. Feel the wool and see if you can tell which is the wool by the springy, wiry feeling. Under the microscope the wool fiber may be seen to be covered with small scales that overlap like the scales of a fish. Changing from hot to cold water and rubbing the material while washing causes the scales to interlock more firmly and to shrink.
- c. How to know silk. Silk fibers are straight and smooth. Under the microscope the silk fiber looks like a smooth glass rod. Artificial silk may be distinguished from real silk by its very brilliant luster.
- d. How to know linen. The linen thread as it appears in linen cloth has a slight irregularity caused by the unevenness of the linen fiber. The linen is stiffer and wrinkles more easily than cotton. Under the microscope the linen fiber looks like a jointed bamboo rod. Unravel a piece of linen yarn from a piece of linen cloth and try to break it. Untwist the yarn to get a linen fiber. The fiber is long and straight as compared with the cotton fiber. It has an average length of twenty inches, varying from ten to thirty inches.

4. Selection of textiles. The selection of textiles is governed by:

a. Color. A fabric of brilliant hue may be used for evening dress, and white and neutral colors, or dark and subdued tones, may be used for morning and afternoon dress.

(1) The choice of color is significant in the effect dress may have on the eye and the nerves of the public. Black and all very dark colors make a figure look smaller; consequently, they are desirable for very stout people.

(2) Color has its influence also, and grief is portrayed in black, truth and womanliness in blue, joy and cheerfulness in yellow, innocence in white, and royalty in rich purple. Lack of refinement is represented in loud colors or strong contrasts, and refinement in harmonious, soft, subdued tones.

Some colors give a feeling of warmth. A hot day may become unbearable by the use of tones in their

highest intensity or by emphasizing red, orange or yellow. White, broken blues, quiet greens and soft violets have a cooling influence. Bright colors will increase the apparent size of the wearer. Color has its influence on the wearer, exciting, depressing, refining, or coarsening as the case may be.

- b. Weight. Heavy materials may be used for coats and for winter wear. Light weight materials may be used for evening dress and for summer wear.
- c. Texture. It is closely related to color. Materials of good quality may be used many times without fading.
- d. Durability. In selecting materials, one should consider how much wear the garment will be subjected to. For certain purposes and occasions, delicate materials are ideal. For daily wear durable materials are the best.
- e. Fashion should not be overlooked. If a material is chosen that is out of fashion even though the style is up-to-date, it will show poor taste.
- f. Age. The fabrics should be selected from the point of view of the wearer's age.

Brocades and heavily embroidered designs are becoming to mature women, and plaids are becoming to girls.

g. Personality. The material should be suited to the individual personality. For instance, figured satin is not suited to the boyish type of lady.

5. Construction. There are no definite boundaries between the front, back, or sides of the body. The good points will be enhanced, and the minor defects will be concealed, by properly constructed lines of the clothes. The important parts of construction are:

a. The neck line.

(1) Should be in harmony with the shape of the face and chin.

(a) A shallow U-shaped opening is suited to the person with a thin and long face.

(b) A shallow round neck opening is suited to the person with a pointed chin.

(2) Should be shaped with reference to the shape of the neck.

(a) A deep V-shaped neck opening or a priest collar is becoming to the person with a short and

thick neck.

- b. The width of the armhole and sleeves. The width of these two parts should be in proportion with the blouse. The wearer will look out of proportion if the armholes and sleeves are too broad, and will look uncomfortable and ugly if they are too narrow.
- c. The width and the length of the blouse should be suited to the figure of the wearer.
- d. The skirt. The length of the skirt is governed by the age, size and the personality of the wearer.
- e. Construction of clothes for various figures.
 - (1) Well proportioned figure. The figure which approximates the standard need not use her dress as a means of calling attention to good points of proportion, or concealing of her defects. Her efforts may concentrate on getting pleasing effects of color and texture.
 - (2) Tall and thin figure. She should accent her horizontal lines. The blouse should be loosely fitted, and the skirt should be cut a little full. The head should not look small in proportion. For out-of-door wear a cape is suitable.

(3) Tall and heavy figure.

- (a) She should keep her quality of dignity and poise that her size demands.
- (b) She should wear a properly fitted blouse and skirt, and avoid any thing that is fluffy and dainty.
- (c) She should wear heavy silks, brocades, and other substantial looking fabrics.

(4) Short and thin figure. Her appearance should be kept as small and delicate as possible. Daintiness should be the keynote of her costume. All parts of her dress should be in proportion to her body. Soft and fine materials with lace and trimming in construction are in good taste.

(5) Short and stout figure.

- (a) She should emphasize the vertical lines.
- (b) She should concentrate her attention on the head and face so as to keep the body inconspicuous.
- (c) Her blouse should fit snugly, and should have long sleeves.

(d) Her skirt should be long, and properly fitted.

(e) The trimming of the clothes should be flat and smooth, no puffs nor ruchings.

(6) Swayed, round, square, or sloping back.

All these defects may be made inconspicuous by loosely fitted blouses with roll collars.

(7) Full bust. The underwear should be close-fitting, but not too tight.

Binding chests may be very injurious.

The neck line should be carefully cut.

6. Suggested laboratory work.

- a. Get samples of as many different textures as you can. Arrange together all the stiff, soft, rough, etc., materials.
- b. Of the above samples, list those becoming to the short, thin woman; to the tall, heavy woman; to the mature woman.
- c. Make a list of textures you think suitable to a child of eight. Why did you choose each of these?
- d. Make a list of textures and patterns becoming to a tall, thin girl of fourteen.
- e. Make a list of all the garments that you possess that are suitable for: school wear, sports wear; an informal party; a formal

party; church; a picnic; housework. 68.

- f. Make a simple dress for daily wear for yourself.
- g. What kind of underwear is most satisfactory for women of limited income and limited time? Ask at local stores to see different brands and get their good points from the clerks.
- h. Plan what you consider an ideal winter out-of-door play outfit for a boy of five. List all garments, writing out reasons for choice.
- i. Name four essentials to properly fitted shoes.

E. Hygiene of Clothing. Clothing serves not only to satisfy the esthetic feeling of the wearer and beholder, but to provide physical protection. Therefore, whenever one plans to have a garment, one must so design it that it will fulfill the requirements of both beauty and hygiene at the same time.

1. Type of clothing.

- a. For adults. This paragraph involves mostly women's costume.

(1) Blouse.

- (a) The blouse should be neither too wide nor too narrow. The wearer

would feel uncomfortable if it were too narrow, and discommoded if it were too wide.

- (b) The sleeves of the winter clothes should not be too short and wide. The elbow must be covered.

(2) Skirt.

- (a) Should not be too short so that the lower part of the legs may be protected.
- (b) Should not be too long so that it will not be a menace to comfort and safety.

(3) Underwear.

- (a) Trousers. The trousers should be so made that they may be covered by the skirt (if a skirt is worn) but the knees should be protected by them, for the knees are very sensitive.
- (b) Waists. No tight waist should be worn, for it impedes the circulation, interferes with respiration and causes bodily deformities. Many girls and young women tightly bind the breasts. As a result many girls develop

tuberculosis and mothers cannot nurse their babies, for their breasts cannot function. For correcting this, the line of the blouse must be broader in order that the underwear may be loosened.

(4) Shoes.

- (a) Right size. A shoe must be the width of the foot when it is unshod and pressed upon the ground by the weight of the body.
- (b) Right shape. The shoe should have a straight line from the heel through the point of the big toe. The heel of the shoe should be broad, and should come squarely under the heel of the foot. Korean old fashioned shoes are soft and flexible, but the heels are too flat and the arch of the foot may be spoiled. The so-called French heels which throw the feet forward into the front of the shoe and cause the deformity of the foot should not be worn.

(5) Collar of blouse.

- (a) Round, square, U-shaped, and may

be designed for summer dress. ^{71.}

(b) Loosely made collar may be worn during winter time. A high and tight collar should never be worn, because it may cause the throat to be inflamed.

b. For children. A child should be so dressed that a sudden change of temperature cannot affect him. A garment should be comfortable. The neck, legs, and arms may be exposed in summer. Knees, elbows, and ankles should be covered during the winter time.

(1) Open trousers should never be worn by any child, for children are active creatures, and they always play outside by sitting on the ground or somewhere else. It is easy to acquire infections originating in this part of the body.

(2) Both blouse and trousers should fit their bodies, and be free for movements.

(3) Weather-proof overshoes should be worn during snow or rain.

(4) The texture of underwear should not be too coarse, because the skin of a child is so delicate that rough material may irritate it.

- (5) An overcoat or outer gown should be worn when the child is going out during the winter time.
- (6) Simply made night clothes should be worn at night. This is not only hygienic, but also economical.
- (7) The color of underwear should be considered. Any discolored material should not be used.

2. Cleanliness of clothes.

- a. The clothes which are worn next to the skin should be kept clean. The sweat glands give off about three pints of bodily waste a day, most of which is absorbed by the underwear, so that underclothes should be washed often.
- b. The clothes worn during the day must be taken off at night and aired, and night gown should be put on.
- c. The color of underwear should be white or some other light hue. No colors that fade should be worn, because the dye readily comes out and may be absorbed by the body; consequently, the body may be poisoned.

3. Textiles and color.

a. Underwear.

- (1) The material must be porous, washable, and light. Porous linen or cotton

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underwear is sanitary because it is not only washable, but helps the ventilation of the skin.

- (2) Flannel or wool clothing should not be worn next to the skin unless it is kept clean, for it absorbs and retains the moisture from the skin.
- (3) Any material that fades should be avoided.

b. Summer clothes.

- (1) The material should be linen, fine cotton, thin washable silk, and chiffon, etc., because they are good conductors of bodily heat.
- (2) The color should be light, for light color reflects heat, but dark absorbs it.

c. Winter clothes.

- (1) For those living in a building where a warm temperature is maintained in winter time, the indoor clothes should be thin and light. Outdoor garments should be made wind-and-moisture proof. Flannel, wool, and fur are good textiles.
- (2) For those in a house which is not very warm, the indoor clothes should

be of a considerable thickness, and outdoor garments are also desirable. If the person cannot afford an especially made outdoor garment, a heavy Seoul gown is very good for this purpose.

4. Hats. Hats have never been universally used by the Korean. Parasols are used instead of them. However, they may be worn sometimes in severely cold or hot weather if they are nicely designed.

5. Suggested laboratory work.

- a. List three good brands of underwear. Give at least three reasons why each is good.
- b. What kind of underwear is most satisfactory for women of limited income and limited time? Write out reasons. Ask at local stores to see different brands and get their good points from the clerks.
- c. Make a list of the things we need to do to keep the body in perfect condition.
- d. Make out a list of things that should be done every week.
- e. Make a list of supplies needed to keep

the body well-groomed,

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- f. Make a list of supplies needed to keep the wardrobe in good repair.

F. Economy in dress and hair arrangement.

1. Selection of clothing.

- a. The utility of the clothing should be considered. Clothes should be comfortable and durable and convenient for work.
- b. Extremes of fashion should be avoided, since the styles change rapidly.
- c. Elaborateness of trimming and over-decoration should not be used, as they are not in good taste.
- d. Substantial fabrics which have good wearing quality should be chosen.

2. Purchasing of clothing.

- a. Selecting certain stores and dealers for a permanent relation with one store usually has advantages.
- b. A pre-determined list of items should be in hand.
- c. An annual clothing budget should be planned. Be sure you do not spend more than the amount in the budget. Some Americans put 15% of the total income for clothing.

3. Care of clothing.

- a. Adequate storage.

- (1) Clothes should be nicely folded and put in a chest or trunk for protecting them from dust, sun, and moth.
- (2) Clothes should be kept in condition for immediate use.

b. Immediate repairs.

- (1) Clothes should be properly cleaned, washed, and pressed before they are put in storage.
- (2) All torn parts should be immediately mended.

c. Protective garments, aprons, overalls, work gauntlets, etc., should be worn during the work.

d. Rubber overshoes, raincoats, and umbrellas should be used during snow or on rainy days.

e. All clothes should be frequently changed. At least two other garments and two pairs of shoes should be had.

4. Hair arrangement.

a. Three essentials to good hair arrangement.

- (1) Careful grooming. Hair should be kept shining and clean, because the appearance of a person may be ruined by greasy, frowsy, or dirty hair.
- (2) Neatness. The daintiness, poise, and dignity of the whole appearance

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is brought out by the neat arrangement of hair.

(3) Becomingness. Hair arrangement should be suited to the individual.

(a) Appropriate to her age and to her occupation.

(b) Becoming to her head and features.

-1- A slender woman with a long and thin neck looks better if her hair is so arranged that it will not add to her height.

-2- A plump woman with a short neck should arrange her hair from the nape of the neck and pile it high on her head.

-3- If the face is too wide, the hair should be so arranged that the ears may not be exposed.

b. Coiffures for different types of head.

(1) A large bulging forehead.

(a) The hair may be parted on the side and drawn slightly over the ears. If the forehead is not too broad bangs may be worn.

(b) The hair should be fluffy and soft and be trained to grow low over the forehead.

(2) A square jaw and heavy chin. The upper part should be put in a broad and flat mass on the top.

(3) A protruding jaw and narrow chin. The hair should be dressed loosely at the sides and above the forehead and piled at the back of the head.

(4) Large face with large features. The mass of hair should be kept large and smooth. The line of the hair against the face should be soft and indistinct.

5. Suggested laboratory work.

- a. Make a list of every article of clothing you now possess. List under main headings used in the Budget Scheme A. Give the price of the article when you know it; estimate the cost when you do not. Try to discover from this what you have spent for clothes during the past year. Is it too much or too little in proportion to the family income?
- b. Suppose your family yearly income were 1500 yen (\$750 gold), and ten percent could be spent for the family clothes.

Plan the family clothing budget on a three-year basis.

- c. Make a budget scheme for yourself beginning with the old clothes you now possess. Found it upon what you think you have spent this past year upon clothes.
- d. Keep account of your clothing expenditure for the next three months, including what is spent upon repair and renovation. Compare expenditure with budget scheme you have planned.
- e. Write down all you know about taking care of your hair.
- f. Try arranging the hair: parted, pompadour, wide at sides, high over forehead, showing ears completely, hiding ears. Decide which way is most becoming and write out reasons.

II. Outline of subject matter (continued).

G. Laundering.

1. Preparation of the wash.

- a. Mending. Mending should be the first step of the preparation of the wash. A tiny break in a thread may form a large hole if it is neglected before washing. However, underwear and stockings may be mended after being washed.
- b. Sorting. All things ready to be washed should be sorted according to the color, materials and the kind of dresses.
- c. Counting and marking. If the clothes are to be sent out, they should be accurately counted, and a little mark should be put on.

2. Process of washing.

- a. Soaking. All soiled white clothes should be soaked in warm, soapy water. This is an economical way, because soaked ones require less rubbing.
- b. Washing. The water should be sufficient to make good suds, but not enough to splash out of the tub. The garments should be rubbed over the board systematically, and the especially dirty places rubbed directly on the board after the soap is applied.

- c. Wringing. The garment should be wrung in straight folds. Materials not durable should not be wrung too tightly.
- d. Bluing. Bluing is used to counteract the tendency of clothes to turn yellow. When the bluing is added, the water should be stirred. Stir the water well just before adding the clothes, because some bluing may settle to the bottom. After the clothes have been blued, they may be wrung. If it is necessary to starch then, do it; if not, hang them for drying.
- e. Hanging. The line should be stretched taut and wiped, and the pins should be cleaned. The garments should be well shaken to remove the wrinkles and creases, and then hung straight. They are fastened to the line by pins. White clothes should be hung in the sun, because the sun bleaches white, while colored ones should be hung in the shade to prevent fading. Silks and woollens are dried in the shade. All clothes should be dried in the open air except in very stormy or cold weather.
- f. Sprinkling. Sprinkling the clothes carefully by spraying, stretching them into shape, and rolling tightly prepares them

for ironing. Lace, embroidery, tucks, and dainty garments should be nicely folded.

- g. Ironing. All embroideries, laces, and buttons should be ironed on the wrong side with a soft pad underneath so that the pattern may sink into the pad and not be spoiled by the iron. Fold the clothes nicely and iron a part until it is perfectly dry before the new part is started. A wet cloth is used when it is desired to keep the clothing from becoming shiny.
- h. Clothes should be carefully folded after ironing and put in drawers, trunks, or chests in such a way that they are ready for use.

3. Removal of stains.

Character of stain	Reagent	Method
Candle wax	Permanganate and oxalic	To remove color after wax has been removed, wash in clear water and use a mild bleach.
Fruit	Boiling water	Spread stained part over a bowl, pour boiling water on it from a height so as to strike the stain with force.
	Borax and Ammonia (for woolens & silk)	Use borax and ammonia solution and boiling water in equal quantities and immerse stained portion, allowing it to soak a few minutes, and rinse thoroughly with boiling water.

Character of stain	Reagent	Method
Grass	Javelle (for cotton and linen)	Use Javelle water instead of borax and ammonia.
	Oxalic acid	Apply a few drops of oxalic. Rinse well with warm water. (Dilute oxalic acid may be used on all fabrics.)
	Cold water, alcohol, ether	Wash a fresh stain with coldwater without soap. Alcohol or ether will dissolve the green coloring matter when material cannot be washed.
	Javelle water (for white cottons and linens)	Apply Javelle water and follow immediately with boiling water. Thorough rinsing will prevent Javelle from affecting the fabric.
Grease and oil	Kerosene	Moisten with kerosene, let stand a short time, then wash with soap and water.
	Warm water and soap.	Wash in warm water and soap. Remove traces of grease stains by bleaching with Javelle water. Apply these reagents with a cloth, preferably of the same material, rubbing the stain lightly until all the reagent has evaporated. Moisten with salt and lemon juice. Lay in the sun. Wash in soap suds.
	Javelle (for white cottons and linens)	
	Chloroform, benzine (for delicate colors and fabrics).	
	Salt and lemon juice.	
	Oxalic acid or Hcl and Javelle for white cottons and linens.	Apply a few drops of oxalic acid, follow with a few drops of Javelle and rinse quickly with boiling water.
	Ink eradicators.	Use as indicated on box. Wash finally with soap suds.
	Oxalic acid for silk and wool.	Use without other bleach especially for wools and silks.

Character of stain	Reagent	Method
Printers' ink	Lard or grease	Rub in lard or grease well, then wash with warm water and soap.
Iodine	Warm water and soap.	Wash while fresh in warm water and soap.
	Ammonia	Apply concentrated ammonia to stain. Wash and repeat until removed.
	Alcohol, starch	Wash with alcohol. Apply moistened starch, brush off and repeat until removed.
Machine oil	Cold water and soap, turpentine	Wash in cold water and soap. Rub stain with turpentine, then wash out.
Paint	Soap and water	If paint is fresh, wash it at once if the goods is washable.
	Gasoline, turpentine, benzine, bensol	Wash the spot with any one of these, remembering that they are inflammable. Old stains may be readily removed with bensol.
Varnish	Alcohol, turpentine, bensol	Wet the stain with alcohol, turpentine, or bensol and allow it to stand a few minutes, then wet again and sponge off with a clean cloth. Continue this until the stain is removed. In case the color is affected by the alcohol, sponge with chloroform; for blue material use dilute vinegar.

Character of stain	Reagent	Method
Blood	Warm water	Wash in warm water until the stain disappears.
	Warm water and ammonia.	Ammonia assists in dissolving the blood. Use a few drops to a quart of water.
	Warm water with raw starch.	If heavy or new goods, as a new blanket, make a paste of raw starch and warm water. Spread on stain, and as fast as starch is discolored, make a new application.
Candle wax	Friction and warm iron with blotting paper.	Rub off all excess paraffin. Use paper each side of wax stain, then apply a warm iron - not hot.

4. Suggested laboratory work.

- a. If a mattress is spotted, what simple methods may be used to clean it without washing it?
- b. How may grease spots be removed from carpets?

III. References on Clothing.

- Baldt - - - - - Clothing for Women.
- Buttrick - - - - - Principles of Clothing Selection.
- Balderston - - - - - Housewifery.
- Dyer - - - - - Textile Fabrics.
- Fales - - - - - Dressmaking.
- Frederick - - - - - The New Housekeeping.
- Goldstein - - - - - Art in Everyday Life.
- Kinney & Cooley - - - Shelter and Clothing.

- McLeod - - - - - Handbook of Cleaning.
- McGowan & Waite - - -Textiles and Clothing.
- Quigley - - - - - What Dress Makes of Us.
- Picken - - - - - The Secrets of Distinctive
Dress.
- Story - - - - - How to Dress Well.
- Taber - - - - - The Business of the Household.
- Woolman - - - - - Clothing, Choice, Care and Cost.
- Woolman & McGowan - Textiles.

CHILD CARE

I. Objectives

- A. To know how life begins.
- B. To know the development of the foetus.
 - 1. Reproductive organs and functions of male.
 - 2. Reproductive organs and functions of female.
- C. To know how to care for the health during pregnancy.
 - 1. To know how to prepare and use the proper diet during pregnancy.
 - 2. When to rest and how to rest; and how long to sleep at night.
- D. To know necessary supplies during labor.
- E. To know how to give the proper treatment for the new born baby.
- F. How to take care of the mother after giving the child birth.
- G. To know the nursing problem.
 - 1. Taking care of mother's breasts.
 - 2. The length of time between feeding of mother's milk.
 - 3. How to hold the baby while he is nursing.
- H. When he can be weaned, and how; what kind of food substitute should be used when he is beginning to be weaned.
- I. Bathing problem.
 - 1. The temperature of the bath room and the tem-

perature of the bath water should be considered,

2. What kind of equipment to use in giving the bath.

3. When and how often to give the bath.

J. Clothing problem.

1. Kinds of clothing; quality of clothing; construction of clothing; layers of clothing should be learned for a baby.

K. To know adequate surroundings or environment to be provided for a baby.

L. To know kinds of play, toys, and place for play.

M. Training.

1. Mental training; moral training, etc.

N. Education.

1. Physical changes.

2. Psychological changes.

3. Signs of puberty.

4. Sex relationships.

II. Outline of subject matter.

A. The beginning of life.

1. Plants. Every living creature, even a plant, has a life story. Sexual instinct plays a very important part in life perpetuation. It is a little difficult to think of plants as living things, yet they struggle for their lives. They eat, breathe, drink and protect themselves from enemies, and provide for the union of the sexes and the future care of offspring. When a

plant gets food, air, light, and protection, it develops its blossoms. The two sexual organs may be in the same flower or may be borne in different ones. The reproductive organs of plants are:

- a. Stamen. The anther or the long slender filament is the essential organ for reproduction. When the anther sac is full of pollen, it bursts and discharges its contents, the sperm cells.
- b. Pistil. Is situated at the bottom of the flower cup in the same manner as an ovary. The egg of the plant is found here.
- c. Steps of reproduction. The sperm cells find their way to the ovary either by the agency of wind or insects, or by themselves. The ovary then develops into an embryo, and the seed is formed.

2. Lowest forms of animals. The lowest animals, such as the amoeba and the hydra, reproduce by means of fusion or budding. The amoeba is a tiny unit. The mother organism does not die, but ceases to exist because of the division of two body amoeba. Hydra is also a very tiny animal. They reproduce by means of budding. First the mother increases in the interstitial

cells, and then the two layers of the body ^{91.}
grow out into a tiny knob-like projection whose
internal cavity connects with that of the par-
ent and lives as an individual.

3. Chicken. The chicken is a domestic bird. The
life story of a chicken may be discussed briefly.

a. The four parts of the egg.

(1) Shell.

(2) Egg white.

(3) Egg yolk.

(4) The germ.

b. The birth of the chicken. The germ or
real egg lies upon the upper surface of
the yolk, and may be seen when the egg
is carefully broken. If the temperature
is desirable, the fertilized germ will may
develop. The food naturally provided is
the yolk. When the yolk, or food, is nearly
exhausted, the tiny body breaks the shell
and comes out as an individual. The length
of time for the development from a germ to
a baby chicken is about three weeks.

4. Rabbits. Rabbits are a species of mammals.
Since rabbits are easily obtained, they may be
studied as a representative of the mammals.

a. Reproductive organs of the rabbit.

(1) Female. Consist of ovaries, egg-tubes, and uterus.

(2) Male. Testes and penis.

b. The birth of young rabbits. Five or six or about that number of eggs may be ripened in the ovaries at a time. After fertilization, the young are carried in the body of the mother about 30 days. When they are born they are blind and hairless. They are nourished and protected by their mother until they are able to live independently.

B. The development of the foetus.

1. The reproductive organs and functions of man.

a. Female.

(1) Ovaries. Produce egg cells and send them into the uterus through the oviducts.

(2) Fallopian tubes. Are the connecting tubes between ovaries and uterus.

(3) Uterus (womb). Measures about three inches by one and a half inches and weighs about two ounces, consisting of a thick wall and a small triangular central cavity. During pregnancy the wall is thickened and the weight is increased. When empty at full term, it weighs about two pounds.

b. Male.

(1) Testes. Produce sperm.

(2) Spermatid ducts. Store sperm.

(3) Penis. Places sperm in female reproductive tract.

2. Fertilization. The fusion of a spermatozoon with an egg or ovum. The nuclei of the cells fuse and a new cell is formed.
3. Segmentation. The new cell divides into two cells. This process continues until the spherical mass is a little larger than the size of the original egg. Then the segmenting egg is carried down through the oviduct into the central cavity of the uterus. It possesses a thin membrane (which develops later into the placenta) which attaches the foetus to the womb of the expectant mother.
4. The embryo. It grows very rapidly, the egg increasing 10,000 times in size within four weeks after fertilization. At the time when the embryo is about one-eighth of an inch in length, the brain, eyes, heart, and several extremities are distinguishable. At about 280 days it is ready for delivery.
5. Mother's contribution to the foetus. The placenta takes up nourishment from the blood of

the mother and carries it to the circulation of the child. The artery in the cord carries the wastes from the blood and kidneys of the foetus to the placenta; there it passes into the blood of the mother. Egg yolk contained in the cell is the food material of the embryo before it can receive the nourishment from the mother's blood.

6. Suggested problems.

- a. A visit to a hospital is a good way to study the concrete methods used in the hospital on the care of confined mothers and new born babies.
- b. Let each girl score two or three mothers and babies and see the condition of the mothers and children.
- c. In what ways may children be aided in normal development by playing with dolls?

C. The care of mother and new born baby.

- 1. Care of the mother. The health of the mother affects the infant directly during pregnancy and breast feeding; therefore, the hygienic care of the mother is very important.

a. During pregnancy.

- (1) Diet. Some disturbances like indigestion (morning sickness, heartburn, flatulence), decaying of

teeth, and constipation are quite^{95.} often present, or unavoidably occur in the early months of pregnancy. The diet must be considered. Meals should be light, but frequent and adequately nourishing. The amount of liquid intake should be at least two quarts a day. Foods which contain minerals, protein, and vitamins should be supplied in sufficient quantity, and those which contain sugar and starch should be decreased. Sea foods containing iodine should be taken to protect the child from enlargement of the thyroid gland.

(2) Rest and sleep. The pregnant woman should break her day's work with frequent short periods of rest. She must have an abundance of sleep in a comfortable place and in a well ventilated room. If she cannot get enough sleep at night, she has to plan to take a nap after the noon meal.

(3) Exercise and recreation. An expectant mother should have adequate exercise and recreation. Outdoor

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exercise is desirable, for there is no tonic like fresh air. She should have as much social recreation as possible. These two points are very essential, but most Korean expectant mothers neglect them and do nothing but rest all the period of pregnancy in very warm and poorly ventilated rooms.

(4) Dangers. Abortion is much too common among Korean expectant mothers, causing quite a number of deaths.

(a) Causes.

- 1- Misplacement. After child-birth the proper rest is important. Some women who have not taken adequate rest after child birth have this trouble.
- 2- Intercurrent diseases.
- 3- Violent emotion.
- 4- Venereal disease. As the result of syphilis, abortion may take place at any period of pregnancy with the discharge of the dead fetus.

- (5) Doctor's examination (medical supervision.) The physician should be consulted as early in pregnancy as possible. The pelvis should be measured, and an examination of the heart, lungs, abdomen, and urine should be made to determine any hint of syphilis.

b. During labor.

- (1) Necessary supplies.
- (2) Care of the room. Unnecessary furniture and equipment should be moved out and the room should be cleaned thoroughly.
- (3) Care of the bed. The bed should be comfortable and the mattress should be flat and firm and at least 20 inches from the floor. Quilts should be clean and sheets should be sterilized by boiling water. Oil papers should be used under the sheet to protect the mattress from being soiled.

c. Stages of labor. In America the course of labor is divided into three stages:

- (1) The first stage. Its duration is about sixteen hours in the average first labor. Subsequent confinements

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take eleven hours or less. The uterus contracts and the patient feels distressed while the contractions last. She should be encouraged to take light and nourishing food between pains, and should have necessary sleep and rest and be urged to take a walk about the room if possible.

(2) The second stage (delivery stage).

The duration is about two hours. The patient is in more pain, because of the contraction of the abdominal as well as the uterine muscles. A doctor should be with her. All the bed sheets and night gowns should be changed to sterile ones.

(3) The third stage. After more than ten minutes, sometimes several hours, the placenta and membrane are discharged naturally, with more or less hemorrhage, or they are pressed down by a physician. If the hemorrhage is prolonged, a physician should be called, if one is not already present.

d. After child birth. The patient should be cleaned up. A hot drink should be given if the mother is chilled. She should be urged

to sleep, and no visitor may be allowed^{99.}
for at least twelve hours.

(1) Diet. Liquid may be given on the first day. Soft diet may be given on the second day. Rich food should be avoided.

(2) Excretion.

(a) Bowels. A dose of castor oil may be taken on the second morning if the patient feels constipated. Be sure no constipation exists.

(b) Kidneys. The bladder should be emptied within ten hours after delivery. An abundance of water should be taken.

(3) Breasts. The nipples should be washed with boric solution (saturated) both before and after nursing.

(4) General care. Pulse temperature and respiration should be noted three times a day. The room should be well ventilated, but without drafts. Sunshine should be plentiful. The mother should not attempt ordinary housework for at least one month after child birth.

2. Care of the new born baby.

a. At birth.

- (1) The cord should be tied one inch from the abdominal wall, then again another inch farther along, then cut and covered with sterile linen.
- (2) The eyes, nose and mouth should be washed with saturated boric acid solution. The eyelids should be washed with sterile water and one drop of from 1 to 2 percent silver nitrate solution should be put in each eye for killing the bacteria which may cause blindness if the mother has gonorrhea.
- (3) The baby should be wrapped and put in a warm place.
- (4) The first toilet.
 - (a) The child should be oiled all over with warm olive oil, and the cord dressed with sterile gauze.
 - (b) The child then should be dressed quickly and put on a soft, thick, warm mattress.

- (1) A sponge bath should be given daily until the cord is off.
- (2) Cord dressing should be changed when soiled.
- (3) The eyelids should be washed with boric acid solution every day.
- (4) The bowels should move daily.
- (5) The genitals should be washed daily with boiled water and absorbent cotton. If the foreskin in a boy is tight, circumcision should be given.
- (6) Nursing. 8 to 12 hours after delivery the baby may be put to the breast. The mother's breast contains a liquid (colostrum) which is just what the baby needs to clean out its alimentary canal and make it ready for digestion. It is a great mistake that we Koreans usually give a dose of medicine before breast taking. A very queer custom in some districts in Korea is to put the new born baby at the breast of a mother whose milk is well established. This is, of course, wrong, for it does not perform the

function of colostrum. The custom of giving new born babies laxatives is also harmful.

D. The nursing period.

1. Every mother who has had proper physical care and is free from tuberculosis and infectious diseases can and should nurse her own babies. The sucking of the baby stimulates the uterus to contract and prevents hemorrhage. Furthermore, it is the best way to prevent the premature return of menstruation and prolong the short interval between pregnancies, and the mother's milk is the only food prepared for the baby by nature. There is no substitute as good as mother's milk. The temperature and composition of mother's milk are ideally suited to the baby's needs.

2. The wet nurse. In Korea, many wealthy women do not nurse their babies, but hire women who have good breasts to feed them. It is objectionable for both mother and child.

a. Reasons why the mothers cannot nurse their babies:

(1) Bound breast custom. Our girls like flat breasts, so many of them bind their breasts very tightly, which prevents proper development. During the

breast feeding period they cannot secrete milk.

- (2) To shorten the intervals between child birth. Wealthy parents love to have many children, the more the better. It is the glory of the women, no matter whether the children are weak or subnormal. But the increase in birth rate is always accompanied by an increase in death rate.

b. The disadvantages of wet nursing.

- (1) It is unsanitary. Almost all the wet nurses employed are from the villages. They are not neat and clean.
- (2) It prolongs the nursing period. The baby is always with the wet nurse. If he leaves her he will be fussy; therefore, the nursing period is usually prolonged until the baby is three to four years old.
- (3) It does not provide enough nourishment. Very few wet nurses can provide as ample nourishment as the mother.
- (4) It interferes with education. The child will imitate whomever he is

with. The wet nurse is never educated; how can she be a good example?

- (5) It takes the baby from the mother, with the result that the relationship and love between the mother and the baby is diminished to some extent.

3. The care of the nursing mother.

- a. Diet. The amount of breast milk should contain adequate nourishment for the baby. The mother must have more animal protein, minerals, especially calcium and iron, and more vitamins than for her ordinary living. An adequate amount of liquid is essential to the quantity of milk.
- b. Excretion of waste should be regulated by food taking.
- c. Sufficient sleep, rest, and exercise are important factors in the production of milk.
- d. The nipples should be kept clean.
- e. The nervous condition of the nursing mother affects the milk, both in the quantity and the quality; therefore, the mother should control herself and never get angry, over-excited and worried.

4. Intervals of breast feeding.

a. Age	No. of nursings in 24 hours	Interval during day (hours)	No. of night nursings (6 P.M. to 6 A.M.)
1 day	2	12	None
2 days	5	4	1
3 days to 1 month	6	4 or 3	2
1 to 3 mo.	5	4 or 3	1 or 2
3 to 5 mo.	5	4 or 3	1
after 5 mo.	5	4	1

b. Length of each nursing period. Usually from 5 to 20 minutes, 5 minutes for one breast and ten minutes for the other.

5. Weaning. The normal infant of the countries which utilize cows' milk as an essential food may be weaned when they are nine months old, but in view of present Korean conditions, our babies should be weaned at one year. During the hot season, or while the child is recovering from an illness, the nursing may be prolonged. Additional food should be given to the baby gradually from the sixth month until at one year or a little longer (but not more than 14 months) he is entirely weaned. Cows' milk is a very suitable, digestible, and richly nourishing food for both adults and infants. It is to be hoped that we Koreans will realize the value of it and learn to feed

cows for their milk as well as for their meat.

6. Food.

a. Baby 6 months. Cereal and fruit juice should be given gradually to supplement breast feeding.

(1) Cereal.

(a) Soup of rice.

(b) Wheat hearts.

(2) Fruit and vegetable juice.

(a) Orange juice.

(b) Tomato juice.

(c) Pear juice.

(d) Cabbage juice.

(3) Meat broth and vegetable juice and cereal (strained).

b. Baby 7 months.

(1) Cereal and fruit same as for six months.

(2) Vegetables. Spinach, carrots, and cabbage should be cut into pieces and boiled. Strain before using.

c. Baby 8 months.

(1) Cereal. Rice, gruel, and toast may be given.

(2) Milk, if possible.

(3) Vegetables and fruit. Same as for seven months.

d. Baby 9 months.

- (1) Cereal and milk, same as for 7 months.
- (2) Vegetables. String beans and beets may be added.
- (3) Fruits. Baked apple may be added.
- (4) Egg yolk.

e. Baby 10 to 11 months.

- (1) Cereal. Rice, rye, gruel of rice, rye, and small grain, and toast may be given.
- (2) Other foods. Same as for 9 months.

- f. Baby 12 months.** He may be weaned entirely. Foods are almost the same as for 11 months, but the quantity should be increased.

7. Suggested problems.

- a.** Why are the following qualities necessary if one is to observe children helpfully:
sympathy; an unbiased attitude; self-control; power of intense concentration.
- b.** Observe a child for as short a period as ten minutes and notice how many bodily movements he makes. Why is a normal child very active?
- c.** Observe the methods a little child takes in getting acquainted with a new object: manipulation of various sorts, tasting, smelling,

seeing, hearing. He naturally puts everything into his mouth. What very serious injury may be done by giving a baby a pacifier?

d. Study the playthings of a little child and analyze according to value in his development.

e. What sort of games may a mother play with the infant which will really aid him in his physical growth? Is there ever danger of too much mother play?

E. The general care of the infant, and children through adolescence.

1. Bathing.

a. The temperature of the bath room should be from 70° to 75° F., certainly never warmer than that.

b. The temperature of the bath water should be taken by a thermometer or tested with the elbow of the mother. If it is taken with a thermometer the right degree of temperature is as follows:

(1) During early weeks from 98° to 100° F.

(2) During first six months from 95° to 90° F.

(3) During the next six months as low as 80° F.

c. Equipment.

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(1) A small bath tub and a table or other suitable support for the tub to stand on.

(2) Individual towels.

d. Bath. The bath should be given on an empty stomach and at a convenient time for the mother.

2. Clothing.

a. Clothing should allow free movement of arms and legs, and should not have too many buttons.

b. All clothes should be adapted to the season of the year; the child should not be overloaded with clothing in winter time.

c. Night gown is necessary, and the material should be suited to the temperature.

d. The material of clothes should be warm, (not too warm), light, smooth, elastic, washable, and simple in design.

3. Sleeping.

a. A young infant should sleep from 15 to 20 hours per day, and he should not turn night into day, but acquire early a regular habit of sleeping.

b. A young infant should have a long nap after the bath.

c. A young infant should be trained from the very first to sleep all night. He should not be awakened at night for feeding or diaper changing. He should go to sleep whenever he is put in bed, without being patted, rock, or sung to sleep.

d. A young infant should have adequate fresh air and reasonable quiet.

4. Care of the child from 2 to 6 years of age.

This is the transitional period between infancy and childhood. Some habits are formed and some instincts are developed in this period. Sometimes they are neglected, for the mother has to take care of younger children, but the parents should know that the later life of children is based upon the development in this period; therefore, hygienic care and proper food are very important.

a. General care.

(1) Sleep. At least 12 hours should be spent in sleeping. In some families if the children go to bed very late the parents will be proud of them and say, "How lively our children are!" This is a big mistake. No wonder many children are unhealthy and unable to study hard when they attend school.

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(2) Good ventilation. Children should have plenty of fresh air, especially in sleeping rooms.

(3) Cleanliness.

(a) The genitals should be kept clean.

(b) The bladder and rectum should be brought under control.

(c) Hands and face should be washed before meals and at bedtime.

(d) Teeth should be brushed at least twice a day.

b. Clothing.

(1) Clothes should be suited to the weather; they should never be too warm and heavy.

(2) An extra garment for out of doors is necessary.

(3) Clothes and shoes should be comfortable and sanitary.

(4) Night gowns and underclothes should be changed frequently, as well as outer clothing.

c. Protection from communicable diseases.

Children are very easily infected with communicable diseases. The terrible death rate of children from 1 to 4 years of age is due to this.

(1) Common diseases:

- (a) Diphtheria.
- (b) Scarlet fever.
- (c) Measles.
- (d) Influenza.
- (e) Whooping cough.
- (f) Rumps.
- (g) Common cold.
- (h) Typhoid fever.
- (i) Dysentery.
- (j) Cholera.

(2) Method of infection.

- (a) Contact infection. Diseases are spread directly from a person ill with the disease, and indirectly by a carrier.
- (b) Indirect transmission. By water, food, and insects.

(3) Protection.

- (a) Sick persons should be isolated from children.
- (b) Children should never be allowed to call on neighbors' children who have infectious diseases.
- (c) Foods should not be exposed to dust and flies.

(d) Water should be boiled before^{113.}
drinking it.

d. Play.

- (1) The use of play. Play is an essential element in the development of the physical, mental, and moral capacities. Cooperation, sacrifice, justice, self-control, self-respect, leadership, and obedience to command all may be trained by play.
- (2) Place for play. Home is the right place for children's play and to keep playthings. There should be a play room if possible. A little tactful direction of parents will help children to have more interests.
- (3) Kinds of play. Walking, running, jumping, climbing, riding, swimming, hitting, hunting, fighting, making toys, herding, and other games suited to the child's state of development.

e. Training.

(1) Mental training.

- (a) Imitation. When the child begins to imitate, an opportunity for education opens before the mother. He likes to do things himself.

This is the right time to establish the habit of doing things thoroughly and systematically.

(b) Curiosity. All children like to ask questions during this period. This is certainly an educational opportunity open to the mother. She should answer him reasonably, simply, truthfully, and frankly as far as she is able to explain and as far as the child can comprehend.

(c) Imagination. The stronger a child's imagination is, the more creative ability he is going to develop. Parents should not worry when the child begins to invent stories, to tell "lies." This is merely normal expression of the imaginative power; and it is harmful only if the parents, through ridicule, drive the child to conscious deceitfulness.

(2) Moral training.

(a) Obedience.

-1- Wise suggestions of parents

are better than commands.

-2- Use the same code of ethics and courtesy with the child as with the adult.

-3- Never use excessive punishment.

-4- Never give hasty and unreasonable commands.

(b) Kindness. A child should learn to treat both mankind and animals kindly.

(c) Respect. A child should be trained to respect his parents, and all aged persons.

(d) Charity of spirit should be cultivated at this period. The child should be trained to understand sympathetically the misery of all unfortunate people.

5. Care of child from 6 to 12 years of age.

a. General care. About the same as previous period, except the sleeping hours are a little shorter.

b. Food sufficient and properly balanced, for stunted children owe their condition to improper food. Loss of muscular and nervous energy, reduction of resistance

to infection, and decrease of mental ability often occur in this period by reason of improper food taking.

c. Training.

(1) Physical. During this period, children should learn a large variety of motor activities. The habit of using hands, feet, and legs should be established.

(2) Mental. This period is one of acquiring the foundations of knowledge. Memory is pretty good, and new ideas are formed. They are interested in reading. Stories are the most favored. Parents should help them to select books which are in good taste.

(3) Moral. Children in this are are very curious. They like to destroy things, even animals and plants. Parents should teach them what attitude children should have towards animals and plants.

6. The adolescent (12-16). This is a transitional period from childhood to adult. The best of care, proper supervision and sufficient food are necessary for the enormous growth and development incident to this period. Children

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of this age begin to notice the nature of sex
by the physiological maturity of the sex glands.

a. The changes.

(1) Physical.

(a) Height. There is a rapid increase in height. The most rapid growth during puberty is at about the eleventh year in girls and at the thirteenth year of boys.

(b) Weight. From 11 to 13 years of age girls gain more rapidly, and from 14 to 16 years of age boys gain more rapidly. The greatest gain in girls is in the 13th year, and in boys in the 16th year.

During the greatest growth, the average for boys is 16 ounces per month, and for girls 12 ounces.

(c) Other body changes.

-1- Nervous system. For the reason that the muscles grow much more rapidly than the rest of the body, sometimes the nerves cannot control them. Children are very sensitive and often absent-minded.

- 2- Reproductive organs. Hair appears, the size of reproductive organs is increased, and the function of the reproductive organs is established.

(2) Psychological changes.

(a) Exaggerated emotional responses.

- 1- Self-regard.
- 2- Food eccentricities.
- 3- Great like or dislike of certain persons, rooms, places, or things.
- 4- Hero-worship. They see themselves as the hero of even the cheapest story, and conceive themselves as occupying the center of interest.

(b) Increase in self-consciousness and social consciousness.

- 1- Feelings of independence.
- 2- Feelings of maturity.
- 3- Excessive interest in knowing what others think about them and criticize in them.

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-4- Sensitive about what they
have done.

(c) Sex emotions.

- 1- Avoid the opposite sex
(beginning of this period).
- 2- Feel sex attraction.
- 3- Associate with and easily
fall in love with opposite
sex (15-18).

(d) Religious emotions.

- 1- The mystery of religion ap-
peals.
- 2- Religious conversions occur
at this time.
- 3- Critical attitude held to-
ward religion at the end
of this period.

(e) Esthetic emotions.

- 1- Love of beautiful in clothes,
music, house furnishings,
and arts.
- 2- Esthetic ability is usually
developedduring this period.

b. Signs of puberty.

- (1) Girls. Features become more beautiful
and attractive. The internal organ-

isms change as well as external ^{120.}
body features. Menstrual periods
begin.

- (2) Boys. Deepening of voice, and hair
on face.

c. General care.

- (1) Food. They should have plenty of
proper food at regular intervals.
Stimulating foods, including strong
tea, pepper, should be avoided.
Wine and cigarettes should be pro-
hibited.
- (2) Athletic sports. Both sexes need
organized athletic play. Girls in
this age are usually tired and lazy.
They should be urged to play and to
take outdoor exercise. Many girls
develop tuberculosis during this
age, because of the old custom of
never letting girls play outside.
- (3) Care during menstruation. Normal
exercise should be encouraged.
Avoid all kinds of violent forms of
play. Lukewarm baths should be
taken and constipation should be
avoided or cured.

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(4) Posture. Attention should be paid to the manner of standing and sitting. Girls are ashamed for the growth of breasts and always bind their breasts very tightly, and bend heads forward. This is not only injurious to the development of the breasts, but also harmful to the respiratory organs. No wonder many girls acquire tuberculosis during this period and many mothers cannot feed their babies naturally.

(5) Sex habits. Mothers should teach their girls and boys that they should respect themselves and control the sex power. They should be told frankly about the importance of purity and the highest ideals between friends of the opposite sex.

(6) Sleeping. Children during this period need a great deal of sleep, at least nine hours a day. They should not be allowed to sleep in very warm places.

7. Suggested problems.

- a. A very healthy looking baby was seen on the street car with its parents at seven o'clock in the evening. It was passed frequently from one to the other. It fretted, and several times cried tempestuously. What may have been the cause or causes?
- b. A young mother says, "My little daughter was the most unselfish baby I ever knew, always sharing everything, and now, at three and a half years, she is growing so selfish that I am very much troubled." How would you answer this mother?
- c. How may the "hero worship" of later childhood be used in the religious development?
- d. Why is it of vital importance that parents guard carefully the reading of children from eight to eleven? Relate to habit-formation, moral and intellectual.

1. Heredity. The new individual is formed by the fusion of the egg and sperm. Chromosomes in the nucleus perform the function of transmitting heredity. Therefore, the new individual has a marked tendency toward resemblance to his parents in physical structure, personal manner, and mental ability. Attention should be paid to this feature if one wants to adopt a child.
2. Environment. Both persons and material things which are around us are our environment. Surrounding conditions affect the development very much. The environment of a child may be divided into two periods, the prenatal and the postnatal.
 - a. Prenatal environment. The surroundings which encircle the child before he is born are called prenatal environment. The mother has the responsibility of creating the prenatal environment of the child. The health of the expectant mother affects the child directly. Maternal care is necessary for both mother and child.
 - b. Postnatal environment.
 - (1) The home and all the things which surround him.
 - (2) Persons in his home.
 - (3) Children with whom he plays.

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- (4) Neighbors and the whole community.
 - (5) Climate and geography.
 - (6) Schools, churches, and other social and natural organizations.

3. Is heredity more important than environment?

It is a debated question. No one can answer it satisfactorily. The inborn capacity is limited by inheritance. The subnormal child cannot be made a normal person by putting him in a good environment. But we all agree that wise care, proper training, good habit formation, and the best opportunities for development can affect the bad inheritance very much. Although no kind of environment can cure inborn deficiencies, suitable surroundings are able to help the child to be a better one.

4. Suggested problems.

- a. Keep a record of the length of time it takes to form a definite good habit in a baby and compare this length of time with an attempt of your own to form a habit or to change a habit in yourself or in an older child. What is the very significant fact in this comparison?
- b. Why is it essential not to permit an exception to occur when trying to help a child form a habit?

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c. Ask several adults to describe some fear experienced in childhood which actually affected their later childhood, perhaps even extending into youth and adult life. Could such fears have been cured? Need the cautious child be a timid, fearful child?

G. The Mortality of Mothers and Children.

1. The maternal death rate during pregnancy and child birth. The death rate of mothers and children is not registered in Korea; therefore, the accurate figures cannot be given. From my experience I observe that the death rate is very high, probably much higher than in most countries. A great number of women die during pregnancy and child birth. Abortion and still birth are the chief causes of mortality.
2. The causes of maternal death.
 - a. Venereal diseases. Either syphilis or gonorrhea is a serious menace to the health. Abortion and stillbirth are unavoidable in many cases.
 - b. Hygienic care. Because of a lack of hygienic training, many expectant mothers do not know how to take care of themselves during pregnancy. Proper diet, moderate exercise, and

good ventilation are neglected.

c. Lack of trained physicians and midwives.

No persons had specialized on this subject twenty years ago. Although recently many students have taken up work in medicine and nursing, the number is still far too small in proportion to the population. There are still many rural people who have never heard of physicians and nurses specially trained in this field. The mortality for rural women is much higher than for women who live in cities.

3. Infant mortality. Both the birth rate and the death rate of children are pretty high. This is not uncommon, for one mother bears about ten children, of whom only two to five live until maturity. Some of them are stillborn, some die within seven days, and some die within several years.

4. Causes of infant mortality.

- a. The unskilful midwife. Children who die on the sixth or seventh day after birth often owe their death to the unclean hands of the midwife adjusting the cord of the child.
- b. Venereal diseases. Syphilis results in abortion, in children still born, or born

alive with such enfeebled vitality that they survive only for a few days or perhaps for some months.

c. Improper feeding. Many women cannot or do not nurse their babies themselves. Wet nurses can hardly have the same milk as the mothers. Some women of the poorest class cannot get sufficient food, so that the milk is affected. During the process of weaning, children cannot be fed properly by artificial methods.

d. Communicable diseases. This subject has been treated under "The care of the child from 2 to 6 years of age."

5. The need of registration. The registration or record of child birth, whether the child is still born or born alive, is necessary.

a. It is needed for furnishing data on maternal and infant mortality so that public hygiene work may be assisted in finding remedies for the conditions leading to these unnecessary deaths.

b. It is needed so that vital statistics may be secured. Rights to inheritance, school attendance, child labor, age of voting and military service, passport, and citizenship are all based upon this. This im-

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portant point is neglected by the Koreans.
It is hoped it may be established very soon.

6. Suggested problems.

- a. What are the pathological causes of infant mortality? How can you improve them?
- b. What are the hereditary and environmental factors which aid disease germs?
- c. Would not the improvement of social and personal conditions, coupled with direct methods of preventing disease, practically eliminate many of the ills of childhood?
- d. What is the principal cause of bad housing for the majority of people at present.
Is it due to ignorance or poverty or both?
- e. What is the death rate under one year old as compared with foreign countries? Mention some of the urgent needs for precaution in order to reduce the death rate of children.

H. Child labor and apprenticeship.

1. Status. No laws have been designed to control either apprenticeship or child labor in Korea today. Many parents send their children to be apprentices or work in industries and factories, because if they belong to the poor class, they

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are unable to go to school, nor do they have sufficient food. Child labor has always been the cheapest labor and the apprentices are very profitable, so the employers tend to use them excessively.

2. The condition of working children and apprentices.

Many children under the age of 12 are employed in industries with unlimited hours and at a small wage. They work from dawn until night and can earn only a few cents a day. Apprentices work harder, usually from dawn until midnight, but they are sometimes permitted to take a nap in the day time.

3. Conditions in both industries and workshops are unsanitary. Occupational diseases are commonly found. Fortunately, about six years ago the members of the Y.M.C.A. established a child labor and apprenticeship movement and created some social laws, but these laws can only be found to be applied in a few Christian factories and workshops.

4. Suggested problems.

a. What are the causes of child labor?

b. Is the attitude of employers of labor responsible for much of the child labor of Korea?

- c. How are the industrial conditions for both woman and child labor in your city?
- d. Does the public bear a large share of the responsibility for the existence of child labor? Can it eliminate much of the evil by seriously opposing the practice?
- e. What would be the chief factors to be considered in the child labor problem?
- f. What is the social adjustment for the wages of child workers?
- g. What are the general affects of child labor in relation to the economic cost, social cost, and moral situation?
- h. Discuss the disadvantages of children and pregnant mothers working in factories.

III. References.

- Holt - - - - - Food, Health, and Growth.
- Gesell - - - - - The Preschool Child.
- Chapman - - - - - How Shall I Tell My Child?
- Lucas - - - - - Health of the Runabout Child.
- Mangold - - - - - Problems of Child Welfare.
- Rose - - - - - Feeding the Family.
- Slaughter - - - - - The Adolescent.
- Blanchard - - - - - The adolescent Girl.

HOUSEHOLD MANAGEMENT

I. Objectives

- A. To develop an appreciation of the value and importance of unbiased study of the history of the Korean family life.
- B. To prepare for an intelligent comprehension of conditions as they are.
- C. To understand how certain laws, customs, and social ideas came to be.
- D. To understand why these laws are still maintained and how things ought to be.
- E. To develop a broad and accurate knowledge of social reform.
- F. To understand the relation of the moderate income group to poverty and riches.
- G. Ability to understand the effect of character and leadership.
- H. Ability to understand the woman's position.
- I. Ability to plan the spending systematically.
- J. Ability to keep their main purpose in getting satisfactory results in their spending.
- K. Ability to purchase wisely.
- L. Ability to understand relationship between husband and wife as to income, property, debts, and financial plans for the future.
- M. To study her work and make ready to carry her responsibilities.

- N. Ability to use a simple method of keeping accounts.
- O. Ability in careful planning of day's work.
- P. Ability in better planning of houses and arrangement of equipment.
- Q. Ability to use labor-saving devices.
- R. Ability to understand fatigue and the best conditions for work.
- S. Ability to understand the business of homemaking as a profession for which training is necessary.
- T. To understand that the best social forces are pulling in this direction.

II. Outline of subject matter.

A. Organization of the household.

1. Pre-historic

a. Material element

(1) Shelter

(2) Food - the flesh of animals.

(3) Clothing - the skins of animals.

b. Persons. No one can tell exactly, but various theories have been established by various authors.

(1) The theory of promiscuity.

(2) The theory of the matriarchate.

(3) The theory of the patriarchate.

2. Nomadic stage.

a. Material element.

- (1) Shelter. Tents which were moved from place to place in search of better pasture.
- (2) Food. Began to eat grains and used simple methods of cooking.
- (3) Clothing. Some kinds of cloth and the skins of animals which were cut like clothes.
- (4) Operating. Rudimentary household equipment.

b. Persons. Patriarchal family.

- (1) The father was the head of the whole family.
 - (a) The wife was won by purchase.
 - (b) Slaves were commonly held by the family.
 - (c) The offspring inherited the property and home through their father.

3. Agricultural stage.

a. Material element.

- (1) Shelter. The tents were fixed and organized into villages and communities.
- (2) Food. The fields were cultivated, and people lived on the grains and the flesh of domestic animals.
- (3) Clothing. The clothes were made of cotton and silk.

- (4) Operating. Equipment for household work was all created, but simpler than we have today.

b. Persons.

- (1) Large families existed.
- (2) The oldest male was the head of the family.
- (3) Polygamy.
- (4) The offspring were the most important property of the father.

4. Industrial stage. We have not really passed into this stage.

5. Modern family.

a. The structure of the household.

(1) Material.

- (a) The house in which the family lives.
- (b) Equipment and supplies used for the household work.
- (c) Furniture and decorations.

(2) Persons.

- (a) The husband and wife.
- (b) The children.
- (c) The aged parents and occasionally dependent relatives.
- (d) The servants.
- (e) The lodgers and boarders give a reasonable sum of money for room

rent and board.

b. The type of household.

(1) Domestic household. Naturally composed of those of blood relationship.

(a) The size of the domestic household.

-1- Large family. The families of four generations are occasionally found. In general, families have three or four generations.

-2- Small family. Two, and sometimes three, generations live together.

(b) Economic classification of domestic household.

-1- Farm household.

a' Supplies farm products for market.

b' Supplies own household from the farm rather than by purchase.

-2- Village or town household.

a' Purchases commodities rather than produces.

b' Produces the laborers for factories.

-3- City household

a' Produces no household products for outside market.

b' Consumption is more extensive than production.

(c) Institutional household. Composed of a group of persons who are not related by blood, but joined together for convenience.

-1- Dormitories.

-2- Hotels.

-3- Boats.

-4- Trains.

c. The functions of the household.

(1) Biological function. Perpetuates the race.

(a) Marriage of man and woman.

(b) Birth of children.

(c) Care and nurture of children.

(2) Economic function.

(a) Production. Provides the needs of the family.

(b) Consumption. Utilizes the commodities for the family.

(3) Social function.

(a) Perpetuates civilization and social traditions.

(b) Creates the fundamental morality of society.

-1- The relationship between husband and wife.

-2- Cooperation.

-3- Unselfishness.

(c) Care of children.

-1- Takes care of and feeds children in their dependent years.

-2- Develops thoughtless and ignorant children into thinking, judging, feeling, and acting adults.

-3- Trains the children.

a' Habit formation.

b' Attitude toward manhood.

(d) Takes care of aged ones.

6. Suggested problems. This outline is brief, because it is a discussion course. The teacher should lead students to have frank discussions about all the subjects concerning family life, traditional and conventional family customs, such as concubinage, slavery, early marriage, the way of arranging betrothal and marriage, etc.

a. What are the disadvantages of the polygamous system to:

(1) The status of women.

(2) Nurture and education of children.

(3) Family life.

- b. Discuss the status of women and girls.
How could you improve this?
- c. Do you think it is right for a girl or a boy to break off his or her early betrothal arranged by the parents?
- d. Mr. Park is a very highly educated man who has married an uneducated woman, the marriage having been arranged by his parents. He does not like her at all. Do they have to live together unhappily, or should they get a divorce? Why?
- e. Should a widow marry again? Study the reasons.
- f. What are the conditions of servants in your home city? How could you improve them?
- g. Is it necessary to have servants? Under what conditions?
- h. Discuss the custom of large families. Do you approve of them? If not, what reforms would you suggest?
- i. Why do many girl students look down on household work? How could a Home Economics course improve this condition?
- j. Each student should make an individual yearly budget according to the procedure mentioned.

- k. List the ways through which the conditions of home life may be improved, by conserving what is good in the past, and discarding those practices which hamper true family happiness.

II. Outline of subject matter (continued).

B. Social conditions affecting the household.

1. Traditions and conventions in regard to the household.
 - a. Women are to be obedient to their husbands.
 - b. The glory of the large family.
 - c. Parents arrange marriages for their children.
 - d. Early marriage.
 - e. The children should support their parents.
 - f. Sons must not appear in public for three years after parent dies.
 - g. Girls have no right to receive school education.
 - h. Widows should not marry again.
 - i. Men and women cannot transfer things directly by hand, but must place them on a table or other object.
 - j. The concubinage system is recognized.
2. Statute law and the household.
 - a. The son is required to support his parents.
 - b. The wife has no right to divorce.
 - c. The daughter has no right to inherit the property of her father.

3. Social opinion and the household.

- a. We do not now recommend the large family system.
- b. Widows may have the right of remarriage.
- c. We do not agree with the customs of chest binding, or concubinage, early marriage, or of inequality of position between husband and wife.
- d. Girls should have the same education as boys.
- e. We should have freedom in selection of mates.

4. Educational organization and the household.

- a. Many schools have been established so that both boys and girls have a chance to study.
- b. Most of the students do not approve the present bad family customs of the household.
- c. The living standard of the household is being improved by highly educated persons.

5. Religion and the household.

a. Confucianism.

- (1) Respectful to aged persons and dead ancestors.
- (2) Great value set upon the male offspring.

(3) Unequal position between husband and wife.

(4) Filial respect is more important than all other qualities.

(5) Custom of polygamy exists.

b. Polytheism.

(1) Superstition.

(2) Fear of gods and spirits.

c. Christianity.

(a) The use of paper imitations of household and personal belongings to be burned for the dead is decreasing.

(b) The concubinage custom is changing gradually.

(c) The position of the wife is growing to be equal to that of her husband.

(d) Girls and boys are of equal value in some homes.

6. Industry and the household.

a. Condition at present.

(1) Lightens the household work by suitable utensils.

(2) Gives more time.

(3) Helps many women who are mistreated by the people of their husbands' family to be independent.

(4) Monopolizes prices.

(5) Employs children under the age of ten and women at any time.

(6) Results in many employees contracting occupational diseases.

b. Needed improvements in the conditions of industrial workers.

(1) Legislation should be enacted concerning

(a) Child labor.

-1- Age. Under a certain age children should not be employed.

-2- Wages. Should be regulated.

-3- Working hours. Nine hours a day and 48 hours a week.

(b) Protection of mothers. A woman should not be employed six weeks before and after childbirth.

(c) Sanitary facilities of factories should be improved.

7. Suggested problems.

a. Outline principles of economic consumption and illustrate each in terms of the household.

b. Just what is nature of economic "work"? Does this term apply to the household?

- c. "The profession of homemaking." What is a profession? Is homemaking an art, a science, a vocation, an avocation, a profession? Is it always the same?
- d. "Economic illiteracy is the most dangerous form of illiteracy." Is this true also of household economic illiteracy?
- e. Discuss the economic influences related to marriage.
- f. Examine the influence of inheritance law upon the family.
- g. Would you approve the custom of parents giving a marriage dowry to daughters? What would be its affect on the size of the family, age at marriage, unity of family? If the daughter were to have a dowry should the son, also?

C. The Household Income.

1. The sources of income.

a. Money income.

(1) Outside labor income.

(a) Wage.

(b) Salary.

(2) Outside management income.

(a) Business organizer.

(b) Business decision maker.

(c) Risk bearer.

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(3) Investment income. The return of invested funds.

b. Capital income.

(1) Building and land rent.

(2) Equipment for household productions.

(3) Utensils which may be rented for money.

(4) Products from farm and gardens.

2. Methods of increasing the household income.

a. Wise spending.

(1) Budget making.

(2) Record keeping.

b. The satisfaction of the members obtained through skillful household management.

c. Cooperation.

(1) Everyone, even children, should take responsibility for the consideration of spending.

(2) Everyone has to take a part in the care of commodities and furnishings used in common.

3. Distribution of the household income.

a. Kinds of household expenditure.

(1) Saving. Either money or assets.

(2) Food.

(3) Shelter.

- (4) Clothing.
- (5) Operating.
- (6) Development.

b. The budget and income distribution.

- (1) Spend wisely and evenly.
- (2) Eliminate the nonessential purchasing.

c. Record and distribution of expense.

- (1) Review of purchases and costs.
- (2) Coming year's budget making may depend upon it.

4. Suggested problems on income.

- a. Make a schedule analyzing the items of real income in a family to be filled in by members of the class.
- b. The modern housewife must be a skilled laborer, a planner, a good financier, one who dares take risks, a person of decision of character, thrifty in the accumulation of capital, and enterprising in its adaptation and use. Explain in terms of the household as a productive agency.

D. The Spending of Income.

1. Savings.

a. Purpose of saving. Protection for:

- (1) Financial emergencies.
- (2) Decreased income.
 - (a) Unemployment.
 - (b) Reduced wages.
 - (c) Sickness.
 - (d) Accident.
 - (e) Climatic conditions.
 - (f) Old Age.
 - (g) Death of the main earner.
- (3) Increased or deferred expenditure.
 - (a) Home ownership.
 - (b) Business.
 - (c) Farm.
 - (d) New equipment.
 - (e) Education.
 - (f) Travel.
 - (g) The wish for power and position.
- (4) To insure the future income.

b. Methods of saving.

- (1) Money.
 - (a) Savings banks.
 - (b) Life insurance.
 - (c) Mortgage.
 - (d) Other investments.

(2) Immovable assets.**(a) Land and garden.****(b) Buildings and equipment and other goods.****2. Food.****a. Functions of food.****(1) Body building and regulating.****(2) Growth promoting.****(3) Energy producing.****(4) Body repairing.****b. Classification of food.****(1) Starch.****(2) Fats.****(3) Proteins.****(4) Minerals.****(5) Vitamins.****(6) Water.****c. Factors in the cost of food.****(1) The level of food prices in local markets.****(2) The cost of production, rent or interest on the ground used, labor, tools or machinery, waste from the climatic condition or disease, and loss in harvesting.****(3) The distribution. Transportation, packing, handling, wrapping, and delivery.**

- (d) The preparation. Cost of fuel, loss^{140.}
in preparation, and waste in diges-
tion.

d. Housewife and food.

- (1) She should know how to select and
prepare the food.

(a) She should plan according to
dietetic rules.

(b) She should spend the money for
food in accordance with the
budget.

(c) She should know the market
facilities.

-1- Whether foods are in season
or not.

-2- Quality of food as well as
quantity.

-3- Price of foods.

-4- Substitution of expensive
food by cheaper ones, but
not lower the quality.

(4) Amount of food.

-1- Plan the menus ahead.

-2- Estimate the amount of
food according to the num-
ber and age of the family.

(e) Attractive service of food. 150.

-1- She should know how to
guide the social life
of the family at meal
time.

-a- Table manners.

1' Individual hap-
penings.

2' News.

-b- Training of children.

1' Attitude of talk-
ing.

2' Self-control and
self-denial.

3' Eat all kinds of
food which mother
gives them.

4. Shelter.

a. Functions of shelter.

(1) Human beings are protected from the
discomforts of hot and cold weather,
wind, rain, and snow.

(2) Commodities are protected.

(3) Properties are safeguarded from the
spoilage by weather.

(4) Children are reared.

10.

b. The standard of the shelter is determined
by:

- (1) Income.
- (2) The number of the family.
- (3) Location.
- (4) Occupation.
- (5) General standards of living and
ideals.

c. Essentials of the shelter.

(1) Location.

- (a) City.
- (b) Town.
- (c) Village or farm.

(2) Type.

- (a) Single. Family detached house.
- (b) Single. Family semi-detached
house.
- (c) Two or more families. Detached
house.

(3) Sanitary conditions.

- (a) Access to sunlight and outer
air.
- (b) At least one window per twelve
square feet of floor space.
- (c) Unpolluted ground or drainage.
- (d) Temperature and humidity must
be properly arranged for.

- (e) Children should not sleep
with their parents.

(4) Number of rooms. A small family
with a moderate income.

- (a) One living room.
- (b) One dining room.
- (c) One kitchen.
- (d) One bath room.
- (e) Three sleeping rooms.
- (f) One servant room.

(5) Factors of the cost of the shelter.

- (a) Location.
- (b) Environment.
- (c) Convenience of the house.
 - 1- Light.
 - 2- Water.
 - 3- Heat.
- (d) Construction of the house.
- (e) Size of the house.

5. Clothing.

a. Purpose.

(1) Protection.

- (a) Protects human beings from dis-
comfort.
- (b) Maintains the constant body
temperature.

(2) Decoration.

(a) Satisfies one's own sense of
the beautiful.

(b) Gratifies the eyes of others.

b. Classification of clothes.

(1) Outer.

(2) Underwear.

(3) Street clothing.

(4) Accessories.

c. Essentials of clothing.

(1) Fashion. Do not go to the extreme.

(2) Comfortable.

(3) Adaptable to the weather.

(4) Esthetic. Arrangement of color,
line and form.

(5) Suitable to the occupation.

(6) Washable.

(7) Durable.

d. Clothing economy.

(1) The cost of clothing.

(a) The expenditure of clothing
should be consistent with other
expenditures, based upon the
clothing budget.

(b) The wise selection of material
is a method of reducing the
cost of clothing.

(2) The care of clothing.

(a) Adequate storage, protecting it from dust and sunlight.

(b) Should be folded whenever removed. Underwear should be exposed to air.

(c) Keep it in a convenient place for immediate use.

(d) Protective garments during rain or work.

-1- Aprons.

-2- Overshoes.

-3- Raincoats.

(e) Frequent change.

(f) Immediate repair.

(3) The materials of clothing.

(a) Linen.

(b) Cotton.

(c) Silk.

(d) Wool and fur.

(4) The factors which influence selection of clothing.

(a) Family income.

(b) Location.

(c) Occupation.

(d) Environment.

(e) Social and personal taste.

(f) Ability of mother.

(g) Standard of living.

6. Operating.

a. The items for operating.

(1) Heat.

(2) Water.

(3) Light.

(4) Laundry.

(5) Servants' wage.

(6) Telephone.

(7) Purchase and repair of household supplies.

(8) Furnishings.

b. Factors in operating.

(1) Type of house.

(2) Food preparation and serving.

(3) Clothing.

(4) Occupation.

(5) Location.

c. Methods of controlling the expense of operating.

(1) Heat.

(a) Fuel selection.

(b) Method of cooking.

(c) Construction of fireplace.

(d) Register and radiator of stove.

(e) Air movement.

(f) Methods of control.

(2) Light.

- (a) Put it at a reasonable distance.
- (b) Turn off whenever not in use.
- (c) The color of the walls should be light.
- (d) Utilize the natural light.

(3) Water.

- (a) Laundry should be considered.
- (b) Shallow well water may be used to water flowers and splash the ground or sprinkle the lawn.

7. Development.**a. Definition of expenditures for development.**

Expenditures for the personal and social satisfactions of life as contrasted with expenditures for the material necessities, food, clothing, and shelter, are called the expenditures for development.

b. Classification of development.**(1) Mental.****(a) Education.**

- 1- School attendance.
- 2- Home library.
- 3- Magazines and newspapers.
- 4- Music, art, and drama.

(b) Travel.

(2) Physical.

(a) Health. Fees of doctor, dentist and nurse, and for medicine.

(b) Recreation. Play, music, clubs, vacation, trips, etc.

(3) Social.

(a) Entertaining.

(b) Social gifts.

(4) Spiritual.

(a) Service to others.

(b) Religious activities.

(c) Benevolence.

c. Importance of development.

(1) To satisfy the personal life.

(2) To establish well-rounded living.

(3) To increase the interest of daily living and eliminate monotony.

(4) To improve the standard of living.

d. Factors which determine the standard of development.

(1) Income.

(2) Location.

(3) Occupation.

(4) Personal tastes.

(5) Associates.

e. Dangers involved in development.

(1) Too much money spent for food, shelter, clothing; therefore, no money to spend on development.

(2) Spending for harmful so-called development.

(a) Gambling.

(b) Drinking.

(c) Smoking.

(d) Adultery.

8. Suggested problems on spending the income.

a. Do you consider the family table an essential for a home? What elements does it contribute to family life?

b. Keep a record of the time spent in planning and preparing meals in an ordinary day or period of days. Compare with this the time spent in planning and preparing when meals are planned ahead, purchases made at one definite time, etc.

c. Outline methods of keeping food records, market lists, food purchases, storage records, menu records, etc.

d. Estimate the importance of housing to health, recalling farmhouses, village situations, city housing, as you have seen them.

- e. List conditions that should determine a family's selection of a house.
- f. Study the factor of relative location in your community as affecting rentals. What other aspects of sites are important?
- g. Analyze the idea of step-saving applied to housing, and list all the possibilities of design and structural arrangements to effect the economy.
- h. In selecting a garment how much attention do you give relatively to fabric quality and how much to "fashion" or "mode"?
- i. Should a student's service dress be renewed seasonally, or selected of fabric and mode making possible longer wear with slight readjustments in the garments?
- j. How much is the value of your family wardrobe, measured by the purchase prices of items? What percentage of your family's annual income is represented? What is your own share of total clothing cost?
- k. Plan a four years' clothing wardrobe for a high school student.
- l. Design a record book for your outfit of clothing, to show a description and history of garments purchased by appropriate columns for description, date, cost, where purchased, length of wear, disposal.

- m. Each student may report the usual schedule of the housewife in one or more homes: hour of rising, work schedule, rest hours, weekly recreation, retiring hour, etc.
- n. Study use of time by class members, who are to keep personal time records for a week, classifying different activities and noting time of beginning and ending of each activity. Summarize each individual's time record and find range and average times of group for each activity.
- o. "Motion study" to save losses through unnecessary motion is one item in "scientific management"; study dish washing or table service as a series of muscular movements. Do you see possibilities of elimination of unnecessary motions?
- p. Fatigue is a problem in housework. Make out a program for reducing fatigue when a woman does all her own work.

II. Outline of subject matter (continued).

E. The successful family.

1. Stability of the family.

a. Unmarried young people.

(1) Should not marry too early.

(2) Should have a part in selecting mates.

The way of selecting the mate should be based upon:

(a) Thorough understanding.

(b) True love.

(c) Common interest.

(d) Good health.

(e) Suitable ability to cooperate in maintaining a home.

b. Married people. Almost all women who have married early are uneducated.

(1) The husband should:

(a) Develop true love for her.

(b) Help her to obtain an education, and to realize her responsibility.

(c) Not repudiate her, because without education she cannot live independently.

(2) The uneducated wife should:

(a) Not think of marriage simply as a protection, as a source of clothes, food, and shelter.

(b) Realize her husband's sacrifice in marriage to an uneducated wife.

(c) Make herself as good a helpmeet as she can.

2. Woman and the successful family.

a. The preparations for housewifery.

(1) She should have proper knowledge of and practice in managing a household.

(2) The qualities of a successful woman:

(a) She should know how to make her family happy.

(b) She should know how to manage her home on scientific principles.

-1- Plan her work ahead.

-2- Do her work systematically.

-3- Use time schedule for herself and servants.

-4- Waste no motion.

a' The kitchen should be next to the dining room.

b' The height of the sink, table, etc., should be fitted to the height of the housewife.

(c) Result:

-1- More work can be done in a shorter time, and with less fatigue.

-2- More time is open for recreation and relaxation.

(d) She should know how to direct servants.

(e) She should know how to take care of aged parents.

(f) She should know how to train and nurture her children.

-1- Well trained child should know:

-a- To respect aged persons.

-b- Obedience for his parents and teachers.

-c- The importance of self-respect, self-control, and self-restraint.

(g) She should know how to spend money wisely.

-1- Knowledge of consumption.

-a- Budget making.

-b- Record accounting.

-2- Knowledge of production.

Skill in using whatever resources she has for the

satisfaction of family needs.

(h) She should know how to raise the standard of living of her family.

3. Suggested problems on the successful family.

a. Successful family life requires cooperation. How would you secure it? What economic factors help develop a coordinating home spirit?

b. Outline the home conditions making for the best educational results for the child in a family.

III. References on Household Management.

- Abel - - - - - Successful Family on a Moderate Income.
- Andrews - - - - - Economics of the Household.
- Donham - - - - - Spending the Family Income.
- Fredrick - - - - - Household Engineering.
- Gilbreth - - - - - The Homemaker and her Job.
- Goodsell - - - - - The Family as an Educational and Social Institution.
- Robinson - - - - - Domestic Architecture.
- Taber - - - - - The Business of the Household.
- White - - - - - Successful Houses and How to Build Them.

HOME FURNISHING AND DECORATION

I. Objectives

- A. To develop the ability to take due account of individual needs and tastes.
- B. To enable the student to proceed logically and assuredly and with the minimum of costly experiment and disappointment to express these needs and tastes artistically in the decoration of houses.
- C. To develop the mutual interrelation and interdependence of the two qualities of beauty and comfort in the home.
- C. To enable the student to adapt a decorative treatment to any given condition.
- D. To master the grammar of decoration and the fundamental principles of composition.
- E. To develop the mind in proportion, balance, light and shade and color practice.
- F. To learn enough to ornament and of design to recognize excellence and detect the lack of it.
- G. To create some measure of beauty in the home and in the aggregate to go far toward cultivating the taste upon which the excellence in decoration so largely depends.

II. Outline of subject matter.

A. Purpose of house.

1. Protection. The primary use of the house is for protecting people from:

a. Discomforts of:

(1) Wind, rain and other climatic disturbances.

(2) Unsuitable temperature.

b. Transmission of diseases.

c. Physical strain and fatigue.

d. Mental depression.

B. Location and ground.

1. Lot.

a. The size of the lot should suit the type of the house which will be built on it.

b. The corner lot is better than inner lots as far as the light is concerned.

c. The cost and the future development of the lot should be considered.

2. Soil. Good soils on which houses maybe built are:

a. Dry, well drained, and above the level of ground water.

b. Sandy or sandy loam containing sand and clay.

3. Natural advantages.

- a. Prevailing wind. The house should be so located that the winds sweep over it fresh from the country, the sea, or the mountains before being polluted by passing over cities or other dirty or smoky places.
- b. Unlimited supply of good water.
- c. Accessibility to the place where the head of the family works, market, and the school.
- d. Good roads.
- e. Good neighborhood and local government.

4. Grounds.

- a. Style of the yard.

- (1) Formal style. Suitable for large private houses.
 - (2) Natural style. Suitable for ordinary small houses.

- b. Ways of fixing up the yard.

- (1) Walls should be stringly built, with stones used for the bottom part and brick for the top.
 - (2) Trees. The horizontal lines may be broken by a tree standing at the front of the house. Fruit trees are ordinarily planted for this purpose.
 - (3) Shrubbery.

- (a) The use of:

- 1- To form screen and boundaries.
 - 2- To give a mass of color and

shade.

-3- To frame a fine view.

(b) How to plant them.

-1- Plant the outer border
heavily with a mass of
dense shrubs.

-2- Plant the refined ones for
the corner of the house.

(4) Vines. Good vines may be planted for
covering the front porch and walls.

(5) Flowers.

(a) Tall flowers should be put
against the wall or fence.

(b) Some flowers may be planted
along the walk.

(6) How to choose plants.

(a) Native trees, shrubs, flowers,
should be the first choice.

(b) The color of plants should be
harmonious.

(c) Blossoming plants should be con-
sidered for season or months.

(7) Walks.

(a) Should be wide enough that two
persons may walk abreast.

(b) Cement or brick makes good walks.

5. Suggested questions and problems.

- a. Why should the cost be taken into consideration?
- b. Why is a permanent house desirable?
- c. What style and size do you prefer?
- d. Draw a floor plan for your own ideal home giving:
 - (1) Size.
 - (2) Number and location of the rooms.
 - (3) Explain why you arrange the rooms in this way.
- e. What are the advantages of having trees and plants in the court? How do you want to plant yours? Why?

C. House planning.

1. Cost determines the style, shape and construction of the house.
 - a. Taxes, fire insurance, repair, and the interest of the sum spent for building the house should be carefully calculated.
 - b. Compare the cost of building it with the sum paid for renting it.
 - c. Factors influencing cost.
 - (1) Location.
 - (a) Materials. Transportation of materials is a potent factor.

(b) Labor.

(2) Design.

2. Design.

a. Construction. The house should be so constructed that it is suited to the use of it.

(1) Methods of planning.

(a) Get a number of building charts and study them carefully, then select the good points of different pictures and make out a good plan.

(b) Consult an architect.

(c) Make the final sketch of the house and rooms.

b. Style.

(1) Ancient style. Broad porch and temple roof.

(2) Occidental style.

3. Size. The size of the house is determined by:

a. The size of the family.

b. The economic condition of the family.

4. Room planning.

a. Living room. If the house is in native style the living room should be put in the main house and straight toward the gate.

b. Reception room. Should be put near the information room.

c. Dining room.

(1) Should be adjacent to the kitchen because of convenience and step-saving.

(2) Should be square in shape.

d. Bed rooms.

(1) Parents' bedroom should be put near the living room if possible.

(2) Childrens' rooms should be near that of the parents.

(3) Grandparents' room should be near one end of the main house and adjacent to the room of the woman servant.

(4) Guest room may be placed in a side house.

(5) Cook's room should be near the kitchen.

e. Library. May be placed in a side house where it is more quiet.

f. Bathroom. It is better to have the bathroom near the bedrooms if the house is heated in the occidental way; otherwise, it should be near the kitchen.

g. Toilet.

(1) May be placed in the bathroom if plumbing system is used.

(2) May be put in a room at the side of the main house, the door of which should be fly-tight.

5. Suggested questions.

- a. What are the disadvantages of building on damp soil?
- b. What are the differences between the houses located in a city and in the country? Where would your ideal house be? Why?
- c. Why are good neighbors important?

D. Sanitation.

1. Water supply.

a. Classification.

(1) Rain and snow.

- (a) These forms contain impurities, carbon dioxide and micro-organisms, especially the first that falls.
- (b) Water should not be collected in metal equipment as metal is injured by carbon dioxide.
- (c) Rain and snow may be used for drinking after being filtered and chemically treated.

(2) Surface water. The sources of surface water are: lakes, ponds, streams, and rivers.

- (a) May contain a high percentage of organic material and a low percentage of inorganic material.
 - (b) May be used for drinking after boiling.
- (3) Ground water.
- (a) Shallow wells.
 - 1- Are easily polluted with sewage.
 - 2- Are the vehicle of infectious organisms.
 - 3- Are dangerous if the well is near sewers or drainage.
 - (b) Deep wells.
 - 1- Water contains little bacterial life, and much inorganic material.
 - (c) Springs. Even spring water is easily polluted, if it passes through unclean ground.
- (4) Stored water. If water is kept in reservoirs from four to six weeks, the bacteria are killed by natural agents, so that water from reservoirs is the purest and safest.

2. Water supply and diseases. Polluted water con-^{175.}
tains infectious organisms which come from the
discharges of infected persons.

a. Sources of pollution.

- (1) Sewage.
- (2) Water carried waste.
- (3) Sweepings.
- (4) Industrial waste in cities.
- (5) Garbage.
- (6) Rubbish.

b. Water-borne diseases.

- (1) Typhoid fever.
- (2) Dysentery.
- (3) Cholera.

c. Means of making a safe water supply.

(1) Surface water.

(a) Should be kept in a container
for two or three days until the
sediment has settled.

(b) Should be boiled whenever it is
used for drinking.

(2) Shallow well.

(a) Should be dug at a distance from
sewage outlet and from clothes-
washing facilities.

(b) Should be boiled before it is
used for drinking.

- (c) The top of the well should be raised from six to ten inches.
 - (d) The opening should be covered tightly.
 - (e) The well should be cleaned occasionally.
- (3) Deep well. The linings of the deep well should be of cement or brick.
- (4) Storage of water.
- (a) The water should be stored in reservoirs for at least four weeks. If the period is shorter the water should be treated with chlorine.
 - (b) The water plumbing and the waste plumbing should be kept separate with no connection between them.
 - (c) The material of plumbing should be such as will not be injured by the mineral content of the water.

3. Disposal.

a. Sewage.

(1) Methods of disposal.

- (a) Pail. The odor is liable to fill the house.

(b) Means of improvement.

- 1- The can should be emptied at least once a day if the pail is put in the house.
- 2- The can should be covered carefully.
- 3- Disinfectant should be used regularly.

b. Garbage.

(1) Care of garbage in the individual home.

- (a) Food waste should never be left standing in a sink, or in any open container, nor should it be thrown into the yard.
- (b) Garbage should be removed promptly.
- (c) Garbage can lids should fit well.

4. Lighting.

a. Natural lighting. The sun is the source of natural lighting.

(1) The essentials of natural lighting.

(a) Color and texture and lighting.

The reflection of light varies with the color and texture of the walls, floor and furnishings in the room.

(b) Windows and lighting.

- 1- Windows must be sufficient in number, and properly placed.

(2) Artificial lighting.

(a) Classification.

- 1- Candle light. A large amount of oxygen is consumed, and a large amount of carbon dioxide and heat are given off.

- 2- Kerosene.

- a- The cost is low.
 - b- The wick should be kept clean and smooth; thereby the combustion will be more complete.

- 3- Electricity.

- a- Is steady, and very little heat is produced.

(b) The essentials of artificial light.

- 1- Should be adequate in intensity and suitable according to the requirement of the room.
- 2- It should be properly placed.

(3) Special requirements for light.

(a) In a school.

- 1- Light should always come from the left side.
- 2- Light should be above the line of vision of the children.

(b) In a kitchen.

- 1- There should be direct light over the stove.
- 2- There should be indirect and even light at other places.

(c) In a living room.

- 1- Indirect.
- 2- Even.

(d) In a hall indirect light should be used.

(e) In a bed room a drop light is desirable.

(f) In a bathroom a ceiling light should be used.

5. Ventilation.

a. The needs of ventilation.

(1) The impurities of air in an occupied room.

(a) The products of respiration:

180.
carbon dioxide, moisture, and organic matter.

(b) The products of combustion from fire and light.

(c) The odor from human bodies.

(2) The ill effects of impurities.

(a) Feeling of dullness, nervousness, sleepiness, and even faintness.

(b) Loss of appetite.

(c) Decrease of vital activities.

(3) The amount of air needed by each person.

(a) An adult at rest needs about 3,000 cubic feet of air per hour. Children and sick persons need more.

b. Methods of ventilation.

(1) In the house.

(a) Natural ventilation.

-1- Windows should reach nearly or quite to the top of the room, and should be opened frequently.

-2- Doors.

(b) Artificial ventilation.

-1- Paper fans.

-2- Electric fans.

c. Important factors in ventilation.

(1) Temperature adjustment very important, for it affects the body heat.

(a) Body temperature 98.6° F.

(b) House temperature 60° to 63° F.
is comfortable.

(2) Humidity.

(a) Absolute humidity is the greatest amount of water which could be present in a given volume of space at a given temperature.

(b) Relative humidity for the room in the house. The comfortable humidity is from 35 to 55 percent.

(c) Effect of humidity on body heat.

-1- The body loses heat by conduction more rapidly as humidity increases.

-2- The body loses less heat by radiation as the humidity increases.

-3- The body loses heat by evaporation as the humidity increases.

6. Suggested questions and problems.

- a. What is the source of the water used in your town? Is it safe? How do you make it safe?
- b. Have you ever seen village people getting water from a lake, pond, or stream? If so, what should you tell them?
- c. Why is the light best coming from the left side?
- d. State how our bodies lose heat by radiation, conduction, and evaporation.
- e. How is the amount of heat required for comfort affected by the kind and amount of clothing?
- f. Explain why increased humidity makes hot weather hotter and cold weather colder.

E. House Furnishing.**1. Floors and floor coverings.**

- a. Color of the floor should be darker than that of the walls.
- b. Wood floors are better than brick pavements.
 - (1) They are easier to keep free from moisture.
 - (2) Give a warmer feeling than bricks in winter.
- c. Rugs may be used if it is possible to afford them. Simple designs with subdued

colors are desirable because they can easily fit in with the color of the room and furniture.

2. Walls and ceiling. Walls are the background of a room, against which furniture is placed. In painting or papering the wall there are four points which should be considered.

- a. Architecture. The wall finish must be suitable to the architecture of the house and the character of the room.
- b. Exposure of the room. North rooms demand a warm color, but a soft tone, while the south rooms need a cool color.
- c. Use of the room. Wall papers chosen should be carefully considered. It should suit the use of the room.

(1) Bedrooms. Gray, tan, or other neutral tone papers may be used, for they give the effect of space and restfulness. Yellowish paper may be used for a north chamber.

(2) Childrens' rooms may be papered in a gay and cheerful color.

- d. The size of the room. The apparent size may be changed by the color of the walls. deep and warm colors make the room smaller, while light and cool colors make them appear larger.

- e. Furniture. The color and design of the wall should be in harmony with the furniture which goes into the room. Plain paper in subdued color is easily decorated.
- f. The ceiling should be toned to match the wall surface, but a little brighter.
- g. The higher the ceiling, the deeper the tone should be in order to bring the ceiling down. If the ceiling is too low the color must be as light as possible.

3. Window coverings.

a. Uses of curtains.

- (1) For the modification of light.
- (2) To obtain privacy.
- (3) For hiding ugliness or defects of proportion.

b. The way of using curtains.

(1) Length.

- (a) In a lower floor room, long curtains give a better appearance, whereas in bedrooms curtains to the sill are better.
- (b) In a large and elegant room it will need the full length curtains to carry out the effect. However, the woodwork should be shown if it is pretty.

- (2) For narrow windows the curtains should be put back on the woodwork in order to give the effect of space.
- (3) The top of the curtain. This part should be skilfully done. There are two simple ways of treatment:
 - (a) Simply run onto the rod.
 - (b) Shaped valance.

3. Furniture.

a. Principles of arranging furniture.

- (1) Center of interest.
 - (a) A larger object should be placed as the center of interest.
 - (b) The central object should be placed against the wall.
- (2) Formal balance. Objects on each side of the central feature are to be the same in character and size and arranged in the same manner.
- (3) Informal balance. Objects on the two sides of the central feature are not in the same size and character, but appear to be equal in weight.
- (4) Top-heaviness should be avoided. A large picture or mirror should not be placed above a small chair or table. The size should be smaller

and the color lighter than that of the lower object.

b. Ways of selecting furniture.

(1) Quality.

(a) Lasting satisfaction. Good furniture will give years of satisfaction.

(b) Well constructed. Every piece should be well constructed and suited to its purpose and surroundings.

(c) Simplicity. They should be simple in structural and decorative design.

c. Furniture for different rooms.

(1) Hall. Every piece of furniture selected for decorating the hall should have the quality by which dignity, simplicity, and hospitality should be expressed.

(2) Living room.

(a) Group furniture for convenience. Sofa and chair may be grouped for conversation. Centers of activity should be emphasized.

(b) Order in furniture arrangement.

-1- Large pieces of furniture

should be placed to follow the line of the room and to balance against the four walls.

-2- The shape and color of each piece should be in harmony with the wall space against which it is placed and with other pieces.

-3- Small pieces may be arranged to relieve bare pieces or places.

(3) Dining room.

(a) The atmosphere of the dining room should be restful.

-1- To keep the background simple.

-2- To display very few objects.

(b) The lighting of the dining room should be suitable.

-1- Successful type of light is that which concentrates the light upon the table.

-2- Candles furnish the most delightful light for the dining room, for they not only concentrate light but also pre-

duce interesting reflections
and shadows.

(4) Bedrooms. The furniture of a bedroom should be designed to promote rest and comfort.

(a) It should be simple.

(b) It should express the personality of the individual.

(c) Walls should be light in color and neutral in tone.

(d) Variety of harmonious colors in the room is better than one color.

(e) Photographs and the special pictures which are too personal to be placed in the more public places may be put in the bedroom.

(5) Guest room.

(a) Furniture and other things should be impersonal.

(b) The spirit of hospitality should be shown.

(c) Requisites for the guest room:

-1- Comfortable bed.

-2- Well lighted mirror.

-3- Sufficient space.

- 4- A table on which one may write, with a supply of stationery and pen and ink.
- 5- A bedside table with a good reading lamp and some good books.

(6) Childrens' room.

- (a) Good pictures which are adapted to the age of the child. They should be used until they have become familiar but not until the child will cease to notice them.
- (b) Cupboards and drawers for toys, which should be put away before bedtime.
- (c) The bed should be placed where there will be enough fresh air, but where the light will not shine into the eyes of the child when he is sleeping.

4. Accessories.

a. Principles of selecting pictures.

(1) Quality of the picture.

- (a) The appeal of a picture. Pictures make their appeal to individuals through their story,

their beauty of line, the quality of their color, or the interest of their pattern.

- (b) The composition of a picture should be so evident that the interpretation of it may be traced.

(2) Character of the picture.

- (a) Avoid those which are too exciting in character.
- (b) Avoid those which are too sad in feeling.
- (c) Avoid those which are too monotonous in design.

b. Suitability of the picture and the place where it is put.

- (1) In domestic rooms the picture should not possess a distinctly social or formal quality.
- (2) Too personal or religious pictures should not be put in more public rooms.

c. Framing of pictures.

- (1) The type of the frame should be in harmony with the picture.
- (2) The color of the frame should be suited to the color of the picture.

A little darker than the lightest part of the picture is best. Glass may be used for protection.

d. Arrangement of pictures.

(1) Pictures should be in relation to the background of the room.

(a) If the wallpaper is patterned no pictures should be used.

(b) If there is a great deal of color in the room but little pattern, the suitable pictures will be drawings or etchings.

(c) The color should be in harmony with the background.

(2) Hanging of pictures.

(a) Light pictures should be hung on the fairly light walls, and dark ones should be hung on dark walls or in dark corners.

(b) Tall pictures hung in vertical wall spaces, and broad pictures in horizontal spaces are best.

(c) Small pictures should not be hung next to large ones, or large pieces of furniture.

(d) All pictures should be hung flat against the wall.

5. Flowers

a. Ways of selecting flowers.

- (1) Color scheme. The color of the flower should be suitable to the color of the room.
- (2) The color and texture of the container should be fitted to the flowers. Short stemmed flowers should be placed in low bowls, and long stemmed ones should be put in high vases.

b. Arrangement of flowers. Should depend upon the beauty of lines and color.

- (1) Flowers which have much beauty in their lines should be so arranged as to emphasize this beauty. A single spray or a few blossoms should be used.
- (2) If more than one kind of flower is put in one container, the color should be perfectly harmonious.
- (3) The arrangement should be in balance. The flower with the longest stem is usually placed in the middle so that its head comes above the center of the bowl. Then others should be put around the center.

c. Placing the bouquet.

- (1) Tall flowers should be put below
or on the level of the eye.

6. Suggested questions and problems.

- a. Why should the color of the floor be darker than that of the wall and the wall darker than the ceiling?
- b. How do the colors affect the size of the room?
- c. Before you select the color and design of wall papers, what points should be taken into consideration?
- d. Why is a center of interest necessary in arranging furniture?
- e. Why is informal balance better than formal balance?
- f. How does the furniture express the personality of the possessor?
- g. Analyze the ways which are being used generally by Korean homes in selecting, framing, and hanging pictures. Are there any points which should be improved? Why and how?
- h. What important points should be taken into consideration in selecting flowers for decorating purposes?

III. References on Home Furnishing and Decoration:

Eberlein - - - - McClure and Holloway - Practical
Book of Interior Decoration.

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Goldstein - - - - Art in Everyday Life.

Gray - - - - - The House and Home.

Jakway - - - - - Principles of Interior Decoration.

White - - - - - Successful Houses and How to Build
Them.

Wright - - - - - Interior Decoration for Modern Needs.