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AN OUTLINE

... OF ...

Domestic Science,

EMBRACING 80 LESSONS.



The Course to extend over two years.
Each Class to receive One Lesson per
week of one and one-half hours each.
Designed for use in the Public Schools.



LISBETH M. GLADFELTER,
*Teacher Domestic Science,
St. Louis Public Schools.*

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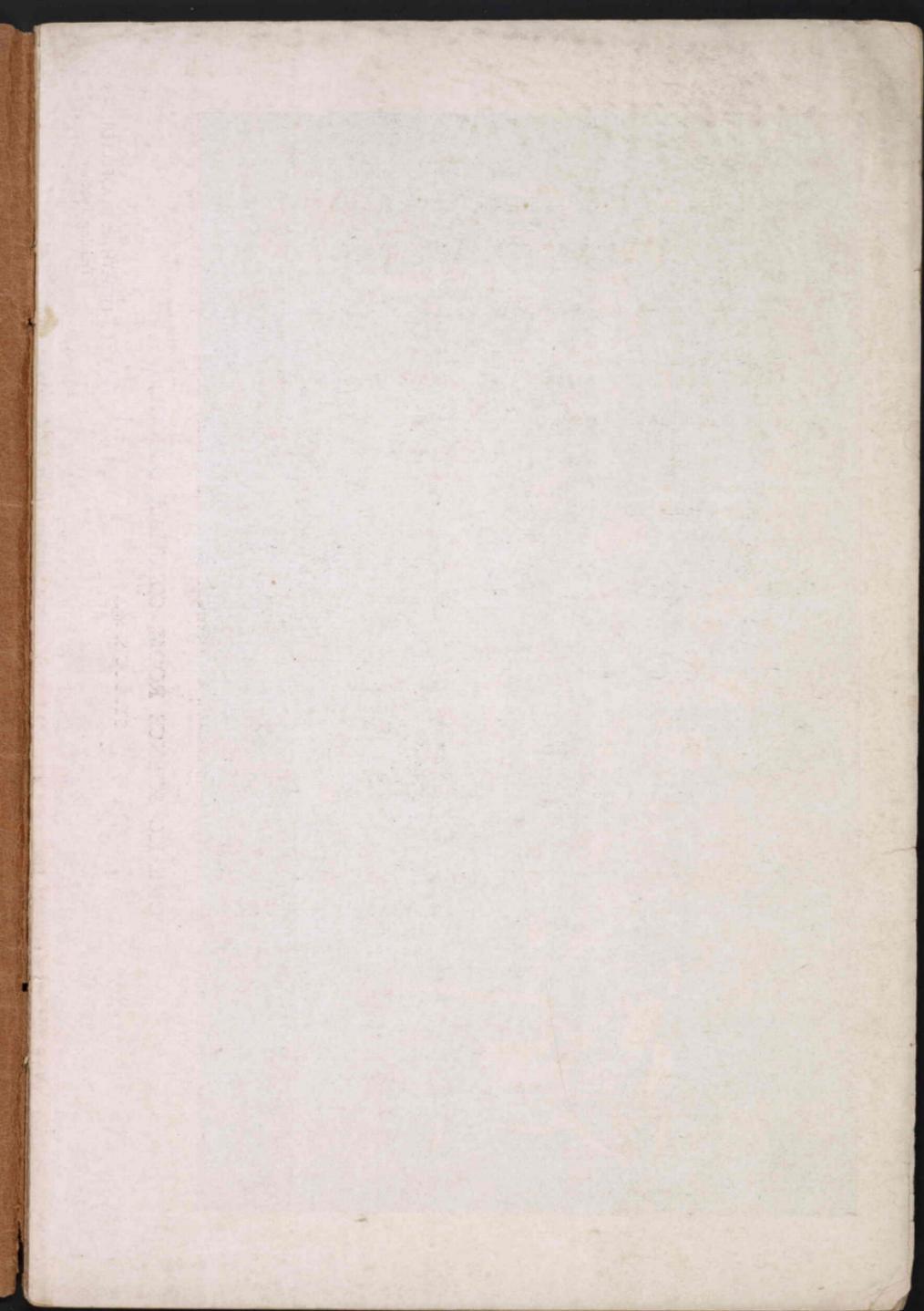


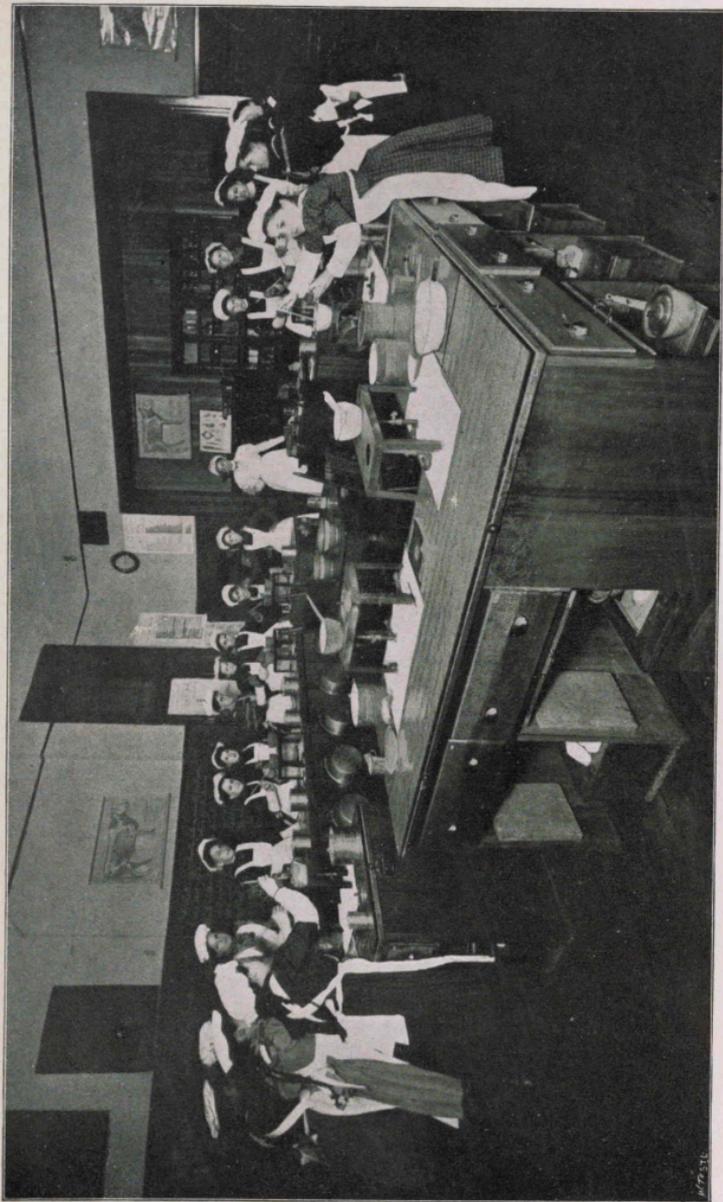
Class _____

Book _____

THE KATHERINE GOLDEN BITTING
COLLECTION ON GASTRONOMY

Presented by A. W. BITTING





DOMESTIC SCIENCE ROOM, COLUMBIA SCHOOL,

ST. LOUIS, MO.

LISBETH M. GLADFELTER,
Training Teacher.

PREFACE.

Being engaged in the preparation of a text book on Domestic Science in the Public Schools, to be published in the near future, and in view of the present interest manifested, I thought a synopsis of a portion of the work might be welcomed at the State Teachers' Convention by those interested.

This is by no means the only course of study that can be prepared, but after ten years' experience in Domestic Economy, in the broadest acceptance of the term, under the able directorship of Mrs. M. E. Fischel, I can confidently offer this as a safe outline. In the general domestic lessons, there does not seem to be any special sequence. Lessons can be interchanged to suit the convenience of the time and class, but in the cooking and sewing work it seems that one step grows out of the other in a natural way, and care should be taken in changing the sequence.

In order to bring the course of study into reasonable proportions, it was impossible to fully develop all of the lessons. Sample lessons, such as the Table-setting and Dish-washing, have been expanded to show method. The others are given in briefest outline. Some of the books in the writer's library, which are consulted in the daily preparation of her work, will be found in the appendix. Special help in preparing this outline was obtained from Helen Campbell's "Household Economics," and Maria Parloa's "Home Economics." It is the writer's earnest hope that efforts will be made through her dearly beloved State to introduce Domestic Science into the various Public School curriculums. The results of such a step will soon prove the worth of the movement.

LISBETH M. GLADFELTER.

EQUIPMENT FOR ONE KITCHEN.

(For class of 24 pupils, each doing individual work.)

(The data given below is a reasonable preparation for serious work.

Very few items could be omitted without seriously hampering the work.)

FURNITURE AND WOODENWARE.

- | | |
|---|----------------------------|
| 1 dresser. | 2 dozen rolling pins. |
| 1 dining table. | 2 dozen vegetable brushes. |
| 1 U-shaped table, provided with 24 drawers, giving 48 feet in length. | 2 dozen dish mops. |
| 30 chairs (rubber tipped.) | 2 holly wood spoons. |
| Chest for sewing materials. | 1 pair butter paddles. |
| 1 mirror. | 1 roller-towel rack. |
| 1 roll-rim, porcelain sink. | 3 towel racks. |
| | 1 refrigerator. |

CROCKERY.

- | | |
|------------------------|------------------------|
| 2 dozen pop-over cups. | ½ dozen crocks. |
| 2 dozen bakers. | ½ dozen pitchers. |
| 1 dozen soap dishes. | 1 large pitcher. |
| 4½ dozen yellow bowls. | 1 dozen butter dishes. |

CHINAWARE.

- | | |
|---------------------------|----------------------|
| 1½ dozen plates. | 1 dozen side dishes. |
| ½ dozen cups and saucers. | 1 sugar bowl. |
| 2½ dozen sauce dishes. | 1 cream pitcher. |

GLASSWARE.

- | | |
|----------------------|------------------------|
| 1 dozen tumblers. | 1 lemon squeezer. |
| 4 dozen Mason jars. | Test tubes. |
| 2 dozen small lamps. | Glass tops for tables. |

GRANITEWARE.

- | | |
|--------------------------|------------------|
| 4 dozen small saucepans. | 1 basin. |
| 2 dozen small dish pans. | 1 tea kettle. |
| 1 garbage pail. | 1 double boiler. |

WIREWARE.

- | | |
|-------------------------------|------------------|
| 2 dozen surprise egg beaters. | 1 broiler. |
| 1 sink strainer. | 1 frying basket. |

TINWARE.

- | | |
|---------------------------|--------------------------|
| 2 dozen cake pans. | 1 dozen pepper shakers. |
| 4 dozen teaspoons. | 1 dozen salt shakers. |
| 2 dozen tablespoons. | 1 graduated quart cup. |
| 4 dozen measuring cups. | 2 dozen muffin rings. |
| 2 dozen strainers. | 3 graters. |
| 1 set skewers. | 1 flour bin and sifter. |
| 1 round boiler. | 1 flour bin. |
| 2 dozen coarse strainers. | 2 dozen biscuit cutters. |
| 2 dozen dover beaters. | 2 dozen bread pans. |
| 2 cake turners. | 1 drip coffee pot. |
| 1 apple corer. | 2 dozen dish pans. |
| 1 blacking dauber. | 1 meat cutter (triumph.) |
| 1 brush. | |

LINEN.

- | | |
|-------------------|------------------------------|
| 1 table cloth. | 24 plaid linen glass towels. |
| 6 napkins. | 24 dish cloths. |
| 1 silence cloth. | 2 floor cloths. |
| 12 roller towels. | 2 cheese-cloth dusters. |

STEEL AND IRONWARE.

- | | |
|------------------------|----------------------------|
| 2 dozen frying pans. | 1 French knife. |
| 2 chain dish cloths. | 1 coal range. |
| 1 bell. | 1 gas range. |
| 1 Scotch kettle. | 2 dozen gas burners. |
| 2 dozen knives. | 1 dozen individual stoves. |
| 2 dozen forks. | 2 dozen scissors. |
| 2 dozen paring knives. | 1 pair scales. |

MISCELLANEOUS.

- | | |
|-----------------|------------------------------------|
| 1 whet stone. | 1 coal hod. |
| 1 sink scraper. | 1 shovel. |
| 1 cork screw. | 1 set Atwater's Food Charts. |
| 1 can opener. | 1 set Pratt Institute Food Charts. |
| 1 tack hammer. | Window curtains of dotted Swiss. |

SEWING EQUIPMENT.

Includes :—Needles, thread, yarn, darning cotton, hooks and eyes, emory bags, tape measures, cotton, linen and woolen goods and silk.

COURSE OF STUDY.

SEWING (26 LESSONS.)

LESSON I.

Preparation :

- Of pupil ; hands, nails, clothes.
- Special clothes ; aprons, sleevelets.
- Special tools ; needle, thread, scissors, thimble, emery, measures.
- Source and process of manufacture of each of these.
- Material to be sewed ; cotton, linen, wool, silk.
- Source of each.
- Process of manufacture.

How to Handle tools.

- To break thread from spool.
- To close spool.
- To thread a needle.
- To hold scissors.
- To practice taking stitches.

First Work With Materials.

- Striped paper—folding down of edges.
- Kinds of edge, raw and selvedge.
- Matching or stripes.
- Four thicknesses of material.
- Right and wrong sides.
- Basting stitch of two kinds, even and uneven.
- Uses of both.

LESSON. II.

Overhanding.

- On striped paper.
 - Position of needle.
 - To begin the seam.
 - To end the seam.
 - Care in having a flat seam.
 - Derivation of word overhanding.
- On striped calico ;
 - Piece 9x3 in., cut and sewed together.
- On plaid gingham ; matching of plaids, and difference between gingham and calico.
- On white muslin ;
 - Piece 9x3 in.
 - Sewing two selvedge edges together.
 - Care in making a flat seam.

LESSON III.

True Bias.

- Paper cutting.
- Square, four inches (paper.)
- True bias on figured calico.
- Matching figures.
- overhanding bias seam.

LESSON IV.

Weaving and Darning.

- Looms—warp and woof.
- Coarse darn.
- Fine darn on stockings.
- Establish relation between weaving and darning.

LESSON V.

Hemming.

- Turning folds on paper.
- 1-inch hem—teaching two ways of mitred corners.
- Basting hem—even basting.
- ½-inch hem.
- ¼-inch hem.
- ⅛-inch hem.
- Hemming; coarse muslin, 7 inches square—1-inch hem.
- Colored thread.
- Home work; cretonne bag for buttons.

LESSON VI.

Hemming on long cloth, 7 inches by 9 inches.

- Ends; ⅛-inch hem, sides; 1-inch hem.
- Baste wide hem with even basting.
- Overhand ends of wide hem.
- Home work; hem piece for gusset, 6 inches x 6 inches.

LESSON VII.

French hem on damask.

- Pull threads.
- Hem overhanding selvedge piece.

LESSON VIII.

Stitching.

- Two pieces unbleached muslin, 6 in. x 3 in.
- Running stitch.
- Half back stitch.
- Complete back stitch.
- Overcast edges.

LESSON IX.

Stitching, (Continued.)

- Cashmere sample, 6 in. x 6 in.
- Hem basted, then slip stitched.

LESSON X.

- Felling and Overcasting.
Uses of these stitches
Position of needle.
Two squares striped paper 6 in. x 6 in.
Unbleached Muslin 6 in. x 6 in.
Colored thread.
Sew from wide to narrow end.
White muslin, white thread.

LESSON XI.

- French Fell.
Use of this stitch.
Bias fold on silk.

LESSON XII.

- Gussets and gathering.
Paper.
Cloth.
Stroking gathers.

LESSON XIII.

- Bands placed in two ways.
Heavy gathers, as for dress skirt.

LESSONS XIV AND XV.

- Doll's apron; examination of work done previously.
Review of theory.

LESSON XVI.

- Sewing on of tape.
Three ways.
Sewing on of hooks and eyes.
Uses of tape.

LESSON XVII.

- Button holes and blind loops.
Position of needle.
Use of blind loops.

LESSON XVIII.

- Button holes and blind loops continued.
Two kinds of button holes.

LESSON XIX.

- Eyelets.

LESSON XX.

- Flannel.
Source.
Process of manufacture.
Microscopic examination of wool fibre.
Study of felting.
Flannel square, 7 in. x 7 in.
Sewing seam, and pressing.

LESSON XXI.

Plaid patch hemmed.
Matching of plaids.

LESSON XXII.

Figured patch overhanded.

LESSON XXIII.

Hemstitching.
Drawing of threads.
Study of flax.
Manufacture of linen.
Whipping and sewing on of ruffles.

LESSON XXIV.

Darning on Cashmere.
Three darns.

LESSONS XXV AND XXVI.

Pressing work and arranging work in sewing books.
Examination of work done.

GENERAL DOMESTIC SCIENCE (15 Lessons.)

LESSON I.

Lamp-cleaning.

Preparation ;

- Of body, heavy apron,
- Of table, protect with paper.

Materials collected :

- Lamps, polishene, kerosene, funnel, scissors, cloth, tissue paper, wooden skewer, tin pan.

Process of cleaning :

Daily :

- Fill with oil.
- Rub wicks.
- Wipe burner.
- Clean chimneys.
- Light lamp.

Weekly :

- Empty oil reservoirs.
- Boil in soda water.
- Wash reservoirs.
- Refill and clean.
- Try by lighting.

Study of lighting.

Evolution,

- Pine knot, candle, lamps, gas, electric light.

Definition of lamp.

Composition and use of parts.

- Wick, burner, chimney, reservoir, base.

Ancient forms of lamps.

Inventions.

- Round burner, glass chimney.

Characteristics of a good lamp.

- Relative amount of light given by the different forms.

Lamp shades.

Use.

- Best kinds.

Materials used for lighting.

Oils.

Origin.

Methods of obtaining.

- The great coal-oil wells.

Natural gas—dangers.

LESSON II.

Care of Metals.

Action of acids and alkalis on the different common metals and their compounds.

Silverware.

Solid silverware.

Plated ware—how made.

Difficulties in polishing.

Injurious treatment of silver.

Composition of various silver powders.

(Dry powders, liquid and soaps—cautions in their use.)

Home-made powder.

Process of cleaning.

Soft cloth and chamois.

Boil in soda water.

Keeping of silver.

Never wrapped in bleached cloths.

Never kept near rubber.

Brass and copper.

Brass polish—Oxalic acid and a salt. Kerosene.

Iron and steel.

What causes metal to rust.

To keep a stove in order.

Nickel.

Best material for cleaning.

Aluminum.

Kitchen Utensils.

Ammonia.

Sand soap.

Kerosene.

LESSON III.

General Cleaning.

Sources of dust.

What is dust?

Meaning of "cleaning."

Soap and soap making.

Effect of cleaning on the finish of wood.

Effect of cleaning on paint.

Effect of cleaning on oiled surfaces.

Effect of cleaning on piano polish.

Effect of cleaning on wall paper.

Effect of cleaning on leather.

Effect of cleaning on marble, porcelain.

Effect of cleaning on glass, etc.

Prevention of dirt.

LESSON IV.

Stains, Spots and Tarnish.

Nature of stains studied.

Causes of tarnishing.

Cause of grease.

Methods of removing.

From carpets.

From wood.

From stains.

(Wine, fruit, tea, coffee, cocoa, ink, water--marks, grass-stains, mildew.)

Running colors, (to set colors.)

Iron rust.

Scorch stains.

LESSON V.

Woods and Polished Floors.

Brief description of a log of wood, big trees of California, small cedars of Mt. Washington. Value of woods commercially.

Where the most expensive wood comes from.

Best way to cut wood for floors; rift, slash, quartered-oak.

Best wood to use for floors.

Polished floors, objections to carpets, sanitary value of polished floors.

Hardwood floors.

Daily care of such floors.

Weekly care of such floors.

How to wax floors.

LESSON VI.

Plumbing and Draining.

Proper arrangement of pipes.

Terms used in plumbing; trap, fixture, etc.

Drawing of correct form of plumbing.

Three rules for correct house draining.

Test for leaks in the pipes.

Care of the plumbing.

Kitchen sink.

Disinfecting in case of illness.

Soda for cleaning the pipes.

Potash for the sinks.

Mode of disposal of garbage.

Sanitary drainage of houses, water supply.

Sanitary precautions in large cities; simple tests for impure water.

LESSON VII.

Ventilation and Heating.

Definition of pure air.

Need of pure air and sunlight.

Air, when contaminated causes disease.

Causes of foul air—decaying matter, etc.

Care of cellars and garbage.
Dangers of gas and artificial light.
Dangers of hot air registers.
Means of escape for foul air.
Air testers.
Amount of fresh air needed daily by individuals.
How to ventilate sleeping rooms.
How to ventilate kitchens.
Means to prevent draughts.

LESSON VIII.

The building of the house.
Study of ancient houses, Oriental, Greek, Roman.
National types of homes.
Colonial and Southern architecture.
The drawing of house plans.

LESSON IX.

Emergency Work.
Nursing of the invalid and sick.
What to do in emergencies.
Washing wounds.
Disinfecting cuts.
Bandaging.
To bandage a cut vein or artery.
Methods of applying court plaster.
Antidotes for poison.
Care of cases of sunstroke.

LESSONS IN DEFINITE LINES OF HOUSEWORK.

LESSON X.

Dining Room.

Table setting. (Developed in full.)

(For a Luncheon.)

General Plan:

Study of furniture, wood, kinds, habitat of woods, museum of specimens, cost of various kinds.

Ancient forms of tables, modern shapes.

Customs, ancient and modern, at table.

Practical Work:

Setting of one full-sized table. Pupils alternate at various parts of the work. This can only be made an individual lesson by having the pupils practice setting the table at home, and reporting work at next lesson. The home practice, expected after each lesson, **MUST** be performed in this case, else the lesson is not received. The pupil **KNOWS** those things she **DOES**.

Order of Table Setting:

Put in extra leaves. Dust table. Spread silence cloth. Pin corners down. Spread table cloth (measure side creases), condition of the cloth, **SMOOTH, STRAIGHT and SQUARE** (moral lesson).

Napkins (these decide position of "covers"). Glassware. (wipe and always hold with towels.) Cutlery. Knife at right side of plate, blade turned in. Fork at left side of plate, tines up. Glass outside of knife, near tip. Right end up.

Individual covers, plate, sauce-dish, butter-plate, salt cellar. Place of each.

Tea service. Place handles so as to be most convenient to mother. Food dishes, place of each. Chairs.

General rules of table setting.

Regard the convenience of others.

Prepare guests' places before end "covers."

Father's place at foot. Mother's place at head. Guest of honor at father's right.

Order of clearing table.

Remove chairs, place food on smaller dishes, scrape plates, sugar bowl and pitcher emptied, butter saved, bread crusts saved, napkins folded, glassware, cutlery, plates and other dishes, tea service, brush table cloth and fold in old creases. Fold silence cloth. Leave pins in corners.

Remove leaves, and leave room in tasteful order.

Suggestive notes on table-setting lesson.

Teach dusting. DO NOT ALLOW PUPILS TO SHAKE DUST CLOTHS. Let the dust go into the sewer. Suggest ornament for center of table. Give, or rather get some account of glass-making, cutlery, china, telling something of the famous quarries at Limoge. Linen had better be studied in connection with sewing. This is a lesson far reaching in its influence.

LESSON XI.

Bed room.

Morning work.

Airing of room.

Ventilation.

Pillows and bed clothes on chairs near windows.

Beat mattresses.

Leave room in this condition several hours.

Making bed.

Order of spreading on bed clothes.

Underblanket.

Sheets—wide hems to the top of the bed—right side of sheet towards occupant of bed.

Blanket—open side to top.

Comfort.

Spread—neatly tucked in at corners—leaving bed SMOOTH, STRAIGHT and SQUARE.

Pillows well placed.

Use of pillow-shams discouraged.

(Moral lesson upon use of shams in general.)

Dusting room.

Necessity of especial tidiness in one's own private room.

Care of toilet set.

Special cloths plainly marked for special articles.

Cleansing of brush and comb.

Evening work.

Changing day pillows for night pillows. Turning down covers, leaving bed ready for occupant.

Study of origins.

First mattresses in history.

How savage tribes and soldiers of the present day sleep without them.

Materials used for mattresses.

Beds of different nations.

Iron bed from sanitary standpoint.

Precautions in regard to insects.

LESSON XII.

Dishwashing, (developing.)

Preparation—Cloths.

Plaid towel for glasses and fine china.

Striped towel for earthenware and for pans.

Dish mop.

Pot cloth.

Cloth for wiping woodwork.

Scrub cloth (Russia crash.)

Cleaning materials needed.

Soap for chinaware.

Scourine for tins, graniteware and iron.

Bath-brick for knives and forks.

Silverine for silver.

Putz-pomade for silver.

Whiting for silver.

Dishes gathered.

Collect and arrange systematically, all dishes, pots and pans, putting similar ones together. All scraps of food should be removed, and greasy dishes and pots should be wiped with tissue paper.

Water.

In dish pan, hot soapsuds Put soap on fork, and move it around in the water until a lather is formed. Remove soap to soap dish.

In rinse pan, hot, clear water.

Drainer. Use tray or empty pan.

Order of dishwashing. Rule—Do the most unpleasant thing first. (Good moral rule, better for the hands, not so tiresome, insures change of dish water.)

Silver, washed, rinsed, cleaned, rewashed, wiped dry.

Cutlery, washed, rinsed, cleaned, rewashed, wiped dry.

Care of wooden handles, scour BACK of knives, and clean inside tines of forks.

Tins. Use a wooden skewer for all corners.

Graniteware.

Ironware. Do not dry with towel. Use pot cloth to dry.

Place on top of stove for final drying.

Renew water. Do not add soap to either dishpan.

Glasses.

Glasses containing milk should be rinsed in cold water, before washing in the hot water. Do not touch glassware in drying with the hands.

Chinaware.

Pitchers and sugar bowls. Cups and saucers, plates and other fooddishes.

Earthenware.

Renew water.

Wash towels and hang to dry.

Wash desk and soap dish.

Wash dishpan, and empty water.

Dry dishpan, and hang on hooks.

Hang up desk cloth.

LESSON XIII.

Study of Range.

Names of parts. Fire-box, oven, grate, flues, drafts and checks, stove-lids, food-warmer, stove-pipe.

Difference between stove and range.

Place of oven, number feet, number of oven doors, stove has no food warmer.

Study of drafts

Pupils draw diagrams of range, showing position of fire-box, and oven, marking with arrows, direction of drafts, about the oven, and showing effect of various openings for causing drafts.

Study of fuels used in fire.

1. Match. Its predecessors, flints, tinder-box, discovery of phosphorus, lucifer matches, safety matches, where made, of what kind of wood.
2. Paper. Best kind to use for fires. Crumple, not fold it. Manufacture of paper. Paper from wood pulp. The wasp the first paper-maker. Different uses of paper, car wheels, tubs, buttons, collars, telegraph poles, books, etc.
3. Wood. Soft and hard. Examples of each. Charcoal. Use soft wood. Small piece for starting fires, then some hard wood.
4. Coal—Anthracite and Bituminous, slate, cannel coal. The story of a piece of coal. Coke: What is driven away?
5. Petroleum. Where found, how purified. Its uses. Coal tar, its uses.
6. Fire. What is required to produce a fire. Illustrate need of air by placing lit candle under glass. Burning point, its variations. Instructions in regard to care of fires. Lighting the fire. Rubbing on polish, adding more fuel. coal never above the top of fire box. When fire has well started, close dampers. Replenish fire when coals are red. To quicken an old fire. Thorough cleaning of all parts of the stove once a month. Remove grease or anything spilled on stove by wiping with absorbent paper. Teach use of gas stoves. How to regulate the supply of gas.

Dangers in lighting.

I am fully aware that the ground covered in this lesson is immense. The field opened to the child for the first time is so fascinating that we are inclined to attempt to do too much. Perhaps a selection of one topic for enlargement would be enough for one class, or the most of the historical and scientific work could be done as outside work, and be brought to the class in form of essays. How fine a chance it would be to correlate with the other branches taught, the grade teachers doing the theoretical work. That would be the ideal method.

LESSON XIV.

Review.

LESSON XV.

Preparatory Lesson for Cooking.

Personal preparation.

Care of body, hands, nails, hair.

Clothes, plain, cotton, clean.

Special cloths, cap, sleeves, apron, holder, hand towel.

Study of kitchen utensils, names, places, care. Teaching arrangement of drawer, of closets, and compartments.

Cloths and towels used.

Linen glass towel, dish towel, dish cloth, dish mop, cloth to wipe tables. Flannel squares for polishing metals.

Two floor cloths.

Scope of work.

Study of foods (not trade of cooking), study of plain sewing (practice of different stitches), study of emergency work (nursing and care of the sick), and sick diet, general housework, (care of lamps, dish-washing, dining room and bed room work.)

Time—Two years—(80 lessons)—1½ hours each, VII and VIII.

Grades.

Examinations written, semi-annually. Practical, unaided preparation of some previous lesson.

Practice in measuring weights and measures.

(All measures taken level.)

(½ tablespoon obtained by lengthwise cut.)

(¼ tablespoon by cross cut back of true half.)

Review tables of liquid and dry measures and avoirdupois.

Comparison of weight and volume, using water, flour butter, sugar, rice, etc. Weight of one dozen eggs.

Rule. Sift dry materials before measuring.

Suggestive notes on preparatory lesson.

(Work well done by teacher in this lesson makes the lessons which follow much more orderly and systematic.)

Try round holders

Sew two tapes to apron waist-band; fasten holder to one, to the other, the hand towel.

Each pupil should have note book and pencil. Teacher's note book should exactly record all taught. The practical value of fractions appeals to the child as never before, if this lesson be well taught. Children should leave the kitchen impressed with the value of beauty of order and system.

At each lesson there are three girls appointed to do the extra tasks besides their regular lesson for that day. These girls are called the house-keepers, their duties being as follows:

First housekeeper.

Attend to the fires. Wash zinc and floor cloth. Fill hot water reservoirs and tea kettle, and at end of lesson empty and wipe dry. Take

charge of any extra pots on stoves. Take charge of ovens for all baking. Rub stoves with dauber and polisher.

Second housekeeper.

Dust the room, wash the dust cloth, take care of teacher's table, take care of dressers and blackboard. Take care of supplies, lock and unlock compartments.

Third housekeeper.

Take care of sink. Empty sink-strainer, scrub with hot soapsuds, polish faucets, wash the cloths used. Take care of ice-chest. See that towels are hung evenly on racks.

These officers are changed at each lesson. Such work gives each girl a chance to practice general housework. The work never interferes with a special lesson, as the first two housekeepers do most of their work before the lesson, and the third one remains a few minutes after the lesson, if her work is not quite completed.

COOKING (26 Lessons.)

LESSON I.

Cooking of baked potatoes.

Preparation—Utensils. Recipe written on board.

Points of chief importance in teaching this lesson.

Perfect cleaning.

Proper time in baking.

Crushing in a towel, skin broken.

Eating as soon as cooked.

Study of composition of potatoes.

Weigh potato, grate, and weigh water and cellulose.

Test sediment with iodine to prove starch.

Botany. Family, and botanical function of the potato.

History.

Indigenous to America. Introduction to Europe.

Efforts of Count Rumford to popularize the potato.

Sir Walter Raleigh and the potato flower.

Commercially considered.

Food value as compared with other foods. (See Atwater's food charts.)

LESSON II.

Cornstarch mold.

Experiments with starch.

Mix starch with cold water, stir well. Let sediment form. Pour off cold water. Dry starch.

Mix starch in cold water and boil.

Third experiment. Pour boiling water on dry starch.

Let children deduce as many conclusions as possible from above experiments.

Try two experiments showing change that takes place when starch is cooked very long.

Examine cornstarch with iodine, to prove presence of starch.

Recipe for cornstarch mold given. Difficulties to teacher—careless measuring; second, careless dropping of flavoring.

Wash dishes. Leave all drawers ready for inspection.

See that all towels are hung evenly on racks. Class should practice cooking at home, and report at next lesson how things were liked and how successful they were. Teacher should keep some record of same.

LESSON III.

Rice dumplings and hard sauce.

Washing and cleaning of rice.

Use of double boiler.

Rice absorbs three times its amount of water.

Spices used should be mixed.

Cinnamon—where it grows.

Rice, study of—indigenous to what place; early history; food of what people at the present day; soil conditions necessary; is it a desirable food? Chemical composition.

LESSON IV.

Mashed potatoes.

Recipe given.

Points of most importance in cooking the potatoes.

Use of hot milk.

Mashing potatoes in hot pot until perfectly dry.

Thorough beating with a fork or wire beater.

Continued study of starchy foods.

LESSON V.

Milk toast.

Recipe given.

Slow drying of bread. All moisture driven out. Contrast with broiled steak, all moisture retained.

Turn only once while toasting. Test of perfect toast, complete dryness. The value of toasted bread, granulation and change of starch to dextrine.

Making of croutons.

Teach geometric form of cube.

Use of crusts and scraps of bread to make browned crumbs.

Rules for the use of the oven.

LESSON VI.

Study of Sugars.

Cranberry jelly.

Sources of sugar.

Value of sugar to the body.

A short account of cranberries.

Giving of receipt.

Difficulties to teacher. Straining, failure to get jelly clear.

LESSON VII.

Orange ice.

Individual proportions.

Each pupil improvise a freezer.

The philosophy of freezing mixtures.

Cook stewed prunes.

LESSON VIII.

White fondant.

Importance of atmospheric conditions in boiling sugar.

Teach temperature with the thermometer. Let children practice by dipping the finger in cold water, then in the hot fondant, and then in cold water. Importance of this lesson.

Basis for pure candy. Saving of great outlay to the child.

LESSON IX.

Fats and Oils.

- Study of milk, cream, skim milk.
- Oils versus fats.
- Volatile and fixed oils.
- Teach how to make cocoa.
- To roll butter balls.
- To whip cream.
- To clarify fat.

LESSON X.

Proteids.

- Lesson on eggs.
- Examination of egg.
- Test yolk for sulphur.
- Cook albumen in test tubes at different temperatures.
- Find effect of pepsin on these different results.
- Cook eggs hard.
- Cook eggs soft.
- Teach that eggs should never be boiled.
- Teach foamy omelet.

LESSON XI.

Cheese Fondue and macaroni.

- Introduce rennet into milk, show caseine and whey.
- Tell how cheese is made.
- Food value of cheese.
- Recipe for cheese fondue or welsh rarebit.
- Cooking macaroni in white sauce.
- Show how the proteid is found in macaroni.
- Manufacture of macaroni.

LESSON XII.

Meats.

- Soup.
- Experiment with small scrap of meat in test-tube, using first hot water, then with another piece, using cold water.
- Examine fiber of meat under microscope.
- From knowledge of action of albumen in egg lesson, let children deduce conclusions in regard to cooking the albumen in meat.
- Making of beef tea.

LESSON XIII.

Broiling a Steak.

- Three methods.
- Study of beef chart.
- Prices of various cuts.

LESSON XIV.

Fish.

- To clean.
- Recipe for a stuffed baked fish.
- Each pupil prepare a fish.
- Different kinds of fish used as food.

Different seasons for using.
U. S. Fish Hatcheries.
Geographical distribution of fish.
Children prepare scalloped fish.

LESSON XV.

Croquettes, timbals and hashes.
How to use up cold meat.
Deep fat frying.

LESSON XVI.

First lesson in batters.
Egg raised doughs.
Reasons why the dough is light.
Recipe for pop-overs.
Use of Dover beater.
Care in regard to oven temperature.

LESSON XVII.

Lesson on Dough.
Biscuit.
Study of argol and baking powders.
Experiment in test-tubes with
Soda and cream of tartar.
Molasses and soda.
Sour milk and soda.
Baking powders.

LESSON XVIII.

Yeast.
Study of the chemistry of the yeast raising the bread.
Different samples of different kinds of yeast.
Experiments of different quantities in a solution of sugar and water
in test tube.
Experiments as before, adding different quantities of salt to test
tubes, and find effect of salt on fermentation.
Examination of yeast plant through microscope.
(In this day give no practical application in cookery.)

LESSON XIX.

Bread.
Pupils mix, knead, and bake bread, in two hours' time.
(As this lesson has been explained elsewhere at length, it will not be
developed here.) It is the most important lesson of the whole course.

LESSON XX.

Dough raised with fat—pastry.
Pupils make a lemon pie with meringue over it.

LESSON XXI.

Cake.
Pupils make cake and ice it. Cut some cake into small pieces and
ornament with fancy frosting.

LESSON XXII.

Desserts.

- Simple and inexpensive.
- Their relation to the other dishes at the meal.
- A study of gelatine.
- Its source.
- Its food value.
- Leibig's experiments of dog fed on gelatine.
- Different commercial brands.

LESSON XXIII.

Salads.

- Chicken salad.
- Mayonnaise dressing, or plain boiled dressing.
- Value of celery, and other salad plants.
- Proper seasoning for salad
- Importance of olive oil in a dietary.

LESSON XXIV

Vegetable Lesson.

- Unimportant place in regard to food value.
- Cabbage, 95 per cent water, etc.
- Value as salts to the body.
- An expensive food for poor people
- Only good in height of season.

(Vegetables are put at the end of the course, partly because of their unimportant place as a food, but more especially because they are scarce during the winter months, and therefore it is necessary to have the vegetable lesson late in the term.)

- Select for practical work several vegetables in season.
- Let some children practice on one, some on another.

LESSON XXV.

Preparation and serving of a dinner.

(To be developed later.)

LESSON XXVI.

Practical and theoretical examination of all the lessons taught in cooking.

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