DOMESTIC SCIENCE IN COUNTY HIGH SCHOOLS.

ESTHER E. CHRISTENSEN.

DOMESTIC SCIENCE IN COUNTY HIGH SCHOOLS.

OUTLINE.

I. Laboratory.

a. Location.

b. Size.

c. Plan.

1. Finish of interior.

2. Windows.

3. Cupboards.

4. Lockers.

5. Desks.

6. Sinks.

7. Heat.

d. Equipment.

1. Desk Equipment.

2. Desk Cupboard.

3. General Equipment.

4. Teacher's Equipment.

5. China Closet.

II. Outline of Work for One Year in the Ninth Grade.

a. Plan of Work.

b. Lessons.

III. Recipes with Cost.

DOMESTIC SCIENCE IN COUNTY HIGH SCHOOLS.

343

The ideal location for a school building in which Domestic Science is taught is in the center of the block with at least sixty feet of air space around it so as to give sufficient light and sunshine. A room in the south east corner on the first floor is the most desirable as there is the benefit of the morning sun and the afternoons will be cool. Direct sunlight during some part of the day is necessary to disinfect and keep the room in a sanitary condition.

The following plan is for a large laboratory, thirty by forty feet, giving ample room for the desks and other equipment necessary for twenty pupils.

The floor of a laboratory must be one that is durable, looks well and is easily cleaned. White ash gives a satisfactory floor if the boards are narrow and fitted together closely, to prevent cracks where dust will settle. A varnish or oil should be rubbed over the floor to keep it in good condition and cause it to be easy to clean. Tiled floors are sometimes used because of the ease in cleaning them, but they are cold and hard and quite expensive. If they are used, rubber mats should be placed at the desks to prevent foot fatigue.

The walls of a laboratory should be light, either pale green or gray, with the ceiling of a lighter tint or pure white. Enamel paints, if used on the walls and ceiling, make the laboratory appear clean and neat. Paper should never be used on the walls of a laboratory or kitchen as it absorbs odors and organic material and therefore is unsanitary. Wainscoting is objectionable as it leaves a place for dust to collect, but with a plastered wall it is often necessary, to keep the plastering near the floor from being knocked out. If wainscoting is used, there should be no cracks or grooves. 344

The laboratory should have enough windows to furnish all the light and ventilation necessary, and some artificial light should be in the room in case of necessity. At least one-fourth as much window space as floor space is necessary, but more is desirable. The number of windows depends upon the wall space but there should be as many windows as the wall will stand.

The cupboards are built in the walls, the utensil cupboard having a large door, some shelves for utensils and space for broom, dust-pan and other such articles. The china closet is seven feet high and has a large glass door on the upper part which slides up into the wall. The lower part has several drawers in which the table linen and towels are kept. The supply cupboard also has the sliding glass door but the lower part has wooden doors, and has a large space for flour and sugar cans. The upper part has shelves for various supplies and chemicals used in the laboratory.

The aprons are kept in a locker room adjoining the laboratory. In each locker room or near it, there are lavatories, that the girls may enter the laboratory clean.

345

The desks, which are made for two, are in the form of tables with a cupboard under the middle part. They are six feet long, twenty-six inches wide and thirty-two inches high, and are made with good tops of hard oak or maple. The two large drawers contain necessary utensils which are used in almost every lesson, and the small drawers are used for books during class hours. Each girl is provided with a desk board and a bread board which are placed underneath and above the drawers. The cupboard contains all the equipment necessary for the two girls and they are held responsible for the appearance and arrangement of all their utensils.

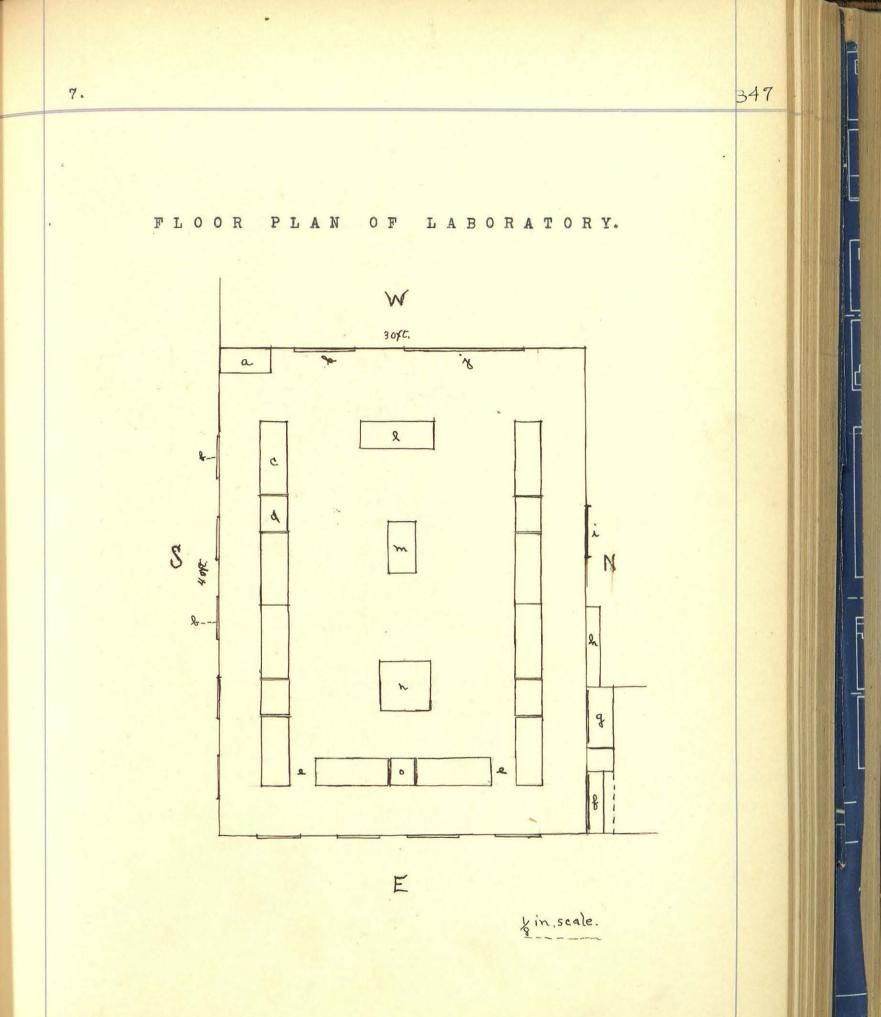
The sinks, which are of white enamel, are about thirty-four by twenty-six inches, with faucets at the back. Four girls have one sink, which they must keep scoured and clean. A small garbage pail is placed by each sink and a sink strainer is also provided.

The cooking is done entirely over gas burners or plates, there being two plates and one oven for each table. An asbestos mat is placed under the burner to prevent the heat from burning the table.

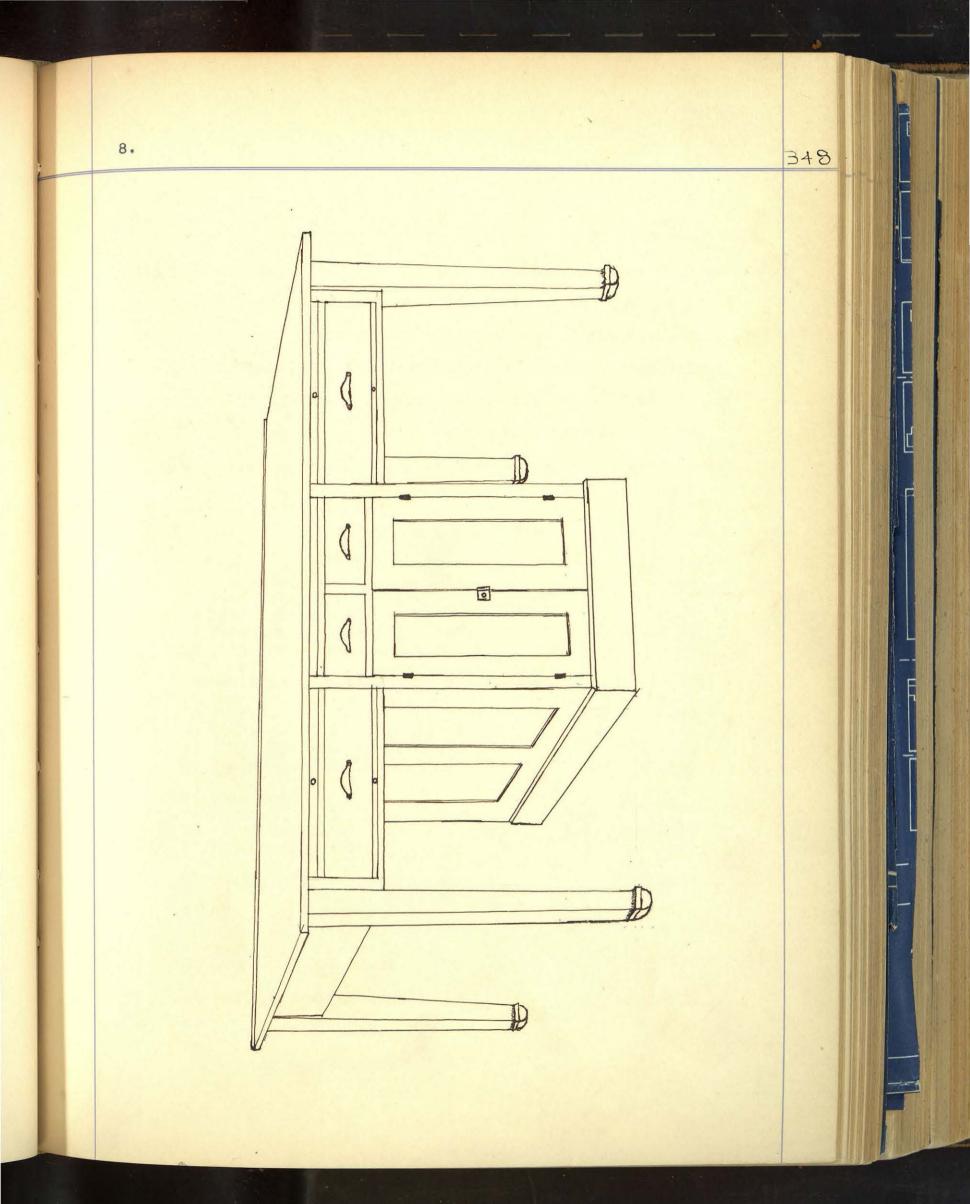
The laboratory is heated by the hot water system, which is the most convenient method for a high school building.

EXPLANATION OF LABORATORY PLAN.

- a. Refrigerator.
- b. Windows (31/2' x 10').
- c. Desk.
- d. Sink (34" x 26").
- e. Passage-way.
- f. China Closet.
- g. Supply Cupboard.
- h. Lockers.
- i. Door.
- j. Blackboard.
- k. Utensil Cupboard.
- 1. Teacher's Desk.
- m. Supply Table.
- n. Dining Table.
- o. Sink (30" x 26").



E.E.C.



The equipment of a laboratory should be as good as is possible under the circumstances. Have utensils and other equipment that is durable, and economize on the cooking if necessary. The desks may be equipped with dishes which can be used in serving, thus decreasing the cost of extra china, or silver ware. The girls can have chairs instead of stools, as these can be used with the dining table if needed. The equipment of laboratory in plan here suggested is as follows: 349

DESK EQUIPMENT.

10 Enamel Soap Dishes @ .08 10 China Match Holders @ .16 20 lpt. China Bowls @ .08 20 l ¹ / ₂ pt. China Bowls @ .10 20 Porcelain Plates,(for desk), 20 China Cups and Saucers @ .06	\$.80 1.60 1.60 2.00 2.00 1.20
20 Gas Plates @ .50, 10 Asbestos Mats @ .10 10 Ovens @ .75 20 Tin Sugar Cans (Labeled) @ .05 20 Tin Flour Cans (Labeled) @ .05 20 Tin Salt Cans (Labeled) @ .03	10.00 1.00 7.50 1.00 1.00 .60
24 Case Knives) 24 Forks) 20 Steel Spatulas @ .25 20 Paring Knives @ .05	6.00 5.00 1.00
20 Wooden Spoons @ .05	1.00
24 Craig Silver Tablespoons 48 Craig Silver Teaspoons	3.00 4.40
20 Scrub Brushes @ .05	1.00
20 Glass Measuring Cups @ .05	1.00
Total cost,	\$52.70

DESK CUPBOARD.

10 Dover Egg Beaters @ .10 10 Wire Tea Strainers @ .06 20 Tin Dish Pans @ .40 10 Tin Biscuit Cutters @ .03 10 Graters @ .12 20 Small Pie Tins @ .05 10 Bread Pans (Tin) @ .08	\$ 1.00 .60 8.00 .30 1.20 1.00 .80
<pre>10 Stransky Stew Pans (1½c.) @ .22 10 Stransky Stew Pans (2c.) @ .26 10 ¾qt. Stransky Double Boilers 10 Štransky Small Pudding Pans (1qt.) 10 Small Stransky Lids 10 Large Stransky Lids</pre>	2.20 2.60 6.99 2.10 .54 .60
10 Rolling Pins @ .07	.70
20 Omelet Pans @ .10	2.00
10 Individual Baking Dishes	.50
Total cost,	\$31.13

GENERAL EQUIPMENT.

1 Supply Table	\$ 2.25
I Dining Table	15.00
I Refrigerator	30.00
20 Chairs @ \$.150	30.00
10 Tables with Cupboards @ \$21.60	216.00
I Clothes Hamper	1.00
1 Clock	1.00
5 Enamel Sinks @ \$10.	50.00
6 Lemon Reamers @ .10	.60
12 Large Glass Supply Jars with Metal Tops	1.32
12 Small " " " " "	1.20
12 Glass Bottles for Flavoring and Chemicals	1.20
40 Jelly Glasses	4.00
120 Pint Jars	6.00
5 Glass Drinking Cups	.25
	and the second second
1 Dust Pan	
4 Tin Gem Pans (6 holes each)	.40
2 Wire Frying Baskets @ .10	.20
1 Large Tin Flour Can	.75
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351

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5 Sink Strainers @ .05, 5 Small Garbage Pails @ .25 I Large Tin Sugar Can 1 Large Tin Milk Pan for supplies on 1 " " " " " " 5 Toasters @ .05 I Tray 2 Tin Bread Boxes @ .36 I Flour Sifter 4 Vegetable Presses @ .30	\$.25 1.25 .75 table (4qt.).12 (6qt.) .16 .25 .25 .72 .25 1.20
I Meat Cutter 1 Can Opener 1 Butcher Knife I Bread Knife I Ice Pick 10 Towel Racks for desks 1 Cork Screw I Standard Scale 1 Flat Iron I Steel for sharpening	1.25 .10 .75 .60 .25 1.00 .10 1.00 .50 .50
2 2qt. Mixing Bowls (Crockery) 1 1gal. Jug	.15 .10
1 5pt. Stransky Coffee Pot	.80
150 yds. Crash @ .15 1 Silence Cloth, 3yds. @ .55 6 yds. Table Linen @ .85 1 doz. Napkins	22.50 1.65 5.10 2.75
1 Broom	.30
Total cost,	\$405.42

TEACHER'S EQUIPMENT.

1	Table with Cupboard and drawers	21.60
ILII	Gas Plate Oven Asbestos Mat Dover Egg Beater Biscuit Cutter Grater	.50 .75 .10 .10 .03 .12

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	China Match Holder	.16
1	China Plate	.10
I	Cup and Saucer	.06
	China Bowl (1pt.)	.08
	China Bowl (1pts.)	.10
+	outing Down (125000.)	•10
T	Paring Knife	.05
	Case Knife, included in desk list.	•
	Fork, " " "	•
I	Steel Spatula	.25
1	Omelet Pan	.06
1	Nickel Plated Tea Kettle, small,	.75
1	Wooden Spoon	.08
	Rolling Pin	.10
+	NOTITING LTH	.10
-	Mable means included in other list	
	Table spoon, included in other list,	0
2	Teaspoons, " " "	o
1	Stransky Sauce Pan	.26
1	Stransky Double Boiler	.69
1	Measuring Cup	.10
	Total cost,	\$26.04
		Averet

CHINA CLOSET.

1 doz. Glasses and Water Pitcher	\$ 1.50
2 sets Salt and Pepper Shakers	.30
l Sugar Bowl,) l Cream Pitcher,)	.50
12 Bread and Butter Plates	.60
12 Salad Plates	.96
2 Vegetable Dishes	.40
1 Meat Platter	• 25
12 Sauce Dishes	.60
1 Carving Set	3.00
Total cost,	\$8.11

SUMMARY OF COST OF EQUIPMENT.

Desk Equipment,	\$ 52.70
Desk Cupboard,	31.13
General Equipment,	405.42
Teacher's Equipment,	26.04
China Closet,	8.11
Total cost,	\$523.40

The class in cooking meets once a week in a term of nine months. An hour and a half are allowed for theory and practice to be divided according to the lesson for the day. The theory work consists principally of notes given by the teacher, with a little outside reference reading. Note books written in ink must be kept by the pupils and these are handed in about once a month. 353

Two of the girls act as housekeepers and serve for one lesson at a time. They are expected to take part in the theory and generally in the practice work also.

At the first lesson the girls are given instructions regarding their aprons and towels which are to be made at home. These must be marked at the second lesson. A few simple rules concerning the housekeepers' duties are included in the first lesson.

No loud talking should be allowed in the laboratory, and when assistance is needed, the student should raise her hand.

The following lessons have been arranged for ninth grade pupils, this being their first year of cooking. The different food principles are discussed and simple dishes, prepared, with the intention of more extensive work along the same lines to be carried out in the following years.

354

LESSON OUTLINES.

LESSON I.

- 1. Talk on behavior in laboratory.
- 2. Give instructions about aprons and towels.
- 3. Enrollment.
- 4. Explain lighting of gas.

LESSON II.

- 1. Mark aprons and towels.
- 2. Clean desk and desk utensils.
- 3. Explanation and rules of measurements.

LESSON III.

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1. Theory.
A. Water.
a. Source.
b. Composition.
c. Distribution.
d. Contamination.
e. Purification.
f. Use to body.
B. Utensils.
Ideal utensils.
2. Practice.
Boil water as experiment to notice stages.
Sugar Syrup.
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LESSON IV.

3557

LESSON V.

 Theory. Sugar. a. Review of last lesson. b. Properties. c. Digestion.
 Practice. Apple Sauce.

LESSON VI.

1. Theory. Test on last lessons. 2. Practice. Peach Sauce.

LESSON VII.

Theory.
 Starch.
 a. Source.
 b. Manufacture.
 c. Experiments with starch.
 Practice.
 White Sauce.

LESSON VIII.

 Theory. Starch

 Composition.
 Properties.
 Digestion of starch.

 Practice. Creamed Onions.

LESSON IX.

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    Theory.
Potato.
a. Growth.
b. Composition.
c. Structure.
    Practice.
Plain Boiled Potato.
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16. 356 LESSON X. 1. Theory. Review starch lessons. 2. Practice. Cream of Pea Soup. LESSON XI. 1. Theory. wheat. a. Description of plant and grain. b. Structure of grain. c. Composition. 2. Practice. Cream of Wheat. LESSON XII. 1. Theory. Test on last lessons. 2. Practice. Clean cupboards and desks. LESSON XIII. 1. Theory. Chocolate. a. Source. b. Composition. c. Manufacture. d. Cost. 2. Practice. Chocolate Cornstarch Mold. LESSON XIV. 1. Theory. Cocoa. a. Growth. b. Manufacture. c. Composition. 2. Practice. Cocoa.

17. 357 LESSON XV. 1. Theory. Cellulose. a. Source. b. Structure. c. Digestibility. 2. Practice. Scalloped Cabbage. Buttered Crumbs. LESSON XVI. 1. Theory. Fat. a. Kinds. b. Occurance. c. Properties. d. Uses to body. 2. Practice. Apple Pie. LESSON XVII. 1. Theory. Fat. a. Digestibility. b. Adulteration of fats. 2. Practice. Buttered Lima Beans. LESSON XVIII. 1. Theory. Eggs. a. Source. b. Structure, (drawing). c. Composition. d. Cost. 2. Practice. Poached Eggs on Toast. LESSON XIX. 1. Theory. Eggs. a. Digestibility. b. Preservation. 2. Practice. Egg Omelet Demonstration. Egg Omelet.

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	LESSON XX.		1_
1	1. Theory. Milk.		L
	a. Source.		F
	b. Composition c. Use as food. 2. Practice.		
	Rennet Pudding.		
	LESSON XXI.		
	1. Theory.		12
	Cheese. a. Source.		L
	b. Manufacture. c. Food value.		F
	d. Digestibility. 2. Practice.		
	Scalloped Cheese.		
	LESSON XXII.		
	1. Theory.		
	Meat. a. Source.		E
	b. Structure. c. Color.		
	d. Cookery. 2. Practice.		
	Beef Steak.		IT
	LESSON XXIII.		
	1. Theory. Meat.		
	a. Different cuts of meats, (illustrated). b. Food value.		-
	c. Digestibility of different meats. 2. Practice.		F
	Pot Roast, Brown Gravy, Demonstration.		
	LESSON XXIV.		
	1. Theory.		
	Test on work since last test. 2. Practice.		
	Clean desks.		
			the second s

19. 359 LESSON XXV. 1. Theory. A. Gelatin. a. Occurence. b. Manufacture. c. Uses. B. Discuss Mineral matter in food. 2. Practice. Lemon Gelatin. LESSON XXVI. 1. Theory. Beverages in general. a. Tea. 1. Growth. 2. Preparation. b. Coffee. 1. Growth. 2. Preparation. 2. Practice. Coffee. LESSON XXVII. 1. Theory. Fish. a. Kinds. b. Food value. c. How used as food. 2. Practice. Fried Fish. . LESSON XXVIII. 1. Theory. A. Leavening agents. a. Definition. b. Kinds. 1. Air. 2. Soda and acid. 3. Baking powder. 4. Yeast. B. Rules for baking cake. 2. Practice. Sponge Cake.

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LESSON XXIX.

LESSON XXX.

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    Theory.
Test on work since last test
    Practice.
Practice review of certain dishes.
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LESSON XXXI.

 Theory. Yeast.
 a. Growth.
 b. History.
 c. Use.
 d. Kinds.
 Practice. Yeast.

LESSON XXXII.

1. Theory.

Flour.

- a. Manufacture.
- b. Kinds.
 - c. Different sources.
- 2. Practice.
 - Bread.

LESSON XXXIII.

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1. Theory.
Bread.
a. Kneading.
b. Baking.
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- c. Care after baking.
- 2. Practice. Bread.

LESSON XXXIV.

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    Theory.

            a. Salad combinations.
            b. Kinds of salad.
            c. Digestibility.

    Practice.

            Fruit and Nut Salad Demonstration.
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LESSON XXXV.

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    Theory.
Review all previous lessons.
    Practice.
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Fruit and Nut Salad.

Punch. Marguerites.

LESSON XXXVI.

Examination on last six weeks work.

GENERAL COST OF ARTICLES.

Table used in calculating cost of Recipes.

Sugar Flour Butter Eggs Peanuts Milk Salt Chocolate Cornstarch Potatoes Lima Beans Baking Powder Lard Cream Oranges Walnuts Vinegar

\$.06 per pound. .02¹/₂ " " .32 " " .15 per dozen. .15 per pound. .05 per quart. .01¹/₄ per pound. .20 " " .05 " " .90 per bushel. .08 per pound. .50 " " .15 " " .15 " " .40 per quart. .30 per dozen. .20 per gallon. 362

363

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RECIPES.

SUGAR SYRUP.

나	c.	Sugar	.015	
14	C.	Sugar Water	.000	\$.015

PEANUT BRITTLE.

2	tbsp.	Sugar		.004	
2	tbsp.	Water		.000	
1	tbsp.	Chopped	Peanuts	.004	.008

APPLE SAUCE.

1 Apple, (Medium	sized) .005	
2 tbsp. Sugar	.004	
2/3 c. Water	.000	.009

PEACH SAUCE.

1 Peach	.01	
1 tbsp. Sugar	.002	
1/2 c. Water	.000	.012

PLAIN BOILED POTATO.

1 Medium sized Potato	.008	
12 c. Water	.000	
1 ¹ / ₂ c. Water ¹ / ₂ tsp. Salt	.000004	.008004

WHITE SAUCE.

1 c. Milk	.003	
1/4 c. Milk 1/4 tbsp. Flour	.00005	
spk. Salt	.000	
1/4 tbsp Butter	.0025	.00555

CREAMED ONIONS.

$\frac{1}{4}$ c. White Sauce 1 Medium sized Onion $\frac{1}{4}$ tsp. Salt	.00555 .01 .000002	.015552
SCALLOPED CABBAGE.		
1 c. White Sauce 4 c. Cooked Cabbage 2 tbsp. Buttered Crumbs	.00555 .003 .011	.01955
BUTTERED CRUMBS.		
2 tbsp. Bread Crumbs 1 tbsp. Butter	.001	.011
CHOCOLATE CORNSTARCH MOLD.		
<pre> description of the second s</pre>	.00625 .006 .004 .00156 .000 .00189	.0197
POACHED EGG ON TOAST.		
l Egg l slice of Bread Pepper and Salt	.0125 .00416 .000002	.016662
EGG OMELET		
$\frac{1}{2}$ Egg Yolk) $\frac{1}{2}$ Egg White)1 tbsp. Milkspk. Salt	.00625 .00075 .000	.007
RENNET PUDDING.		
1 c. Milk 1 tsp. Sugar 2 tsp. Rennet Liquid (1/12 tablet)	.003 .00066 .00083	
4 drops Flavoring	.0009	.00539

364

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SCALLOPED CHEESE.

1/2 slice of Bread(buttered).003	
1 slice of Bread(buttered 1 oz. Cheese (grated)	.00266	
Salt and Pepper to taste,	.000002	
1 Egg	.00625	
1 Egg 2 C. Milk	.006	.017912

FRIED STEAK.

1/10 1b. Fat from	Round	Steak	.015	
Fat from	Steak		.000	.015

POT ROAST, (Demonstration).

3 lbs. Chuck or Round $l\frac{1}{2}$ tsp. Salt 6 Whole Allspice	1 .25 .000006 .0005	
Per two girls,	10).250506	. 0250506

BROWN GRAVY, (Demonstration).

1	c. Liquid (stock).	.000	
1	tbsp. Flour	.00039	
14	tsp. Salt.	.000001	.000391

FRIED FISH.

1	small piece Fish	.03	
2	tbsp Crumbs	.001	
14	Egg (with little	Water).0031	
14	Egg (with little tsp Salt	.000001	.034101

APPLE PIE.

1 c. Flour	.00156	
1 tbsp. Lard	.002	
spk. Salt	.000	
1/2 Apple	.003	
1 tbsp. Sugar	.002	
1/2 tsp. Butter	.0013	.00986

BUTTERED LIMA BEANS.

불 c. Lima Beans I c. Water	.0104	
1 c. Water	.0000	
Salt and Pepper	.0000	
1/2 tsp. Butter(or	FatPork).0013	.0117

YEAST.

1 Medium sized Potato	.008		
1 c. Water	.000		
1 tbsp. Sugar	.002		
1 tsp. Salt	.000004		
1/4 cake Dry Yeast	.0018	(.011804)

BREAD.

1 c. Water	.000
	.005
+ then Sugan	.001
E tsp. Salt	.000002
1/8 c. Yeast	.001475
$1\frac{3}{4}$ c. Flour	.01182

For two loaves, 2x.019297 .038594

BAKING POWDER BISCUIT.

1 tsp. Baking Powder	.0052	
1 c. Flour 1 tbsp. Lard	.00357	
l tbsp. Lard	.002	
A little Salt	.0000005	
Water to make a soft	dough.000	.0107705

COFFEE.

	tbsp.ground	Coffee .00625 .0031	
i	Egg c. Water	.000	.00935

COCOA.

1 tsp. Cocoa	.00324	
1 tsp. Sugar	.0006	
1/2 c. Milk 3 tbsp. Water	.006	
3 tbsp. Water	.000	.00984

SPONGE CAKE.

1 Egg White	.00625	
2 tbsp.Powdered Sugar	.004	
Few drops Vanilla	.0009	
1 Egg Yolk	.00625	
2 tbsp. Flour	.0008	
spk. Salt	.000	.0182
shy. pare		· 0102

LEMON GELATIN.

🕺 tsp. Gelatin	.00249	
<pre> tsp. Gelatin tbsp. Cold Water </pre>	.000	
2 tbsp. Lemon Juice	.015	
3 tbsp. Water	.000	
$1\frac{1}{2}$ tbsp. Sugar	.003	.02049

FRUIT AND NUT SALAD.

1 English Walnut (1tbsp.Whipped Cream a (1tsp.Powdered Sugar	.0175 .0035 .021 .006) .00095 <u>.00695</u>)
or b. small spoon Dressing	.00828 .02928

WHIPPED CREAM DRESSING. (For 20 girls).

1c. Vinegar1tsp. Butter3Egg Yolks2tsp. Sugar1tsp. Mustard2tsp. Saltspk. Cayenne1c. Whipped Cream	.0062 .0026 .0188 .0012 .005 .000002 .000 .05	
Per two girls,		(.00828)

PUNCH. (For 8 girls).

1	c. Juice_	(2 Oranges)_ (1 Lemon)	.07
241	c. Syrup qt. Water	(1 ¹ / ₂ c.Sugar)	.045
	Per tw	o girls, 4)	.115

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MARGUERITES.

15 Saltines	.000 .05616 .0492 7).12336	.01762
1 c. Sugar Egg White	.015 .003	

CREAM OF PEA SOUP.

1	c.	Canned Peas	.02	
14	c.	Canned Peas White Sauce	.00555	.02555

CREAM OF WHEAT.

2	tbsp.	Cream	of	Wheat	.00187	
1	c. Wa	iter			.000	
Li	ittle	salt			.000	.00187

SUMMARY OF COST OF LESSONS.

Total cost of lessons for two girls,	Ş	.4537421
Total cost per girl,		.226871
Average cost per lesson for one girl,		.007562