THE PRACTICAL TEACHING OF HOUSEWIFERY TO GIRLS IN ELEMENTARY SCHOOLS.

BY LUCY A. CRASS,

Superintendent of Cookery, Laundry, and Housewifery Instruction, Manchester Education Authority.

IT is frequently said (and not without reason) that the home life of the England of to-day is nothing to be compared to that of a few generations ago. The blame for this is generally laid upon the shoulders of the women of the country, but this is neither just nor true. Many factors have been at work and are responsible for the present state of things.

science and machinery. Along with the departure of these greater activities from within the home went to a great extent the interest in the lesser activities.

Women followed these activities, which had till then been "home industries," into the mills, factories and workshops, and the homes and home life have to a great extent suffered in consequence.

The system of modern education must take some share of the blame for the lack of interest often shown by girls of the present day in home duties. Great strides have been made in the direction of affording girls opportunities of developing their mental and physical abilities, but the direction has been too much

CLEANING SITTING-ROOM.

Great changes have taken place in the social, economic, industrial and educational conditions of this country during the last hundred years, and probably no body of people have been more affected by these changes than the "home makers" and housewives of our land.

Many activities, such as spinning, weaving, baking, curing of bacon and hams, brewing, bottling and preserving of fruits, etc., which were once considered as belonging exclusively to the legitimate and proper sphere of the women within the home, have been taken right away from the home. This came about through no wish on the part of the women to shirk their duties or responsibilities, but owing to the discoveries and inventions of modern

on the lines of boys' education, and practically no use has been made of domestic subjects as the means of developing mind and muscle.

A subject almost ignored in both school and college curricula has naturally come to be rather despised by the modern girl. This spirit is not confined to any one class of society, but is seen amongst all classes, and there is a great tendency in the present day to belittle the importance of a pure home and family life. If it is true that "to homes when they improve, age after age, we owe qualities of character that do big deeds and build up great nations, and from degenerate homes spring national weakness and decay," it behoves all who care for the welfare of their country to do all they can to improve the present state of

affairs and to endeavour to create a healthier public opinion.

Happily a reaction has already set in. On all hands one hears of schemes for training girls in domestic arts. Most educational authorities now provide some form of domestic instruction for the girls in the elementary schools. Ere long it is hoped that the study of domestic science may receive University recognition.

In Manchester a great deal is being done by the Education Committee to prepare the girls in the elementary schools for their future duties in the home.

Good provision for the teaching of cooking and laundry work is found in over 50 centres, and more than 30 special teachers are employed

A point of cardinal importance in the Manchester system of teaching housewifery is that the instruction is given not in the school but in cottages, which are of the type lived in by the majority of the children attending the centres. They are tastefully yet very simply furnished, and are equipped with suitable though not elaborate cookery and laundry appliances, such as should be found in a decent and well-managed working-class home.

In order that the work may be thoroughly practical in character the teacher resides at the centre, and that she may not be alone in the house at night a girl (generally a former scholar) comes in each evening and sleeps at the centre. In this way two bedrooms are in constant daily use. The girl lights the fire in

PREPARING DINNER.

in teaching these subjects to the girls over 11 years of age.

Special courses of lessons on the feeding and tending of infants are given by two specially qualified ladies to the girls in Standard V and upwards.

The teaching of housewifery is also receiving great attention, and the main purpose of this article is to describe the practical way in which this is being carried out.

The aim of the work in the Manchester housewifery centres is to show the girls in as simple and practical a way as possible how to arrange the work of an ordinary cottage home in the best and most orderly manner. The motto of these centres might be said to be "Simplicity, practicability and efficiency."

the morning and gets ready the teacher's breakfast. This is the only outside help given, all the work of the house being done by the girls attending the course.

Each course is of seven or eight weeks' duration, and the scholars attend for the whole of the ordinary school hours during this period. This arrangement of a continuous period of instruction enables the girls to get a much more comprehensive view and a much better grasp of the subject of household management than is possible when isolated lessons are given. The advantages of a well-regulated household in which the week's work is carried out in accordance with a definite and organized plan is well shown to the girls, and they have the opportunity of seeing each piece of work

done on its own particular day and at the correct appointed time. Twelve girls attend at a time, and in choosing the girls choice is made of those who are shortly to leave school. This minimizes the difficulty of having to break into the ordinary school curriculum.

The general instruction comprises the following:—The qualifications of a good housewife; importance of order and cleanliness in the home; the plan of the general arrangement of the work of a house; the care and cleaning of sitting-room, kitchen, scullery, bedrooms, stairs, passages, washhouse, etc.; the cleaning of flues, blackleading, laying and lighting fires; washing up; care of glass, silver and knives; the airing and making of beds; suitable floor coverings; the care of

folding, mangling, ironing and airing clothes, etc.; care of laundry utensils and appliances; cleaning of washhouse. Lectures are given by the teacher on two or three afternoons in the week on such subjects as choice of a house, ventilation, drainage, care of the kitchen sink, hot and cold water supply, division of income, thrift, keeping of accounts, management and care of household linen, choice of food and clothes; care of glass, china, silver; how to set and clear the table, etc. These lectures are plentifully illustrated by the various articles in actual use in the house.

A special feature is made of the lessons on the care of the baby. A fully qualified nurse comes to the centre one afternoon each week and lectures on the tending and feeding of

MAKING THE BED.

linoleum, oilcloth, carpets, mats, etc.; care of household brushes; laying and clearing the table; sewing, darning, household mending and patching; making of blouses, aprons, etc.; home hygiene; simple first aid; laying out money to the best advantage.

Under the heading of cooking, the girls learn how to plan and prepare the week's dinners, marketing, tea and coffee making, bread and cake making, jam making, mince meat, plum pudding (according to the season of the year), cost of dinners, and household accounts.

The laundry instruction comprises the preparation for the week's wash, sorting, mending, removing stains, steeping clothes; washing of household and body linen, flannels, etc.; drying,

infants and young children. Under her superintendence and guidance the girls bath, dress and tend a "real live" baby, kindly lent for the purpose by some interested mother in the district. One of the illustrations shows the girls busy at this work. On the particular day in question two babies were present. These lessons are much enjoyed by the girls, and there is very seldom any difficulty experienced in obtaining the loan of a baby. Much good is hoped for as a result of these lessons. Surely it is not too much to expect that ere long a decrease in the rate of infant mortality will be found in the district surrounding these centres, since the mothers of the not far distant future are being so well equipped for the duties of motherhood.

The general plan of the week's work in the centres is as follows :—

MONDAY.

9 to 12 a.m.	2 to 4.30 p.m.
Ordinary household duties	Finish breadmaking
Dinner, breadmaking	Washing up
Change house linen	Sewing
Sort, mend, steep clothes	Domestic economy lecture
One bedroom cleaned	

TUESDAY.

Necessary household duties	Finish washing
Dinner preparation	Clean and tidy washhouse
Washing	Folding, mangling, ironing, sewing or upholstering

WEDNESDAY.

Ordinary household duties	Cookery demonstration or lesson
Dinner preparation	Taking notes and recipes
One bedroom cleaned	Washing up
Folding, mangling, ironing and airing clothes, etc.	

for one section of the work for a week at a time, taking each section in rotation; so that by the end of the course every girl has done the work of each section at least twice.

The division of the work is as follows :—

I.—COOKERY.

Dinners	Cleaning of kitchen fireplace and flues
Marketing	Ironing
Bread and cake making	Washing up
Cleaning of kitchen	Care of outside premises
Cleaning of scullery	Sewing, etc.

II.—LAUNDRY.

Sort clothes, etc.	Clean washhouse
Wash clothes, etc.	Clean class-room
Fold, mangle, iron, air clothes, etc.	Clean steps and passages
	Sewing, etc.

CARE OF BABY.

THURSDAY.

Ordinary household duties	Domestic economy lecture
Sitting-room cleaned	Household sewing or upholstery
Class-room cleaned	Special lesson on feeding and tending of infants and young children, or domestic economy lecture
Cloak-room cleaned	
Bath-room and stairs cleaned	
Ironing (if necessary)	

FRIDAY.

Ordinary household duties	Cooking (if necessary)
Kitchen flues and grate cleaned	Cleaning up
Kitchen & scullery cleaned	Domestic economy lecture or special lesson on tending of infants
Stairs and passages	Rewriting notes
Outside premises	

The work is divided into three sections; the girls are also divided into three groups of four girls in each. Each group of girls is responsible

III.—HOUSEWIFERY.

Housework	Clean stairs
Daily care of bedrooms	Clean passages
Daily care of sitting-room	Clean bath-room
Change sheets, etc.	Washing up
Clean bedrooms	Help with ironing
Clean sitting-room	Sewing, etc.

In order to give plenty of scope in the preparation of dinners, either two or three teachers come in from a neighbouring school or some of the children remain and dine at the centre. In every case the dinners are served at a very moderate charge.

The illustrations accompanying this article show the practical character of the instruction. Yet, though so thoroughly practical, the scientific principles underlying the simple everyday

actions are not neglected, but are well brought out in the teaching.

The value of such centres as these is hardly calculable. They serve to show to the general public the importance that the Education Authorities attach to the training of girls in domestic subjects; they act as models in the districts surrounding them, and they point the moral that good housekeeping, like most other things, needs to be learned to be done well, and that it does not come by instinct, but that when thoroughly understood and carried out in a proper manner it is a work full of interest and enjoyment.

THE OPEN WINDOW.—Thousands of visitors flock annually to this borough, eager to exchange the murky atmosphere of the industrial towns for the pure invigorating air of Scarborough. But it may be seriously questioned if the residents of Scarborough adequately appreciate the advantages they enjoy in this respect. Judged by the comparative infrequency of open windows, especially during the colder months, it would appear that the primary function of a window (as the name implies), the admission of air, had been lost sight of, and that the sole use of windows was the admission of light. It is only fair to state that some of the girls' boarding schools give the inhabitants at large a valuable daily object lesson regarding the double function which a window subserves. No doubt this common neglect of the cult of the open window is due to an abnormal fear of draughts, but it may be confidently stated that the atmosphere of the ordinary dwelling house cannot be maintained at a proper standard of purity unless one or more windows be kept constantly open. A draught is simply a current of air moving so rapidly as to make its presence disagreeably evident. Ventilation aims at the adequate renewal of air without perceptible draught, and this can be readily accomplished in the ordinary dwelling-house by judiciously opening windows. Even in the smallest houses all the rooms are not occupied day and night, and the simplest plan of securing proper ventilation is to open the windows of the unoccupied rooms. Thus during the day all the bedroom windows should remain open, or on stormy days those on the lee side of the house. The force of the entering air is reduced by friction at the angles formed by walls and doors, while the temperature is gradually raised by the indoor warmth. By the time the incoming air reaches the occupied living rooms the draught is no longer perceptible, and a sufficient supply of pure warmed air is secured. It cannot be too strongly stated that there is no surer way of contracting ill-health, increasing susceptibility to colds, and greatly enhancing the risk of consumption, than by habitually living in a vitiated atmosphere. The remedy is simple, and that is probably the reason why it is so widely neglected.—*Annual Report of Dr. John Knight, Medical Officer of Health, Scarborough.*

VARIATIONS IN THE CHEMICAL AND BACTERIOLOGICAL COMPOSITION OF WATERS CONSIDERED FROM A STATISTICAL POINT OF VIEW.

By R. J. EWART, M.D., M.Sc., F.R.G.S., D.P.H.

IN a series of analyses, both into chemical composition and bacterial fauna of any water, variations are seen which at times may border on, or even exceed, such limits as are considered hygienically safe. Change within certain limits must of necessity occur quite irrespective of the addition of harmful matter, even in those constituents which are used as indicators of pollution. It is quite obvious that a great advance in the interpretation of a water report would be achieved if we could express the possible normal change of composition by some factor. In the present paper I venture to suggest certain methods by means of which the stability of any individual water with respect to any particular constituent may be expressed by a figure, which when considered along with the mean for any series of estimations will enable the formation of an opinion which would scarcely be possible with the present methods.

If a series of analyses of any inorganic constituent of a water are placed in order of magnitude, irrespective of the sequence of examination, and then plotted graphically, it will be seen that a curve is evolved, the smoothness of which depends on the frequency of the observations—the differences at the extremes being large and in the middle much smaller. Such an arrangement suggests that any series of analyses might be treated in the same manner, and obey the same mathematical laws, as any other series of figures selected at random.

If such estimations when arranged in this way produced some form of understandable curve then a factor is available which is eminently suitable to express their variability—namely, the standard deviation. Such is much more valuable than a mere empirical figure, as from it certain information can be obtained if the nature of the curve can be expressed by some known formula. The curves formed in only a few cases could be described as normal; in most they were markedly askew—that is to say, the distribution about the mean was not equal. The "skewness" and ambiguity of the curves rob this standard of much of its mathematical significance, and in the sense in which I have used it it can only be regarded in its