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Why You Take "Those Awful Sciences"

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Why You Take

"Those Awful Sciences"

by Marjorie Griffin

If only we didn't have to take that awful chemistry or physics or zoology or some other course. It's the wall of the campus.

But these allied sciences are a part of ones agriculture, engineering, or home economics course. In fact, they are the background for our work, which is applied science. Then too they form a part of that general knowledge that gives breadth to life.

Dr. W. H. Wellhouse of the Zoology Department says, "People should study to have a sense of life as well as to prepare themselves for getting a job, for people only spend a part of their time making a living."

With the establishment of the NRA there has been a great deal of discussion regarding the increased amount of leisure time American people will have at their disposal. A large part of an individual's leisure time is spent in reading, but in newspapers and magazines are articles telling of new anesthetics, fabrics, food products, insects, bacteria, diseases, and inventions such as the radio and neon signs. There are very few who would not appreciate sufficient knowledge obtained through a study of some of the sciences, to have a general idea of the make-up of these compounds or inventions.

If one is reading it is essential that there be no strain of the eye due to improper lighting. In giving a few practical, all-around suggestions of the way in which physics is applied to home economics, R. D. Miller of that department suggests, "An understanding of the proper lighting of the home through a knowledge of the principles of physics as related to the mixing of colored lights, reflecting surfaces, and diffusing shades, reflectors, size of lamps to be used, and many other significant factors relating to the home, are outstanding."

"Zoology," according to Dr. Wellhouse, "is chiefly for the making of a broader and deeper individual through a knowledge of the things in nature." However, if a girl is a textiles and clothing major working for her masters degree she may need to go further into this study in determining relationships between insects and fabrics, as for example, "How to Fend Off Over-stuffed Furniture of Clothes Mothes."

Through a study of chemistry a textiles and clothing major learns what elements and compounds go to make the pigments in the dyes used on fabrics. This factor also applies to the applied art majors who use dyes, paints, and oils of various colors. The textiles and clothing major may also tie up with her work a knowledge of the chemicals in soaps and cleaning materials and how they will react with the fabric being cleaned. There is a very great difference in the qualities of wool, silk and synthesized fabrics. One who makes a dress of silk or wool knows something of its wearing qualities, how it will fit, and how it will clean, but unless the maker has a knowledge of chemistry she will have very little conception of these qualities in a synthesized fabric.

In studying physics these same people may learn of heat conductivity through various fabrics and furs, and also of the light absorbed or reflected by certain pigments in fabrics. People wear white or light-colored garments a great deal in the summer. Why? Because white as well as the longer waves which produce heat reflects all colors. Heat and light are closely associated since they are both transmitted on ether waves. Since white reflects all colors not much heat will be transmitted to the body. Too, we know that cotton is cooler than wool because it does not retain the body heat as efficiently as wool. In wool the fibers and the minute air spaces between these fibers are used in retaining heat. Thus wool retains body heat and also prevents a part of the cold air coming in contact with the body.

Foods and nutrition, child development, and institution management majors are interested somewhat in food. Through chemistry these students learn of the compounds making up the foods eaten and how they are broken down in the body to give energy and promote life. In zoology digestion is studied. Digestion in the human body is very complex, but if studied in the earthworm, frog, mamimal and then in the human body, it becomes more simple. Not only does one learn in zoology of foods digested but also some of the parasitic worms, trichinella and beef tape worm, which may be taken into the system in food. This knowledge makes more clear the necessity of cooking beef to a minimum inner temperature of 57 degrees Centigrade and pork to an inner temperature of 78 to 83 degrees Centigrade—to kill these foreign bodies.

At present there is a growing demand for new ways of preparing and preserving food to be taken into the body. In the main, two things essential for good food are preparation and preservation. On the whole, heat is required to prepare foods, but to preserve foods heat is generally removed. Therefore, it is plain why a knowledge of electricity to give heat, and refrigeration to take out heat, is essential.

Of course, household equipment majors are most directly interested in physics for they need to know not only of electricity and refrigeration but also the principles of motors, light and conductivity in order to give practical applications to the public. Dr. Nellie M. Naylor of the chemistry department maintains, that "although these people do work most directly with the physics department, they do need to know of the metals used in the manufacture of kitchen utensils and the properties of these metals in order to know what soaps and cleaning fluids to use without causing too rapid deterioration of the utensil." Did you ever stop to think of the gradual transition in search by the chemist for an ideal metal to use for kitchen utensils? Dr. Naylor says, "'From the copper utensils of Puritan days, through the period when heavy black iron pans were used, has finally evolved the shiny, bright aluminum ware. But even better than this is the copper and chromium alloys which combine in one material the heat-conducting and acid-resisting properties so highly desired.'"

HOME management majors are covering such a broad field that they may evolve reasons for studying the sciences from those given for other departments. All science departments emphasize the fact that home economics education majors do need considerable knowledge of the sciences for they may be called upon to teach them in high schools.

GLASS

Gleaming red in the dying sun
Rose tinted in the early morn
Jewel crusted when the Frost
King pays his annual court
Threaded with pearls amid the
the April showers
Shrouded with mist on cold au-
tumnal nights.
Beauty ever-changing—ever new
Windows are the soul of homes
But doggone them
They're always telling the world
What sort of housekeeper you are.

—Katherine Griffith.