portant subjects as agriculture and domestic economy. Domestic economy should be taught in the agricultural colleges of the country, the normal schools and normal colleges, the high schools and collegiate institutes, and academies, and to some extent in the public schools.

Why should not domestic economy be taught in the high schools of this country? Why should we have so many high schools named, and not one in the whole province equipped for any kind of training on practical lines? The thing is monstrous, and it is time for the people to insist on an immediate change. The public school teachers of the province get most of their education in these schools, and for that reason, if no other, every high school and collegiate institute in the country should at once be compelled to furnish a full course of lectures on domestic economy, and a thorough practical training in sewing and kindred branches of work—knitting, darning, patching, and the making of such articles of daily wear as are most needed by women with large families and small incomes.

Further, I venture to say that the number of ordinary scholastic high schools and collegiate institutes in the Province of Ontario is too large, and the time has come when either the number should be reduced or the Government grant diminished, in order to obtain the money necessary to establish at least five technical high schools in this province—one east, one central, one north, and two west—at convenient centres to teach chemistry, geology, botany and entomology in their relation to the industries of the country; and to furnish thoroughly practical courses of training in domestic economy, agriculture and horticulture, under regulations allowing each school some latitude in adapting its course to the circumstances and needs of the locality. Two short extra courses of instruction should be at once prescribed for the public schools; one in nature study, embracing the simplest and most practical principles of geology, botany and entomology; and the other on domestic science, including weekly practice in plain sewing, darning, patching and knitting, with very simple practical talks on cleanliness, tidiness, cooking, laundry work, and general housekeeping, endeavoring especially to make every girl ashamed of filth and untidiness, whether in person, home, or surroundings. These courses should not be made compulsory; but a fairly liberal extra grant of money, so much per pupil, should be paid to those schools which teach them

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Probable:

Tommy Tompkins—I bet my pup kin lick your kitten.

Willie Wilkins—Well, I bet if he does he'll wish he hadn't when my kitty grows up.—*Ohio State Journal.*

Collectors and Students.

By Alice Hollingsworth, Beatrice.

The great mass of people who make a pastime of collecting articles of various kinds may be divided into two classes: those who, like the jackdaw, find pleasure in the effort to obtain things to put away with other things, but having obtained them, have no further interest in them; and those who collect in order to increase their knowledge of the world's history, its past, its present and the probabilities of its future. The first mentioned class are by far the most numerous, for stamp clubs and curio corners are the fashion of the hour, but you will look in vain for the geography, the natural history book, or works on geology or botany, by means of which the collectors should be making themselves familiar with the various objects in their collections, and thus advancing a pace beyond the jackdaw. Yet, if they only knew it, the history of the most common-place object is more wonderful than the most fantastic fairy tale ever composed. For instance, I have a piece of sandstone that came from the bottom of an oil-well at Oil Springs, a dirty oily-looking stone that scarcely one in twenty would give a second glance at. That it was at the bottom of an oil-well might seem to be a mere accident, but when we look into the facts we learn that if there was no sandstone or shale there would be no oil-well. So this bit of stone can tell us a story, the first chapter of which began many thousands—perhaps millions—of years ago, before man had appeared on earth, but when the earth was very busy preparing for the future comfort of the human race by embedding vegetable matter—probably seaweed—which contained a large amount of oil, in sand and mud, then sinking it down and carefully covering it over with a great weight of soil, by which process the sand became sandstone and the mud passed into shale. So you see the oil was bottled, labelled and set aside to be left till called for. If we wish to go still farther back in the history of this oil or petroleum, we find that we are using bottled sunlight, because sunlight is the most active agent in vegetable growth, and a stem or a leaf is simply a body of transformed sunlight. When embedded in the rocks it is strictly and literally fossil sunlight. In petroleum ancient sunlight is preserved in liquid form; in natural gas it is in a gaseous form. I think it would be difficult to name a more common place object than the whitewash on the kitchen wall. We are so accustomed to looking at it that we never stop to think of the long, long journey it has travelled, of the ages upon ages that Nature has spent in preparing the lime for the whitewash pail. Nobody knows where it first began, nobody ever will know, for that belongs to the First Great Cause, but men who have given their lives to collecting, comparing, analyzing and studying have traced it back to a time when down in the calm depths of the ocean untold myriads of little creatures, so minute that there are said to be 40,000 of them in a square inch of chalk, were busily absorbing from the water mineral substance which they turned into beautiful shells to encase their strange little bodies. Then, having lived their day and done their duty as animate creatures, they sank on the ocean floor to accomplish greater ends in death. It is the old story of "little drops of water, little grains of sand," etc. These little organisms, so small as to be barely perceptible when taken singly, have united in numbers to form vast beds 1,300 feet deep. This is the origin of chalk. The same process of chalk-making is going on at the present time. When the naval officers surveyed the bottom of the Atlantic Ocean before laying down the electric cable between Ireland and America, they found vast plains of oozy mud, made up almost entirely of just the same atoms as make up our chalk. We do not have to dive for chalk; it is found in hills, and there are whole mountain ranges of it, yet they carry so many shells that their marine origin is indisputable. The explanation is this: The earth which seems to us the very embodiment of stability, is of all things most unstable. The surface is continually rising in one place and sinking in another, so that dry lands and oceans have frequently changed places, while new mountains are thrown up by the volcanic force from within, and old ones are plowed and ground down by glaciers. Chalk is not lime but what is called "carbonate of lime," and is a soluble in carbonic acid which forms a part of our atmosphere and which every rainfall brings down. This coming in contact with the exposed surface of the chalk dissolves and carries off a portion of it in little rills which join the larger streams and so on until the dissolved chalk is back once more in the ocean. The next step brings us to the coral polyp, and here we meet with another instance of the amazing results that may be attained by co-