

The Need for Gardening as an Intermediate Grade Subject in City Schools

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Examination of elementary education convinces one that gardening not only has much to offer as a subject for study, but that it is a necessity for city-bred children. In the last decade we have made great advances in clarifying the purposes of public education. We shall discuss first the purposes in teaching gardening to children; second, the curriculum and gardening.

If we consider the boy or girl immediately after entering the industrial world, we realize that he is confronted by many political and industrial problems which he would solve. The public school should train the child for participation in the work of solving such problems. Most of us think our citizens are too passive in their interests. This is, in part, due to the fact that much of their knowledge is paper knowledge, obtained through the study of geography, history and arithmetic textbooks. There is in schools slight preparation for the understanding of the underlying tendencies and problems which confront one in industry and politics. In the teaching of gardening we can directly prepare for the assumption of civic duties. We are fortunate in having no textbooks of gardening for the intermediate grades. Nearly every city has, within walking distance from the schools, a market garden, grocery stores, a cold storage plant, a canning factory. These, together with the gardens of the children, their parents and their school, may yield abundant material for the consideration of simple or complex industrial problems. Such study, based upon concrete experiences in these excursions and upon the participation in gardening, will tend to prepare the youth of the land for their activities in city life.

In New England probably the majority of the children find their way into our dominant industry—manufacturing. For some of these boys and girls, gardening may become an art in the pursuit of which they may keep alive their creative abilities. If our democracy is to succeed we must not allow the intellect of the laborer in the factory to become dulled. It is the school's responsibility to offer, in its education, training which will counter-

act the deadening influence of watching a machine do its work. I believe that the garden, with its attendant study, can, for some, take the place of the cheap amusements now so popular in our cities, and so deadening to the constructive abilities. The fourth, fifth and sixth grade children have interests, and among them gardening, which we must use in training the mind and the hand so that these children will find, in life, pursuits worthy of their leisure time and resulting in a citizenship which is effective because intelligent.

The securing of a varied and adequate food supply is a very real problem in many city homes. Malnutrition is ever present in school children. Until the teaching body makes definite preparation for meeting the problem in a concrete way, our education will be ineffective. We now urge children to buy food at school. Many laws as to what to eat and what not to eat are memorized. The war taught us that fifth and sixth grade children can produce satisfying and acceptable results from a garden. The garden yields the bulk, the vitamins, and the foods, such as carbohydrates, fats and proteins, so much needed by the growing boy or girl. Here is the possibility of an industrial lesson which may not be neglected. Agriculture is still the first industry of the land. There is a possibility that school experience in gardening may for many children be a satisfactory introduction to agriculture and its problems. The chief purpose, however, in training children in gardening, are those that enable them to understand the garden's relation to health and thrift.

We may conclude that gardening is needed as a school subject in order to make the school work more effective in realizing the social purpose of the public school in a democracy. It places the child in touch with the community and its problems in a concrete way. In no way is anything here written intended to convey the thought that the purpose of gardening is vocational in the elementary schools. It has been our purpose to show that we must suit our education to the social environment of the children and prepare them in a more concrete way for meeting their responsibilities as citizens, as workers in industry and in the use of leisure.

Besides serving the social purpose of education gardening satisfies certain needs of the curriculum. I refer to the mastery of the essentials of the necessary subjects. Educators are now pretty well agreed that the subjects of the curriculum may be learned as a

result of needs arising out of some activity. We hear so much today of correlations. In planning, planting and caring for a garden, one needs knowledge of flowers and vegetables, soils, plant friends and enemies, and plant physiology. Thus the elementary sciences are studied. There seems no more sensible basis for the introduction of the facts and principles of science to children. In the sixth grade children may, through gardening, be led to gain a little experience with the experimental methods of procedure.

The second need of children to which the study of gardening directly contributes is spoken English. In discussing the procedure followed or in describing the results, or in inquiring about work to be done, there is a natural need for accuracy and clearness of exposition. Occasionally there is need of bulletins, seeds or catalogues and the written letter is employed. Children may wish to keep a record of their work in a note book. Efficiency in spelling, in the use of outlines, paragraphs and diagrams of sketches are then needed. Daily there is need for understanding the printed page for, by reading, the children may find out how to do much of their work. In planning the garden and purchasing materials and in considering the value of the product, the need for arithmetic is felt. From this it is evident that gardening requires aid from several subjects and so is a real servant of the curriculum. The mechanical skills are acquired, the experiences of everyday life and the accumulated facts of race experience in nature lore are studied during the year's study of gardening.

The teacher's problem is to provide in the curriculum those experiences which have not been attained as a result of the general undirected experience. For the city-bred child the teacher and supervisor should note that their objective can not be reached without this basic experience which the school must provide. This field of work is a challenge to the ingenuity of the intermediate grade teachers. It is not yet a part of the "system." Gardening is fortunately not tabulated by topics in courses of study. Much depends upon the teacher as to how the form and content subjects shall be unified and as to the exact nature of the gardening knowledge and skill to be developed. We are fortunate in having few supervisors who control the class room work. Let us hope that, if we ever do have this subject in the curriculum, the supervisors will teach the teachers but keep their hands off the children. The subject can best serve educational purposes in the hands of the

regular teacher. It remains for the regular teachers to sieze their opportunity and, with the hour a week at their disposal for nature-study, begin experimenting with gardening as a tool in the education of their children. Gradually their difficulties with equipment and information will be met. The children educated by such teachers may then show us whether gardening serves both the social purpose of education and the needs of the curriculum.

An Adequate Use of the Aquarium and Terrarium

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We nature-study teachers sonetimes feel that our students are like the heathen idols of the Old Testament with eyes that see not and ears that hear not. We put much emphasis, and rightly so, upon teaching that nature-study is first of all *nature* study and not studying a textbook. We practice what we preach by conducting many carefully planned out-door excursions. All this is good; but field trips, while a necessity, are in some respects a delusion and a snare. I am not referring to the question of discipline or of interest. These in the hands of good teachers give little trouble; but in the rather large groups that we are often forced to lead, many fail to make the observations we wish simply because they cannot see what we point out, and our comments, if heard at all, are not understood for the same reason. The bird flies away, and the diving beetle heads for the weeds at the bottom of the pond amid the eager exclamations of those in front who *can* see and the disappointed mutterings of those behind who *can't*. Moreover in small groups or even in individual work, careful study of living creatures in their natural environment requires much time and patience.

Right here, in supplementing not replacing the field trip, the aquarium or terrarium proves of greatest value if teachers have right ideas of its use. A large aquarium perfectly balanced with beautiful water plants and bright-colored goldfish purchased in the city is, to be sure, a thing of beauty and a joy forever. If, in addition, it contains lionheads, fringe-tails and telescopes, it will undoubtedly be a source of interest to all who can get at it; but a two quart mason jar with water plants, frog-spittle and two or three sticklebacks from the nearby ditch, is just as interesting as