

THURSDAY, JULY 11, 1878

SCIENCE IN SCHOOLS

WE print with pleasure on another page a remarkable article from the *Times* of Monday. In itself the article may present nothing remarkable to the readers of NATURE, but as the deliberate utterance of the leading organ of opinion in this country, it marks a distinct stage of progress towards a more enlightened conception of what constitutes education. We hope that it is significant of the near approach of a radical change of the conception in this country of what subjects should be included in elementary education. We need not be surprised at the fate of Sir John Lubbock's Bill for the introduction of elementary science into schools, when such erroneous conceptions of what science is apparently exist in the mind of the Minister of Education in the House of Commons, Lord George Hamilton. The Vice-President of the Council has much to learn, when his idea of the Royal Society, one of the most venerable institutions in the country, is that of a kind of select Polytechnic, where "lectures" are delivered on "biology, chemistry, natural history, mechanics, astronomy, mathematics, and botany." But he is new to his work, and we must hope that the debate of Thursday last may lead him to obtain a more accurate conception of what is meant by elementary science.

Dr. Lyon Playfair, we believe, pointed out what is one of the great hindrances to the introduction of science into elementary schools; the mere name, "science," frightens ministers, inspectors, school-boards, and teachers; perhaps if the simpler phrase, "elementary knowledge," were used, the simple-minded individuals in whose hands are the training of our future citizens might find that they themselves had been compelled to become acquainted with it to their cost after they left school, and that it would have been much better for them had they had some little training in it before entering into the thick of the fight.

The most notable feature in the *Times* article, as well as in Thursday's debate, is the fact that it has at last dawned upon the leaders of opinion and the makers of our laws, that "education" and "instruction" are different things, and that a man may learn a great many "facts" at school, and have his education to begin when he leaves it. It is lamentable that we have to be continually reminded that we are the only one of the great European countries where this distinction is not recognised and practically carried out in education. Our whole system of education, hitherto, has been a mere cramming of the children's memories with words, words, words, to the weariness of children and teachers, and with results unsatisfactory to all concerned. As the *Times* puts it:—"To be taught something about gravitation, about atmospheric pressure, about the effects of temperature, and other simple matters of like kind, which would admit of experimental illustration, and which would call upon the learner to make statements in his own words instead of in those of somebody else, would be so many steps towards real mental development." Sir John Lubbock gave a most conclusive refutation of the

idea that the teaching of science must be attended with hitherto unexperienced difficulties, and at the same time proved what a relief science-teaching would be to the ordinary dull routine of instruction, when he told the House that in the Scotch schools the authorities began to take alarm because science-teaching was found so comparatively easy and pleasant by the children. As to the argument that children who have been taught to know something about the objects and forces with which they every day come into contact contract a distaste for manual labour, we should have thought it had been long ago played out; it has almost as much force as the story told by another speaker of the boy who had been impudent to his master because the latter could not read his newspaper.

It is unnecessary for us to go again into the merits of the question which has been so often and so thoroughly discussed in these pages, especially as the *Times* has put it quite as forcibly as there is occasion for doing at present. It certainly seems sad, nationally suicidal, indeed, that a few more millions of those who will have the destinies of this country in their hands, are likely to be launched into active life, with all their education to acquire, ere legislation steps in to give us the advantages which nearly every other civilised nation gives to its children. Every day we hear of the ignorance of the working classes, every other month "congresses" are held to devise means to remedy the consequences of this ignorance—ignorance of the laws of health, ignorance of household economy, ignorance of the implements and objects of labour, ignorance of the laws of labour and production, ignorance of the nature of the commonest objects with which they come into contact every day, ignorance of almost everything which it would be useful and nationally beneficial for them to know—an ignorance, alas! more or less shared by the "curled darlings" of the nation. Yet while every day's paper shows how keen is the industrial competition with other nations, and how in one department after another we are being outstripped by the results of better—*i.e.*, more scientific—knowledge, the poor pittance of "elementary knowledge" asked for in Sir John Lubbock's Bill is refused by a minister whose own "education" leaves much to be desired. This state of things cannot long continue, and with such advocates for the children as the *Times* and Mr. Forster, we may hope that next time Sir John Lubbock brings forward his Bill it will meet with a happier fate.

THE JUBILEE OF UNIVERSITY COLLEGE

LORD GRANVILLE'S admirably reasoned and temperate speech at the jubilee of University College on Tuesday, reminds us how things move in this country. It records half a dozen great advances which are now accepted cordially and universally, with all of which University College is more or less identified, and in promoting which it has never failed to take a leading part.

To begin with, there is the absolute catholicity of its offer to the student—the invitation on its motto is *Cuncti adsint, meritaque expectent præmia palmae*. When the University