mon vessels and a small pair of scales, how many properties of fluids can be shown which ordinary people never discover? Freeze the water, boil it, and examine it in different states.* The lessons should at first all consist of comparison or experiment, and questions by the teacher and answers by the children—experiment, question, answer again and again in rapid succession. We should evenly mix what I may call Statical and Kinetical comparisons — those which involve states already completed by nature, and those which involve actions that take place in our presence. The comparisons of things—insects, shells, flowers, productions of nature —are of the first kind; experiments in Physics are of the second kind. Set little problems to be solved after the lesson: to compare two things—to do something and describe the result—to watch something and account for what is observed. These, where possible, should sometimes necessitate out-of-door excursions, such as—compare two hills, two cliffs, two rivers, the two banks of the same river, &c. †

Let us now sum up what we have done. I have shown that, particularly amongst journalists, there are many who yet do not understand the importance of Science in education; but as regards these opponents we best aid the advancement of Science by quietly ignoring them, and proceeding with our work. Secondly, that many have made the mistake of thinking that Science is easy to teach, and easy to learn; whereas there are really great difficulties in its way.

The difficulties must be fairly met by the practical teacher, who must find courage enough to face them with little external aid and guidance. The results that flow from Science teaching for all time will depend on the earnestness and thoroughness with which these difficulties are grappled now. Some of these difficulties would disappear, if some of the new and remodelled schools were placed under command of distinguished Science scholars. Then would Science rank, not as subordinate to so called main subjects, but one of the principal subjects, and would be attacked by the ablest minds. Good Science teachers would necessarily be produced in these schools.

Finally, I have given a few hints with regard to the method of teaching. I may have underrated the extent to which Science has become victorious over inertia, and established itself as a settled branch of teaching. What I have said of the difficulties may daunt some, but will stimulate others. I am of opinion that you are more likely to succeed if told to arm yourself for a difficult task, than if left to face a really difficult task believing it to be easy.

As for the ultimate result, there can be but little doubt. Science will assert itself as an essential and a leading instrument of youthful culture,—as a means of cultivating faculties which no other discipline can reach; and I am sure we shall have real cause for satisfaction if we have helped to make it available before it otherwise would have been.—*The Educational Times.*

* Weigh it; weigh equal bulks of other liquids; weigh solids in it; pour it into a bent tube; pour oil in one leg of the tube, and water in the other; dissolve salts in the water, and examine the solution; mix it with powders that do not dissolve sand, chalk, box-wood sawdust—in a glass beaker, and examine the sediments; trace these properties of water in a river, in the waves of the sea-beach; trace the effects of water that has passed away in the street, or a garden—after a storm, for instance, on the hill side. Filter the water; distil it. Decompose it by an electric current, and examine the properties of the gases that then result.

† The lecturer here gave a lesson for young children, consisting simply of experiments, and questions on them; and then treated the same subjects in a way to suit the second or third course,—predicting from some established law what ought to take place, and then appealing to experiment to test the truth of the prediction.

Joseph Lancaster.

(*From the Schoolmaster.*)

Much of a man's success in life depends on the time when he is born. Had Joseph Lancaster been born fifty years sooner than he was, he would have kept a school in his front parlour; he would have been liked by his boys, and praised by their parents for "getting them on wonderful." Had he been born fifty years later than he was he would have been a certificated schoolmaster; he would pass ninety-nine per cent. at his Government examinations (and would never be tired of telling people so); and he would write letters to THE SCHOOLMASTER saying that he managed his school without corporal punishment. Had he made his entry upon life's stage on either of the hypothetical dates I have mentioned, he would, doubtless, have played a very worthy part, although he would not have made much stir in the world; but, appearing on the scene when he did, he occupied a larger place in the public mind than any other schoolmaster ever has; and partly through his merits, of course (for the teachers, his contemporaries, did not achieve his success), but partly through the fortunate accident of his being born when he was, he became the originator of a movement which has ended in giving England the greatest and most beneficent product of modern civilization—a national system of education. Our institutions have this feature strongly marked,—they do not, Minerva-like, spring into perfect existence from a creator's brain; they are not made, they grow; and the history of the growth of popular education begins with Joseph Lancaster. How far the growth is due to him will be seen from a consideration of some of the chief events of his life. For an account of these events one has to search far and wide; because, although Lancaster has found three biographers, they seem to vie with each other in leaving out of their works everything one would care to find in them. In the case of two of them, this is probably because they did not know enough about their subject. In the case of the third, it was not because he was ignorant of the facts (for the third was Lancaster himself), but partly because he had no literary ability, and could not convey what he knew; and partly, perhaps, because he had a larger autobiography in view, and was reserving his facts for that. I believe it is now impossible to write a good life of Lancaster unless the author could invent facts—discover them he could not. I have read everything which Lancaster wrote, and as many of the numerous books, pamphlets, and articles written about him as I could lay hands on; but I have only arrived at the Socratic beginning of knowledge of my subject, a due appreciation of the fact that I know (comparatively) nothing about it.

I can, however, state with something like confidence, that Lancaster was born; and all his biographers agree in saying that his birth took place in Kent street, Borough, on November 27th, 1778. Having said this they wander off into a tedious account of the precocious piety of his childhood—an account which makes the reader expect that, according to honoured precedent, the juvenile saint will die early. One would have been ready to forgive them if they had been animated by a wish to say everything which could be said about their hero; but this is far from being the case, for wherever one would like to have detailed information, they are either altogether silent, or make the most vague and uncertain statements. I should like to know something for instance, about the education of a man who had so large an influence upon the education of his country,