

primary schools, aid and advise teachers in the nature and method of the instruction given, undertake the examinations in drawing, and supervise all matters pertaining to this particular work. In the smaller districts where the advantages are not so great I would doubly urge such an appointment.

Departmental Assistance.—Capitation is paid upon all teachers' classes in accordance with the Technical Instruction Act. I further recommend a grant of 5s. for each first-year drawing scholarship; a grant of 10s. for each second-year drawing scholarship; a bonus of £2 for each full teacher's drawing certificate; and a grant of £50 per annum towards the salary of the drawing superintendent appointed by each district.

4. ELEMENTARY SCIENCE.

The main objects of this work should be the cultivation of habits of accurate observation and methods of investigation. Children are naturally inquisitive; this faculty in the elementary stages may be encouraged by lessons upon common objects and ordinary surroundings. The study of any isolated section of work should not be commenced in the primary school. There are, of course, many methods of instruction. With a view to giving information to teachers upon this point, I have included (1) the latest syllabus or code instructions issued by the Education Department of England; (2) a syllabus adopted by a section of the London Board schools, on what is known as the "heuristic" method (from the Greek *heurain*, "to find out"), being the antithesis of the "didactic" method; and (3) the syllabus of the Birmingham Board schools. Under the English Education Department elementary science is one of the optional class subjects.

The "heuristic" method is a scheme by Mr. Heller, formerly demonstrator to the London School Board, and now of Birmingham. The system is strongly advocated by Professor Armstrong, Inspector Gordon, of the Science and Art Department, Professor Fitzgerald, of Dublin, and many other eminent educational authorities. With Mr. Heller's permission I give the following extract from a letter of Professor Fitzgerald's upon the subject of the "heuristic" syllabus. He says, "I have had a good opportunity of comparing the methods of science instruction in several different places in England during my recent visit to England in connection with the Commission on Manual and Practical Instruction in Primary Schools in Ireland. I took keen interest in what I saw, and especially in your work in London. I have been most favourably impressed with the methods you are employing, and, from what I saw of its work in the schools, am convinced that it is working out in practice what it is designed to do, and is capable of being introduced into any school by intelligent and well-trained teachers. Your methods are intelligible methods, and can consequently be made the basis of an intelligible system which can control all the methods of the teacher, and give him an intelligible clue for developing the methods to suit the varying circumstances of his school and locality. In that respect it seems to me to have an overwhelming advantage over what I may describe as the hand-to-mouth methods of others." And, finally, "I have been so fully impressed with the advantages and workability of your system that I shall use my endeavours to have this rational system introduced wherever practicable in our Irish schools; and feel no doubt that, wherever any science education is practicable, your system, modified as to its details to suit localities, &c., but unmodified as to its ideals and essential methods, will be found by far the most practicable of any, and by far the most valuable as regards its results." Professor Armstrong, speaking of the same subject at a meeting of the Society of Arts, said "that this system had the advantage of being a method applicable to all subjects. It is only because chemistry offers opportunities which probably no other science offers to the same extent that it is advocated that this subject be largely made use of in schools."

(1.) CODE INSTRUCTIONS ISSUED BY THE ENGLISH EDUCATION DEPARTMENT IN ELEMENTARY SCIENCE (CLASS-SUBJECT, OPTIONAL).

	Standards I., II., and III.			
III. Elementary Science (Scheme A.) or III. Elementary Science (Scheme B.)	Thirty object-lessons on the chief tribes of animals and their habits, on common plants and their growth, and on common inorganic substances and their properties.			
	Thirty lessons on common objects, <i>e.g.</i> — A postage-stamp; the post; money; a lead-pencil; a railway-train. Foods and clothing materials, as bread, milk, cotton, wool. Minerals; natural phenomena, as gold, coal, the day, the year.	Thirty lessons on common objects, such as animals, plants, and substances employed in ordinary life, <i>e.g.</i> — Horse, Sparrow, Roots, Stems, Buds, Leaves, Candles, Soap, Cork, Paper.	Simple principles of classification of plants and animals. Substances used in the arts and manufactures. Phenomena of the earth and atmosphere.	
	Standard IV.	Standard V.	Standard VI.	Standard VII.
III. Elementary Science (Scheme A.) or III. Elementary Science (Scheme B.)	Simple mechanical laws in their application to common life and industries. Pressure of liquids and gases. A more advanced knowledge of special groups of common objects, such as— (a.) Animals or plants, with particular reference to agriculture; or (b.) Substances employed in arts and manufactures; or (c.) Some simple kinds of physical and mechanical appliances: <i>e.g.</i> , the thermometer, barometer, lever, pulley, wheel and axle, spirit-level.	Simple chemical laws in their application to common life and industries (a.) Animal or plant life; or (b.) The principles and processes involved in one of the chief industries of England; or (c.) The physical and mechanical principles involved in the construction of some common instruments, and of some simple forms of industrial machinery.	Outlines of physiology in its bearing on health and work. (a.) Animal or plant life; or (b.) The commonest elements and their compounds; or (c.) The mechanical powers.	Familiar illustrations of applied science: <i>e.g.</i> , the dwelling; fabrics and clothing; food; warming; lighting, &c. (a.) Distribution of plants and animals, and of the races of mankind; or (b.) Properties of common gases; or (c.) Sound, or light, or heat, or electricity, with applications.