

about heights of windows or areas of window-space. In England the Board of Education, in its Building Regulation (1907), Rule 6, clause c, has laid down a foolish rule:—"Skylights are objectionable. They cannot be approved in school-rooms or class-rooms." That perfectly monstrous provision ought to be at once repealed. The universal experience of the textile industries, where adequate lighting of spinning and weaving machinery is a prime necessity, is that no method of lighting is so satisfactory as skylights in roofs specially constructed to receive light from the northern sky.

Hitherto little attention has been paid by either local or central authorities to conditions affecting the lighting of factories and workshops. It is true that the factory inspectors require periodic whitewashing of factories, but that is for sanitary reasons, not primarily to secure better illumination. The Home Office has its regulations as to temperature and degree of moisture required or permissible in the different classes of factories and workshops. Then why not also similar regulations as to the proper amount of illumination? Surely the eyesight of the workers is as well worth protecting from injury as their lungs and their limbs. So far as I am aware, Holland is the only country in which legislation has fixed a statutory amount of illumination in factories, the figure there being from 10 to 15 candle-metre, equivalent, therefore, broadly to the value of 0.9 to 1.35 candle-foot.

Architects are often blamed for deficiencies in the lighting of the buildings they design, perhaps more often for the deficiencies found at night by artificial lighting than for those of the lighting by day. For this the fault rests no doubt largely with the persons who have installed the lighting arrangements, and one must not blame the architect too severely for having been as ignorant as all the rest of the world about the principles of illumination; but henceforward, when once it is known how much illumination is required in the rooms of different kinds, the architect ought in his specification to set down, with appropriate numerical values, what degree of illumination is required in the various parts of his building.

I venture to suggest that it would be a good thing if, in the public interest, our society, or some committee appointed by it, could draw up a model specification, or model clauses for architects to insert in their specifications, in which the proper way of prescribing the requisite amounts of illumination in different classes of cases should be set forth.

Outside all these matters of more public interest, there are topics enough to occupy our society for many months to come. We shall have discussions on several interesting subjects during next spring, and there are many problems awaiting solution. When all else fails us, we can turn to the eternal question of the measurement of colour. We have also the long outstanding problem of the production of light without heat, accomplished in nature by the fire-fly, but unrealised by any artificial lamp. We might turn to discuss special cases, such as the flashing lights of lighthouses, or the special lights needed in the hospital for the detection of rashes or the treatment of disease. Amid such endless ramifications of our subject there is no fear of coming to a premature end of our programme. There is, indeed, abundance of work before us.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—Dr. Baker has been appointed chairman of the examiners for part ii. of the mathematical tripos; Mr. A. Hutchinson, chairman of the examiners for the natural sciences tripos; and Mr. H. W. V. Temperley, chairman of the examiners for the economics tripos, 1910.

Mr. A. E. Shipley has been appointed a manager of the Balfour fund.

Mr. J. E. Purvis has been appointed university lecturer in chemistry and physics in their application to hygiene and preventive medicine for five years.

The Walsingham medal for 1909 has been awarded to Mr. L. J. Wills, for his essay entitled "The Fossiliferous Lower Keuper Rocks of Worcestershire," and a second

medal to Mr. H. H. Thomas, for his essay entitled "The Leaves of Calamites (Calamocladus section), with Special Reference to the Conditions under which they Grew."

It is proposed that a grant of 100*l.* be made from the Worts fund to Mr. J. Romanes towards defraying the expense of a journey to Costa Rica with the object of studying the geology and geography of that country.

THE Earl of Crewe, chairman of the governors of the Imperial College of Science and Technology, will distribute the diplomas, medals, and prizes to the successful students at the Royal College of Science on Thursday next, December 16. Prof. Adam Sedgwick, F.R.S., will deliver an address.

DR. H. A. MIERS, F.R.S., principal of London University, will distribute the prizes and certificates at the Sir John Cass Technical Institute, Aldgate, on Thursday, December 16. There will be an exhibition of students' work and apparatus in the laboratories, workshops, and other rooms of the institute.

A CONFERENCE to discuss the needs of technical education in Burma was held at Rangoon early in November. We learn from the *Pioneer Mail* that Mr. J. G. Covernton, Director of Public Instruction, in opening the discussion, presented a brief sketch of what had been done in the past in the way of technical education. He divided the work of technical instruction into two main groups:—(1) those connected with scientific professions, especially engineering; (2) those connected with ordinary country and home life. He proposed that a central technical school for industrial education in the vernacular should eventually be opened at Insein in connection with the engineering school, and related to all the selected vernacular schools for technical education which may hereafter be established, and that pupils who showed special aptitude for technical training should be drafted to this central school. The instruction should be in the vernacular, and its aim be to provide for a general technical training for hand and eye. For trained pupils who might hope to be skilled artisans in various crafts and industries there should, the director said, be local industrial schools in local industries.

THE report for 1908-9 on the work of the Department of Technology of the City and Guilds of London Institute has just been published. It abounds in interesting information concerning the useful work being accomplished by the department in the way of improving the technical education of the country. At the last examinations held by the department, 23,399 candidates were presented in technology from 404 centres in the United Kingdom, and of these 13,665 passed. By the aid of advisory committees the institute is enabled, the report points out, to promote useful relations between trade organisations and the schools in which artisans and others receive their technical instruction. The institute, too, has a system of inspection of trade classes by professional experts, and during the session under review 107 centres were visited by members of the institute's staff for the examination, inspection, or organisation of classes. The report also states that the independent criticisms from examiners in wholly distinct subjects show that many teachers, while undoubtedly using their best efforts to acquaint the students with the technical details of their trade, fail to obtain good results owing to their giving instruction on wrong lines, paying too much attention to description and too little to the theory of the subject and to the principles underlying the work in which they are engaged. This may be partially due to lack of experience in teaching and failure to realise the difficulties of their students, and in such cases a visit from an inspector, himself an experienced teacher in the same subject, would often do much to remedy the defects, more especially if the visit can be repeated so as to enable the instructor to avail himself of the inspector's experience from time to time in the difficulties that arise. The institute also concurs in a suggestion, made by its inspectors, that if the education authority could send a comparatively inexperienced teacher to visit some of the schools at which successful classes are conducted and see their methods of work, such a visit would amply repay its cost.