

a promising future exists there for agriculture, forestry, fishing and coal mining; and there are large deposits of metals and raw materials for the chemical industry. Long before the outbreak of war, the Soviet Government had made detailed plans for the development of Western Siberia; the War has given a great impetus to the process of industrialization. Many of the factories, colleges and scientific research institutions evacuated to the territory from the danger zones have already returned to their homes, but not without leaving behind important traces of their activities, as well as a proportion of their staffs to continue the work begun in Siberia.

The West Siberian branch of the Academy incorporates the Mining, Engineering and Geology Institute, the Chemicometallurgical Institute, the Power and Transport Institute and the Medical and Biological Institute; Novosibirsk has been chosen as its seat; and it will also have offices in Tomsk and Omsk, as well as in the new industrial towns which have sprung up during the last twenty-five years. Typical of these are Kemerovo (chemical and coal industry), Prokopyevsk (coal), Stalinsk (metallurgical industry and mining) and Barnaul (centre of the Altai region). Prof. A. Skochinsky, a specialist in mining engineering, is head of the newly formed branch.

British Film Institute Summer School

A COURSE on visual education was organized by the British Film Institute at Bangor during August 19-26. Among a wide range of topics discussed, very useful contributions were made by Mr. Geoffrey Bell of the Shell Film Unit who discussed "The Scientific Film" and Mr. Neilson Baxter, of the same Unit, who dealt with "The Documentary Film". Both argued that the scientific, realist approach to a subject so characteristic of the documentary group of film-makers is in essence also the proper characteristic of an educational classroom film, as well as being useful for enlarging the child's general knowledge of his environment. Other speakers were Mr. G. P. Meredith, lecturer in visual education at the University College of the South-West, Dr. Winifred Cullis, who made a plea for an increase in the number of films for teaching physiology, and Lieut. M. G. Bowden of the U.S. Army, who gave the conference an account of the extent to which visual aids were used in America. The conference was attended by Polish, Dutch and Canadian representatives, as well as by English teachers and film-makers.

Crop-cutting Survey of Wheat in the Punjab

PRELIMINARY results have just reached Great Britain of an interesting example of random stratified sampling on the grand scale, devised by Dr. P. V. Sukhatme, statistician to the Imperial Council of Agricultural Research, New Delhi, and carried out by the Department of Agriculture of the Punjab. By sampling a hundred out of the total of nine million acres under wheat, the net out-turn of that crop for twenty-seven of the twenty-nine districts of the Province is estimated at 3,448,700 tons, with a standard error only just over 1 per cent. The cost of the survey scarcely exceeded Rs. 1,000 per district.

Uniformity of practice was obtained by central training of the senior staff concerned in all the details of the experiment, and also by central selection of the 748 villages (about 2 per cent of the total number

available) used for the scheme. These were, for each district of the Province, proportionate in number to the area under wheat, but equally distributed among the tehsils of the district, and randomly within each tehsil. Within each village three fields were selected (since previous experimentation had shown little difference between the variation between villages and that between the fields of a village, and practical considerations of time, labour and cost counselled concentration of fields within a village), and within each field one plot of 1/20 acre (the variation between plots in a field being less than that attributable to either source just mentioned). Selection of the fields in villages and of the plot in each field was by use of random numbers supplied by the centre, which was able to check the process. Harvesting, threshing, winnowing and weighing were normally completed in one day. The final estimate includes adjustments for 'driage' owing to the divergence of this procedure, necessary for accuracy and speed, from the general practice (which allows a week or two for drying between harvest and threshing), and also for the different yields of wheat sown pure or mixed with other crops.

Improved Use of Daylight

Two useful recent publications deal with the more effective use of natural daylight. "The Natural Lighting of Houses and Flats with Graded Daylight Factor Tables", by T. Smith and Miss E. D. Brown of the National Physical Laboratory (London: H.M. Stationery Office, 4d. net), gives guidance in the choice of window dimensions for houses and flats. The penetration of daylight through a window is discussed, and tables are given from which the penetration of daylight for different window dimensions may be assessed. These tables are for daylight factors of 2, 1 and 0.5 per cent respectively. "Natural Lighting", Lighting Reconstruction Pamphlet No. 4 issued by the Illuminating Engineering Society (1s.), deals with the subject in a descriptive manner, and shows particularly the benefit derived from high windows and the suitable planning of buildings. In the most favourable circumstances, a daylight factor of 5 per cent may be attained at the working table, and in no case should the daylight factor be less than 0.2 per cent.

Announcements

MR. R. H. HILL, secretary of the Bodleian Library, has been appointed librarian and secretary to the Trustees of the National Central Library, in succession to Dr. Luxmoore Newcombe, who retires at the end of the year.

BOOKS and prints relating to various States of Central and South America, the West Indies and the Antarctic, as well as some rare old maps are the subject of Catalogue 671, issued by Messrs. Francis Edwards, Ltd., Marylebone High Street, London, W.1. The catalogue includes several rare items: a complete set of the *Challenger* results in forty-one volumes; J. Colnett's "Voyage of Whaling and Discovery" (1793-94), with his manuscript journal of the same date; the manuscripts of several of Cunninghamham Graham's books; Grynaeus' "Novus Orbis", with the rare map of 1532; the first Latin edition of Munster, "Cosmographiae Universalis" (1550); "Purchas his Pilgrimes" (1624-26); Apian's map of America (1520); and Arrowsmith's chart of the Pacific (1798).