Described with accompanying photographs is education for blind and partially sighted children between 7 and 20 years of age in special residential schools in the Soviet Union. Discussed is vocational education in 120 vocational polytechnic schools for the blind and partially sighted from 1st to 11th forms (grades), sanatorium schools from 1st to 11th forms; secondary general day and correspondence schools from 3rd to 11th forms; and specialized schools. Noted are two 9-year general vocational schools for the mentally retarded and blind, a school for the deaf and blind, 1-year preschool groups, and preschools for 3- to 6-year-old children with amblyopia. Given are details about curriculum such as emphasis on fundamentals of science, speech and sensory development, knowledge of life through personal discovery, and work in the Komosol (Communist youth group) at the secondary level. Also discussed are hours of study, transfer policies, health services, and admittance to schools based on visual acuity. Mentioned are stress on work with objects in primary forms, enrichment experiences such as hikes, use of technical devices such as radio and television, and provision for well-lighted study rooms for subjects such as physics and art at the senior form level. Students with special aptitudes are said to attend specialized general vocational schools that emphasize subjects such as music education and mathematics and to later enter into professions. Other students are said to specialize in skilled trades or agriculture (the severely visually handicapped). (MC)
THE ALL-RUSSIA SOCIETY FOR THE BLIND

EDUCATION OF THE BLIND AND PEOPLE WITH WEAK SIGHT IN THE USSR

M. ZEMTSOVA,
professor Scientific-Research Institute of Defectology, the USSR
Academy of Pedagogical Sciences

MATERIALS FOR THE SESSION OF THE EXECUTIVE COMMITTEE OF THE WORLD UNION FOR THE WELFARE OF THE BLIND

MOSCOW—1972
Modern society makes high demands on all-round development of an individual and his educational, labour and polytechnical training. The development of culture, science and technology in the Soviet Union called for compulsory secondary education, perfectioning of its content, methods and teaching technical subjects. Children with poor sight study at special secondary schools which are components of the general system of national education. They are educated and brought up with due account of their specific development of various degree of loss of vision.

Special schools enjoy constant concern of the Soviet government. They are maintained on state funds and are under the Ministries of Education of the USSR, Union republics and their local organs.

Education and upbringing in these schools, just as in general schools, are free from religious influence. In the process of education school instills in the pupils scientific and materialistic outlook.

At schools for blind and for partially blind children study pupils aged between 7 and 19-20, irregardless of their nationality, race, religious beliefs or social standing of their parents. Boys and girls study together.
All schools for blind and partially blind children are, in fact, boarding schools. The free-of-charge upkeep is financed by the state. The responsibility for education of the blind and partially blind children and for creating the appropriate conditions for their education lies with the local organs of public pedagogues with a higher special pedagogical education received at the faculties of defectology of teacher's institutes work at schools for blind and partially blind children.

The teaching of children with defective eyesight is based on scientific principles. The Institute of Defectology of the USSR Academy of Pedagogical Sciences and the departments of defectology of the pedagogical institute are conducting scientific research in special pedagogics and psychology for the blind and those with poor sight.

The general compulsory education in our country also embraces children with defective sight.

To realize the general secondary education and prepare pupils for life and work in the Soviet society a differential network of special schools was set up. They include:

Secondary general vocational polytechnic schools, separate for blind and for children with poor sight, comprising preparatory and from the first to eleventh forms.

Secondary general vocational polytechnic schools of the sanatorium type for children with weak health comprising preparatory and from the first to eleventh forms.

Secondary general day and correspondence schools for the blind and partially blind workers comprising from the third to eleventh forms.

The system of general education schools in the USSR for children with defective sight includes incomplete secondary general education vocational polytechnic special schools comprising preparatory and from the first to ele-
eral type. From pre-school establishments children with defective vision may enter either special schools for children with defective eye-sight or into the first form of a general school provided that their eye-sight allows them to study in the usual conditions. Thus all children with defective eye-sight beginning from the age of seven may receive education and be prepared for life and work in the present-day society at this or that pre-school educational establishment.

There are 120 special general vocational polytechnic schools for children with defective eye-sight in the USSR totalling nearly 20,000 pupils. The extensive network of the special schools for blind and partially blind warranted introduction of differentiated education. A broad network of day and correspondence schools was set up for blind adults so that they could combine work with studies.

The general secondary special school aims at all-round development of personality, giving pupils profound knowledge of the fundamentals of science, moulding in them materialistic world outlook, communist consciousness and morality; it aims at giving them physical, labour and aesthetic education and polytechnic training. The general special school prepares pupils for life, labour, conscientious selection of trade, continuation of education in higher schools and for self education. As distinct from general public school, general special schools for blind and partially blind introduce vocational training by trades based on the general educational and polytechnic approach. The tasks of a school of this kind is to conduct corrective-educational work the aim of which is to prevent, correct and compensate the shortcomings of the organs of touch, speech and of physical development of pupils, to implement medical, preventive and health-improving measures and also to protect and develop partial sight of the pupils.
The secondary school couples its teaching and educational work with life, teaches pupils to understand laws of the development of nature and society, instills in them scientific world outlook.

The structure of the special secondary school envisages education and primary study in the preparatory and in the first to third forms. This corresponds to the amount of knowledge received in the same forms of the general public school. The syllabus of the fourth to ninth forms of the special school corresponds to the general level of the fourth to eighth form of the public school.

All general special schools have preparatory classes for seven-year-old children.

In these classes secondary defects in physical development and in failures of the senses of touch and of speech in children are prevented and corrected by specially directed corrective and educational work. At the same time pupils are being prepared for systematic studies at school; they go over the material of the first class and this allows them to master the syllabus of a three-year primary education course of the public school in four years.

Much attention in the process of teaching in the preparatory class is paid to the developing in children perception, observation, development of speech, thinking activity and in their ability to find their way about. Pupils are taught to think by bringing them in direct contact with objects and processes of surrounding life, by observing phenomena of nature, life and work of the people. And this, of course, envisages independent practical activity of the pupils helping them to develop activity and independence.

Much space in the teaching and educational work is given to Pioneer activities, and in senior forms to Kom-
somol work and the participation of youth in the school self-administration.

To make the teaching and educational work more effective at schools for blind and partially blind children the normal complement for classes is ten to twelve pupils. Each class has its permanent master. The complement for classes in the auxiliary schools for blind and partially blind children is five to seven pupils.

The contingent of pupils with defective sight is rather dissimilar and varies as to the degree, clinical forms and etiology of distortion of vision by the diseases and disturbances of the central nervous system accompanying blindness and partial loss of sight. It should be noted that with years children's blindness steadily decreases due to better medical and preventive help given to children and mothers. Thus in the Russian Federation absolutely blind children in relation to the general contingent of pupils of the special schools for blind children comprised 24 per cent in 1958, 13.6 per cent in 1963 and 6 per cent (in some schools 8 per cent) in 1968-69. In this connection schools for blind children have in the main a complement of pupils with a visual acuity of 0.05 to 0.3-0.5 admitted from the general public schools. There are also changes in the contingent of pupils as regards clinical forms of eye-sight distortion. With every year the number of pupils with the earlier acquired forms of blindness and poor sight decreases noticeably. These children make up individual classes for pupils with poor sight.

The teaching and educational work in secondary special schools is carried out in accordance with the curricula and syllabuses approved by the USSR Ministry of Education. Pupils in schools for the blind study by braille textbooks. Pupils with poor sight study by textbooks with large print and clear illustrations.
### Structure
of the specialised general vocational polytechnic school for blind children

<table>
<thead>
<tr>
<th>Study year</th>
<th>Form</th>
<th>Secondary general vocational polytechnic school for blind children</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>XI</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>X</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>IX</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>9</td>
<td>VIII</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>VII</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>VI</td>
<td>Nine-year general vocational polytechnic school for blind children</td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>V</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>IV</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>III</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>II</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Pre-school education</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The home for the blind children of pre-school age from 3–6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>One year pre-school groups for the blind children 6</td>
<td></td>
</tr>
</tbody>
</table>
## Structure of the specialised general polytechnic vocational school for children and youth with poor sight

<table>
<thead>
<tr>
<th>Study year</th>
<th>Form</th>
<th>Special secondary general vocational polytechnic school for children with poor sight</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>XI</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>11</td>
<td>X</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>IX</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>9</td>
<td>VIII</td>
<td>Junior and senior forms</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>VII</td>
<td>Special nine-year general vocational polytechnic school for children with poor sight</td>
<td>14</td>
</tr>
<tr>
<td>7</td>
<td>VI</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>6</td>
<td>V</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>IV</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>III</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>II</td>
<td>Primary forms</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td>Preparatory</td>
<td>8</td>
</tr>
</tbody>
</table>

### General pre-school establishments
- General pre-school establishments for 3 to 6-year-old children
- General pre-school establishments for 3 to 6-year-old children with defective sight
The curriculum of a secondary special school for blind children has the following maximum obligatory study hours (including vocational lessons, lessons in physical culture and art): preparatory and in the first to fourth forms 24 hours, from the fifth to seventh, 30, from eighth to tenth 32 and the eleventh form has 34 hours a week. Besides, in order to give the pupils more extensive knowledge in physics, mathematics, natural and humanitarian sciences and in order to develop varied interests and abilities in the pupils and to better prepare them for life and work in the field chosen additional hours of optional studies are included in the curriculum of the sixth to eleventh forms (all in all 20 hours a week).

Group and individual 2-hour a week sessions in each class of the preparatory and in forms one to four are envisaged in the curriculum to correct physical inaptitude of the children. In order to correct speech and sensory defects in blind children differentiated group and individual sessions are being held for two hours a week in the preparatory and in the first to third forms and for one hour a week in forms from four to six. The curriculum of forms six-eight also envisages production practicals, housekeeping and housecrafts.

The curriculum of schools for children with poor sight has certain distinctions from that for schools of blind children: in the preparatory and in the first to fourth forms 24 hours a week, in the fifth to seventh forms 30 hours, in the eighth to ninth forms 31, in the 10th 32 and in the 11th 33 hours a week. 13 hours are devoted to optional sessions in each of the seventh to eleventh forms. The curriculum of schools for children with poor sight, just as at schools for the blind, envisages group and individual ses-
sions for the correction of physical, sensory and speech defects and also production practicals.

The blind and partially blind pupils are given a good knowledge in accordance with the syllabus of the general education school. This gives them right to enter higher educational establishments, specialised trade schools and other vocational schools on a par with other students.

Pupils of the special schools have the right to transfer from a special school to corresponding general public school. The secondary general vocational polytechnic school combining general and polytechnic education with production training for this or that concrete trade is, just as the general public school, the basic type of schools for persons with defective sight.

Special schools are complemented by the republican, territorial and regional medico-pedagogical commissions in accordance with the instructions of the USSR Ministry of Education.

These commissions include highly-qualified specialists: school headmaster, children's psychoneurologist, oculist, pedagogue-defectologist, specialist in speech correction, ear-nose and throat specialist, representatives of the public education and public health departments.

Children with a visual acuity of 0.04 in the healthier eye with the correction and with concentric narrowing of the visual field down to 35° or with central scotoma are admitted into schools for the blind.

When there are certain clinical forms of vision disturbance the school for the blind admits children with a visual acuity of 0.05 to 0.08 in the healthier eye (with atrophy of optic nerve, pigment dystrophy of retina and other retinitis, and the yellow spot in cases of malignant and progressive short-sightedness, hydrophthalm-
halmia and other kinds of glaucoma and also in cases of other progressive diseases leading to loss of sight).

Children with a visual acuity within 0.05-0.08 with correction in the healthier eye are admitted into schools for those with poor sight. The ability to read black print point 9 and reading test tables (at a distance minimum 15 cm) is also taken into consideration.

Special schools for the blind and partially blind pupils provide various oral and visual study aids and special technical devices.

Much attention is given to laboratory and practical work, excursions and purposeful observations. In order to promote thinking activity and independence in the pupils, use is made of various logical exercises and problems, the end aim of which is to teach them methods of analysis, synthesis, systematisation of material, determination of definitions, use of theoretical reasonings, and arguments. Graphic, measuring, calculating and cognitive problems are widely used in teaching polytechnic subjects.

Various meteorological and phenological observations help the pupils to acquire comprehensive knowledge. Aesthetic education of the blind and partially blind pupils includes teaching pupils drawing, draughtsmanship, introducing them to arts, painting, sculpture and architecture. To enrich pupils' experience and develop in them sense of observation excursions and tourist hikes are being organised which broaden their horizon. In primary forms lessons are conducted on objects.

Pupils put their knowledge to practice during study sessions in nature rooms, in school workshops, when working on models at a laboratory or when studying ABCs of electrical engineering.

Scientific and technical progress increases the flood of
information. Technical devices are one of the most important means of obtaining information. With their help blind pupils master the fundamentals of science at secondary schools, receive higher education, polytechnic and specialized knowledge and skill. This is a very important factor of the employment of the pupils with due account of their abilities and interests. Special technical devices help to extend cognitive abilities and get to know the achievements of the present-day science, culture and technology, freely find one’s way about at physical culture or sports sessions, when engaged in work or when doing house chores. A place of great importance in obtaining information is occupied by radio and television, widely used in study processes.

In schools for children with poor sight they use optical means of correction of defective vision and a “talking book”.

In senior forms in schools for blind pupils and for those with poor sight a study-room system is introduced. Nearly every school has study-rooms in physics, astronomy, mathematics, chemistry, art, special graphics, literature, history, etc. Pupils receive their vocational training at school’s workshops and in electrical engineering and machine fundamentals study-rooms. All study-rooms have plenty of study aids and special equipment.

Additional lighting of study rooms is provided at schools for the blind pupils and for children with poor sight.

Secondary specialised general vocational polytechnic schools may differ in the ways of training pupils for their life and work, they may give them different qualifications or prepare them for further study at a higher school. For instance, there are secondary special schools with production or musical education, or with classes in mathematics for those who show abilities in mathematics. Very often those two take up mathematics work after school as pro-
grammists, computer operators, while continuing their studies at higher schools where mathematics is the chief subject. After graduating the institute they usually work as lecturers or scientific workers at research institutes.

A certain part of school graduates with poor sight goes to work in various fields of agriculture. Pupils who finish schools where they mostly teach music or special music schools enter on a par with others the Conservatory or are offered work in line with their speciality at various cultural establishments.

Part of the pupils, mainly from schools for those with poor sight, to continue their education enter educational establishments of the general system of trade education in their speciality.

To give blind youths professional training a music school and a school of masseurs have been organised in the USSR. Besides there is a wide range of professional and production training in the system of the societies for the blind.

Graduates of the general and vocational schools find their place in life and in the field of work chosen. A considerable number of them after finishing secondary schools continue their education in higher schools in mathematics, history, philology, foreign languages, music, law and so on.

After finishing higher schools blind people work in their fields as teachers, scientific workers, lawyers, writers, economists, computer operators and chiefs of computer centres, special shops and enterprises.

Among the blind society members are many wonderful people who have perfected their abilities to the full: 28 doctors and 100 candidates of science. This all goes to signify the effectiveness of education, upbringing and preparing blind and people with poor sight for life and work.
A considerable number of graduates of secondary schools work as skilled workers at modern industrial enterprises manufacturing various and complicated articles.

The system of education of blind and of people with poor sight changes and improves with the demands of life. The past 10 years saw a considerable rise of the educational level of the blind and people with poor sight. In principle the transition to incomplete secondary and secondary education has been effected. It can be seen from the above cited curriculum that the education in special schools became richer in content. The blind and people with poor sight receive knowledge in full accordance with the syllabus of the general public 8- and 10-year secondary school. The study of art, special graphics, electrical engineering, fundamentals of machines has been also introduced. The last two subject are part of the vocational and production education.

Higher intellectual demands to production work in special schools radically changed methods, content and organisation of labour training. New profiles of industrial work have been introduced. Optional study sessions at pupils' choice have been started for developing their abilities, more extensive study of the fundamentals of sciences and special technical knowledge. For blind children and those with poor sight with accompanying diseases new types of special schools (auxiliary school, a school for the deaf-and-blind) have been set up. In the system of the Ministry of Social Security schools were opened for restoring working capacity in the blind, schools engaged in labour and medical rehabilitation of the people with the loss of sight.

All the work of the development of the system of education, improvement of content, methods and organisation of study processes was the result of the great concern about special schools displayed by the Soviet state and also of the
Plotting the weather change diagram from meteorological observations data.
Practical session in physics at a school for the blind. Determination of level of liquid in connecting vessels with the help of the phonograph.

Geography session at the consultation room of the Moscow day and correspondence school for the blind adults.

English lingaphone session at a school for students with poor sight.
At a lesson in draughtsmanship
Learning German at a TV class in the Sverdlov school for the blind
Work with a stereometric designer's set at a school for the blind.

A reading machine (right) for teaching blind to read ordinary print and a machine for programmed studies (left) used at schools for blind at the lessons in mathematics, Russian and Foreign languages.

Operating a metal-cutting lathe at training shop.
At a session in electrical engineering. Assembling a valve receiver.

Optical means of vision correction developed at the Sverdlovsk research laboratory of the Research Institute of Dioptry.

Chemistry lesson in a school laboratory.