

SARVA SHIKSHA ABHIYAN

DISTRICT ELEMENTARY EDUCATION PLAN

EDUCATION FOR ALL



Annual Work Plan
2003-2004

District
LUDHIANA



ਪੜ੍ਹੋ ਸਾਰੇ ਵਧੋ ਸਾਰੇ

Sarva Shiksha Abhiyan Authority

PUNJAB

VISION STATEMENT-2020

Education is a fundamental human right. It is the key to sustainable development, peace and stability of the state and the country.

We hereby commit ourselves to the attainment of the following goals:

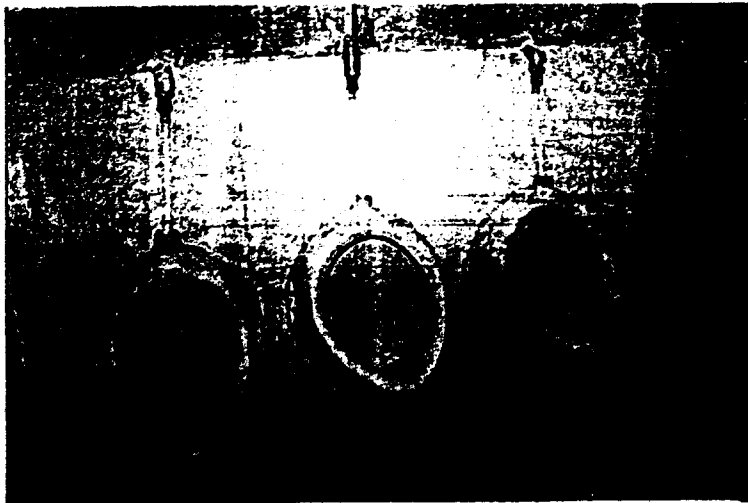
- i) expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged sections of the society.*
- ii) ensuring that by 2020 all children of 6-18 age, particularly girl children vulnerable, deprived and destitute children, children belonging to difficult and backward areas, have access to and do complete secondary education of good quality.*
- iii) ensuring that learning needs of either 'all people' or 'children' are met through equitable access to appropriate learning and life skills.*
- iv) eliminating gender disparities in all levels of education by 2010, with a focus on ensuring girl's full and equal access to and achievement in school education of good quality.*
- v) improving all aspects of the quality of education and ensuring excellence of all so that recognised and measurable learning outcomes are achieved by all.*
- vi) ensuring that education is fully related to real life and environment and in consonance with the world outside the school.*

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SSA through Pictures

Govt. Elementary School Gobind Nagar
Distt. Ludhiana (Pb.)

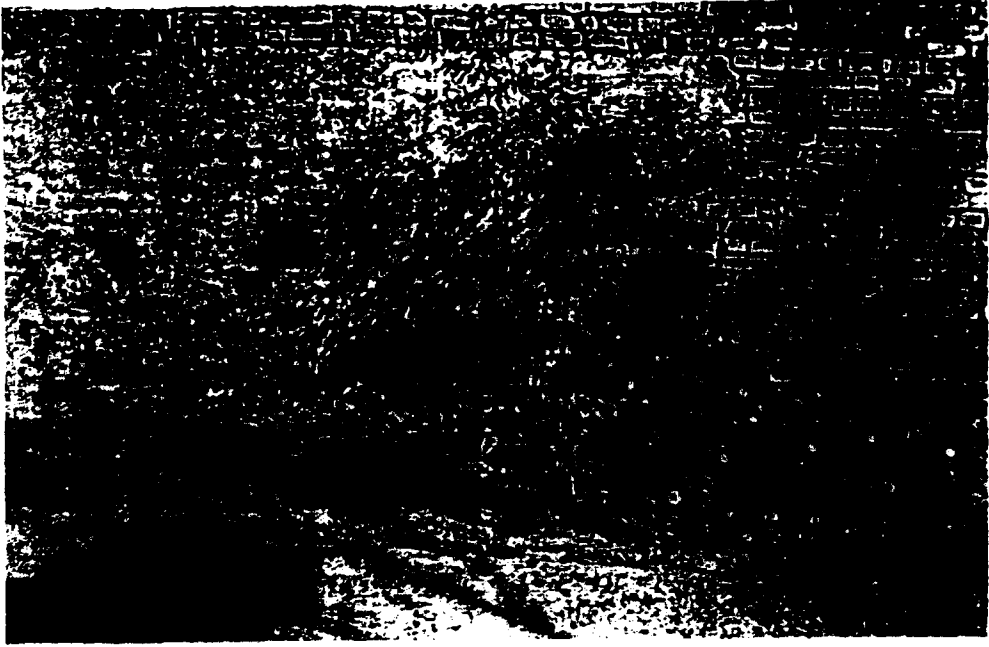




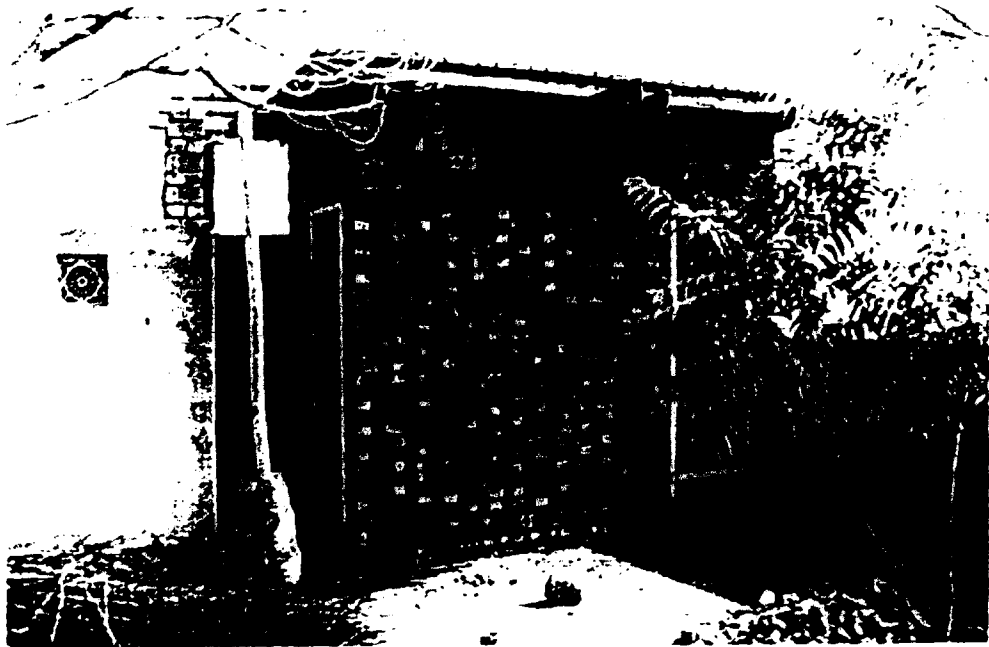
Govt. Elementary School Fangla
Block Mangat-I
Distt. Ludhiana (Pb.)



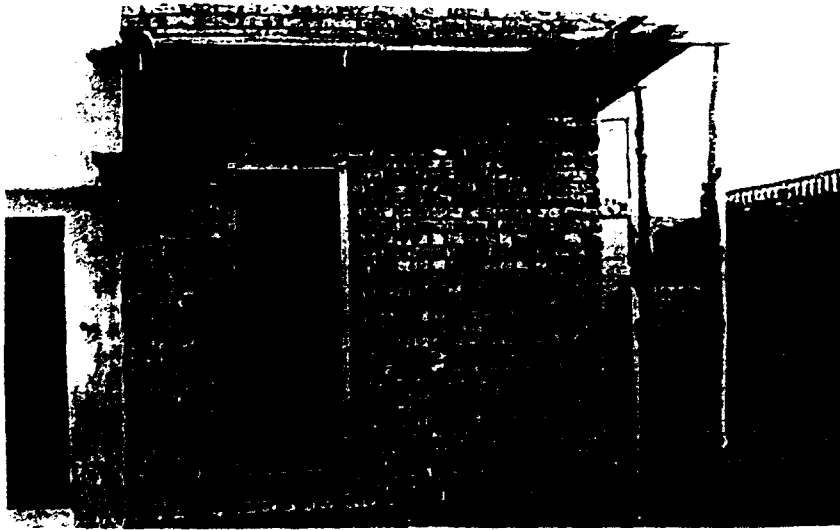
Govt. Elementary School Devatwal
Block Ludhiana-II
Distt. Ludhiana (Pb.)



Govt. Elementary School Malikpur Bet
Block Mangat-I
Distt. Ludhiana (Pb.)



Govt. Elementary School Changan
Block Mangat-I
Distt. Ludhiana (Pb.)



**Govt. Elementary School Isseywal
Block Mangat-I
Distt. Ludhiana (Pb.)**



**Govt. Elementary School Malikpur Bet
Block Mangat-I
Distt. Ludhiana (Pb.)**

**District Profile
and
Statistics**

Brief Profile of District Ludhiana

Location

Ludhiana is the most centrally located district, which falls in the Malwa region of the State of Punjab. For administrative purposes it has been placed in the Patiala Division. It lies between north latitude $30^{\circ}-34'$ and $31^{\circ}-01'$ and east longitude $75^{\circ}-18'$ and $75^{\circ}-20'$. It is bounded on the north by the river Satluj, which separates it from Jalandhar district. On other sides it shares common boundaries with Rupnagar and Fatehgarh Sahib district in the east; Ferozepur and Moga districts in the west; and Sangrur district in the south and Nawanshahar district in the north, respectively.

Origin of Name

The district takes its name from Ludhiana city, which serves as the seat of district headquarters. Ludhiana city was founded in the times of Lodi dynasty which ruled at Delhi from 1451-1526 AD. The legend goes that two Lodi chiefs Yusuf Khan and Nihang Khan were deputed by Sikandar Lodi (1489-1517 AD) to restore order in this region. They camped at the site of present city of Ludhiana which was then a village called Mir Hota. Yusuf Khan went across the river Satluj in Jalandhar Doab to check Khokhars, who were plundering the Doab and made a settlement at Sultanpur (now in Kapurthala district), while Nihang Khan stayed back and founded the present city at the site of village Mir Hota. The new town was originally known as Lodiana, which means the town of Lodis. The name later corrupted to the present name Ludhiana.

Area

Ludhiana district has an area of 3767 sq. km., which is 4th largest district in the state (*Annexure-I*).

Climate

The climate of the district is characterised by dryness except in the brief spell of monsoon season, a very hot summer and a bracing winter. The cold season is from the middle of November to the early part of March. The succeeding period up to the end of June is the hot season. July, August and the first half of September constitute the south-west monsoon. The period from mid-September to about middle of November may be termed as post-monsoon or transitional period.

Temperature increases rapidly after February. June is generally the hottest month. Hot and scorching dust-laden winds blow during summer season and on individual days the day temperature may reach above 45° C. With the onset of monsoon in early July there is appreciable drop in the day

temperatures but the night temperatures are nearly as high as the day temperatures. Due to the presence of increased moisture the weather is sultry and humid and the days are quite uncomfortable after about mid-September the night temperatures drop appreciably. But in the day temperature the decrease is not rapidly. From about November, however both the day and night temperatures decrease rapidly till January, which is the coldest month. Rains are experienced in the months of January and February due to western disturbances, which cause appreciable drop in temperatures, which may touch the freezing point on some days.

The rainfall in the district increases from South-West towards the North-East. About 70 percent of the rainfall is received during July to September. The rainfall during December to March accounts for 16 percent of the total rainfall. The remaining 84 percent rainfall is received in other months of the year. In 2001-02, the district received annual rainfall of 621.4 mm (*Annexure-I*).

Topography

Ludhiana district is centrally located in the Punjab plain region, which is marked for its flatness and featurelessness. The topography of the district is a typical representative of an alluvial plain and it owes its origin to the aggradational work of the Satluj. The alluvium deposited by this river has been worked over by the wind, giving rise to a number of small sand dunes and sand mounds in this otherwise level area.

In the Ludhiana plain, the elevation ranges from about 268 meters in the east to about 216 meters in the west. Thus the slope of the land is from east to west at the gentle gradient of about 2 feet in a kilometers.

For a broad understanding of its relief the district can be divided into the following parts;

a) The Floodplain of the Satluj

The Satluj makes an extensive floodplain along its 96 kilometers course in the North of the district. This covers an area of about 600 square Kilometers, which accounts for about 16 percent of the total area of the district and is locally known as Bet. Most of this tract is between the Satluj and its tributary, the Budha Nala, and runs parallel to the master stream for almost the whole of the length of the district. The Satluj floodplain does have its extension even south of the Budha Nala. The floodplain is the low-lying area, which has swampy condition in parts and possesses somewhat undulating topography. It is the widest in its eastern half (about 11 kms.) and gradually narrows down towards the west (about 5 kms.) prior to the construction of the Bhakra Dam over the Satluj in 1952 and the opening of the network of canals in 1954 the whole of the plain was flooded by the river during the rainy season. The damming of the Satluj had a profound effect in its alleviation and erosive

power. The flood plain is now practically free from floods, except for a narrow strip of land along the river, which is locally called as Mand area.

There is an extensive reclamation of cultivable land in the flood plain. Thus, the floodplain area of the Satluj is further divisible into two parts; (i) The Mand area (inundated area in high flood) and (ii) the flood free floodplain, which has been reclaimed for agricultural purposes.

b) The Upland Plain

The upland plain is locally known as Dhaiya. It accounts for about 84 percent of the total area of the district. It lies at a general elevation of about 243 meters above main sea level and has a gentle slope from the east to the West. The upland plain is separated from the flood plain by a distinct though low scarp, which varies in its elevation from 1.5 meters to 6 meters. In its orientation the scarp parallels the Budha Nala. The most distinguishing feature of this upland plain is its characteristic flatness. However, there were number of sand dunes and sand mounds varying in elevation from 1-5 meters to 9.6 meters and in length from a few meters to about 200 meters. Scattered over the area the sand dunes find a relatively high concentration along the scarp between the floodplain and upland plain in Jagraon tehsil and near Samrala, Machhiwara, Halwara and Sidhwan. The availability of better irrigation facilities has considerably reduced the occurrence of sand dunes throughout the district.

Rivers and Drains

The Satluj and its tributary, the Budha Nala, constitute the chief hydrographic features of the district. A brief description of these is as follows:

River Satluj

It takes its origin from Mansarovar Lake in Tibet (China). After flowing through Himachal Pradesh territory, it debouches from the Shivaliks just above Rupnagar, some 32 km. east of the boundary of Samrala tehsil. Then it flows due west along the top of the district for some 96 km. and turns, as it leaves Jagraon tehsil, slightly to the north towards its junction with Beas at Harike. During its journey along the district, it maintains an east-west direction. It has been a devastating river during its flooding fury. The Satluj has experienced a westward drift during recent times. The old towns and villages of Bahlolpur, Machhiwara etc. were built on its banks. The river had since been dammed at Bhakra, which has considerably checked its flooding menace in the district.

Budha Nala

Immediately under the high bank along the old course of the Satluj runs a perennial stream called Budha Nala, which takes its rise near Chamkaur Sahib in Rupnagar district, and enters the district near Bahlolpur. It runs parallel to Satluj on its south for fairly large section of its course in the district and ultimately joins Satluj at Gorsian Kadar Baksh in the north-western corner

of the district. It is a flooding stream during the rainy season but in the dry season it can be crossed on foot at certain points. Ludhiana and Machhiwara are situated to the south of the Budha Nala. The water of the stream becomes polluted after it enters Ludhiana city, unlike in the past when it used to be quite clear throughout its course in the district.

Present Jurisdiction

The district was carved out as a separate district after the annexation of the Punjab by the British in 1849 and practically assumed its present dimensions in 1850, the earlier portion consisted of the estates belonging to Jind State, which lapsed in 1835 on the death of Raja Sangat Singh. The district then constituted of 4 tehsils viz., (1) Ludhiana, (2) Pakhowal, (3) Samrala and (4) Jagraon. The arrangement continued as such upto 1866.

In 1866 Pakhowal tehsil was split up and Parganas of Pakhowal, Gangrana and Malaudh were added to Ludhiana tehsil, whereas Parganas of Akalgarh and Bassian were added to Jagraon tehsil. This change resulted in the constitution of 3 tehsils viz., (1) Ludhiana, (2) Jagraon and (3) Samrala.

In 1956 under the Absorption of Enclave Order, 1950, 63 villages of Sirhind tehsil were merged with Samrala tehsil. In 1959 village Bahadurgarh was transferred to Malerkotla tehsil of Sangrur district.

On 12th November, 1963 Payal sub-tehsil (minus 14 villages) of Sirhind tehsil of Patiala district were transferred to Samrala tehsil. Also 10 villages of Payal tehsil were transferred to Samrala tehsil. On 21st December, 1963 village Hazurgarh of Payal sub-tehsil (in Ludhiana tehsil) was exchanged with village Sirthala of Malerkotla tehsil of Sangrur district.

On 26th December, 1979 Samrala tehsil gained 6 villages from Balachaur tehsil of Hoshiarpur district.

On 10th September, 1979 a new tehsil of Khanna was carved out as the 4th tehsil of the district. This new tehsil comprised Payal sub-tehsil of Ludhiana tehsil, Khanna sub-tehsil and 21 villages of Samrala tehsil.

Presently Ludhiana district is sub-divided into 7 tehsils, (1) Ludhiana East, (2) Ludhiana West, (3) Khanna, (4) Samrala, (5) Jagraon, (6) Payal (7) Raikot. The district is constituted of 924 villages and 12 towns (including 1 census town). Further the district is divided into 12 Community Development Blocks viz., (1) Ludhiana-East, (2) Ludhiana-west, (3) Dehlon, (4) Pakhowal, (5) Doraha, (6) Samrala, (7) Machhiwara, (8) Jagraon, (9) Sidhwan Bet (10) Sudhar (11) Raikot (12) Khanna (*Annexure-I*).

Major Characteristics of the district

Land Utilisation

During the year 1990-91, the geographical area of the district was 368 thousand hectares. Out of this 10 thousand is under forests, which are mainly found along the river banks. An area of 48 thousand hectares (approximately) is put under non-agricultural use, whereas another 5 thousand hectares is current fallow land. There are 305 thousand hectares of net area sown in the district, which works out to 83 percent of the total area. Out of 305 thousand hectares of net area sown, 300 thousand hectares are sown more than once. Thus the total cropped area of the district in 2001-2002 works out to 605 thousand hectares (*Annexure-I*).

Agriculture

The land owners cultivate their land themselves. This system is known as Khud Kasht (self cultivation). Some times the land is leased out to other farmers/persons who cultivate on "Batai" (Share Cropping) or Theka (contract). The former is payable in kind as a fixed share, which is usually half of the crop. The contract, however, is payable both in cash or kind depending on the convenience of the contracting parties. There were other systems prevalent in the past, which are in disuse of late. Since there are plenty of tractors available for various agricultural operations people prefer hiring services from tractor owners on cash payment at the prevalent rates for various agricultural operations. This has greatly facilitated the farmers in completing various agricultural operations in time.

Agriculture provides the single largest source of employment and livelihood in the district as this employed 34.2 percent of total main workers in the district according to the 2001 Census. The percentage of workers engaged in agriculture has, however, shown appreciable decline during the 2000-2001 decade as against 36.67 percent (cultivators 20.00 percent and agricultural labourer 16.67 percent) in 1991 Census. It has decreased to 19.8 percent (11.7 percent cultivators and 8.1 percent agricultural labour).

There are two principal crop seasons Kharif (sawni) and Rabi (Hari) in the district. Both the seasons are equally important but area wise Rabi is more important of the two as it reported 310 thousand hectares against 294 thousand hectares reported in Kharif in the year 2001-2002. Out of 605 thousand hectares cultivated area the area under food and non-food crops is 531 thousand hectares and 74 thousand hectares respectively. The major and minor crops during Kharif season are; paddy, maize, groundnut, sugarcane, cotton, pulses, chillies etc; whereas wheat, gram, barley, potatoes, oilseeds are the major and minor crops of the Rabi season. Among the food crops important ones are; wheat, paddy and maize, which account for 258 thousand hectares, 239 thousand hectares and 4 thousand hectares of cultivated area, respectively. Sugarcane with an area of 6.6 thousand hectares is another important crop.

The average yield of wheat in the district during 2001-2002 was 5169 kg. per hectares, which is the highest in the state for any district and compares favorably with the best areas in the world. The average yield of paddy was 3947 kg. per hectare which is the second highest, the highest being in Fatehgarh Sahib district (4162 kg. per hectares).

The district has an area of 1174 hectares under various types of fruits and orchards during 2000-2001 and ranked 110th in the state. Among the fruits guava has the largest area (373 hectares), followed by mangoes (215 hectares).

The district had an area of 10795 hectares under vegetables in the year 2001-2002. Out of this area 5810 hectares was under potatoes, 155 hectares under onion and remaining 4830 hectares under other vegetables. In the case of other vegetables the area under winter and summer vegetables was 1869 and 2961 hectares respectively.

The use of green and organic manures and chemical fertilizers are increasingly being used in the district. The district consumed 129 thousand tones of chemical fertilizers (NPK), out of these 97 thousand tones was Nitrogenous (N), 29 thousand tones Phosphatic ($P_2 O_5$) and 3 thousand tones was Potassic.

Irrigation

There were times when 82.5 percent of the total irrigated area was served by the wells through Persian wheels, Dhenkies and Charasas. Also canal irrigation could not gain popularity among the cultivators of the district due to the fact that canal water supply was irregular and inadequate. But things have since changed and there is ever increasing hunger for water for irrigation, preferably for sub soil water through tubewells. The government has also succeeded to large extent in meeting the legitimate requirements of the farmers. It was the excellent rapport of Agriculture department with the farmers which made possible the green revolution in this district.

The canal irrigation was started in the district with the opening of Sirhind canal on November 24, 1882. The canal was taken out from Ropar headworks. Originally the Sirhind canal had a capacity of carrying 8,000 cusecs of water (It had a width of 60 meters and depth of 3.45 metres). But its remodeling was completed in 1953-54 as a result of which it carried a discharge of 12,625 cusecs of water during Kharif and 10,237 cusecs of water during Rabi (width was increased to 69 meters from 60 meters and depth increased to 4 meters from 3.45 meters). The Sirhind canal has three main branches in the district: (1) Sidhwan Branch, (2) Abohar Branch and (3) Bathinda Branch. Besides, some area is also irrigated from the Samrala distributory and Khanna distributory of Bhakra Main Line, which takes off from Nangal Dam in Rupnagar district.

In the matter of irrigation facility this district is well placed. In the year 1990-91, the net area irrigated was 2,97,200 hectares (canal irrigated 24,500 hectares and tubewell and well irrigated 2,72,700 hectares) which increased to 3,04,200 hectares (canal irrigated 10,200 hectares and tubewell and well irrigated 299,200 hectares) in the year 2001-2002 (*Annexure-I*). The drop in canal irrigated area during the decade 1991-2001 shows that canal irrigation is still losing popularity in this district due to fear of water logging. Further the percentage of net area irrigated to net area of sown has shown an increase from 90.6 percent in 1990-91 to 100.0 percent in 2001-2002. In terms of gross area irrigated the area shows increase from 599,700 hectares in 1980-81 to 605,000 hectares in 2001-2002. Likewise the percentage of gross area irrigated to total cropped area has recorded increase from 99.8 percent in 1980-81 to 100.0 percent in 2000-2001.

The figures in the preceding paragraph shows that increase in irrigated area has been possible due to the tapping of sub-soil water for irrigation. Even though, there are some diesel-operated tubewells yet the majority of the tubewells are electricity operated because the later are cheaper in operational cost.

Animal Husbandry

Livestock are the backbone of the peasantry. They not only supply the motive power for various agricultural operations but also provide milk and other by-products and thereby help in augmenting the income of the farmer. Animals, especially cattle, play an important role in the economy of the district. Animal husbandry therefore, is an integral part of the agriculture in the district.

According to 1997 livestock census there were 270,000 cattle and 58,610 buffaloes in the district. There were 9,18,800 total animals of various kinds in 1990 compared to 8,33,400 in 1977. Thus there is an increase of 85,400 animals during the period 1977-97 in the district.

The number of poultry birds has recorded a fantastic increase from 6,31,900 birds in 1977 to 25,63,100 in 1997. This has been possible due to the development of poultry farming in the district. Not only there is increase in the number of poultry farms but their size and scale has also improved.

The district is quite rich in fisheries resources. The Satluj, Budha Nala and the canals are the main sources of fish in the district. The important species of fish found in the district are: Rohu, Mahasheer, Catla, etc. In the year 2001-2002 an area of 817 hectares was stocked with fingerlings. In the year 2002 there was one Fish Seed Farm and one Fish Nursery working in the district.

A milk plant with 4 chilling centers with a capacity to process 4,00,000 litres of milk and milk products was working in the district in the year 2001-2002. It has enabled the farmers and marginal farmers to make handsome income by selling milk to various milk collection centers in the district. There are 112 Veterinary Hospitals and 136 permanent outlying Dispensaries & Insemination Units in the districts.

Industry

In the field of industry, Ludhiana District is renowned for small scale industries not only in Punjab but also throughout India. In fact, Ludhiana city is called "Small Scale Industrial Capital of India" owing to its premier position in hosiery manufacturing, engineering goods, cycle and sewing machine industry. It is also called "Manchester of Punjab" as it has come to occupy top position on industries in the State.

About two centuries back, Raikot and Kila Raipur only counted for few industries. But around 1830 woollen industry made a start at Ludhiana due to the migration of Kashmiri artisans, who manufactured woollen shawls, chadars, Namdas etc. The local Muslim artisans manufactured lungis and Patkas at Bahlolpur. The Khatri of Machhiwara specialised in the manufacture of gur and Bura. Jagraon later specialised in cotton ginning and wheat flour milling. Sirkis. Ivory bangles and Desi Juti were specially of Ludhiana. Later Khanna came to occupy an important place in cotton ginning, oil pressing and iron re-rolling mills. The stationing of troops at Ludhiana gave a fillip to the development of industries. Woollen shirting known as 'Ludhiana Shirting' earned a name throughout India. In the beginning of the present century knitting machines were introduced which started manufacture of gloves and socks at Ludhiana. The advent of 1st world war resulted in the development of casting and foundry industry. Gradually handlooms were substituted with powerlooms, which rejuvenated the hosiery and textile industries. Whereas world war II gave an impetus to the development of industries. Partition of the sub-continent gave a rude shock. There was complete migration of muslim population, which formed the main labour force and skilled artisans but the vacuum has since been filled by various efforts of the government.

The industries can be divided into following 3 main categories: (1) Large scale (2) Small scale and (3) village and cottage.

The large scale industries are: (1) Woollen manufacture (2) Cycle and cycle parts (3) Steel re-rolling (4) Machine Tools (5) Automobile parts (6) Diesel Engine and parts (7) Motor Cycle (8) Hosiery needles (9) Nylon and staple spinning (10) Gas (Oxygen) (11) Measuring tapes.

The small scale industrial units are: (1) Agricultural Implements (2) Dyeing (3) Washing and Finishing (4) Calico Printing (5) Nuts and Bolts (6) Electrical goods (7) Cotton ginning (8) Plastic goods (9) Paints and varnishes

(10) Umbrella ribs (11) Radio assembling (12) Surgical Instruments (13) Rubber goods (14) Stationery articles (15) Spray pumps (16) Steel furniture etc.

Some of the present day village and cottage industries are: (1) Handloom weaving (2) Leather and Hides tanning (3) Shoes and leather goods manufacture (4) Kohlu (Oil pressing) (5) Baan making (6) Gur and Khandsari etc.

In 2002 there were 4543 registered factories in the district, out of which 4450 were operational. These employed 152430 workers on an average (*Annexure-I*).

For the smooth growth of industries and quality of various products, locally manufactured, the government has set up various institutions which are:- (1) Small Industries Service Institute—Established in 1956 at Ludhiana, (2) Quality Marketing Centre for Textile Goods—Amalgamated in June 1964 from Quality Marketing Centres for (i) Hosiery Goods and (ii) Quality Marketing Centre for Dyeing and Printing established as far back as 1956, (3) Quality marketing Centre for Engineering goods—Established in 1962 at Ludhiana, (4) Government testing and Finishing Centre at Ludhiana, (5) Government Textile Finishing Plant at Ludhiana, (6) Mechanical Engineering Research and Development Organisation, Ludhiana—Established in 1965. It is one of the three such units, other two being at Madras and Poona, (7) Food Technology Research Centre, Ludhiana—Established in 1965, (8) Ludhiana Local productivity Council, Ludhiana, (9) Government Institute of Textile Chemistry and Knitting Technology, Ludhiana, (10) Government Industrial School for Boys, Ludhiana and (11) Government Industrial School for Girls, Ludhiana.

Electricity

Electricity has come to be known as an index of the prosperity in any region. Ludhiana was for the first time electrified in 1933. It was supplied power from Joginder Nagar Power House (now located in Mandi district of Himachal Pradesh). This arrangement continued up to May, 1955 when Ludhiana switched over to Ganguwal Power House.

In the year 2001-2002 Ludhiana district consumed 4161.13 Million units of electricity, which was 21.27 percent of the total state consumption (*Annexure-I*). Thus the district ranks 1st in consumption of electricity. Out of 626100 house -holds, 497369 were using electricity in 2002. The percentage works out to 79.43 percent.

The district is a net consumer of electricity as there is no power generating station in the district. The demand for power is more than the supplies available.

Minerals and Mining

The only mineral produce of the district is Kankar, which is quarried in many places and is found in sufficient quantity at many convenient sites that there is no difficulty in obtaining supply for metalled roads and for lime. Saltpetre (shora) used to be made in a few villages, but the manufacture has been stopped under new regulations.

Communications

A good network of roads, railways, bridges and other means of communications is an essential prerequisite for the development of any area. This equally applies to Ludhiana district. All parts of this district are well connected by an efficient network of roads and railways. However, the main hurdle is posed by river Satluj which serves as a natural barrier in the north.

Ludhiana district falls under the Ferozepur Division of Northern Railway. It is connected with important places within the state and outside. The following rail lines pass through this district:- (1) Amritsar--Ambala Rail Line, (2) Ludhiana –Ferozepur Rail Line, (3) Ludhiana –Dhuri—Jakhel—Hisar Rail Line

The district headquarters has no direct rail link with State Capital i.e. Chandigarh, inspite of long demand by the people. Understandably the survey has long been completed and construction of railway line has begun in 2002.

The district has an efficient network of roads. Out of a total road length of 4020 km.(maintained by PWD, B&R) in 2000-2001 154 km. is classified as National Highway No. 1 passing through the district and the remaining 3866 kms. as Provincial Highways. At the partition of the country in 1947 there were only 268 km. of road length maintained by PWD B&R. As regards facilities of roads in the district we find that during 2001-2002 there were 159 km. of roads per 100 sq. km. area and 198 km. of roads per lakh of population, and 100 percent villages were linked by roads.

There is a bridge over river Satluj at Phillaur, which connects this district with Doaba region. From Majha tract the district is approachable via Harike Pattan barrage bridge. District is approachable from Kapurthala also (Sultanpur Lodhi Side) via Harike barrage bridge.

During 2001-2002, there were 397 post offices, 43 Telegraph offices, 113 Telephone exchanges and 4630 Public call offices in district (*Annexure-I*).

Trade and Commerce

Since olden times Machhiwara was the main center for export of gur and bura. The local Muslim labour, however, migrated to Pakistan in 1947 and the curtain fell on this trade in Machhiwara. Khanna and Jagroan were good

markets for wheat and cotton, which were exported to other parts of the State and the country and even exported to European countries. Later, consequent upon difficulties faced by the farmers, the cotton cultivation declined and groundnut cultivation picked up around Khanna and Samrala town, however, emerged as the biggest market for groundnut in the district. The local products were made use for the manufacture of vegetable oil and cotton ginning industries in the district, especially around Khanna. Ludhiana specialized in hosiery items and woolen/ pashmina shawls. During the world wars acute shortage was felt for various types of cloth. Ludhiana specialized in Khaddar and Gabrun (coarse shirting), which was exported to other places. Thus the district hummed with economic activity and it emerged as a leading district. After partition the district occupied a distinctive place as a center of production, trade and commerce. It also occupied important position in banking. The establishment of Ludhiana Stock Exchange (LSE) leaves no doubt about its distinctive position in trade and commerce and industry. Some describe Ludhiana as the financial capital of the State.

This district has also emerged as a lead district in agriculture. Earlier Ludhiana, Jagraon, Raikot, Mullanpur, Bahadurgarh, Khanna, Samrala and Doraha were considered important markets of this district.

The trade and commerce is mostly in private hands. However, there is a District Wholesale Cooperative Marketing and Supply Society at Ludhiana. It does not undertake trading but supplies consumer goods, such as kerosene, soaps, fertilizers, implements, seeds, insecticides etc. to the marketing societies. In 2000-2001 there were 11 cooperative marketing societies functioning in the district. Besides, there were 8 consumer societies in the district. Their main aim is to ensure equitable distribution of various kinds of articles to the consumers at competitive rates. A network of fair price shops was also opened in the district after introduction of State Trading w.e.f. 1959. There were 129 fair price shops in operation in the district as on 31st March, 1966. The number has increased substantially. In 2000-2001, total number of co-operative societies was 2019 (*Annexure-I*).

Banks have made significant contribution in the development of trade and commerce in this district. As on 31st December 2000 there were 35 branches of State Bank of India, 30 branches of State Bank of Patiala, 54 branches of Punjab National Bank, 55 branches of Cooperative Banks and 241 branches of other banks.

Forestry

The area under forests has increased from 89 sq. km. in 1980-81 to 100 sq. km. in 2001-2002 (*Annexure-I*). In terms of percentages the forests occupied 2.66 percent of total area of the district in 2001-2002 against 2.31 percent in 1980-81. This shows slight improvement in forest area in the district.

The break up of the forest areas in 2001-2002 is: 1Sq. Kms Reserved Forests, 74 Sq. kms protected forests and 25Sq. kms unclassified.

Medical and Public Health

The Ayurvedic system of medicine is being practiced in the district since times immemorial. The Unani system was introduced during the Mohammedan rule. The Vaid and Hakims contributed in treating the patients and winning their confidence. The two systems gained popularity due to their lesser cost and easy availability. But the indigenous systems suffered due to lack of patronage of the government during the British times when allopathic system received all types of facilities and government patronage. The homoeopathic system of medicine had a late introduction and is catching up fast. Of late the government is providing all types of facilities for the development of indigenous as well as foreign systems. The quacks and sianas still wield some clientage in cases of mental diseases and bone-fracture, respectively, but their popularity is on the wane.

The State Government has opened up chain of hospitals and dispensaries throughout the district. Even the private charitable trusts have come forward and opened hospitals and dispensaries for the amelioration of sufferings of the humanity. The district can boast of two medical colleges with attached hospitals (Christian Medical colleges and Hospital, and Dayanand Medical College and Hospital) at Ludhiana. Both institutions have been vastly expanded and improved in all respects since their inception. As on 1st April 2002, there were 208 medical institutions (Hospitals, Public Health Centres, Dispensaries, etc.) in the district. Out of these 148 and 60 were in rural and urban areas, respectively. As regards ownership 190 were owned by the state Government, 11 were owned by local governments and the remaining 16 were run by the voluntary organisations. Further out of 208 medical institutions 28 were hospitals (10 rural, 18 urban), 31 PHCs (30 rural, 1 urban), 149 dispensaries (108 rural, 41 urban). In addition to the above institutions there were 36 Ayurvedic, 4 Unani and 11 Homoeopathic institutions (*Annexure-I*).

The scheme to supply protected drinking water to the identified water scarcity villages in the district was tardy as out of 453 identified as water scarcity villages, protected drinking water schemes were commissioned in 305 villages only. Thus much remains to be done in this respect.

Education

According to Dr. Leitner there was not a mosque, a temple, Dharamshala that had not a school attached to it, to which the youth flocked chiefly for religious education. There were also secular schools frequented alike by Mohammedans, Hindus and Sikhs in which Persian or Lande were taught. The state of education in Ludhiana district in the middle of the 19th century was both antiquated and backward. According to the Ludhiana Settlement Report of 1853 there were some sixty schools where the children of the mercantile class

received education. According to 1881 Census there were 8,580 students (4,235 in Government/aided schools, 4,345 in private schools).

The first government high school was opened at Ludhiana on 27th October, 1864. The district was in the forefront of education. There has been gradual increase in the number of schools and students over the years.

The number of educational institutions as on 30th September, 2002 in the district were: one University (Punjab Agricultural University, Ludhiana), Arts, Science, Commerce and Home Science Colleges 30 (14 boys, 16 girls), Engineering, Technology and Architecture Colleges 2 (2 boys), Medical Colleges 4 (2 boys, 2 girls), Teaching Training Colleges 6 (2 boys, 4 girls), Senior Secondary Schools 204 (166 boys, 38 girls); High Schools 222 (202 boys, 20 girls) ; Middle Schools 204 (201 boys, 3 girls); Primary Schools 1027 (1008 boys 19 girls); Teachers Training Schools (JBT) 1 (boys); Polytechnic 2 (1boys, 1 girls); and Technical Industrial Art Craft 12 (8 boys, 4 girls) (*Annexure-III to XIV*).

Ludhiana district has been one of the lead districts in the State in the matter of literacy and education. In 1981 Census the literacy rate for the district was 50.60 percent (56.15 percent males, 44.15 percent females) It However jumped to 76.54 percent (Rural 72.88 percent and Urban 79.42 percent). 80.19 percent males (Rural 78.32 percent and Urban 81.58 percent) and 72.11 percent females (Rural 66.73 percent and Urban 76.66 percent) (*Annexure-XI*).

Occupation

Unlike other districts in the state, Ludhiana district is the only district which reported more than half of its population (50.80 percent) in the urban areas. This characteristic is mainly due to the fast development of Ludhiana city on account of the growth of industries. The general saying goes that whosoever settles in Ludhiana city can eke out a decent living as there is adequate work for every settler.

According to 2001 Census there were 37.8 percent workers in the district, 55.9 percent were males whereas 15.7 percent were females. The rural and urban break up shows that 40.2 percent workers were in rural areas and 35.9 percent workers were in urban areas.

The break up of main workers by various industrial categories shows that there are: 11.7 percent cultivators (13.6 percent male and 3.5 percent female) and 8.1 percent agricultural labourers (8.6 percent male and 6.1 percent female) of the total main workers in the district.

Miscellaneous Activities

The Punjab Agricultural University Ludhiana made a significant contribution in bringing about green revolution and sustaining the tempo of

agricultural growth in the State as well as in the district through various extension programmes and popularizing new types of improved seeds. The popularity of paddy cultivation and levels of output achieved speak volumes about the attainments of the farmers of the state, especially this district. The green revolution coupled with the white revolution has not only filled the pockets of the farmers but also overflowed the godowns/warehouses of various government agencies. All this not only confirms the receptiveness of the farmers to the modern practices but also speak volumes about his ingenuity in managing things on the agricultural front.

The achievements of Ludhiana city on industrial front are amazing. There is an often-heard remark, about Ludhiana that this can make pin to plane. In each sector like Agriculture, Industry, Education, Medical, Communication etc, this district will push behind the other districts of the state in coming years.

District: Ludhiana		
Primary Statistics		
S.NO	ITEM	
1	Area	3767 sq. km.
	Tehsils	7
	Sub Tehsil	6
	Blocks	12
	Towns	12
	Inhabited villages	924
2	Population (2001)	
	Total population	3030352
	Rural population	1339566
	Percentage to total Population	44.20%
	Urban population	1690786
	Percentage to total Population	55.80%
	Density	804 per sq. km.
	Literate and educated persons	2042846
	Literacy	76.54%
	Female per 1000 male	824
	Total Workers	1145376
	Main Workers	1036736
	Marginal Workers	108640
	Non- Workers	1887380
	Break up of Main Workers	
	I) Cultivators	134074
	II) Agriculture Labourer	92853
	III) Manufacturing, Processing, servicing and Repairs in Household Industry	52178
	IV) Other Services	866271
3	Local Bodies(2001-2002)	
	I) Zila Parishads	1
	II) Municipal Committees	11
4	Climate	
	Average Rainfall	621.4 mm
5	Agriculture (2001-2002)	
	Net Area Sown	305000 hect.
	Area Sown more than once	300000 hect.
6	Irrigation (2001-2002)	
	Net Area Irrigated by:	
	Govt. Canals	6100
	Wells/Tubewells	299200 hect.
	Total	305300 hect.
	Percentage Net Area Irrigated to Net Area Sown	100%
	Gross Area Irrigated	605000 hect.
	Percentage Gross Irrigated Area to Gross Cropped Area	100%
7	Animal Husbandry (2001-2002)	
	Veterinary Hospitals	112
	Permanent Outlaying Dispensaries & Insemination Units	136
	Area Stocked with fish	838 hect.
	Total Live Stock (Live Stock Census 1997)	918800
	Total Poultry (Live Stock Census 1997)	2563100
8	Energy (2001-2002)	
	Consumption of Electricity	4161.13 million kwh.
9	Forest (2001-2002)	
	Area Under State Forest	100 sq. km.
	Area Under Private Forest	Nil
	Total area under Forests	100 sq. km.
10	Industries (2000-2002)	
	Regd. Working Factories	4543
11	Medical and Health (2002-2003)	
	Hospitals	28
	Dispensaries	149
	P.H.Cs.	31
	Ayurvedic and Unani Institution	40 (36+4)
	Homoeopathic Institutions	11
	Beds installed in Medical Institutions (Allopathy)	3481
12	Co-operation (2001-2002)	
	Co-operative Societies	2027
	Primary Agricultural Credit Societies	382
13	Banking (2001-2002)	
	Scheduled Banks & Co-operative Banks	430
14	Miscellaneous(2001-2002)	
	Post Offices	397
	Police-Stations/ Police Posts	23 (21+2)

District: Ludhiana Demographic Profile		
	1991	2001
Population-Total	2426343	3030352
Male	1315648	1661329
Female	1110695	1369023
Rural	1183562	1339566
Male	629665	713695
Female	553897	625871
Urban	1242781	1690786
Male	685983	947634
Female	556798	743152
Sex Ratio-Total	844	824
No. of Females per 1000 males		
Rural	880	877
Urban	812	784
No. of Literates-Total	1377681	2042846
Male	806340	1172516
Female	571341	870330
Rural	627650	857254
Male	371463	488400
Female	256187	368854
Urban	750031	1185592
Male	434877	684116
Female	315154	501476
0-6 Population-Total	387357	361305
Male	206265	199179
Female	181092	162126
Rural	190487	163257
Male	100940	90106
Female	89547	73151
Urban	196870	198048
Male	105325	109073
Female	91545	88975
SC Total-1991	594438	N/A
Male	319803	N/A
Female	274635	N/A
Rural	417077	N/A
Male	223832	N/A
Female	193245	N/A
Urban	177361	N/A
Male	95971	N/A
Female	81390	N/A
Projection 2002-Total	3098073	

Source : Statistical Abstract of Punjab

District Ludhiana																
No. of Recognised Institutions																
Type	1998				1999				2000				2001			
	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions
Universities			1	0.00			1	0.00			1	0.00			1	0.00
Art, Science, Commerce and Home Science Colleges.	14	13	27	48.15	14	14	28	50.00	14	16	30	53.33	14	16	30	53.33
Engineering, Technology and Architecture Colleges.	2		2	0.00	2		2	0.00	2		2	0.00	2		2	0.00
Medical Colleges (Allopathic Only)	2		2	0.00	3		3	0.00	2		2	0.00	2	2	4	50.00
Teacher's Training College (B.ed.)	2	2	4	50.00	2	3	5	60.00	2	4	6	66.67	2	4	6	66.67
Senior Secondary Schools	115	30	145	20.69	118	30	148	20.27	122	30	152	19.74	166	38	204	18.63
High Schools	195	27	222	12.16	201	27	228	11.84	198	27	225	12.00	202	20	222	9.01
Middle Schools	208	3	211	1.42	206	3	209	1.44	205	3	208	1.44	201	3	204	1.47
Primary Schools	973	19	992	1.92	996	19	1015	1.87	1027	19	1046	1.82	1008	19	1027	1.85
Pre-Primary Schools																
Elementary Teacher's Training Schools	1		1	0.00	1		1	0.00	1		1	0.00	1		1	0.00
Polytechnic Institutions	1	1	2	50.00	1	1	2	50.00	1	1	2	50.00	1	1	2	50.00
Technical Industrial Art Craft Schools	8	4	12	33.33	8	4	12	33.33	8	4	12	33.33	8	4	12	33.33

Source: Statistical Abstract Of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

District Ludhiana																
No. Of Working Teachers in recognised Schools																
Type	1998				1999				2000				2001			
	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers
Universities																
Art, Science, Commerce and Home Science Colleges.	457	789	1246	63.32	484	750	1234	60.78	473	778	1251	62.19	488	818	1306	62.63
Engineering, Technology and Architecture Colleges.	193	18	211	8.53	195	17	212	8.02	204	17	221	7.69	203	21	224	9.38
Medical Colleges (Allopathic Only)	380	261	641	40.72	377	268	645	41.55	396	280	676	41.42	294	196	490	40.00
Teacher's Training College (B.ed.)	24	58	82	70.73	19	85	104	81.73	17	88	105	83.81	16	88	104	84.62
Senior Secondary Schools	1617	3514	5131	68.49	1604	3547	5151	68.86	1625	3841	5466	70.27	1874	4385	6259	70.06
High Schools	1215	1868	3083	60.59	1205	2046	3251	62.93	1206	2032	3238	62.75	1048	1771	2819	62.82
Middle Schools	571	791	1362	58.08	589	803	1392	57.69	567	762	1329	57.34	441	618	1059	58.36
Primary Schools	1265	2902	4167	69.64	1274	2836	4110	69.00	1095	2881	3976	72.46	921	2476	3397	72.89
Pre-Primary Schools																
Elementary Teacher's Training Schools	15	5	20	25.00	15	5	20	25.00	10	4	14	28.57	10	4	14	28.57
Polytechnic Institutions	84	12	96	12.50	82	14	96	14.58	79	19	98	19.39	79	19	98	19.39
Technical Industrial Art Craft Schools	194	32	226	14.16	194	31	225	13.78	194	31	225	13.78	193	32	225	14.22

Source : Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

District Ludhiana																
No. of Students (Total)																
Type	1998				1999				2000				2001			
	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment
Ph.D.		9	9	100.00		21	21	100.00		24	24	100.00				
M. Phil.																
M.A.	481	1917	2398	79.94	330	1918	2248	85.32	1011	2050	3061	66.97	554	1999	2553	78.30
M.Sc.	49	184	233	78.97	50	70	120	58.33	11	144	155	92.90	56	214	270	79.26
M.Com.	10	31	41	75.61	12	41	53	77.36	26	42	68	61.76	23	154	177	87.01
B.A / B.A. (HONS)	6646	12563	19209	65.40	7948	13514	21462	62.97	6856	14056	20912	67.21	7685	14351	22036	65.13
B.Sc./ B.Sc. (HONS)	789	1620	2409	67.25	691	1329	2020	65.79	868	1742	2610	66.74	966	1794	2760	65.00
B.Com./ B.Com. (HONS.)	1946	1792	3738	47.94	1765	1993	3758	53.03	2118	2377	4495	52.88	2123	2478	4601	53.86
B.E./ B.Sc. (Eng.) / B.Arch. / B. Tech.	987	192	1179	16.28	1046	182	1228	14.82	1015	169	1184	14.27	1064	205	1269	16.15
M. B. B. S	332	278	610	45.57	339	276	615	44.88	327	284	611	46.48	316	289	605	47.77
B. ed.	134	650	784	82.91	180	759	939	80.83	175	825	1000	82.50	177	823	1000	82.30
Senior Secondary School	78563	65032	143595	45.29	78748	65458	144202	45.39	82161	68957	151118	45.63	88249	76377	164626	46.39
High School	39225	38295	77520	49.40	42047	39933	81980	48.71	41133	39001	80134	48.67	35251	33246	68497	48.54
Middle School	13068	11421	24489	46.64	13704	11664	25368	45.98	12597	11295	23892	47.28	10169	9019	19188	47.00
Primary School	84595	77769	162364	47.90	89470	80711	170181	47.43	89587	78342	167929	46.65	83994	73474	157468	46.66
Pre - Primary School																
Elementary Teacher's Training School J.B.T.	189	107	296	36.15	150	102	252	40.48	52	53	105	50.48	52	53	105	50.48
Polytechnic Institutions	682	375	1057	35.48	693	401	1094	36.65	671	430	1101	39.06	691	435	1126	38.63
Technical Industrial Art and Craft School	1819	592	2411	24.55	1905	609	2514	24.22	1944	676	2620	25.80	1992	691	2683	25.75

Source: Statistical Abstract of Punjab

1. These figures relate to the State Statistical Abstract and are not in conformity with the household survey conducted by the department.
2. For the purpose of District Plan Number of School and enrolment has been take as per survey figures.

District Ludhiana																
No. of Scheduled Caste Students.																
Type	1998				1999				2000				2001			
	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment
Ph.D.																
M. Phil.																
M.A.	93	100	193	8.05	76	141	217	9.65	87	159	246	8.04	11	90	101	3.96
M.Sc.	4		4	1.72	7	6	13	10.83	5	1	6	3.87	3	5	8	2.96
M.Com.	1	9	10	24.39	4	6	10	18.87	10	7	17	25.00	3	6	9	5.08
B.A / B.A. (HONS)	742	953	1695	8.82	750	1279	2029	9.45	802	1080	1882	9.00	483	1150	1633	7.41
B.Sc./ B.Sc. (HONS)	98	73	171	7.10	77	55	132	6.53	98	83	181	6.93	37	89	126	4.57
B.Com./ B.Com. (HONS.)	106	74	180	4.82	99	113	212	5.64	88	79	167	3.72	27	88	115	2.50
B.E./ B.Sc. (Eng.) / B.Arch. / B. Tech.	150	74	224	19.00	117	16	133	10.83	107	15	122	10.30	104	9	113	8.90
M. B. B. S	25	21	46	7.54	34	27	61	9.92	36	38	74	12.11	42	42	84	13.88
B. ed.	30	101	131	16.71	41	141	182	19.38	50	155	205	20.50	44	120	164	16.40
Senior Secondary School	14425	11438	25863	18.01	14287	11556	25843	17.92	14050	12077	26127	17.29	17173	15490	32663	19.84
High School	13270	13015	26285	33.91	13987	13765	27752	33.85	13518	13593	27111	33.83	12261	11832	24093	35.17
Middle School	5494	4775	10269	41.93	5742	5149	10891	42.93	5605	5158	10763	45.05	4318	3995	8313	43.32
Primary School	45393	41705	87098	53.64	48008	43827	91835	53.96	47236	41857	89093	53.05	46528	40968	87496	55.56
Pre - Primary School															0	
Elementary Teacher's Training School J.B.T.	58	30	88	29.73	45	33	78	30.95	14	14	28	26.67	14	14	28	26.67
Polytechnic Institutions	164	72	236	22.33	158	85	243	22.21	156	87	243	22.07	188	90	278	24.69
Technical Industrial Art and Craft School	443	151	594	24.64	460	147	607	24.14	485	136	621	23.70	482	137	619	23.07

Source: Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

Annexure - VII

District Ludhiana												
Description	2000						2001					
	State Government Schools			Total Enrolment (Recognised Schools)			Total Enrolment (Recognised Schools)			SC Enrolment (Recognised Schools)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Primary	80354	71550	151904	113025	95670	208695	107603	91761	199364	48174	42392	90566
Middle	39781	38073	77854	56684	52690	109374	54842	50971	105813	20617	19256	39873
<i>Elementary</i>	120135	109623	229758	169709	148360	318069	162445	142732	305177	68791	61648	130439
High School	18867	19118	37985	29695	28749	58444	28833	28377	57210	8658	8211	16869
Sr. Secondary	9588	7701	17289	18672	15292	33964	18442	15470	33892	2772	2390	5162
<i>Secondary</i>	28455	26819	55274	48367	44041	92408	47275	43847	91122	11430	10601	22031
Total (I-XII)	148590	136442	285032	218076	192401	410477	209720	186579	396299	80221	72249	152470

Source : Statistical Abstract of Punjab

Annexure - VIII

District Ludhiana						
Enrolment by Department						
1999	State Government Schools			Total Enrolment (Recognised Schools)		
	Male	Female	Total	Male	Female	Total
Primary	81247	74192	155439	112066	97884	209950
Middle	40378	38001	78379	57595	52061	109656
Elementary	121625	112193	233818	169661	149945	319606
High School	18829	18870	37699	29545	28348	57893
Sr. Secondary	9214	7273	16487	17916	14287	32203
Secondary	28043	26143	54186	47461	42635	90096
Total (I-XII)	149668	138336	288004	217122	192580	409702

Source : Statistical Abstract of Punjab

Annexure - IX

District Ludhiana						
Enrolment in rural schools (Recognised -total)						
Year	Enrolment in Rural School			% of Enrolment in Rural to total enrolment		
	Male	Female	Total	Male	Female	Total
Primary	78470	63502	141972	66.2	67.56	66.80
Middle	38513	32693	71206	65.36	66.35	65.81

Source : Statistical Abstract

District Ludhiana			
Literacy Percentage of the Scheduled Castes and Non-Scheduled Castes (1991)			
	Population	No. of Literates	Literacy Percentage
Total (SC+Non SC)	2426343	1377681	56.78
Male	1315648	806340	61.29
Female	1110695	571341	51.44
Scheduled Caste Population			
Total	594438	252084	42.41
Male	319803	160768	50.27
Female	274635	91316	33.25
Non-Scheduled Caste Population			
Total	1831905	1125597	61.44
Male	995845	645572	64.83
Female	836060	480025	57.41

Source : Census of Punjab, 1991

District : Ludhiana												
Literacy rates by residence and sex- 2001												
Tehsil Code	Tehsil	Literacy Rate										
		Total			Rural			Urban				
		Person	Male	Female	Person	Male	Female	Person	Male	Female		
034	Samrala	73.54	79.15	67.29	73.03	78.74	66.66	75.97	81.10	70.27		
033	Khanna	76.93	81.69	71.51	71.89	77.81	65.26	81.21	84.97	76.90		
036	Payal	74.20	79.47	68.20	73.29	78.69	67.21	78.68	83.21	73.27		
031	Ludhiana-I East	78.60	80.99	75.51	72.49	78.70	65.32	79.58	81.34	77.27		
032	Ludhiana-II West	76.04	80.99	70.37	75.96	80.86	70.34	77.33	83.26	70.79		
037	Raikot	73.46	78.38	67.99	72.86	77.83	67.33	76.58	81.29	71.43		
035	Jagron	71.39	76.38	65.87	70.07	75.33	64.25	77.04	80.88	72.81		
010	District	76.54	80.19	72.11	72.88	78.32	66.73	79.42	81.58	76.66		
	State	69.95	75.63	63.55	65.16	71.70	57.91	79.13	82.97	74.63		

District Ludhiana						
Projected School age population						
Year	6-10			11-13		
	Boys	Girls	Total	Boys	Girls	Total
1999	175718	154627	330345	101962	90106	192068
2000	177590	155875	333465	101462	89981	191443
2001	183577	135532	319109	103002	83510	186512
2006	152630	138778	291408	109450	95347	204797
2011	149510	137280	286790	85738	79123	164861
2016	154003	141398	295401	91354	83741	175095

Source :RGI Estimates

Annexure - XIII

District Ludhiana							
Dropout Rate							
Level	Level	Total			SC		
		Male	Female	Total	Male	Female	Total
Primary	1999	22.08	20.72	21.69	27.39	19.31	23.80
	2000	15.76	16.74	16.62	27.36	19.27	23.75
Middle	1999	27.54	30.37	34.18	36.51	35.65	34.89
	2000	31.83	29.31	30.08	41.46	35.61	38.85

Source : Family Survey 2002

Annexure - XIV

District Ludhiana						
Gross Enrolment Ratio 2001- 2002						
	Gross Enrolment Ratio			Gross Enrolment Ratio for SC		
	Male	Female	Total	Male	Female	Total
Primary	118.57	117.25	117.98	115.29	114.95	115.13
Middle	102.39	100.42	101.48	97.41	95.35	96.43
High	100.30	97.69	99.05	88.67	87.48	88.11
SR.Sec	66.68	78.05	72.07	43.51	49.87	46.56

Source : Family Survey 2002

Classification of Nutritional Status (%)			March'2002				
Sr. No.	District	Integrated child development scheme	Normal	Grade-I	Grade-II	Grade-III+	Total children covered
10	LUDHIANA	Delhon	77.90	21.18	0.85	0.06	100.00
		Doraha	60.79	38.19	0.87	0.15	100.00
		Jagraon	89.95	9.30	0.74	0.01	100.00
		Khanna	64.63	33.57	1.66	0.14	100.00
		Ludhiana (U)	58.38	41.61	0.01	0.00	100.00
		Ludhiana (U-II)	57.21	42.31	0.47	0.00	100.00
		Ludhiana-I (R)	55.49	43.38	1.02	0.12	100.00
		Machhiwara	60.17	37.37	2.26	0.21	100.00
		Mangat	67.42	29.56	2.88	0.14	100.00
		Pakhowal	76.91	21.42	1.67	0.01	100.00
		Samrala	64.91	34.72	0.30	0.07	100.00
		Sidhwan Bet	78.67	20.14	1.11	0.07	100.00
		Sudhar	62.28	35.42	2.24	0.06	100.00
District Total			67.75	30.95	1.22	0.07	100.00

Source : SW Department

Family Survey 2002

FAMILY SURVEY

Family Survey was conducted in the district in the month of January, 2002. A manual for the guidance of teachers was prepared and distributed at the school level. Master trainers were trained at state level centres which imparted training to district/block/cluster level persons. Data was captured on SSA/ FS/I/I on the following format:

Reference Date :
Unit : Village/Ward

I. Family

1. House No.
2. Name of Street/Mohalla/Basti/Colony
3. Distance of house from Govt.Primary School (Actual)
4. Head of family
5. Size of family (including children) numbers
6. Caste (SC/BC/others)
7. Type of house (normal/institutional/homeless)
8. Type by period of residence (permanent/semi-permanent)
9. Monthly Income (codified)

II. Child (3-19)

1. Name
2. Sex
3. Age
4. D.O.B.
5. Mother/Father
6. Literacy of parents
 - 6.1 Mother (yes/no)+Level
 - 6.2 Father (yes/no)+Level
7. Mental/Physical challenge
8. Attending School
 - 8.1 School type
 - 8.2 Class (Pre-Primary to Sr. Secondary)
9. Not attending school
 - 9.1 Never attended school
 - 9.2 Left school
 - 9.3 Reasons for not attending school
10. Detail of efforts to mainstream out of school child

Primary Data captured on SSA/FA/I/1 was compiled at village/ward level on the following parameters.

I. Total (3-19) Population

1. Number of Special Need Children
2. Age groupwise/sexwise/castewise school going children
3. Age groupwise/sexwise/castewise school not going children

II. School going Children

1. Caste
2. Special Need
3. Ever attended school
 - 3.1 Class of dropout
4. Age group by sex
5. Child labour by age group/sexwise

III. Out of School/child labour

1. Special Need
2. Ever attended school
 - 2.1 Class of dropout
3. Age group by sex
4. Child labour by age group/sexwise

IV. Mentally/physically challenged

1. Caste
2. Special Need
3. Ever attended school
 - 3.1 Class of dropout
4. Age group by sex
5. Child labour by age group/sex

From the compiled Data following report have been prepared so far.

Reports

1. Total children attending school (classwise)
 - 1.1 Class wise/Genderwise/Casteswise
 - 1.2 Class wise/Genderwise/Casteswise/State Govt. Schools
 - 1.3 Class wise/Genderwise/Casteswise/Non-State Govt. Schools
 - 1.4 Class wise/Genderwise/Casteswise/Unrecognised Schools
2. Total children attending school (Agewise)
 - 2.1 Agewise/Genderwise/Castewise
 - 2.2 Agewise/Genderwise/Castewise/State Government
 - 2.3 Agewise/Genderwise/Castewise/Non State Govt. Schools

- 2.4 Agewise/Genderwise/Castewise/Unrecognised Schools
- 3. Caste type
 - 3.1 Total
 - 3.2 Total SC
 - 3.3 Total BC
- 4. Management type
 - 4.1 In State Govt. Schools
 - 4.2 In Non-state Govt. Schools
 - 4.3 In Un-recognised schools

There is a large variation in enrolment at primary and upper primary level between the reported enrolment and the enrolment compiled from survey data, especially in enrolment in government schools.

District - 10 - LUDHIANA

Sarav Sikhiya Abhiyan, Punjab

Family Survey 2002

Form No. : SSA/FS/IV/6

Report : 01

Year : 2001-2002

01 - School Going Children (Total) - (Gradewise)-Total-Districtwise

Class ↓	School Going Children - Total			School Going Children - S.C.			School Going Children - B.C.		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	38325	28668	66993	13021	10656	23677	5136	3856	8992
Pre Primary Total	38325	28668	66993	13021	10656	23677	5136	3856	8992
I	30929	23462	54391	12212	9847	22059	3954	3156	7110
II	26511	20739	47250	10523	8618	19141	3463	2820	6283
III	25261	20278	45539	10276	8814	19090	3449	2832	6281
IV	25575	20061	45636	10030	8382	18412	3310	2674	5984
V	23727	19523	43250	8975	7916	16891	3239	2740	5979
Primary Total	132003	104063	236066	52016	43577	95593	17415	14222	31637
VI	24199	19268	43467	8976	7721	16697	3208	2636	5844
VII	21465	18385	39850	7576	6892	14468	2882	2558	5440
VIII	20434	17501	37935	7186	6400	13586	2874	2390	5264
Midlle Total	66098	55154	121252	23738	21013	44751	8964	7584	16548
IX	17118	15445	32563	5509	4959	10468	2368	2136	4504
X	21188	17971	39159	6775	5984	12759	2727	2374	5101
Secondary Total	38306	33416	71722	12284	10943	23227	5095	4510	9605
XI	10128	10180	20308	2176	2286	4462	1551	1337	2888
XII	10137	10877	21014	2162	2274	4436	1296	1242	2538
Sr. Secondary Total	20265	21057	41322	4338	4560	8898	2847	2579	5426
Technical Education	2053	2623	4676	293	381	674	268	313	581
Technical Education Total	2053	2623	4676	293	381	674	268	313	581

01 - School Going Children (Total) - (Agewise)-Total Districtwise

Age ↓	School Going Children - Total			School Going Children - S.C.			School Going Children - B.C.		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
3	9912	7826	17738	3231	2824	6055	1291	976	2267
4	15933	11616	27549	5274	4240	9514	2046	1617	3663
5	19326	14432	33758	6904	5667	12571	2657	2003	4660
Sub Total	45171	33874	79045	15409	12731	28140	5994	4596	10590
6	21946	17351	39297	8634	6868	15502	2935	2388	5323
7	21412	16705	38117	8468	7216	15684	2937	2351	5288
8	23753	19164	42917	9373	7789	17162	3025	2501	5526
9	23126	18135	41261	8932	7535	16467	3121	2486	5607
10	25690	20747	46437	9846	8493	18339	3433	2926	6359
Sub Total	115927	92102	208029	45253	37901	83154	15451	12652	28103
11	22442	18597	41039	8157	7143	15300	3073	2598	5671
12	22472	18506	40978	8232	7224	15456	3009	2584	5593
13	20249	17616	37865	7127	6706	13833	2817	2379	5196
Sub Total	65163	54719	119882	23516	21073	44589	8899	7561	16460
14	18835	16443	35278	6509	5648	12157	2595	2301	4896
15	16273	15114	31387	5235	4834	10069	2287	2003	4290
Sub Total	35108	31557	66665	11744	10482	22226	4882	4304	9186
16	13457	12382	25839	4053	3775	7828	1721	1533	3254
17	10887	9965	20852	2823	2654	5477	1361	1194	2555
Sub Total	24344	22347	46691	6876	6429	13305	3082	2727	5809
18	8274	7606	15880	2160	1879	4039	991	881	1872
19	3063	2776	5839	732	635	1367	426	343	769
Sub Total	11337	10382	21719	2892	2514	5406	1417	1224	2641
Grand Total	297050	244981	542031	105690	91130	196820	39725	33064	72789

District - 10 - LUDHIANA

Sarav Shiksha Abhiyan, Punjab
Family Survey 2002

Form No. : SSA/FS/III/8
Report : 01
Year : 2001-2002

01 - School Going Children Total - Total - (Age-Grade Wise) - Districtwise

Class Age	Pre Prim.		Primary										Middle						Secondary						Sr. Secondary						Tec. Edu					
	Nursery/ Aaganw- ari Etc.		I		II		III		IV		V		Total		VI	VII	VIII	Total		IX	X	Total		XI	XII	Total		Other Tech. / Prof. course.								
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G						
3	9890	7802	22	24								22	24																							
4	14308	10450	1608	1161	16	5	1					1625	1166																							
5	11483	8325	7361	5683	472	420	10	4				7843	6107																							
6	2587	2036	15155	11907	3897	3099	304	309	3			19359	15315																							
7	28	32	6231	4313	11890	9587	3008	2494	252	278	3	1	21384	16673																						
8	24	19	423	304	8645	6535	11705	9600	2706	2416	250	284	23729	19139	6																					
9	1	3	80	46	1070	685	9120	6991	10150	8010	2476	2174	22896	17906	228	224	1	2																		
10	2		37	12	362	244	804	624	11287	8419	10703	8980	23193	18279	2267	2180	225	277	3	8	2495	2465														
11	2		9	9	144	155	249	215	941	723	9414	7346	10757	8448	9458	7865	2042	2014	182	269	11682	10148	1	1												
12		1	3	2	10	8	48	31	177	159	694	607	932	807	10890	8081	8425	7374	1983	1981	21298	17436	241	261	1	1	242	262								
13				1	4		8	5	44	40	130	96	186	142	1003	701	9186	7383	8142	7432	18331	15516	1520	1735	204	208	1724	1943	8	15	8	15				
14						1	4	5	10	11	29	18	43	35	248	127	1030	852	9081	6941	10359	7920	6844	6442	1447	1767	8291	8209	137	238	1	5	138	243	4	36
15					1				5	5	27	16	33	21	82	76	519	459	831	744	1432	1279	7276	5917	6184	6114	13460	12031	1029	1428	316	352	1345	1780	3	3
16												1		1	13	6	29	17	140	90	182	113	805	686	7843	6239	8648	6925	3374	3763	1192	1500	4566	5263	61	80
17											1		1		6	1	5	1	53	21	64	23	289	273	3439	2264	3728	2537	3990	3483	2838	3441	6828	6924	266	481
18														4	1	3	5	18	13	25	19	136	111	1673	1134	1809	1245	1254	1012	4519	4392	5773	5404	667	938	
19																1	1	2	1	3	6	16	397	244	403	260	336	241	1271	1187	1607	1428	1052	1085		
Total	38325	28668	30929	23462	26511	20739	25261	20278	25575	20061	23727	19523	132003	104063	24199	19268	21465	18385	20434	17501	66098	55154	17118	15445	21188	17971	38306	33416	10128	10180	10137	10877	20265	21057	2053	2623

District - 10 - LUDHIANA

Sarav Sikhiya Abhiyan, Punjab
Family Survey 2002

Form No. : SSA/FS/IV/9

Report : 01

Year : 2001-2002

01 - Out of School Children Total - Agewise-Total Districtwise

Age ↓	Out of School									Working Children								
	Total Children			SC Children			BC Children			Total Children			SC Children			BC Children		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
3	1514	1142	2656	715	563	1278	228	174	402									
4	1503	1177	2680	781	636	1417	206	163	369									
5	1049	890	1939	626	551	1177	134	105	239									
6	528	488	1016	273	267	540	69	65	134	1	1	2	1		1			
7	338	360	698	169	202	371	59	55	114	9	1	10	7	1	8			
8	418	404	822	219	207	426	77	103	180	9	4	13	6	4	10	2		2
9	317	285	602	159	162	321	39	40	79	11	10	21	6	6	12	1		1
10	539	514	1053	290	279	569	98	90	188	35	11	46	21	6	27	13	1	14
11	484	473	957	260	276	536	64	72	136	41	25	66	31	16	47	4	5	9
12	913	896	1809	542	535	1077	135	141	276	81	33	114	53	23	76	13	5	18
13	1221	1175	2396	712	696	1408	166	174	340	116	49	165	69	32	101	18	9	27
14	1716	1515	3231	944	937	1881	252	236	488	177	47	224	113	33	146	37	9	46
15	2473	2144	4617	1396	1266	2662	349	287	636	340	89	429	228	59	287	38	16	54
16	2723	2396	5119	1428	1335	2763	414	363	777	353	71	424	230	50	280	62	14	76
17	3140	2453	5593	1519	1321	2840	420	372	792	431	96	527	281	55	336	55	16	71
18	3884	2732	6616	1892	1382	3274	575	426	1001	515	87	602	353	44	397	54	9	63

District - 10 - LUDHIANA

Sarav Sikhiya Abhiyan, Punjab
Family Survey 2002Form No. : SSA/FS/IV/10
Report : 01
Year : 2001-2002**01 - Physically/Mentally Challenged Children Total - (Agewise)-Total Districtwise**

Age ↓	Total Children						SC Children						BC Children					
	School Going			School Not Going			School Going			School Not Going			School Going			School Not Going		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
3	8	12	20	30	21	51	4	5	9	18	11	29				3	3	6
4	22	10	32	42	18	60	9	4	13	17	5	22	7	1	8	4	3	7
5	30	18	48	56	35	91	14	5	19	21	9	30	4	2	6	9	6	15
6	59	31	90	62	45	107	29	15	44	22	25	47	8	5	13	8	7	15
7	66	45	111	50	36	86	34	20	54	23	18	41	10	7	17	6	2	8
8	85	70	155	67	60	127	47	42	89	30	28	58	17	6	23	14	4	18
9	83	58	141	67	42	109	59	29	88	27	14	41	15	7	22	11	2	13
10	83	60	143	64	41	105	47	33	80	35	26	61	7	7	14	7	12	19
11	79	58	137	71	47	118	40	30	70	35	18	53	7	6	13	11	5	16
12	94	75	169	99	73	172	48	31	79	41	32	73	10	4	14	14	14	28
13	81	49	130	93	59	152	29	26	55	41	24	65	11	5	16	9	9	18
14	80	57	137	89	68	157	48	32	80	42	32	74	8	8	16	14	8	22
15	71	37	108	96	81	177	27	18	45	53	51	104	4	2	6	11	6	17
16	51	33	84	93	69	162	14	18	32	41	37	78	12	4	16	12	9	21
17	39	35	74	85	71	156	14	16	30	34	29	63	7	6	13	11	9	20
18	40	31	71	115	66	181	19	15	34	59	43	102	5	6	11	13	11	24

District - 10 - LUDHIANA

Sarav Sikhiya Abhiyan, Punjab

Family Survey 2002

Form No. : SSA/FS/IV/11

Report : 01

Year : 2001-2002

01 - Physically/Mentally Challenged Children Total - (Category Wise)-Total Districtwise

Class ↓	School Going Total Children			School Going S.C. Children			School Going B.C. Children		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	47	30	77	22	14	36	7	3	10
I	90	53	143	48	26	74	12	8	20
II	95	62	157	52	38	90	14	5	19
III	91	58	149	52	34	86	12	6	18
IV	79	61	140	48	36	84	4	6	10
V	73	63	136	41	38	79	10	6	16
VI	77	56	133	38	24	62	6	3	9
VII	44	32	76	24	20	44	4	2	6
VIII	49	32	81	29	17	46	6	2	8
IX	36	38	74	12	24	36	6	4	10
X	72	42	114	21	19	40	13	8	21
XI	16	10	26	4	3	7	2	3	5
XII	18	14	32	7	6	13	1	2	3
Technical Education	2	3	5	1	2	3	1		1

District - 10 - LUDHIANA

Sarav Shikshia Abhiyan, Punjab

SSA/FS/IV/15

Report : I

Distribution of School going Children (Percentage) -Total--Districtwise

Year : 2001-2002

Class ↓	Total School Going			State Govt.			Non-State Govt.			Unrecognised		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	57.21	42.79	100.00	54.76	45.24	100.00	59.19	40.81	100.00	58.80	41.20	100.00
Pre Primary Total	57.21	42.79	100.00	54.76	45.24	100.00	59.19	40.81	100.00	58.80	41.20	100.00
I	56.86	43.14	100.00	54.22	45.78	100.00	59.18	40.82	100.00	59.32	40.68	100.00
II	56.11	43.89	100.00	53.99	46.01	100.00	58.49	41.51	100.00	58.74	41.26	100.00
III	55.47	44.53	100.00	53.33	46.67	100.00	58.95	41.05	100.00	57.39	42.61	100.00
IV	56.04	43.96	100.00	53.45	46.55	100.00	59.68	40.32	100.00	59.28	40.72	100.00
V	54.86	45.14	100.00	52.93	47.07	100.00	58.79	41.21	100.00	54.36	45.64	100.00
Primary Total	55.92	44.08	100.00	53.58	46.42	100.00	59.03	40.97	100.00	58.03	41.97	100.00
VI	55.67	44.33	100.00	53.95	46.05	100.00	58.70	41.30	100.00	56.54	43.46	100.00
VII	53.86	46.14	100.00	51.88	48.12	100.00	56.79	43.21	100.00	56.91	43.09	100.00
VIII	53.87	46.13	100.00	52.03	47.97	100.00	57.13	42.87	100.00	54.72	45.28	100.00
Middle Total	54.51	45.49	100.00	52.66	47.34	100.00	57.59	42.41	100.00	56.09	43.91	100.00
IX	52.57	47.43	100.00	50.66	49.34	100.00	55.10	44.90	100.00	54.45	45.55	100.00
X	54.11	45.89	100.00	52.61	47.39	100.00	56.42	43.58	100.00	55.05	44.95	100.00
Secondary Total	53.41	46.59	100.00	51.73	48.27	100.00	55.82	44.18	100.00	54.77	45.23	100.00
XI	49.87	50.13	100.00	50.99	49.01	100.00	48.68	51.32	100.00	49.89	50.11	100.00
XII	48.24	51.76	100.00	50.22	49.78	100.00	47.27	52.73	100.00	45.33	54.67	100.00
Sr. Secondary Total	49.04	50.96	100.00	50.60	49.40	100.00	47.95	52.05	100.00	47.61	52.39	100.00
Technical Education	43.91	56.09	100.00	49.52	50.48	100.00	42.10	57.90	100.00	42.02	57.98	100.00
Technical Education Total	43.91	56.09	100.00	49.52	50.48	100.00	42.10	57.90	100.00	42.02	57.98	100.00

Annual Work Plan
2003-2004

District : Ludhiana

District Data Summary Sheet

SL.No.	DESCRIPTION	2003-04
1	No. of C D Blocks/BRC's	12
1.1	No. of B.R. & D.R. Personnels (9x20+3x10)+10	220
2	No. of P E Blocks	19
3	No. of CRC's	112
4	No. of Villages	926
4.1	No. of VEDC's	1531
4.2	No. of VEDC's Members	12248
5	No. of Habitations/Wards (Unserved)	4000
5.1	No. of S.C. Bastis	1352
6	No. of House Holds	626100
	No. of Schools	
7	No. of Primary Schools (State Govt.)	1011
7.1	Non State Govt. Primary Schools	36
7.2	Unrecognised Primary Schools	263
8	No. of Middle Schools/Sections (State Govt.)	520
8.1	Non State Govt. Middle Schools/Sections	210
8.2	Unrecognised Middle Schools/Sections	340
	No. of Teachers (State Govt.)	
9	No. of Primary Teachers	4685
9.1	No. of JBT Teachers + New	3894
9.2	No. of HT	679
9.3	No. of CHT's	112
10	No. of Teachers Middle Schools/Sections	3144
	Primary (State Govt.)	
11	Total No. of Students	137527
11.1	Male Students	72405
11.2	Female Students	65122
11.3	Total No. of S.C. Students	83564
11.4	Male S.C. Students	43786
11.5	Female S.C. Students	39778
	Upper Primary (State Govt.)	
12	Total No. of Students	72648
12.1	Male Students	38256
12.2	Female Students	34392
12.3	Total No. of S.C. Students	34590
12.4	Male S.C. Students	16326
12.5	Female S.C. Students	18264
	Out of School Children	
13	No. of Out of School Children Total	12191
13.1	No. of Out of School Children Male	6253
13.2	No. of Out of School Children Female	5838
13.3	No. of EGS Centres (Proposed)	653
	No. of Handicapped Children	
14	Total No. of Handicapped Children	2373
15	Aganwari centre	1304

SOURCE :- D.E.O (E.E.)

<i>District - Ludhiana</i>		
Blockwise list of BRC and CRC		
PEBlock Code & Name		
		CRC BRC
214	LUDHIANA-I	6
215	LUDHIANA-II	5
216	LUDHIANA-III	2 1
217	MANGAT-I	6 1
218	MANGAT-II	5
219	MANGAT-III	9 1
220	KHANNA-I	6
221	KHANNA-II	5 1
222	SAMRALA-I	6
223	SAMRALA-II	4 1
224	DEHLON-I	5
225	DEHLON-II	6 1
226	SIDHWAN BET-I	5
227	SIDHWAN BET-II	4 1
228	JAGRAON	8 1
229	SUDHAR	8 1
230	PAKHOWAL	6 1
231	DORAHA	7 1
232	MACHHIWARA	9 1
	Total	112 12

Source :- D.E.O. (E.E.)

District wise list of PEBlocks	
PEBLOCK	CODE
LUDHIANA	
JAGRAON	228
LUDHIANA-I	214
LUDHIANA-II	215
LUDHIANA-III	216
MANGAT-I	217
MANGAT-II	218
MANGAT-III	219
KHANNA-I	220
KHANNA-II	221
SAMRALA-I	222
SAMRALA-II	223
DEHLON-I	224
DEHLON-II	225
SIDHWAN BET-I	226
SIDHWAN BET-II	227
SUDHAR	229
PAKHOWAL	230
DORAHA	231
MACHHIWARA	232

Source : Sarva Shiksha Abhiyan

PEBlock Code & Name	No. of Villages
<i>District - Ludhiana</i>	
214 LUDHIANA-I	37
215 LUDHIANA-II	24
217 MANGAT-I	40
218 MANGAT-II	41
219 MANGAT-III	80
220 KHANNA-I	58
221 KHANNA-II	37
222 SAMRALA-I	52
223 SAMRALA-II	39
224 DEHLON-I	44
225 DEHLON-II	48
226 SIDHWAN BET-I	49
227 SIDHWAN BET-II	42
228 JAGRAON	61
229 SUDHAR	63
230 PAKHOWAL	51
231 DORAHA	60
232 MACHHIWARA	100
Total	926

SOURCE :- D.E.O. (E.E)

BLOCKWISE COUNT OF PRIMARY SCHOOLS - 2003													
DISTRICT - LUDHIANA													
PE Block Code & Name	G1	G2	G3	G4	TOTG	P1	P2	P3	P4	P5	P6	TOTP	TOTAL
PE214 LUDHIANA-I	54				54	1	1	1			25	28	82
PE215 LUDHIANA-II	43				43	1	1				27	29	72
PE216 LUDHIANA-III	18				18	5	3	1			8	17	35
PE217 MANGAT-I	49				49	1	8	1			19	29	78
PE218 MANGAT-II	49				49		8	1			29	38	87
PE219 MANGAT-III	89				89	1	6	1			27	35	124
PE220 KHANNA-I	55				55	1	2	1			21	25	80
PE221 KHANNA-II	42				42			1			7	8	50
PE222 SAMRALA-I	49				49		1	3			13	17	66
PE223 SAMRALA-II	38				38						4	4	42
PE224 DEHLON-I	44		1		45		4				11	15	60
PE225 DEHLON-II	51				51		3				13	16	67
PE226 SIDHWAN BET-I	50				50		3	1			3	7	57
PE227 SIDHWAN BET-II	39				39		1				1	2	41
PE228 JAGRAON	77				77		7	1			15	23	100
PE229 SUDHAR	64				64		7				15	22	86
PE230 PAKHOWAL	49				49		2				2	4	53
PE231 DORAHA	63		1		64		2	1			8	11	75
PE232 MACHHIWARA	88				88			2			15	17	105
TOTAL	1011	0	2	0	1013	10	59	15	0	0	263	347	1360

SOURCE :- D.E.O. (E.E.)

BLOCKWISE COUNT OF MIDDLE SCHOOLS - 2003													
DISTRICT - LUDHIANA													
PE Block Code & Name	G1	G2	G3	G4	TOTG	P1	P2	P3	P4	P5	P6	TOTP	TOTAL
PE214 LUDHIANA-I	34				34	7	4	10	13		51	85	119
PE215 LUDHIANA-II	37	1			38	8	4	11	2		32	57	95
PE216 LUDHIANA-III	7				7	3	3	25	3		31	65	72
PE217 MANGAT-I	24		1		25	6	4	9	6		38	63	88
PE218 MANGAT-II	18				18		6	10	2		33	51	69
PE219 MANGAT-III	30				30	4					59	63	93
PE220 KHANNA-I	29				29			2	2		15	19	48
PE221 KHANNA-II	18				18	4		2	2		13	21	39
PE222 SAMRALA-I	19				19	4		4	3		7	18	37
PE223 SAMRALA-II	22				22			5			8	13	35
PE224 DEHLON-I	29				29	2	2	1			4	9	38
PE225 DEHLON-II	29	1	1		31	2					8	10	41
PE226 SIDHWAN BET-I	24				24			1	3		3	4	28
PE227 SIDHWAN BET-II	19				19		5	1	3		1	10	29
PE228 JAGRAON	41				41	6		3			6	18	59
PE229 SUDHAR	48	3			51	6					9	15	66
PE230 PAKHOWAL	37				37						3	3	40
PE231 DORAHA	35				35			4			3	7	42
PE232 MACHHIWARA	20				20		2	3			16	21	41
TOTAL	520	5	2	0	527	52	30	91	39	0	340	552	1079

LEGEND:-

- | | |
|-------------------------------|-----------------------------|
| G1 STATE GOVT. | P1 AIDED AND RECOGNISED |
| G2 CENTER GOVT. | P2 RECOGNISED |
| G3 OTHER ORG. OF STATE GOVT. | P3 AFFILIATED WITH P.S.E.B. |
| G4 OTHER ORG. OF CENTER GOVT. | P4 AFFILIATED WITH C.B.S.E. |
| | P5 AFFILIATED WITH I.C.S.E. |
| | P6 ANY OTHER |

SOURCE :- D.E.O. (E.E.)

Blockwise Breakup of Primary Teachers					
PEBlock Code & Name		JBT	HT	CHT	Total
214	LUDHIANA-I	275	40	6	321
215	LUDHIANA-II	208	36	3	247
216	LUDHIANA-III	64	16	2	82
217	MANGAT-I	181	30	6	217
218	MANGAT-II	191	33	5	229
219	MANGAT-III	287	41	9	337
220	KHANNA-I	183	29	6	218
221	KHANNA-II	132	25	5	162
222	SAMRALA-I	138	29	6	173
223	SAMRALA-II	119	27	4	150
224	DEHLON-I	175	35	5	215
225	DEHLON-II	183	43	6	232
226	SIDHWAN BET-I	171	34	5	210
227	SIDHWAN BET-II	127	25	4	156
228	JAGRAON	366	55	8	429
229	SUDHAR	338	53	8	399
230	PAKHOWAL	216	39	8	263
231	DORAHA	222	45	7	274
232	MACHHIWARA	203	44	9	256
	Total	3779	679	112	4570
	Unadjusted Teachers in Peblocks	29	0	0	29
	New Teachers				86
	Grand Total	3808	679	112	4685

Source :- D.E.O. (E.E.)

CD BLOCKWISE ENROLLMENT MARCH 2003

DISTRICT - LUDHIANA

S. NO.	Integrated Child Development Scheme	Anganwari Centres	Pre School Education (3-6) Years		
			Boys	Girls	Total
1	Delhon	133	1601	1506	3107
2	Doraha	91	1286	1153	2439
3	Jagraon	115	1649	1467	3116
4	Khanna	84	992	878	1870
5	Ludhiana (U)	110	1453	1342	2795
6	Ludhiana (U-II)	110	1481	1323	2804
7	Ludhiana-I (R)	111	1352	1287	2639
8	Machhiwara	95	1295	1096	2391
9	Mangat	107	1534	1342	2876
10	Pakhowal	100	1320	1143	2463
11	Samrala	76	1039	919	1958
12	Sidhwan Bet	89	1092	1080	2172
13	Sudhar	83	1243	1093	2336
	Total	1304	17337	15629	32966

SOURCE : D.E.O. (E.E.)

District-Ludhiana							
Blockwise Enrollment in State Govt. Primary Schools							
PEBlock		Total			SC		
		Male	Female	Total	Male	Female	Total
214	LUDHIANA-I	5644	5143	10787	3704	3330	7034
215	LUDHIANA-II	3801	3464	7265	2399	2373	4772
216	LUDHIANA-III	1254	1269	2523	509	515	1024
217	MANGAT-I	3514	3269	6783	2443	2290	4733
218	MANGAT-II	3948	3773	7721	2275	2184	4469
219	MANGAT-III	4963	4522	9485	2978	2788	5766
220	KHANNA-I	3334	3155	6489	2257	2028	4285
221	KHANNA-II	2466	2271	4737	1794	1644	3438
222	SAMRALA-I	2502	2201	4703	1594	1422	3016
223	SAMRALA-II	2135	1936	4071	1430	1292	2722
224	DEHLON-I	3463	3109	6572	2159	2003	4162
225	DEHLON-II	3517	3136	6653	2238	1946	4184
226	SIDHWAN BET-I	3635	3109	6744	1883	1613	3496
227	SIDHWAN BET-II	2441	1995	4436	502	461	963
228	JAGRAON	7441	6656	14097	4655	4196	8851
229	SUDHAR	6554	5816	12370	4235	3784	8019
230	PAKHOWAL	4233	3546	7779	2551	2129	4680
231	DORAHA	4416	3864	8280	2763	2458	5221
232	MACHHIWARA	3144	2888	6032	1417	1312	2729
	Total	72405	65122	137527	43786	39768	83564

SOURCE:- D.E.O. (E.E.)

District- Ludhlana-2003-04							
Blockwise Enrollment In State Govt. Middle Schools							
PEBlock		Total			SC		
		Male	Female	Total	Male	Female	Total
214	LUDHIANA-I	2205	2032	4237	1072	998	2070
215	LUDHIANA-II	1728	1656	3384	812	805	1617
216	LUDHIANA-III	460	455	915	267	132	399
217	MANGAT-I	1571	1366	2937	873	772	1645
218	MANGAT-II	1542	1450	2992	775	714	1489
219	MANGAT-III	5132	4350	9482	2275	2147	4422
220	KHANNA-I	2075	1855	3930	995	952	1947
221	KHANNA-II	1351	1217	2568	731	652	1383
222	SAMRALA-I	957	883	1840	373	365	738
223	SAMRALA-II	1290	1274	2564	666	631	1297
224	DEHLON-I	2034	1718	3752	1070	898	1968
225	DEHLON-II	1657	1513	3170	962	872	1834
226	SIDHWAN BET-I	1420	1348	2768	523	543	1066
227	SIDHWAN BET-II	1130	887	2017	502	425	927
228	JAGRAON	3423	3225	6648	1382	1267	2649
229	SUDHAR	3434	3065	6499	1566	1368	2934
230	PAKHOWAL	2702	2416	5118	1563	1071	2634
231	DORAHA	2497	2145	4642	1261	1075	2336
232	MACHHIWARA	1648	1537	3185	658	577	1235
	Total	38256	34392	72648	18326	16264	34590

SOURCE:- D.E.O. (E.E.)

District- Ludhiana-2003-04					
Blockwise Enrollment in State Govt. Primary Schools					
PEBlock		State Govt. Total	Non-State Govt. Total	Unrecognised Total	Grand Total
214	LUDHIANA-I	10787	8370	4175	23332
215	LUDHIANA-II	7265	6639	2803	16707
216	LUDHIANA-III	2523	7077	3760	13360
217	MANGAT-I	6783	7104	1565	15452
218	MANGAT-II	7721	6303	3056	17080
219	MANGAT-III	9485	4862	2397	16744
220	KHANNA-I	6489	3139	1650	11278
221	KHANNA-II	4737	2413	1960	9110
222	SAMRALA-I	4703	346	4398	9447
223	SAMRALA-II	4071	1118	1525	6714
224	DEHLON-I	6572	2408	565	9545
225	DEHLON-II	6653	2489	972	10114
226	SIDHWAN BET-I	6744	879	576	8199
227	SIDHWAN BET-II	4436	1022	126	5584
228	JAGRAON	14097	5878	2656	22631
229	SUDHAR	12370	3206	2553	18129
230	PAKHOWAL	7779	2288	375	10442
231	DORAHA	8280	4483	820	13583
232	MACHHIWARA	6032	3172	891	10095
Total		137527	73196	36823	247546

SOURCE:- D.E.O. (E.E.)

District- Ludhiana-2003-04					
Blockwise Enrollment in State Govt. Middle Schools					
PEBlock		State Govt. Total	Non-State Govt. Total	Unrecognised Total	Grand Total
214	LUDHIANA-I	4237	3118	1228	8583
215	LUDHIANA-II	3384	3399	1363	8146
216	LUDHIANA-III	915	4332	2280	7527
217	MANGAT-I	2937	3754	669	7360
218	MANGAT-II	2992	3247	1452	7691
219	MANGAT-III	9482	2473	468	12423
220	KHANNA-I	3930	1532	646	6108
221	KHANNA-II	2568	1302	796	4666
222	SAMRALA-I	1840	484	2247	4571
223	SAMRALA-II	2564	395	547	3506
224	DEHLON-I	3752	934	200	4886
225	DEHLON-II	3170	1064	278	4512
226	SIDHWAN BET-I	2768	329	193	3290
227	SIDHWAN BET-II	2017	447	31	2495
228	JAGRAON	6648	3140	947	10735
229	SUDHAR	6499	2155	718	9372
230	PAKHOWAL	5118	915	116	6149
231	DORAHA	4642	1896	285	6823
232	MACHHIWARA	3185	1261	316	4762
	Total	72648	36177	14780	123605

SOURCE:- D.E.O. (E.E.)

District- Ludhiana							
Blockwise Out of Schools Children							
PEBlock		Age Group (6-14)					
		Total			SC		
		Male	Female	Total	Male	Female	Total
214	LUDHIANA-I	436	370	806	189	176	365
215	LUDHIANA-II	0	0	0	0	0	0
216	LUDHIANA-III	465	420	885	172	190	362
217	MANGAT-I	367	349	716	216	201	417
218	MANGAT-II	761	781	1542	283	245	528
219	MANGAT-III	500	628	1128	207	301	508
220	KHANNA-I	198	173	371	135	137	272
221	KHANNA-II	126	141	267	75	107	182
222	SAMRALA-I	161	149	310	110	112	222
223	SAMRALA-II	161	166	327	107	112	219
224	DEHLON-I	191	156	347	122	119	241
225	DEHLON-II	256	229	485	157	129	286
226	SIDHWAN BET-I	234	307	541	134	145	279
227	SIDHWAN BET-II	223	204	427	127	127	254
228	JAGRAON	799	647	1446	775	566	1341
229	SUDHAR	455	406	861	326	299	625
230	PAKHOWAL	231	153	384	138	110	248
231	DORAHA	287	239	526	115	107	222
232	MACHHIWARA	402	420	822	72	110	182
	Total	6253	5938	12191	3460	3293	6753

SOURCE :- D.E.O. (E.E.)

Blockwise Handicapped Children							
District : Ludhiana - 6-14 Years (Total)							
PEBlock	Visually Impaired Children	Speech Impaired Children	Hearing Impaired Children	Physically Challenged Children	Mentally Challenged Children	Any Other Challenged Children	Total
LUDHIANA-I	15	23	8	27	17	25	115
LUDHIANA-II	0	0	0	0	0	0	0
LUDHIANA-III	11	13	4	37	31	21	117
MAANGAT-I	8	7	5	41	36	8	105
MAANGAT-II	11	12	6	49	58	5	141
MAANGAT-III	25	33	10	56	59	10	193
KHANNA-I	6	11	15	47	17	29	125
KHANNA-II	8	13	1	22	28	4	76
SAMRALA-I	3	12	4	22	21	15	77
SAMRALA-II	7	10	6	17	17	11	68
DEHLON-I	3	27	1	36	41	19	127
DEHLON-II	2	19	7	52	41	26	147
SIDHWAN BET-I	5	12	4	41	25	10	97
SIDHWAN BET-II	1	6	8	18	16	5	54
JAGRAON	26	26	20	101	66	71	310
SUDHAR	25	26	4	93	58	70	276
PAKHOWAL	17	28	6	45	44	14	154
DORAHA	4	15	2	24	24	6	75
MACHHIWARA	9	14	5	45	31	12	116
Total	186	307	116	773	630	361	2373

SOURCE :- D.E.O. (E.E.)

Blockwise Handicapped Children						
District : Ludhiana - 6-14 Years (Total)						
PEBlock	SC			BC		
	School Going	School Not Going	Total	School Going	School Not Going	Total
LUDHIANA-I	25	23	48	14	12	26
LUDHIANA-II	12	4	16	0	0	0
LUDHIANA-III	9	29	38	15	22	37
MAANGAT-I	24	14	38	4	10	14
MAANGAT-II	22	30	52	9	9	18
MAANGAT-III	31	37	68	14	16	30
KHANNA-I	40	14	54	5	3	8
KHANNA-II	37	21	58	1	6	7
SAMRALA-I	43	14	57	3	11	14
SAMRALA-II	33	33	66	3	2	5
DEHLON-I	36	35	71	5	5	10
DEHLON-II	29	21	50	4	4	8
SIDHWAN BET-I	52	29	81	8	10	18
SIDHWAN BET-II	26	18	44	1	4	5
JAGRAON	60	67	127	29	19	48
SUDHAR	59	32	91	13	5	18
PAKHOWAL	57	40	97	8	8	16
DORAHA	25	18	43	4	2	6
MACHHIWARA	17	16	33	6	15	21
Total	637	495	1132	146	163	309

SOURCE :- D.E.O. (E.E.)

ANNUAL WORK PLAN AND BUDGET for the year 2003-04

District: Ludhiana											(Rs. in lacs)
S.No	Maj. Act.	Activity Description	Unit Cost 2003-04	Total AWP 2002-03		Expenditure 2002-03	SPU over 2002-03		AWP 2003-04		Total AWP 2003-04
				Physical	Financial		Financial	Physical	Financial	Financial	
1	FFE	Primary Schools									
		Salary of teachers (schools opened last year)	0.072	172	13.418		13.418	1032		74.304	87.720
		TLE Grants	0.100	0	0.000		0.000	86		8.600	8.600
		Sub-Total			13.418		13.418			82.904	96.320
2	UPE	Upper primary Schools									
		No. of UPS								0.000	0.000
		Salary for teachers in Upper Primary								0.000	0.000
		TLE Grants for uncovered UPS	0.500					23		11.500	11.500
		Sub-Total					0.000			11.500	11.500
3		School Grants	0.020	1550	31.000	27.960	3.040	1531		30.620	33.660
4		Teachers Grants	0.005	7804	39.020	31.705	7.315	7829		39.145	46.460
5	EGB	EGS Centers for 6-14	0.00845					12191		103.014	103.014
		Sub-Total								103.014	103.014
5.1	IED	Education of disabled		2373	28.476		28.476			28.473	56.949
		Sub-Total			28.476		28.476			28.473	56.949
6	BRC	Salary of staff	0.072	420	32.760		32.760	2160		155.520	188.280
6.1		Contingency Grant	0.125	12	1.500	1.500	0.000	12		1.500	1.500
6.2		TLM Grant	0.050	12	0.600		0.600	12		0.600	1.200
6.3		Workshops and Meetings Grants	0.005	144	0.720	0.875	-0.155	144		0.720	0.565
6.4		BRC	0.072	0	0.000		0.000	360		25.920	25.920
		Sub-Total		0	35.580	2.375	33.205			184.260	217.485
7	CRC	Salary CRC coordinator	0.275							0.000	0.000
7.1		Contingency Grant	0.025	112	2.800	2.800	0.000	112		2.800	2.800
7.2		TLM Grant	0.010	112	1.120		1.120	112		1.120	2.240
7.3		Workshops and Meetings Grants	0.002	1344	2.688		2.688	1344		2.688	5.376
7.4		CRC						0		0.000	0.000
		Sub-Total			6.608	2.800	3.808			6.608	10.416
8	R&E	Research and Evaluation Programme		1550	21.700		21.700			21.323	43.023
		Sub-Total			21.700		21.700			21.323	43.023
9		Civil Works									0.000
9.1		Construction of BRC buildings	6.000	12	72.000	48.000	24.000	4		24.000	48.000
9.2		Construction of CRC buildings	2.000	6	12.000		12.000	8		18.000	28.000
9.3		Construction of additional room for P/S	1.200	55	66.000		66.000	75		90.000	156.000
9.4		Construction of additional room for UPS	1.200	55	66.000		66.000	93		111.600	177.600
9.4		Buildingless Schools	3.000	12	36.000	9.000	27.000	0		0.000	27.000
9.5		Branch School Buildings	3.000	15	45.000	0.000	45.000	0		0.000	45.000
9.6		Sanitary Blocks and drinking water facilities for primary and upper primary sections	0.350	600	210.000	122.500	87.500	469		184.150	251.850
9.7		Construction of Headmaster room for UPS	1.200				0.000	35		42.000	42.000
9.8		Varanda	1.000				0.000			0.000	0.000
9.9		Buildings for schools having unsafe buildings	3.000				0.000			0.000	0.000
		Sub-Total			507.000	179.500	327.500			447.750	775.250
10		Maintenance and Repair Grant	0.050	2908	145.400	67.900	77.500	1531		76.550	154.050
		Sub-Total			145.400	67.900	77.500			76.550	154.050
11	MGT	Management Cost			44.600	0.12379	44.478			79.779	124.255
		Sub-Total			44.600	0.12379	44.478			79.779	124.255
12	TRG	20 days Teachers training (in service)	0.014	7804	109.256	33.27609	75.980	7829		109.608	185.586
		Sub-Total			109.256	33.27609	75.980			109.608	185.586
13	VEC	Training to VEC Members	0.0003	24800	7.440	0	7.440	24496		7.349	14.789
		Sub-Total			7.440	0.000	7.440			7.349	14.789
14	INO	Computer Education			15.000		15.000			15.000	30.000
		Education of Girls			10.000		10.000			10.004	20.004
		Education of SC/ST			10.000		10.000			10.003	20.003
		ECE			14.999		14.999			14.953	29.952
		Sub-Total			49.999		49.999			49.960	99.959
15		Free text books for Non SC girls	0.0015	44309	66.464		66.464	41472		62.208	128.672
		Sub-Total			66.464		66.464			62.208	128.672
		Grand Total			1105.959	345.640	760.319			1341.049	2101.367

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
1	PFE	Salary for primary teachers 86 x 12	0.072	1032	12 months	74.304		
		TLE for New primary Schools(upgradation of Branch Schools with more than 40 students)	0.100	86		8.600		
		Subtotal				82.904	6.182	
2	UPE	Upper primary Schools						
		TLE for Upper Primary Schools	0.500	23		11.500		
		Subtotal				11.500	0.858	
3		School Grant (P+UP Schools)	0.020	1531		30.620	2.283	
4		Teacher Grant (P+UP Teachers)	0.005	7829		39.145	2.919	
5	EGS	Cost of running of EGS centres for 12191 out of school children of 6-14 age group declining by 25%	0.00845	12191		103.014		
		Subtotal				103.014	7.682	
5.1	IED	IED Training to BRC staff 12 x10 x 5	0.0007	600	5 months	0.420		
		IED assessment camps 2 x12	0.020	24		0.480		
		One Resource person honorarium 12 Blocks x 12 months	0.070	144	12 months	10.080		
		Manual for Teachers about visually impaired children for No. of primary & upper primary schools	0.00034	1531		0.521		
		Manual for Teachers about mentally challenged children for No. of primary & upper primary schools	0.00036	1531		0.551		
		Special assistance and TLM to disabled 2373 children	0.00692	2373		16.421		
		Subtotal				28.473	2.123	
6	BRC	Salary of 20 Block Resource Persons per CD Block having more than 100 schools for 9 Blocks @ Rs.7200/- x 12 P.A.	0.072	2160	12 months	155.520		
6.1		BRC Contingency grant for 12 CD Blocks @ Rs.12500/- P.A.	0.125	12		1.500		

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
6.2		TLM grant for 12 CD Blocks @ Rs.5000/- P.A.	0.050	12		0.600		
6.3		Meetings, Travel allowance for 12 CD Blocks @Rs.500 x 12 P.A.	0.005	144		0.720		
6.4		Salary of 10 Block Resource Person Per CD Block having less than 100 schools for 3 Block @ Rs. 7200/- x12 P.A	0.072	360	12 months	25.920		
		Sutotal				184.260	13.740	
7	CRC	Salary of Staff						
7.1		CRC Contingency grant for 159 CRCs Blocks @ Rs.2500/- P.A.	0.025	112		2.800		
7.2		TLM grant for 112 CRCs @ Rs.1000/- P.A.	0.010	112		1.120		
7.3		Meetings, Travel allowance for 112 CRCs Blocks @Rs.200 x 12 P.A.	0.002	1344	12 months	2.688		
		Subtotal				6.608	0.493	
8	R&E	Reasearch and Evaluation Programme						
		Annual School, Block and district planning for Primary and Upper Primary schools @ Rs. 30/-	0.0003	1531		0.459		
		Annual School Gradation and Evaluation process for Primary & Upper primary schools @ Rs. 30/-	0.0003	1531		0.459		
		Conduct of Pupil Achievement Survey 5 % to 10% of schools @ Rs. 2000/-	0.020	153		3.060		
		Academic monitoring of schools by DIET staff by travelling 12 months 2 x12 @ 1000/-	0.010	48		0.480		
		Academic supervision by BRCs 12 x 5 units @ Rs. 1000/-	0.010	120		1.200		

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					Remarks
			Unit cost	Physical	Period	Financial	% to total	
		Hiring of Vehicles for Academic supervision by DPO/ SPD 5 visits to 10 visits x 12 months @ Rs. 1000/-	0.010	120	12 months	1.200		
		Annual Household survey @Rs.3/- per household for 626100 households (50% each year) in parts	0.00003	363050		10.892		
		MIS Data collection and processing of data for 1011 primary schools at State/District office	0.0017	1011		1.719		
		MIS Data collection and processing of data for 520 upper primary schools/sections at State/District office	0.0018	520		0.936		
		Development and supply of material for evaluation of learning in upper primary schools i) Science ii) Mathematics iii) Health and physical education iv) English v) Hindi vi) Punjabi vii) Social Studies				0.000		
		Study in i) Child's concept of class relations ii) Causal thinking in students iii) Students concept of time iv) movement v) Students concept of space vi) Concrete and formal reasoning in Mathematics vii) Teacher expectations and remedial strategies	0.0003x2	1531		0.919		
		Subtotal				21.323	1.590	

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					Remarks
			Unit cost	Physical	Period	Financial	% to total	
9		Civil Works						
9.1		Block Resource centre buildings	6.000	4		24.000		
9.2		Cluster Resource Centres	2.000	8		16.000		
9.3		Additional Class rooms for primary schools	1.200	75		90.000		
9.4		Buildings for buildingless school	3.000			0.000		
9.4		Additional Classrooms for Primary schools and upper primary sections	1.200	93		111.600		
9.5		New Primary school buildings Branch Schools	3.000	*		0.000		
9.6		Sanitary Blocks and drinking water facilities for primary and upper primary sections	0.350	469		164.150		
9.7		Headmaster's room for upper primary sections	1.200	35		42.000		
9.8		Varandah	1.200			0.000		
9.9		Buildings for schools having unsafe buildings	3.000			0.000		
		Sutotal				447.750	33.388	
10		Maintenance and Repair Grant						
		Repairs and maintenance of school Primary and upper primary sections	0.050	1531		76.550		
		Subtotal				76.550	5.708	
11	MGT	Management Cost						
		Hire charges for vehicles for DPO/State 30 times x 12 months	0.015	360		5.400		
		DPO/state consumables	0.070	12		0.840		
		Water, Electricity, Telephone etc. of District and State office	0.100	12		1.200		
		TA & DA of District and State etc.	0.300	12		3.600		
		Consultants (12 Months x 7) for District and State	0.070	84		5.880		
		Computer Stationery Peripherals DPO/State	0.200	1		0.200		

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					Remarks
			Unit cost	Physical	Period	Financial	% to total	
		Documentation at DPO/State	3.000	1		3.000		
		Running cost of Data centre for all primary and upper primary schools and students 1.400 x 12 inclusive of rent and salaries and other expenses for DPO/State	1.500	12		18.000		
		Jan Samparak Abhiyan (once a year visit of 10 schools per block by all senior officers for three days- taxi and other charges) to be conducted by State/District office No of blocks x 2	0.030	24		0.720		
		Development and printing of modules on planning and management by State/District office	0.00036	1531		0.551		
		Hiring of experts for pedagogy research, evaluation, community mobilization, gender sensitisation, alternative schooling, planning and management training District 19x12x8000	0.08000	228		18.240		
		Circulatic of material prepared by the expects Of school/VEDC level				0.000		
		New letter	0.00025	1531		0.383		
		Media Activity				0.000		
		Development and distribution work training manual for VEDCs 4 x 1531	0.00032	6124		1.960		
		Development and distribution training manual on civil works for BRPs and DRPs 4 x (210+10)	0.00068	880		0.598		
		Workshop on Architectural plans and layouts 30 persons x 3 x 300	0.270	2		0.540		
		Development and distribution of architectural plans and layouts 2 x No. of primary & upper primary schools	0.00047	3062		1.439		

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Hiring of vehicles for monitoring of civil works 6 visits x 12	0.010	72		0.720		
		Hiring of vehicles for monitoring of civil works by State office and seeking advice on civil work	0.100	12		1.200		
		Printing of modules for various districts	0.000350	12248		4.287		
		Office Equipment				3.130		
		Annual Household survey @Rs.3/- per household for 626100 households (50% each year) in parts	0.00003	263050		7.892		
		Subtotal				79.779	5.949	
12	TRG	Teachers training for primary and upper primary-for x 20 days	0.0140	7829		109.606		
		Subtotal				109.606	8.173	
13	VEC	Training to VEC Members						
		Orientation to VEDC Members No. of primary + upper primary schools x 8 members x 2	0.0003	24496		7.349		
		Subtotal				7.349	0.548	
14	INO	INNOVATIVE						
a) Computer Education								
		Cost of running of computer education centres at block/cluster level	15.000	1		15.000		
		Subtotal				15.000	1.119	
b) Education of Girls								
		Remedial coaching for girls students for two months in primary schools in parts	0.003	256		0.768		
		Remedial coaching for girls students for two months in upper primary schools in parts	0.003	131		0.393		

**Annual Work Plan & Budget for the year 2003-04,
District Ludhiana, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Development of supplement reading material and item Bank for 65122 girl student of primary students for use in remedial coaching in parts	0.00038	14872		5.651		
		Development of supplement reading material and item Bank for 34392 girl student of upper primary students for use in remedial coaching in parts	0.00057	5600		3.192		
		Subtotal				10.004	0.746	
c) SC/ST								
		Remedial coaching for 3 months in primary & upper primary schools in parts	0.0030	775		2.325		
		Supplementary reading material for remedial coaching in primary school SC children 83564 in parts	0.0005	9216		4.608		
		Question Bank for SC children of 34590 upper primary classes for remedial coaching in parts	0.0006	5117		3.070		
		Subtotal				10.003	0.746	
d) ECCE								
		School readiness kits and playway material for 3-5 age children in ICDS Centres (1304) × 3	0.00075	1304		0.978		
		Teaching learning material for 3-5 age children in ICDS centers × 2 partly	0.00030	39000		11.700		
		School readiness kits for first generation learners in primary schools of 5 year age for no. of primary schools x 3 (1011x3)	0.00075	3033		2.275		
		Subtotal				14.953	1.115	
15		Free text books for Non SC girls	0.0015	41472		62.208		
		Subtotal				62.208	4.639	
		Grand Total				1341.050		

Training

DEVELOPING THE PERSONAL AND PROFESSIONAL COMPETENCIES OF TEACHERS AND HEADS THROUGH TRAINING

It is visualised in the GOVERNMENT OF PUNJAB EDUCATION POLICY AND PROGRAMME OF ACTION 2002 that the teachers need to acquire professional competencies and commitment to enable and empower them to perform the multiple tasks in the classrooms as well as in the school and community in genuinely professional manner, which can enable the school system to obtain the necessary criticality to set a chain reaction, starting with the sound teacher performance. It further states, that effective stages of teacher education now necessarily have to be conceived with a more comprehensive paradigm, which encompasses a number of interrelated components. Therefore, in-service teacher training should be offered on a yearly basis in a most organised manner. Training should be conducted through workshops, seminars and orientation programmes.

The policy states that to run the In-Service Programme effectively, competencies of In-Service Training Institutes i.e. DIETs and GISTCs will have to be thoroughly revitalized by providing able teacher educators, equipment, teaching material/modules and other necessary support.

Focus is required for the proper education of teachers both for pre-service as well as in-service teacher training. All pre-service or in-service teacher training programmes are being designed and organised in such a way so as to make a substantial initiation into preparation for the different roles suggested in the PUNJAB EDUCATION POLICY AND POA 2002 for future education. Programmes at all levels are being geared to certain basic and general objectives, keeping in mind the influences of the present technological advances on the education system. These objectives are being commonly applied in varying degrees to all the levels. The need for changing technology, quality management in education, stable staff requirement, and better management of education make it essential that the teachers are trained in specific skills.

Training is an organised activity for increasing the knowledge and skills of educational functionaries for a definite purpose. It involves systematic procedures for transferring technical know-how to the teachers/Heads/administrators so as to increase their knowledge and skills for doing their job with proficiency. A training programme should be able to bring about positive change in the knowledge, skills and attitudes of the teachers.

The enhancement of competencies in regular teachers as well as Heads of schools is a vital step for making our educational system really need based and value based, so as to help develop a child according to the future needs of the society and the country. In a worldwide phenomenon of upgradation of technologies, upgradation of skills of teachers and Heads also has acquired vital dimensions to keep pace with the constantly developing and changing world.

Our obsolete and traditional teaching-learning aids had been directed just to keep the age old educational system at work, whereas the need of the hour is to develop a child with a modern outlook that may greatly suit the further development of technologies and for acquiring an all round understanding of the intricacies and complexities of human existence.

IDENTIFICATION OF TRAINING NEEDS

Identification of training needs has gained new importance in educational programme because of the technological changes taking place. Modern working methods are making it necessary that new techniques of training are used for the professional growth of teachers. Therefore, training programmes related to the current skills with expected needs for future requirements are being designed. While identifying the needs, the gaps between the existing and required levels of knowledge, skills, performance and attitudes have been taken into account. The problem areas that can be resolved through training have also been targeted.

Following types of analysis may be helpful in identification of training needs:

1. Setting specific goals of the teacher training programmes.
2. Analysing long term and short term objectives and their relative priorities.
3. Identification of the physical and professional resources and their efficient utilisation in meeting the operational targets should be analysed.
4. Identification of skills and training through a task analysis.
5. Identification of the time frame within which training must be imparted and introduction of new work methods and technology.

THE OBJECTIVES OF THE TRAINING PROGRAMME

The objectives of the training programmes are to develop competencies in the Teachers and Heads on the following dimensions:

I. Knowledge and Understanding

1. Understand facts and scientific principles involved in various forms of work.
2. Understand the use of teaching-learning material.
3. Understand the utility of working with the community.
4. Understand the needs of a technologically advancing society in terms of education.
5. Understand the process of planning and organization.
6. Develop an awareness of social programmes.
7. Develop the abilities for self-evaluation.

II. Skills

1. Develop skills for the selection, arrangement and assimilation of useful educational concepts.
2. Develop her/his skills of observation, manipulation and participation in work experience.
3. Develop skills of problem solving.
4. Develop her/his skills of inquisitiveness.
5. Use her/his creative faculties to devise innovative methods and materials.

III. Attitude and Values

1. Inculcate socially desirable values such as self-reliance, helpfulness, cooperativeness, teamwork, perseverance, tolerance etc.
2. Develop proper work ethics such as regularity, punctuality, honesty, dedication, discipline etc.
3. Develop self-esteem through achievements.
4. Develop a deeper concern for the environment and a sense of belonging, responsibility and commitment to the society.

TRAINING PROGRAMMES

These programmes are targeted to help develop concrete plans for enhancing competencies in regular teachers, Heads, community and administrative staff. The upgradation of one's skills is entirely one's personal choice and enforcing or thrusting these on any teacher/Head or educational functionaries may not prove fruitful either for the teacher or for the schooling system. So it is of the utmost importance that it be linked with immediate and long-term monetary gains, better professional status and reputation. The absence of the teacher/Head or educational functionaries from home/personal duties must be compensated so as to motivate him to enhance her/his desire to undergo refresher courses.

This list is by no means exhaustive, since the very nature of refresher programmes is need based. The list also contains all other kinds of training i.e. orientation training, on-the-job-training, apprenticeship training, management training, as well as social responsibility training. Personal development training is also included since the personal competence of educational functionaries holds a lot of importance. Any programme of training has to be, by nature, dynamic and flexible meeting the future needs of Heads, teachers and students. The trainer is the best judge of that. This list can be added to at any time if the need is felt.

The information given in the following pages list the training areas of all these. They also state the level, minimum service requirement to undergo the training and duration of the training.

TYPES OF TRAINING

On the basis of the purpose, several types of training programmes can be offered. It should be noted that these programmes are not mutually exclusive. They invariably overlap and employ many common techniques. The important types of training are: –

1. *Orientation Training*: Helps the newly recruited to know better about the department.
2. *Job-Training*: Helps in developing confidence and skills.
3. *Apprenticeship Training*: Tends more towards information. The usual apprenticeship combines on the job training and experience with classroom instructions in particular subjects.
5. *Refresher Training*: As the name implies, this training is meant for the old employees, the basic purpose of refresher training is to acquaint the existing work force with the latest methods of performing their jobs and improve

their efficiency further. The skills of the existing employees become obsolete because of technological changes and because of the tendency of the human beings to forget. Thus refresher training is essential.

6. *Management Training:* This training develops certain management qualities in the educational functionaries such as Leadership, etc
7. *Social Responsibility:* This is meant to develop sensitivity in the employees towards socially relevant subjects e.g. the socially disadvantaged students like the handicapped, the first generation learners and the girl child.
8. *Personal Development Skills:* Skills that would make the Head a more competent person. For example, interpersonal skills, counseling skills, conflict management skills etc.

In education, pre-service and in-service training are familiar concepts. Pre-service training focuses both on theory and practice of the academics, whereas the in-service training methods may involve orientation courses, seminars/workshops, case studies and special projects etc. These training programmes may be conducted through vestibule, direct, cascading or distance learning. These days tele-conferencing is becoming the most commonly used and economic training device for imparting knowledge to more people in lesser time and without traveling much distances.

TRAINING PERIOD

The length of the training period depends upon the skills to be acquired, the trainee's learning capacity and the training methodology used. The use of effective and visual material usually helps to reduce the training time to maintain interest and secure maximum accomplishment. No single session lasts longer than two hours. The duration of the whole training will be 2-3 days for optimum absorption and internalization of the knowledge. It may be useful if workshops/seminars are organized for 3 days and refresher/orientation are organized for 5 days duration.

TRAINING METHODS AND MATERIALS

There are several on-the-job and off-the-job methods of training. The choice of any method would depend upon the specific objectives of the training programme. Mostly, however, the techniques of role-play, lectures and games have been employed to increase interest and participation of the educational functionaries.

To increase the effectiveness of training some written material is given as a basis for instruction, review and reference. The training material is distributed among the trainees well in advance so that they may come prepared in the lecture class and understand the subject quickly their doubts may be removed by asking questions from the instructor. Material is being developed through several working groups that are constituted especially for this purpose. Expertise and experience available in the field is also utilised for this purpose.

TRAINING EFFECTIVENESS

Training effectiveness is the degree to which the trainees are able to learn and apply the knowledge and skills acquired during the programme. The attitudes, interests, values and expectations of the trainees and also the training environment influence it. A

training programme is likely to be more effective when the trainees want to learn, and are involved in their jobs and have career-plans. Contents of the training programme and the ability of the trainees also determine training effectiveness to a certain extent. The learning of the trainees is assessed through assignments and exercises. These are evaluated at the end of the programme and a feedback is given to the participants about their performance.

SUGGESTED CRITERIA FOR THE EFFECTIVENESS OF THE PROGRAMME

This depends upon the quality of the resource faculty to a large extent. The following guidelines help in the selection and deputation of the resource faculty. These are, however, suggestive. Any other guideline(s) particular to the situation can be employed.

1. Selection of the state level key persons

These persons should:

- a. Have a high reputation for teaching and developing innovative practices.
- b. Possess adequate knowledge of the subject content and the pedagogical theory and practice for upgrading the competence of educational functionaries
- c. Have a democratic disposition and skills for initiating and leading group discussions.
- d. Help the nodal agency through various activities in the planning, organisation, implementation and evaluation of the programme.

2. Selection of the resource persons

The resource persons selected for participation should have:

- a. Qualification and expertise both in the contents and pedagogy of the subject areas.
- b. Experiences of organisation and participation in the In-Service Education Programme and activities.
- c. Reputation for teaching and innovative works in classroom situations.
- d. Experience of serving as teacher educators.

Training Programmes For Teachers/Heads

A. Training Programme For Regular Teachers					
Sr. No.	Name of Training	Level	Minimum Length of Service	Duration	Frequency
Plan of Programs for General Training to Develop/Enhance Personal & Professional Competencies of Regular Teachers					
1	Induction Training	All	On joining	1 week	On joining
1.	Attitude to learn more, how to fetch more work	All	2 years	3 days	Once in a year
2.	Right and justified Benchmarking of self & others	All	2 years	2 days	Once in 2 years
3.	First-Aid	All	2 years	2days	Once in 2 years
4.	Handling Emergencies - General fire - Laboratory - Swimming pool accidents	All	2 years	1 day	Once in 2 years

5.	Authentic Vs inauthentic labour	All	2 years	1 day	Once in a year
6.	'Work on & forget the fruit'	All	2 years	1 day	Half yearly
7.	Grievances and Feedback	All	2 years	1 day	Half yearly
8.	Gender Sensitization	All	All	2 days	Once in 3 years
9.	Value Education Relationships in real life	All	All	2 days	Once in 3 years
Plan of Programs for Training for Focus Groups to Develop/Enhance Personal & Professional Competencies of Regular Teachers					
1.	Competence to identify refer special children	Primary and Upper Primary	5 years	3 days	Annual
2.	Sensitivity to a) Freedom of choice of mode of studies writing Vs typing b) Alternative curriculum e.g. talking Vs writing	Primary Upper Primary	2 years	2 days	Annual
3.	Access to Facilities provided by Govt., Education. Board and other bodies for special children	All	2 years	1 day	Annual
4.	Working with First Generation learners e.g. Academic house management, counseling.	Primary	All	3 days	Once in 3 years
5.	Programs for socially Disadvantaged, e.g. Academic, nutritional, house management etc.	Primary Upper Primary	2 years	3 days	Annual
6.	Tolerance for failure	All	All	1 day	Annual
Plan of Programs to Enhance Academic and Professional Competencies of Regular Teachers					
1.	Curriculum Development: content and methodology to transact content	All	5 years	5 days	Once in 2 years
2.	Innovation in content or methodology				
	a) Languages	All	5 years	2 days	Once in 2 years
	b) Science	All	5 years	2 days	
	c) Physics, Biology, Chemistry	Secondary	5 years	2 days	
	d) Geography	Upper Primary Secondary	5 years	2 days	
	e) Social Studies	Primary	5 years	2 days	
	f) History	Upper Primary Secondary	5 years	2 days	
	g) Maths	All	5 years	2 days	
3.	Use of computers and internet	All	All	3 days	Once in 2 years
4.	Concept of Discipline - how - responsibility, wrong definitions of love and affection.	All All	All All	2 days 2 days	Once in 3 years Once in 3 years
5.	Evaluation: Trends & Constraints who, what, why, where, whom & how	All	2 years	2 days	Annual

6.	Current trends which influence teacher's future	All	5 years	1 day	Once in 5 years
7.	Relevance of Education with real life: beyond text book	All	All	3 days	Once in 2 years
8.	Cooperative Supervision with discussion & feedback	All	All	2 days	Once in 2 years
Plan of Programs to Develop/Enhance Personal & Professional Competencies of Pre Primary Teachers					
1.	Discipline	-	All	2 days	Annual
2.	Behavior Modification	-	2 years	2 days	Once in 2 year
3.	Child Development	-	2 years	2 days	Once in 2 years
4.	Content Innovations	-	5 years	3 days	Once in 3 years
5.	Innovation in conduct of Program	-	5 years	3 days	Once in 3 years
6.	Brain Storming sessions for improvement in infrastructure and total program	-	5 years	1.2 days	Annual
7.	Referral – Why? Constraints & limitations	-	All	2 days	Annual
8.	Grievances and feedback (This is a local Program)	-	All	1/2 days	Annual

B. Training Programme For School Heads

Sr. No.	Name of Training	Level	Minimum Length of Service	Duration	Frequency
Plan of Programs for General Training to Develop/Enhance Personal & Professional Competencies of School Heads					
1	Induction Training	All	On promotion	1 week	On promotion
1.	Attitude to learn more, how to fetch more work	All	2 years	3 days	Once in a year
2.	Right and justified Benchmarking of self & others	All	2 years	2 days	Once in 2 years
3.	First-Aid	All	2 years	2days	Once in 2 years
4.	Handling Emergencies - General fire - Laboratory - Swimming pool accidents	All	2 years	1 day	Once in 2 years
5.	Authentic Vs inauthentic labour	All	2 years	1 day	Once in a year
6.	'Work on & forget the fruit'	All	2 years	1 day	Half yearly
7.	Grievances and Feedback	All	2 years	1 day	Half yearly
8.	Gender Sensitization	All	All	2 days	Once in 3 years
9.	Value Education Relationships in real life	All	All	2 days	Once in 3 years
10.	Stress Management -what	All	All	1 days	Once in a year

	-how to manage -various exercises				
11.	Behaviour Modification	All	2 years	2 days	Once in 2 years
12.	Child Development	All	2 years	2 days	Once in 2 years
Plan of Programs for Training for Focus Groups to Develop/Enhance Personal & Professional Competencies of School Heads					
1.	Competence to identify refer special children	Primary and Upper Primary	5 years	3 days	Annual
2.	Sensitivity to a) Freedom of choice of mode of studies writing Vs typing b) Alternative curriculum e.g. talking Vs writing	Primary Upper Primary	2 years	2 days	Annual
3.	Access to Facilities provided by Govt., Education. Board and other bodies for special children	All	2 years	1 day	Annual
4.	Working with First Generation learners e.g. Academic house management, counseling.	Primary	All	3 days	Once in 3 years
5.	Programs for socially Disadvantaged. e.g. Academic, nutritional, house management etc.	Primary Upper Primary	2 years	3 days	Annual
6.	Tolerance for failure	All	All	1 day	Annual
Plan of Programs to Enhance Academic and Professional Competencies of School Heads					
1.	Curriculum Development: content and methodology to transact content	All	5 years	5 days	Once in 2 years
2.	Innovation in content or methodology				
	a) Languages	All	5 years	2 days	Once in 2 years
	b) Science	All	5 years	2 days	
	c) Physics, Biology, Chemistry	Secondary	5 years	2 days	
	d) Geography	Upper Primary Secondary	5 years	2 days	
	e) Social Studies	Primary	5 years	2 days	
	f) History	Upper Primary Secondary	5 years	2 days	
	g) Maths	All	5 years	2 days	
3.	Use of computers and internet	All	All	3 days	Once in 2 years
4.	Concept of Discipline - how - responsibility, wrong definitions of love and affection.	All	All	2 days	Once in 3 years
		All	All	2 days	Once in 3 years
5.	Evaluation: Trends & Constraints who, what, why, where, whom & how	All	2 years	2 days	Annual
6.	Current trends which influence Head's future	All	5 years	1 day	Once in 5 years
7.	Relevance of Education with real	All	All	3 days	Once in 2 years

	life: beyond text book				
8.	Cooperative Supervision with discussion & feedback	All	All	2 days	Once in 2 years
9.	Motivation -how to find level -how to create -how to maintain level	All	All	3 days	Once in 2 years
10.	Leadership -how to develop -how to maintain	On promotion	On promotion	3 days	Once in 3 years
11.	Communication -techniques of clear communication	All	All	3 days	Annual
12.	Administrative and Financial Competency	On promotion	On promotion	2 days	Once in 2 years

The above training programmes were identified on the basis of job and need analysis in order to improve quality and efficiency of school education. The trained teachers and Heads can act as trail-blazers in the lives of learners and in the process of education for development. If teachers and Heads acquire professional competencies and commitment, and if they are enabled and empowered to perform their multiple tasks in the classroom as well as in the school and the community in the genuinely professional manner, then a chain reaction can begin, starting with the sound teaching performance and culminating into a high quality learning among increasingly more students in respect of cognitive, affective and psychomotor areas of human development.

TRAINING PARTICULARS		
S.No.	Particular	Details
A	Agencies for Conducting Training for Teachers	DIET/GISTC/SSA
B	Agencies for Conducting Training for Heads	GISTC/SSA
C	Arrangement of venue, OHP, paper, pens, etc	Training Agency
D	Arrangement of Reading Material	Punjab Government
E	No. of Master Trainers @ of 5 per district (17)	85
F	No. of Resource Persons (district wise)	
	District	(District) + (Block)
1	Amritsar	$(12*20+4*10)+(10)= 290$
2	Bhatinda	$(6*20+2*10)+(10)=150$
3	Faridkot	$(1*20+1*10)+(10)=40$
4	Fatehgarh Sahib	$(4*20+1*10)+(10)=100$
5	Ferozepur	$(8*20+3*10)+(10)=200$
6	Gurdaspur	$(11*20+4*10)+(10)=270$
7	Hoshiarpur	$(8*20+2*10)+(10)=190$
8	Jalandhar	$(8*20+2*10)+(10)=190$
9	Kapurthala	$(4*20+1*10)+(10)=100$
10	Ludhiana	$(9*20+3*10)+(10)=220$

11	Mansa	$(4*20+1*10)+(10)=100$
12	Moga	$(3*20+1*10)+(10)=80$
13	Mukatsar	$(3*20+1*10)-(10)=80$
14	Nawan Shehar	$(4*20+1*10)+(10)=100$
15	Patiala	$(7*20+2*10)+(10)=170$
16	Ropar	$(5*20+2*10)+(10)=130$
17	Sangrur	$(9*20+3*10)+(10)=220$
	TOTAL	2630

Above are the various particulars regarding the Training to be imparted to the School Heads and the Teachers. In the following pages is the Training Schedule for the year of Training starting January 2003 and ending March 2004. The description of the Training topic; number of trainees; number and source of trainers; materials required and the Training Calendar are given.

PLANNING THE CURRICULUM

Planning for the state level training programme is a decentralized process. At the national level only a suggestive syllabus frame for various subjects is prepared to ensure relevance to the needs, resources and conditions that are present. The model syllabus developed by the state has been elaborated into detailed syllabus at the district and local levels.

Expert groups are helping the state in developing a balanced curricula and to indicate the kind of curricula and content which can go into the syllabi after passing the test of relevance to state needs and resources. The lists of such material are being prepared both for the elementary and secondary stage separately. The training activities for various stages may continue over a span of time. Accordingly, the contents need to be graded over successive training programmes. Therefore, selection, modification, elaboration and gradation of the training activities will constitute the process of its adaptation to the needs of the state. There is ample scope for local variation in content, finalized in consultation with the district authorities and professionals.

A balanced selection of activities is made in each of the areas according to the educational potentials of each activity and the facilities and time available for it. A variety of activities should be provided as far as possible so that teachers / Heads / administration can develop self-sufficiency in meeting their needs. Besides, a balanced distribution of activities over the three dimensions i.e. life skills, education and community involvement is being achieved in accordance with their importance at different stages of education.

The training includes planning, analysis and detailed preparation at every stage, so that it is educational in character. Improved tools and modern techniques have been adopted so that it leads to the understanding of a progressive society based on technology.

CONTENTS OF THE TRAINING PROGRAMME

1. Contents of the training programme have been so designed so that the functionaries are able to relate their knowledge of facts and the scientific principles involved, to various types of work. They should learn to apply problem-solving methods and be able to identify and use the tools, raw materials and equipment in scientific manner. Observation, manipulation and work practice are the methodologies to achieve the stipulated goals. The process of inoculation of positive attitudes and values is being continued. Besides, a deeper concern for the environment and a sense of belonging, responsibility and commitment to the community is being developed in the participant.
2. The content at the elementary stage has three components--environmental studies and application; experimentation with the materials, tools and techniques; and work practices. At the secondary stage, the content comprises two parts i.e. essential activities for the academic gain and the essential activities for the satisfaction of day-to-day living needs of the teachers, their families and communities.
3. National, physical and human resources in the locality and the socio-economic background of the local community also influence the contents of the programme.
4. Activities are selected that they help the teachers in giving shape to their imagination. Activities should also offer scope for experimentation with material and tools and participation in activities that involve helping the others in diverse work situations, sharing work in group situations as well as in fulfilling individual responsibilities. In the selection of activities special care has been taken to select those that satisfy their curiosity and have the potential for developing desirable work and social values.

These activities lead to the development of self-reliance in meeting day-to-day needs and to the improvement of the environment. A large number of activities in related areas have been put in such a sequence that they assume the form of project. The choice of activities and project is such that the needs of the students and community are met.

If the continuity is maintained, it may be conceived that sufficient experience gathered in a particular area can equip the individual in a fair degree with regard to her/his vocational competencies.

The training programme keeps in its focus, the needs of the teachers on the one hand and on the resources available in the community and the facilities available in the schools on the other hand. Since these will differ from place to place, no fixed programme can be prescribed for all the employees in an area let alone in a state or in the country as a whole. It is in keeping with this realization that a suggestive list of activities rather than a prescriptive syllabus is recommended for the subject at the national level also.

FACILITIES REQUIRED FOR TRAINING

Two types of facilities are required for the training programme namely.

- (i) Physical facilities consisting of accommodation, venue, technical facilities etc.
- (ii) Teacher/Trainer expertise.

For physical facilities some resources of the community are being used. It is ensured that the venue is centrally located for the participants and well connected by rail and roads.

EVALUATION OF TRAINING CONDUCTED

Effectiveness of training programme is judged by the degree to which trainees are able to learn and apply the knowledge and skills acquired during the programme. It is influenced by the attitudes, interest, values and expectations of the trainees. A training programme is always more effective with willing participants. Besides this the quality of contents also affects the results. The following criteria are being used to measure the effectiveness of training.

1. *Reactions*: Of the trainees to the objectives, contents and methods of training and also the competency of the trainer. In case the trainees are satisfied with the way training is conducted, programme may be considered successful.
2. *Learning*: The extent to which the trainees have assimilated the desired knowledge and skills, This is a useful indicator to evaluate the training effectiveness.
3. *Behaviour*: Changes in the behaviour of the trainees will reflect the extent to which the learning has been put to practice.
4. *Results*: Quality improvement, decrease in absenteeism, high level of motivation, curiosity to learn more, improvement in the behaviours, satisfying administration and management behaviours are used as indicators of evaluating training effectiveness.

Evaluative programme or studies are also being conducted at different levels, through different agencies. At some places the University Departments of Education are collaborating with state level nodal agencies. At some place the SCERTs/SIEs are conducting evaluative studies at their own levels. State has requested some National level agencies to evaluate the training programmes and suggest ways to improve the effectiveness. But in all the cases the evaluation is being treated as the most important exercise. The evaluation of various programmes gathers information on: –

1. Facilities provided.
2. Distribution and quality of material.
3. Use of transaction and demonstrative activities.
4. Process of transaction and demonstrative activities.
5. Participation by teachers in content areas.
6. Likely gain of the programme to the teacher.
7. In-service education needs of teachers.
8. Suggestions for the improvement of the programme.
9. Capability of the trainers.
10. Evaluation of action plan of the trainee.

COMMUNITY SUPPORT

Effective community support is required for a successful training programme. There is provision in the training programme for the involvement of experts from the community. This is particularly necessary to provide orientation at the beginning of various programmes, for the identification of various problems and strengthening of educational issues.

The programmes are built on policy support and the strength of pedagogical foundations. The problem solving approach and the integration of knowledge relating to different subject areas demands a new type of literature for the guidance of teachers. Instructional material in the form of curriculum guides, handbooks, source books, manuals, resources units and doing learning units along with community participation plays a very vital role in the implementation and success of various educational programmes. Teachers' involvement in the community activities is especially necessary in the future training schedules.

Community is represented by the VEDCs i.e. the Village Education Development Committees.

EMERGING ISSUES AT ELEMENTARY AND SECONDARY EDUCATION LEVEL

1. Nature of students and their behaviour pattern.
2. Discipline, self-discipline, freedom necessary for solving education problems relating to school discipline/class room discipline, discipline & drug abuse. Need for resource mobilization.
3. Application of advanced technology in teaching learning and administration.
4. Quality Management in Elementary and secondary education: Necessity of modern times.
5. Vocalization of secondary and higher secondary education
6. Teaching of Professional ethics.
7. Handling the exceptional children.
 - Education of girl child.
 - Education of gifted/creative children.
 - Education of disabled children.
 - Education of delinquent /truant child.
 - Education of drug-abused child: considerations for remedial teaching.
8. Examination and their uses
 - Learning facilities
 - Teacher's role as facilitator and ways to minimise the learning fatigue in the students.
 - Improving learning conditions in the school/classrooms.
 - Ways and means of motivating children in the classroom.
9. Creating Congenial School Environment
 - Classroom identification
 - Classroom illumination
 - The problem of supplying Mid-day meals.
 - Drinking water facilities

- Aspects of school health education programme
 - Factors affecting health of school children: with special emphasis on drug abuse, alcoholism and training in school children.
10. Strategies of teaching
 11. Techniques of teaching
 12. Management in teaching –learning
 13. Planning of teaching
 14. Organising teaching
 - Leading teaching
 - Meaning of Motivation
 - Selection of Appropriate Strategies of Motivation

IN-SERVICE EDUCATION TRAINING

The main contents of the In-service Programmes are organized around.

- (i) the school curriculum.
- (ii) innovations in pedagogy,
- (iii) changes in curriculum areas.
- (iv) enrichment of curriculum, and
- (v) development of new approaches to teaching methodologies.

The other areas of In-service education are concerned with the development of awareness about vital contemporary issues, developments of professional skills and abilities including those required for development of instructional materials and evaluation procedures. Clarification of concepts, development of healthy attitudes and values, motivation devices and pedagogical theories are also areas of concern in in-service education.

Some new items in the content may emerge according to the needs and development of education from time to time. The planners and organizers of in-service education programmes have to be sensitive and responsive to changes. This attitude will help in identifying needs promptly so that the required programmes can be arranged in a timely manner.

Refresher courses are meant for renewing the information already available with the teachers. Any addition in the available information is communicated to teachers. Even where the persons appointed have some job experience, they are being given some training to renew their knowledge and skills and to tell them what they are expected to do. The talent of on-the-job teachers cannot be fully utilized without a systematic programme of training and development.

The Education Department of Punjab has been restructured recently and two directorates of education have become operational i.e. (i) Directorate of Elementary Education and, (ii) Directorate of Secondary Education. Elementary consists of first-eight classes, secondary education consists of secondary and senior secondary levels relating to age group fourteen to seventeen. As per the GOVERNMENT OF PUNJAB EDUCATION POLICY AND POA 2002, all urban primary schools shall be elevated to elementary level in the state. Urban middle schools are a stand-alone unit. Middle

sections of urban high/senior secondary schools will be nominally separated and the separated middle section shall start primary classes to complete their elementary school structure. Thus, only two levels of education will remain operative i.e. elementary and secondary as per the policy decision of the Govt. of Punjab.

This restructuring of the system calls for a readjustment of the teachers and hence the need for changing the teacher training of elementary teachers both pre-service and in-service. Keeping in mind the new scenarios, New Instructional Strategies are being planned which focus more on the inter-related personal, social and physical environment. The elementary teachers are being trained to teach children to explore: -

1. Processes, systems, relationships, areas and regions in arranged learning environments.
2. Providing opportunities for values exploration related to their personal, social and physical environments.
3. Guiding children in solving problems related to social issues.
4. By providing children with opportunities to learn and use the skills characteristic of their age and surroundings.
5. Involving children in the exploration of survival and to suggest probable solutions.

The above-mentioned strategies are workable and are effective in use. They help in the development of skills in thinking, information, assimilation and processing and expressing ideas. Learning and achievement of elementary stage are less a matter of teaching strategies and more a matter of the adequacy of children skills. The elementary teacher training therefore expands this point of view.

Training Contents For The Resource Persons (Administrators/ DEOS /CEOS / Principals Of DIETs And GISTCs)

- 1. Education policy-2002 and the Administrators Role in the Education of Punjab**
 - Education policy-2002
 - Application of Education Policy
 - Two-tier system of schooling instead of four
 - Recruitment Policy
 - Re-deployment of teachers
 - Leading Quality Institutions
 - Participatory management and Team work
- 2. Principles of School Administration / School organizations.**
 - Principles of school administration.
 - Objectives of School administration
 - Importance of physical aspects of School Administration
 - Needs of a school building.
 - Economy in construction.
 - Healthful school condition
 - Securing parental co-operation.
 - Building proper relations with the staff.

- Staff meetings-their utility and organization.
- School management, school finance and budget.
- 3. Inspection and Supervision**
 - Objectives of school inspection and ways to improve it.
 - Functions of supervision.
 - Modern trends in supervision
 - Leading Quality Institutions
 - Discipline in schools
- 4. Importance of Management system for administration**
 - Role of education technology in the effective management
 - Importance of data system, data analysis and presentation of data.
 - Administrator's role in the effective management of education.
 - Storage of educational data for preparing comparative profiles
- 5. Agencies of Education**
 - Community as an agency of Education.
 - Society as an agency of Education: Special emphasis on global society as a complementary agency of Education.
 - Passive agencies of Education.
 - Wastage and stagnation in Elementary Education.
 - Role of community in controlling wastage and stagnation
 - How to control wastage and stagnation.
 - Role of Administration/PTA/Community in controlling wastage and stagnation

Contents given above will be spread in subsequent training programmes. The training related to the above contents will be converted during the year 2003-04.

Contents For The Training Of Center Head Teachers / Head Teachers And Headmasters

1. Social Role

- Head Teachers as the Liaison Officer between the govt. and the society.
- Head Teacher as the motivator for the community.
- Functional Relationship of Chairman of VEDC of the society and the member secretary.
- School Head as community member
- Management of community grievances, students and parents' problems

2. Teachers Role

- School Head as a teacher.
- Breaking isolation of Teacher Education
- Improving the quality of classroom teaching in the school.
- A catalyst for providing quality training to teachers and global education to students.
- Computer savvy Head Teacher: Role as modern administrator

3. Administrator's Role

- Head Teacher as a Professional Democratic Leader.

- Duties and responsibilities of Head Masters and Head Teachers.
- Position of Head Teachers in the Schools / Classroom / Community.
- School Head: A link between the administration and the community
- School Head as a perfect communicator and stress buster
- Head Teacher as Accounts Administrator

4. School Discipline

- Traditional vs. Modern concepts of discipline.
- Rewards and discipline.
- Punishment and discipline
- Indiscipline: A result of bad school organization
- Common forms of Indiscipline in schools.
- Steps to check indiscipline.

5. Special Role of the Head Teachers

- Need and importance of education for girl child
- Making the community gender sensitive.
- Importance of education for disabled children identification of disabled children.
- Knowledge of Personal Disability Law
- Institutions catering to the needs of mild/moderate/severely disabled
- Role of special teachers in the education of disabled children.
- Head Teacher as a stress buster: Techniques for minimizing the staff stress

6. Promoter of Co-Curricular Activities in the school.

- Bringing a change in the attitude towards extra-curricular activities.
- Organization of Co-Curricular activities.
- Literacy and academic activities promoting healthy competition among students.
- Creating congenial school environment.

Contents of syllabus to be prescribed for E.T.T. teachers who are to be on contract for two years before joining as confirmed teachers.

- In-service Education Field Interaction and Innovative Co-ordination (IFIC)
- M.L.L.s for all the school subjects up to eighth class.
- Knowledge, skills and attitudes for the foundation courses, with particular emphasis on Educational fundamental right and its legal aspects.
- Fundamental duties and how to inculcate dedication in the teachers and the learners.
- Training of children with special needs regarding P.W.D. Act 1995 and its implementation.
- Practical performance in aspects of learning, personality traits, child psychology.
- Community cooperation regarding infrastructure.
- Maintenance of school records and registers regarding school complex.
- To impart knowledge regarding maintenance of funds and rules to minimise court cases.

Educational Technology:

- In service training regarding Educational Technology.

- Preparation of low cost and no-cost Teaching Aids.
- Preparation of audio and video educational cassettes and use of scientific instruments and computers.
- Use of Science Kit, Maths Kit, Tool Kits.

Work Experience:

- In service work experience of various crafts.
- Use of Operation Black Board material like Harmonium, Dholak, and Manjira for community singing for national integration.
- Preparation of charts for different subjects i.e. drawing and painting.
- Papier-mâché and Collage work in art education, cutting and tailoring for art purposes.
- Preparation of puppets, charts for the various games and knowledge about different rules.
- Systematic conduct of morning assembly and use of Tipper, dummies and drum etc. for parade.

Planning Management:

- In service training regarding Planning and Management for different activities of the school and S.S.A. activities.

Curriculum Material Development and Education:

- Curriculum Material Development and Education.
- Preparation of different tools and material for evaluating achievement of students and introduction of grading system.
- Play way child-centered and activity-based approach to attract the children to attend the schools right from the age group of three to six to enhance enrolment to achieve U.E.E. and U.P.E., D.P.E.P activities etc.

TRAINING IN COMPUTER EDUCATION

THE GOVERNMENT OF PUNJAB EDUCATION POLICY AND PROGRAMME OF ACTION-2002 states that with the setting up of Information and Communication Technology Centres, it should be made obligatory for all the teachers to make themselves conversant with the computer technology and to achieve a minimum level of competency in handling computers. Information and Computer Technology (ICT) has the potential to change the entire scenario of Indian Education System. Each change brings with it new roles, new relationships and most importantly new and unique information needs. These information needs are related to global education and can be satisfied by access to external data bases which when programmed properly can provide new knowledge and suggestions on how it might be used. This development in communication technology and information has generated new patterns and mode of learning and this has influenced the very approach to curriculum transaction. The didactic functions of computers, for example, are not limited to simple presentations of information. Computers can also provide interactive instructions and instructional simulation.

This implication of educational technology to teacher education training and curriculum is far reaching. In the first place, curriculum transaction within teacher education institutions is itself undergoing a drastic transformation calling to its disposal

all the available technological hardware and software. Secondly, the methodologies that are taught to the trainees are becoming more forward looking. Further teacher training programme focus more on self-directed learning and the development of learning to learn skills utilizing computers. The future teacher will be a competent, computer-savvy, professional and skilled teacher. She/he will be an effective communicator. Therefore, teacher education both pre-service and in-service strives to incorporate the new role perceptions and expectations. The vision is that: -

1. The ICT be introduced in the teacher-training programme for reducing the transmission time and also making the training cost effective.
2. The ICT facilities (telephone, computer, dish antenna, radio, television) are provided in all SCERTs, DIETs and BRCs for organising the training programme continuously. The SCERT is to act as presentation centre and DIETs will be learning centres.
3. A time slot has been provided in the timetable prepared by DIETs and In-Service Training Centres in the state for the teaching of computers. Equipment should be provided for the state agencies by the government.
4. Training in computers will increase the skills in the performance of jobs. Increase in skills usually helps increase both quantity and quality of output. Such training will also help in increasing the current performance and will prepare for the future assignments.

Teachers who are teaching class III onwards should have a sound knowledge of computers. The future of education depends to a great extent on the computerization because the concept of global education is finding favours from the specialists as well as parents and communities. Therefore, becoming computer savvy is becoming a necessity rather than a fashion for the teachers.

Content for Teacher's Training Programme for Elementary Teachers of Punjab (Computer Education)

1. Role of computers in Elementary Education
2. Role of computers in global education.
3. Education policy and computer education
4. Computer awareness; Explaining about the computers.
5. Information technology and classroom education.
6. Information about hardware and software educational appliances.
7. Exposure to the world of windows.
8. Understanding storage device.
9. Folders and files.
10. Web site and its use in the elementary education.
11. Introduction to Internet facilities and their use in the classrooms.
12. Teacher's reactions to the computerization and globalization of education.
13. How community can be benefited in the computerization process.
14. Possible practical problems in the use of computers in the classes.
15. Viruses and scanners.
16. Information about the Microsoft world.
17. Input/output devices.

18. Abbreviation related to computers.

TRAINING OF ENGLISH TEACHERS

In Punjab, English is to be taught from class 3rd in all government and private aided and recognised schools of the state as stated in the GOVERNMENT OF PUNJAB EDUCATION POLICY AND POA-2002. Privately managed schools are also introducing the instruction in second language and English from class III is being taught compulsorily if not introduced earlier. Science, mathematics and commerce are being taught compulsorily in English medium, instructions are optional in other subjects. This vision of the policy makers makes it essential that the teachers in the schools of Punjab should have a high level of professional competency for teaching the students in English medium. A concentrated and effective training programme is required for providing short-term training to teachers for immediate improvement in usage of English as a teaching medium in the schools of Punjab. Therefore, teachers with specialized training are needed for effective instructions in the classroom. These teachers should: –

1. Have high degree of competence in basic skills of reading, writing, listening, and speaking;
2. Have high quality skills in social interaction; and
3. Have capacity for logical and critical thinking in expression of ideas and in acceptances and rejections of ideas,
4. Follow and give instructions in English,
5. Keep up with technical knowledge available for teaching English.
6. Develop needed professional skills.

The teacher of English is expected to help students accomplish the following goals:

1. Develop basic competencies in the accurate reading, writing and speaking of English language.
2. To develop competence in those reading skills necessary for the performance of school tasks and for the use of reading as an instrument of personal enlightenment and enjoyment.
3. To teach students how to write simply and effectively.
4. Give students a sense of security and such competence, as they are able to achieve in the use of the mother-tongue including effectively express their thoughts clearly in sentences and paragraphs and convey exact meanings through discrimination in the choice of words.
5. Help in the development of linguistic competence necessary for vocational efficiency in their future professional lives. English as a school subject has been judged to be of major importance by almost every authority who has dealt with the practical working day needs of people. The teacher must realize, however, that teaching skills and ideas related to the subject matter of English is not an end in itself but a means of achieving the objectives of English as they relate to General Education.

Tentative Training Programme Contents for the (English) (Elementary Teachers)

- Review of English Text Books prepared by the Punjab School Education Board for teaching English Classes III- VIII.
- Justification for this training programme
- Contents (Grammar & Usage)
 - Synonyms
 - Affixes
 - The Phrase and the Clause
 - Formation of different parts of speech
- Methodology
 - Aims of Teaching English in India
 - As a International Language
 - As a Link Language
 - As a Library Language
- Difference between learning the mother tongue and a foreign language.
- Teaching of English in Indian schools: Causes of decline and suggestions for improvements with special emphasis on the schools of Punjab
- Methods of Teaching English
 - Grammar Translation Method
 - Direct Method
 - Bilingual Method
 - Structural Approach
 - Pragmatic Approach
- Methods of Teaching Grammar
 - Inductive and Deductive Method
 - Drill Method
 - Substitution Method
- Communication skills

Tentative Training Programme Contents for the English Teachers (Secondary)

- Review of English Text Books prepared by the Punjab School Education Board for teaching English in classes IX-XII
- The above exercise will continue to establish the rapport with the teachers and to find out the practical problems faced by the teachers while teaching
- Justification for this programme
- Contents
 - Voice Modulations & Pronunciations
 - Narrations
 - Common errors
 - Drafting of letters/advertisements etc.
 - The Art of Communication
- Methodology

- The art of teaching prose
- The Art of teaching poetry
- Steps in Planning of Lessons for teaching English
- Use of audio-video aids in teaching English
 - Audio aids
 - Video aids
 - Use of Computer in teaching English
- Remedial English and Corrections
 - Identifying areas of remedial English
 - Requirement and measures of remedial English
 - Developing correct listening, speaking, reading and writing ability in the students

TRAINING OF SCIENCE AND MATHS TEACHERS

Like any language, the language of the science changes, some times rapidly in definitions and contexts. There are no easy solutions for teachers interested in keeping up with the changes in the language, the processes and progress of science. Knowing the latest elements that the teachers should be constantly exposed to training. Such training is able to give greater insight into how that content relates to the students and the community. In the present world, science is not an insulated entity but an amalgamation of educational, psychological and sociological research studies. Therefore, the contents of the training are designed to help in the development of students, scientific thinking and learning and assessment in the classrooms. The trainers keep in mind that the high school students' attitudes towards science may be affected by several variables some of which teachers and family can influence. Therefore, the teacher-training programmes are being designed accordingly.

Science now is an integral part of school curriculum up to the secondary stage. The objectives of the science teachers training are to develop such competencies and skills in the teachers so that she/he is able to: –

1. Develop in the students an understanding of the nature of science.
2. Develop the concept of holistic view of science.
3. State instructional objectives in terms of specific behavioral outcomes.
4. Analyse content in terms of concepts, sub-concepts and the relation between them.
5. Plan suitable activities, select appropriate resources, organise group activities.
6. Design teaching strategies aimed at development of science process and skills.
7. Select, Develop and Relate learning experience/learning activities with the developmental stages of the learner.
8. Design and Employ suitable activities and learning experiences to help children.

The teacher has to be competent at: –

1. Planning of activities
2. Preparing the students for activities.
3. Conducting and supervising activities.
4. Conducting discussions.
5. Designing activities for evaluating the learning outcomes.

While designing the contents of the training it is kept in mind that "integrated science" is a component of science curriculum. therefore, its contents and methodology are properly dealt with. It is emphasised during training that the teachers use a variety of strategies in and out of the classroom to capture and continue students' interest in science.

It is essential that the participants think about their goal orientation. Once they establish their goals, training helps them to monitor their own progress in achieving those goals so that they can be more successful in attaining them and thereby further increase their motivation to learn science. During training:

1. Before beginning a lesson the participants are shown an overview of the day's contents.
2. Analogies are used to help them develop more valid conceptions.
3. Conceptual change models are used to overcome participants' misconceptions.
4. A problem-centred or problem-based approach to teaching learning is encouraged.
5. Work directly with the participating teachers as often as possible.
6. Apply the Learning-cycle approach to science teaching to understand scientific concepts.
7. Efforts are made to improve the alignment between teaching practices and learning styles.
8. Present a more authentic view of the nature of scientific practice and how it is integrated into culture and society.
9. Reasoning and problem solving skills are encouraged
10. Questioning skills are encouraged
11. Co-operative activities are encouraged.
12. Involvement of community is emphasised during training.
13. Science is promoted as a value free activity.
14. Scientific inquiry is taught as a simple algorithmic process.
15. Science proceeds via induction.
16. Observation provides direct and reliable access to secure knowledge.
17. Special efforts are made to encourage girls to study science and to be sure that girls are given the same quantity and quality of attention as is given to the boys. Cultural biases are discouraged. These may steer the female students away from biology, chemistry and physics, in particular and science in general, whereas given a change many might really enjoy science.

Improvement of Science Education Scheme
Contents for Middle Science Seminar (Medical Group) Year 2003-04
(5-5-03 to 14-5-03)

Day-1 (5.5.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.

- iii) Distance of school from venue of seminar.
 - iv) Category (General, SC, ST, BC etc.)
 - v) Educational Qualification.
 - vi) Medical or Non-medical background.
 - vii) Last seminar attended (Date, Year, Place & Name of seminar).
 - viii) Stationary (Folder, Register, Pen etc.) Received/not received.
- From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 8th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practicals

Seminarians will be divided in three groups: A, B and C. The following Practical of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the Practical themselves.

Physics	Chemistry	Biology
1. To show the weight of air by experiment.	1. To prepare lime water and show that exhaled air contains more CO than present in ordinary air	1. To study plant cell from epidermal cells of onion peel & animal cell from epithelial cells of cheek.
2. To find the focal length of mirror.	2. To determine the melting point of ice.	2. To study micro-organisms such as amoeba, paramecium etc from pond water.
3. Prove that sound needs a medium to propagate.	3. To determine the boiling point of water.	3. To study human digestive system, human heart and ear from models.

4. To find pressure using Barometer.

4. To prepare oxygen gas in the laboratory.

Discussion

Teachers will be asked to give problems to be faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (6-5-03)

Element, Compound & Mixture (Chemistry)

- Element, Compound and mixture.
- Elements, Compounds and mixtures with examples.
- Chemical symbol, its significance.
- Molecular formula, its significance, molecular formulae of some common compounds.
- Chemical equation.

Work and Energy (Physics)

- What is work (specially in terms of mechanics)? Explanation to be given by using some examples.
- How work changes into energy.
- Different Type of Energy (Detailed forms. E.g. mechanical Energy, Electric energy, Nuclear energy, Sound energy, Electromagnetic energy, Sun energy etc.)
- Relationship between different forms of energy.
- Uses of energy.

Health & Diseases (Biology)

- Importance of balanced diet.
- Preservation of food.
- Deficiency diseases due to nutrients.
- Food Pyramids.
- Importance of cheaper but nutritious foods.
- Diet plan according to age, life-style, and nature of work.
- Communicable & Non Communicable Diseases.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic.
- They can also see latest magazines of Physics, Chemistry & Biology.

Practical

- Groups of seminarians will be inter-changed.

Day-3 (7-5-03)

Nature of matter and separation of substances (Chemistry)

- States of matter, properties of solid, liquid & gas.
- Pure substances and mixtures.
- Need for separating components of a mixture

- Methods/Principles of separation-magnetic separation, sedimentation, decantation, filtration etc.
- Separation using more than one method.

Light and its Projections

- Light- a source of energy on sources of light energy.
- Incident, Reflected, Refracted, Transmitted radiations and respective angle. Relationship between them.

Light and its Projections

- Prism, Angle of incidence, Angle of deviation, Angle of emergence, Relation between them.
- Mirror, lens, Images formed by them and their defects.

Basic Algebraic Concepts (Maths)

- Relationship between numbers & letters.
- Operations on numbers and letters.
- Indices.
- Algebraic expressions.
- Operations on algebraic expressions.
- Simplification.
- Linear equation.
- Solution of Linear equation.
- Problems leading to linear equations.

Practicals

Groups of seminarians will be inter-changed.

Day-4 (8.5.03)

Acid, Base & Salt (Chemistry)

- Acidic and basic oxides with demonstrations.
- Properties of acids, bases & salts.
- Uses of salts in daily life.
- To prepare soap.
- To prepare Carbon-di-oxide gas and to study its properties.

Heat & flow of heat (Physics)

- Heat – one of the forms of energy.
- Production of heat in molecules (due to molecular vibrations).
- Temperature, Difference between Heat and Temperature; Scale of Temperatures. Relationship between different scales.
- Units of Heat.
- Heat capacity with examples.
- Conductors, Insulators.
- Conduction, Convection with examples.

Measurement (Physics)

- Mass, length and time.
- A few basically physical quantities derived from them.

Educational Excursion

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-5 (9-5-03)

Number System (Maths)

- Introduction to 'Set' & notations used to represent relation between sets.
- Set of Natural Numbers & Fundamental operations.
- Set of whole Numbers & Fundamental operations.
- Set of Integers & Fundamental operations.
- Set of Rational Numbers & Irrational Numbers.
- Decimal representation of Rational Numbers.
- Recurring and non-terminating Numbers.
- Set of Real Numbers.
- Number line:-one-one correspondence between numbers & points on line.

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Practicals

Physics	Chemistry	Biology
1.To show the direction of ray of light using glass slab.	1. To show that during the process of photosynthesis, oxygen gas is produced.	1. To study structure of Spirogyra from pond water and Rhizopus from decaying bread.
2. To show the direction of ray of light using glass prism.	2. To prepare Carbon dioxide gas in the laboratory and test it with limewater.	2. Study of parts of a flowering plant and a seed.
3. To prepare Volta cell	3. With the help of valve tubes make a model of graphite.	3. To study plant tissue and animal tissues from slides.
4. To show real and virtual images by using lens.	4. To study the different parts of flame.	

Day -6 (12-5-03)

Biology

- According to choice of seminarians.

- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Electricity (Physics)

- Concepts of changes.
- Flow of electricity in terms of changes.
- Relationship between current & Change.

Basic Geometrical Concepts (Maths)

- Point, line, surface.
- Relation between points & lines in a surface.
- Relation between lines in a surface.
- Line segment.
- Ray, Angle, types of Angles.
- Units of measuring line segment & Angles.

OHP, Slide Projector

- Knowledge regarding working of OHP (Over Head Projector), Slide Projector, preparation of transparencies etc. will be imparted to seminarians. In future they can make their lessons more effective by using this information.

Practicals

- Groups of seminarians will be inter-changed.

Day-7 (13-5-03)

Electricity (Physics)

- Force among changes. Relationship between electric force & other forces.
- Hazards of electricity.

Man made Materials

- Building materials.
- Natural stone, Cement, Glass, glass fibbers.
- Ceramics, polymers, plastics.
- Synthetic fibbers.
- Soaps and Detergents.
- Fertilizers, Pesticides.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Post-Test

- A Post-test containing Questions of Physics, Chemistry Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practicals

- Groups of seminarians will be inter-changed.

Day-8 (14-5-03)

Carbon & its compounds (Chemistry)

- Allotropic forms of carbon.

- Structure of diamond and graphite with models.
- Compounds of carbon, their nomenclature.
- Saturated and unsaturated hydrocarbons.

Animal System (Biology)

- Digestive system, or
- Respiratory System, or
- Circulatory System

Sound (Physics)

- Production of sound waves.
- Types of waves (Transverse & longitudinal)
- Pulse, Difference between pulse & waves.
- Concept about amplitude, Time period, frequency of wavelength.

Science Kit

- Subject experts of Physics Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA./DA. & Relieving slips to seminarians.

*** All the topics of this module will be supplemented with latest information from Newspaper, Magazines, etc. for additional impact on seminarians.**

Contents for Middle Science Seminar (Non-medical Group)

Year 2003-04 (5-5-03 to 14-5-03)

Day-1 (5.5.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.
- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario

- Including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topics of Physics, Chemistry, Biology from Classes 6th to 8th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and there previous knowledge will be tested.

Practicals

Seminarians will be divided in three groups A, B and C. The following Practical of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the Practical themselves.

Physics	Chemistry	Biology
1. To show the weight of air by experiment.	1. To prepare lime water and show that exhaled air contains more CO than present in ordinary air	1. To study plant cell from epidermal cells of onion peel & animal cell from epithelial cells of cheek.
2. To find the focal length of mirror.	2. To determine the melting point of ice.	2. To study microorganisms such as amoeba, paramecium etc. from pond water.
3. Prove that sound needs a medium to propagate.	3. To determine the boiling point of water.	3. To study human digestive system, human heart and ear from models.
4. To find pressure by using Barometer.	4. To prepare oxygen gas in the laboratory.	

Discussion

Teachers will be asked to give problems to faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (6-5-03)

Element, Compound & Mixture (Chemistry)

- Element, Compound and mixture.
- Elements, Compounds and mixture with examples.
- Chemical symbol, its significance.

- Molecular formula, its significance, molecular formulae of some common compounds.
- Chemical equation.

Cell & Cell Structure (Biology)

- Discovery of cell
- Structure of Plant cell
- Structure of animal cell
- Structure & functions of cell organelles.
- Difference between plant cell & animal cell

Health & Diseases (Biology)

- Importance of balanced diet.
- Deficiency diseases due to nutrients.
- Importance of Cheaper but nutritious Foods.
- Communicable & Non Communicable Diseases.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic.
- They can also see latest magazines of Physics Chemistry & Biology

Practical

- Groups of seminarians will be inter-changed.

Day-3 (7-5-03)

Nature of matter and separation of substances (Chemistry)

- States of matter, properties of solid, liquid & gas.
- Pure substances and mixtures.
- Need for separating components of a mixture
- Methods/Principles of separation-magnetic separation, sedimentation, decantation, filtration etc.
- Separation using more than one method.

Micro-organisms (Biology)

- Major Groups of Micro organisms –Bacteria, Fungi, Protozoa, Algae & Virus, Major Functions of Micro- organisms. (Brief account)
- Micro-organisms and disease.
- Medicinal uses of micro organisms & vaccination
- Commercial uses of micro-organisms.

Useful Plants and Animals (Biology)

- Food producing plants, Fiber producing plants
- Timber producing plants, ornamental plants
- Medicinal plants
- Animal Husbandry (Feeding, breeding, weeding, heeding etc.)
- Poultry, Apiculture, Sericulture etc.
- Other uses of animals.

Construction and Theorems in Geometry (Maths)

- Construction of triangles (different types of triangles).
- Construction of medians, angle bisectors, bisectors of sides of triangles.

- Circum-circle of triangle. In-circle of triangle.
- Tangents to a circle.
- Cyclic-quadrilateral.

Practical

- Groups of seminarians will be inter-changed.

Day-4 (8.5.03)

Acid, base & salt (Chemistry)

- Acidic and basic oxides with demonstrations.
- Properties of acids, bases & salts.
- Uses of salts in daily life.
- To prepare soap.
- To prepare Carbon-di-oxide gas and to study its properties.

Heat & flow of heat (Physics)

- Heat – one of the forms of energy.
- Production of heat in molecules (due to molecular vibrations).
- Temperature, Difference between Heat and Temperature: Scales of Temperatures. Relationship between different scales.
- Units of Heat.
- Heat capacity with examples.
- Conductors, Insulators.
- Conduction, Convection with examples.

Our Environment (Biology)

- Physical and Biological Environment.
- Biotic & Abiotic components.
- Interaction between abiotic and biotic components.
- Socio-cultural environment.
- General awareness regarding protection of environment.

Educational Excursion.

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-5 (9-5-03)

Conservation of Natural resources (Biology)

- Natural resources
- Renewable resources
- Limits of renewable resources
- Non-renewable resources and their conservation.
- Forest conservation.
- Habitat conservation.
- Recycling.

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Practicals

Physics	Chemistry	Biology
1. To show the direction of ray of light using glass slab.	1. To show that during the process of photosynthesis, oxygen gas is produced.	1. To study structure of Spirogyra from pond water and Rhizopus from decaying bread.
2. To show the direction of ray of light using glass prism.	2. To prepare Carbon-di-oxide gas in the laboratory and test it with limewater.	2. Study of parts of a flowering plant and a seed.
3. To prepare Volta cell	3. With the help of valve tubes make a model of graphite.	3. To study plant tissue and animal tissues from slides.
4. To show real and virtual images by using lens.	4. To study the different parts of flame.	

Day -6 (12-5-03)

Animal System (Biology)

- Digestive system, or
- Respiratory System

Physics

- According to choice of seminarjans.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Animal System (Biology)

- Circulatory system, or
- Excretory system.

OHP, Slide Projector

- Knowledge regarding working of OHP (Over Head Projector). Slide Projector, preparation of transparencies etc. will be imparted to seminarjans. In future they can make their lessons more effective by using this information.

Practical

- Groups of seminarjans will be inter-changed.

Day-7 (13-5-03)

Biology

- According to choice of seminarjans.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarjans.

Man made Materials

- Building materials.
- Natural stone, Cement, Glass, glass fibbers.
- Ceramics, polymers, plastics.
- Synthetic fibbers.
- Soaps and Detergents.
- Fertilizers, Pesticides.

Organic Evolution (Biology)

- Evidences of evolution (from fossils)
- Embryological evidences
- Homologous organs, Analogous & vestigial organs.
- Origin of species.
- Origin of life.

Post-Test

- A Post-test containing Questions of Physics, Chemistry, Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day-8 (14-5-03)

Carbon & its compounds (Chemistry)

- Allotropic forms of carbon.
- Structure of diamond and graphite with models.
- Compounds of carbon, their nomenclature.
- Saturated and unsaturated hydrocarbons.

Food (Biology)

- Constituents of food
- Importance of balance diet
- Preservation of food.
- Diet plan according to age, life style, nature of work etc.

Electricity (Physics)

- Concepts of changes.
- Flow of electricity in terms of changes.
- Relationship between current & Charge.
- Force among charges
- Relationship between electric force & other force.
- Hazards of electricity

Science Kit

- Subject experts of Physics, Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.

- Address & thanks by Co-ordinator.
- Disbursement of TA/DA. & Relieving slips to seminararians.

*All the topics of this module will be supplemented with latest information from Newspaper, Magazines, etc. for additional impact on seminararians.

Contents for High Science Seminar (Non-medical Group) Year 2003-04
(21-7-03 to 1-8-03)

Day-1 (21.7.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School. School's Phone No. & District.
- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers. Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminararians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 10th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test.

- A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practical

- Seminararians will be divided in three groups A, B & C. The following Practicals of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the practical themselves.

Physic	Chemistry	Biology
1. To study the variation in time period of a simple pendulum with length and to plot L-T graph.	1. To distinguish between Saturated and unsaturated organic compounds.	1. To study the presence of starch, sugar, fat & protein in food sample.
2. To determine the value of acceleration due to gravity.	2. To test different samples of soil (4-5 samples) for its acidity and alkalinity.	2. To study yeast (by preparing yeast culture)
3. To verify the laws of reflection of light using plane mirror.	3. To prepare a colloidal solution of sulphur and differentiate it from (i) True solution and (ii) suspension on the basis of transparency and filtration criterion respectively.	3. Identification of plant tissues and animal tissues & draw diagrams.

Discussion

- Teachers will be asked to give problems to be faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (22-7-03)

Matter-Nature & behavior (Chemistry)

- Atoms and molecules.
- Atomic theory of matter.
- Atomic and molecular masses. The mole concept.
- Law of constant proportion.
- Calculation of percentage composition of elements in simple compounds.
- Determination of empirical and molecular formulae of simple substances.

Cell & Cell Structure (Biology)

- Discovery of cell
- Structure of Plant cell
- Structure of animal cell
- Structure & functions of cell organelles.
- Difference between plant cell & animal cell

Diversity in living World (Biology)

- Need & importance of classification, Binomial nomenclature.
- Classification of plants upto division level.
- Classification of Animals (Invertebrates upto phylum & vertebrates upto class.)
- Importance of Conservation of biodiversity.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic. They can also see latest magazines of Physics, Chemistry & Biology.

Practical

- Groups of seminarians will be inter-changed.

Day-3 (23-7-03)

Periodic Table (Chemistry)

- A brief historical background of periodic classification of elements.
- Mendeleev's periodic Law.
- Modern periodic Law.
- Variation in properties across a period and along a group.
- Atomic size, metallic and non-metallic character.
- Ionization Energy and factors on which I.E. depends.
- Electron affinity and electro-negativity.

Human Diseases (Biology)

- Types of diseases, mode of spread of communicable diseases, Symptoms, Prevention & control of some diseases (malaria, influenza, cholera, diarrhea, jaundice, typhoid, rabies, AIDS, tuberculosis).

Human Diseases (Biology)

- Heart diseases, Cancer, Diabetes.
- Protein Energy malnutrition, Vitamin deficiency (Scurvy, rickets, beriberi, pellagra, xerophthalmia, mineral deficiency (anaemia, goitre)

Construction and Theorems in Geometry (Maths)

- Construction of triangles (different types of triangles).
- Construction of medians, angle bisectors, bisectors of sides of triangles.
- Circumcircle of triangle, Incircle of triangle.
- Tangents to a circle.
- Cyclic-quadrilateral.

Practicals

- Groups of seminarians will be inter-changed.

Day-4 (24.7.03)

Chemical bonding (Chemistry)

- Chemical bond and Lewis concept.
- Formation of chemical bond.
- Types of chemical bond (Ionic bond, covalent bond.).
- Ionic bond- conditions for the formation of ionic bond.
- Properties of ionic compounds.
- Covalent bond-Lewis concept, a polar covalent bond and properties of covalent compounds.
- Examples of compounds having both the types of bonds.

Sun and Nuclear energy (Physics)

- Structure of sun, exothermic & endothermic reaction, and energy produced in the Sun, proton- proton cycle. , Structure of atom. A little bit about nuclear reactor.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Population Education

- Information regarding birth rate, death rate, literacy rate, sex-ratio, density of population of Punjab and India will be given to seminarians.
- An awareness regarding AIDS Education, Adolescence Education will also given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To study the variation in limiting with mass and the nature of surfaces in contact.	1. To carry out the following chemical reactions and record observations: - i) Iron nail with copper sulphate solution in water. ii) Burning of magnesium ribbon in air. iii) Zinc with sulphuric acid. iv) Heating of NH ₄ Cl. v) Sodium sulphate with barium chloride in the form of their aqueous solution.	1. To study different microorganisms from pond water
2. To determine the focal length of a concave mirror by attaining image of distant object.	2. To prepare the methane gas in laboratory and study its properties.	2. Identify & draw labeled diagrams of stages of mitosis from prepared slides.
3. To trace the path of ray of light passing through a glass prism and measure the angle of deviation:	3. To determine the %age of oxygen in air.	3. To study bacteria from different sources.

Day-5 (25-7-03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Life processes (Biology)

- Digestive system, or
- Respiratory System

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Moral values

- Along with academic skills, inculcation of moral values in school students is also very important aspect of education.
- Emphasis will be given to remind the teachers about their responsibility in this regard.

Practical

- Groups of seminarians will be inter-changed.

Day -6 (28-7-03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Life Processes (Biology)

- Circulatory system, or
- Excretory system.

Assignments

- Seminarians will discuss and submit their assignments to subject experts.

Practical

- Groups of seminarians will be inter-changed.

Day-7 (29.7.03)

Heredity (Biology)

- Heredity and variation.
- Physical basis of heredity-chromosomes
- DNA (Elementary idea)
- Genes, sex determination.

Educational Excursion

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-8 (30-7-03)

Evolution (Biology)

- Evidences of evolution
- Theories of evolution.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

NTSE

- Eligibility of class X students regarding National Talent Search Examination (NTSE), preparation for this examination, importance for this examination, motivation of the students for this examination, this type of information will be given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To prepare Volta cell.	1. To study the interaction of following metals with their salt solution and arrange according to their reactivity: Cu, Al, Zn, Sn.	1. To study fungus growing on decaying food materials.
2. To find out the resultant resistance of two resistors connected in (i) Series, and (ii) Parallel.	2. To prepare soap and study its properties.	2. To test the presence of adulterant turmeric or coriander.
3. To study the dependence of current on the potential difference across a resistor and determine its resistance.	3. Determine the caloric value of wax.	3. To prepare temporary mount of leguminous root nodules to study bacteria.

Day-9 (31.7.03)

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Carbon & its compounds (Chemistry)

- Coal and petroleum as natural resources of carbon.
- Destructive distillation of coal (in brief)
- Fractional distillation of petroleum (in Brief)
- Carbon- its tetra-valency and catenation.

Sustainable Agriculture (Biology)

- Mixed farming
- Mixed cropping
- Crop rotations
- Variety improvement through breeding and selection.

Post-Test

- A Post-test containing Questions of Physics, Chemistry, Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day -10 (1-8-03)

Electricity (Physics)

- Electricity in terms of electrons and protons. Electric field produced.
- Units, Properties of charges
- Difference between charges & masses.
- Analogous of electricity & gravitation.

Carbon & its compounds (Chemistry)

- Hydro carbons-saturated and unsaturated.
- Isomerism, Homologues series.
- Carbon compounds- alcohols, aldehydes, ketones, carboxylic acids (Preparation, properties and uses.)
- Soaps and detergents.

Our Environment (Biology)

- Habitat and its types, adaptation in plants and animals, conservation of habitats.
- Biosphere – ecosystem, structure of an ecological system, food-chain, food web, trophic levels, function of an ecological system.
- Flow of energy, biogeochemical cycles of materials (Carbon and Nitrogen), and types of ecosystems, biomass, biodiversity and its importance.

Science Kit

- Subject experts of Physics, Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA /DA. & Relieving slips to seminarians.

***All the topics of this module will be supplemented with latest information from Newspapers, Magazines, etc. for additional impact on seminarians.**

Contents for High Science Seminar (Medical Group) Year 2003-04 **(21-7-03 to 1-8-03)**

Day-1 (21.7.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.
- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received not received.

From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario
- Including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 10th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practical

Seminarians will be divided in three groups A, B and C. The following Practicals of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the practical themselves.

Physic	Chemistry	Biology
1. To study the variation in time period of a simple pendulum with length and to plot L-T graph.	1. To distinguish between Saturated and unsaturated organic compounds.	1. To study the presence of starch, sugar, fat & protein in food sample.
2. To determine the value of acceleration due to gravity.	2. To test different samples of soil (4-5 samples) for its acidity and alkalinity	2. To study yeast (by preparing yeast culture)
3. To verify the laws of reflection of light using plane mirror.	3. To prepare a colloidal Solution of sulphur and differentiate it from (i) True solution and (ii) suspension on the basis of transparency and filtration criterion respectively.	3. Identification of plant tissues and animal tissues & draw diagrams.

Discussion

- Teachers will be asked to give problems to faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (22-7-03)

Matter-Nature & behavior (Chemistry)

- Atoms and molecules.
- Atomic theory of matter.
- Atomic and molecular masses. The mole concept.
- Law of constant proportion.
- Calculation of percentage composition of elements in simple compounds.
- Determination of empirical and molecular formulae of simple substances.

Diversity in living World (Biology)

- Need & importance of classification, Binomial nomenclature.
- Classification of plants upto division level.
- Classification of Animals (Invertebrates upto phylum & vertebrates upto class.)
- Importance of Conservation of Biodiversity.

Force (Physics)

- Origin of force
- Newton's Laws & its applications.
- Units, momentum, Force of friction.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic. They can also see latest magazines of Physics, Chemistry & Biology

Practical

- Groups of seminarians will be inter-changed.

Day-3 (23-7-03)

Periodic Table (Chemistry)

- A brief historical background of periodic classification of elements.
- Mendeleev's periodic Law.
- Modern periodic Law.
- Variation in properties across a period and along a group.
- Atomic size, metallic and non-metallic character.
- Ionization Energy and factors on which I.E. depends.
- Electron affinity and electro-negativity.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Measurement, units & motion (Physics)

- Mass, length and time.
- A few basically physical quantities derived from them.

Basic Algebraic Concepts (Maths)

- Relation between numbers & letters.
- Operations on numbers and letters.
- Indices.
- Algebraic expressions.

- Operations on algebraic expressions.
- Simplification.
- Linear equation.
- Solution of Linear equation.
- Problems leading to linear equations.

Practical

- Groups of seminarians will be inter-changed.

Day-4 (24.7.03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Sun and Nuclear energy (Physics)

- Structure of sun, exothermic & endothermic reaction. and energy produced in the Sun, proton- proton cycle, structure of atom, A little bit about nuclear reactor.

Electricity (Physics)

- Electricity in terms of electrons and protons.
- Electric field produced.
- Units, Properties of charges. Difference between charges & masses.
- Analogous of electricity & gravitation.

Population Education

- Information regarding birth rate, death rate, literacy rate, sex ratio, density of population of Punjab and India will be given to seminarians.
- An awareness regarding AIDS Education, Adolescence Education will also given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To study the variation in limiting with mass and the nature of surfaces in contact.	1.To carry out the following chemical reactions and record observations:- i) Iron nail with copper sulphate solution in water. ii) Burning of magnesium ribbon in air. iii) Zinc with sulphuric acid. iv) Heating of NH ₄ Cl. v) Sodium sulphate with barium chloride in the form of their aqueous solution.	1. To study different microorganisms from pond water.
2.To determine the focal length of a concave mirror by attaining image of distant object.	2. To prepare the methane gas in laboratory and study its properties.	2. Identify & draw Labeled diagrams of stages of mitosis from prepared slides.

3. To trace the path of ray of light passing through a glass prism and measure the angle of deviation.	3. To determine the %age of oxygen in air.	3. To study bacteria from different sources.
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Day-5 (25-7-03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Number System (Maths)

- Introduction to 'Set' & notations used to represent relation between sets.
- Set of Natural Numbers & Fundamental operations.
- Set of whole Numbers & Fundamental operations.
- Set of Integers & Fundamental operations.
- Set of Rational Numbers & Irrational Numbers.
- Decimal representation of Rational Numbers.
- Recurring and non-terminating Numbers.
- Set of Real Numbers.
- Number line:-one-one correspondence between numbers & points on line.

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Moral values

- Along with academic skills, inculcation of moral values in school students is also very important aspect of education.
- Emphasis will be given to remind the teachers about their responsibility in this regard.

Practical

- Groups of seminarians will be inter-changed.

Day -6 (28-7-03)

Carbon & its compounds (Chemistry)

- Coal and petroleum as natural resources of carbon.
- Destructive distillation of coal (in brief)
- Fractional distillation of petroleum (in brief)
- Carbon- its tetra-valency and catenation.
- Hydro carbons- saturated and unsaturated.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Light (Physics)

- Light in the form of wave.
- A little bit about interference, Diffraction, Polarisation.
- Details of mirror, lens, prism and their defects.

Assignments

- Seminararians will discuss and submit their assignments to subject experts.

Practical

- Groups of seminararians will be inter-changed.

Day-7 (29-03)

Heat (Physics)

- Heat as a form of energy, its origin (Origin basically from vibrational motion of molecules.
- Each and every term of heat i.e. specific heat etc.

Educational Excursion

- An Educational Excursion will be arranged for seminararians to update their knowledge.

Day-8 (30-7-03)

Physics

- According to choice of seminararians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Electricity (Physics)

- Units, Properties of changes. Difference between changes & masses.
- Analogous of electricity & gravitation.

Basic Geometrical Concepts (Maths).

- Point, line, surface.
- Relation between points & lines in a surface.
- Relation between lines in a surface.
- Line segment.
- Ray, Angle, types of Angles.
- Units of measuring line segment & Angles.

NTSE

- Eligibility of class X students regarding National Talent Search Examination (NTSE), preparation for this examination, importance for this examination, motivation of the students for this examination, this type of information will be given to seminararians.

Practicals

Physics	Chemistry	Biology
1. To prepare Volta cell.	1.To study the interaction of following metals with their salt solution and arrange according to their reactivity: Cu, Al, Zn, Sn.	1. To study fungus growing on decaying food materials.
2.To find out the resultant resistance of two resistors connected in i) Series and (ii) Parallel.	2. To prepare soap and study its properties.	2. To test the presence of adulterant turmeric or coriander.
3. To study the dependence of	3. Determine the caloric	3. To prepare temporary

current on the potential difference across a resistor and determine its resistance.

value of wax.

mount of leguminous root nodules to study bacteria.

Day-9 (31.7.03)

Magnetism (Physics)

- Sources of magnetism.
- Properties of magnet.
- Electro magnet & Permanent magnets.

Chemical bonding (Chemistry)

- Chemical bond and Lewis concept.
- Formation of chemical bond.
- Types of chemical bond (Ionic bond, covalent bond.).
- Ionic bond- conditions for the formation of ionic bond.
- Properties of ionic compounds.
- Covalent bond-Lewis concept, a polar covalent bond and properties of covalent compounds.
- Examples of compounds having both the types of bonds.

Human Diseases (Biology)

- Types of diseases, mode of spread of communicable diseases, Symptoms, Prevention & control of some diseases (malaria, influenza, cholera, diarrhea, jaundice, typhoid, rabies, AIDS, tuberculosis).

Post-Test

- A Post-test containing Questions of Physics, Chemistry & Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day -10 (1-8-03)

Universe (Physics)

- Stars, Galaxies, Meteors, Meteorites, Comets.
- Units used to measure distances.
- Milky way galaxy etc.

Carbon & its compounds (Chemistry)

- Isomerism, Homologues series.
- Carbon compounds- alcohols, aldehydes, ketones, carboxylic acids (Preparation, properties and uses.)
- Soaps and detergents.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding the topic will be given to the seminarians

Science Kit

- Subject experts of Physics Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA/DA. & Relieving slips to seminarians.

* All the topics of this module will be supplemented with latest information from Newspapers, Magazines, etc. for additional impact on seminarians.

Contents of Middle Maths Seminar (8 days)

Number System (2Pds)

- Natural number and their properties
- Concept of Zero and its operation
- Whole numbers and its properties
- Integers and its properties including absolute values
- Decimal representation of Numbers
- Rational numbers and their properties
- Irrational numbers and their properties
- Real numbers
- Number line and its use
- Rational number between two given Rational numbers

Indices, Exponents and Surds (1Pd)

- Representing Numbers in Exponent and Surd form
- Laws of radicals
- Negatives and Positives Indices
- Zero Exponent

Squares and Cubes (1 Pd)

- Concept of Square, Square root, Cube, Cube root
- Square root by factorisation, division method and by using table
- Cube root by factorisation and using tables
- Representing Square Roots Geometrically
- Square and Cube of decimals, rational numbers (Negative and Positive)
- Square Root of +ve numbers
- Cube root of +ve and -ve numbers

Commercial mathematics (5 Pds)

- Percentage and its application
- Profit and Loss
- Discount
- Simple, Compound interest and its application in public sector
- Ratio and Proportion

- Unitary Methods
- Banking- General information and use of table in calculating interest
- Share and Debentures

Algebra (4Pds)

- Introduction to Algebraic Expression in one variable
- Relation between number and letters
- Finding value of algebraic expressions
- Operation on algebraic expressions
- Factorization of algebraic expressions
- Concept of Linear equations in one variable
- Solution of Linear equations and Verification of solution.
- Use of linear equation in daily life
- Algebraic Indices
- Application of Algebraic Indices
- Division of Algebraic Expression

Geometry (7 Pds)

- Basic Geo. Concept
- Angle and its properties
- Triangle and its properties
- Quadrilateral and its properties
- Circle related problems
- Geometrical construction
- Units of mass, length, capacity temperature. Volume &
- Conversion of units.

Mensuration (2 Pds)

- Area of Rectangle, Triangle, Parallelogram, Trapezium, Circle, Sector and Segment of Circle,
- Volume of Cuboid, Cube, Cylinder, Cone Sphere.

Statistics (1Pd)

- Raw data
- Primary and Secondary data
- Mean
- Frequency distribution
- Bar graphs and Histogram and their applications

Teaching Aids (2Pds)

Contents of High Maths Seminar (10 days)

Algebra (10Pds)

- Irrational numbers
- Rationalization of Surds
- Polynomials
- Remainder Theorem and its applications
- Factor Theorem and its applications
- Ratio Proportion – Some useful relations

- Simultaneous linear equations with two variables. Their analytical and Geographical solutions, application of these equations
- Quadratic equations. Solution by factorization and by Completing squares
- Equations reducible to Quadratic equations
- Word problems related to Quadratic equations.
- Rational Expressions, their operations
- GCD and LCM of polynomials.

Mensuration (2Pds)

- Area of Parallelogram, Triangle, Polygon, Circle, Sector and Segment of Circle using Teaching Aids.
- Surface area of Prism, Pyramid, Tetrahedron, and Octahedron.
- Volume & Surface area of Cube, Cuboid, Cylinder, Cone and Sphere, Hemisphere.

Trigonometry (2Pds)

- Introduction with interesting examples
- Trigonometrical ratios
- Trigonometrical table
- Trigonometrical Identities
- Solving sums without using Trigonometrical tables
- Height and Distance (Sufficient number of sums)

Commercial Maths (5Pds)

- Banking
- Share & Debentures
- Income Tax & Sales Tax
- Compound interest

Statistics (3 Pds)

- Statistical data – Raw, Primary and Secondary.
- Geo. Representation of data – Bar graph, Histogram, Frequency polygon, Ogive.
- Arithmetic Mean of ungrouped data
- Arithmetic Mean of grouped data
- Shortcut method for calculating Mean of grouped data
- Weighted Mean
- Median of ungrouped data
- Cost of living Index
- Crude death and birth rates
- Probability

Geometry & Co-ordinate Geo. (9 Pds)

- Theorems, their application the topics
- Congruent triangles
- Similar triangles
- Parallelogram
- Loci and Concurrency Theorem
- Circle and its properties
- Cyclic Quadrilateral

- Tangent to Circle
- Geometrical Construction using Geometry Box in class room
- Construction of Triangles (Simple and Hard Cases), Quadrilaterals.
- Construction of Tangent and using Tangent / Chord properties
- Construction of simple figures
- Distance, Section formulae and their use.

Teaching Aids (2 Pds)

Note: -

1. Probability and Coordinate Geometry is proposed to be included in Class X for 2004-05

2 Area of Tetrahedron, Octahedron etc in class X for 2004-05 by PSEB, which has been included by CBSE. So our teachers should be ready to teach these topics.

Guidelines for Maths Seminar Year 2003-04

Registration

Particulars of the teachers will be registered as per following columns.

- ix) Date of joining.
- x) Name of participant, Name of School, School's Phone No. & District.
- xi) Distance of school from venue of seminar.
- xii) Category (General, SC, ST, BC etc.)
- xiii) Educational Qualification.
- xiv) Medical or Non-medical background.
- xv) Last seminar attended (Date, Year, Place & Name of seminar).
- xvi) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, reliving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the Scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Maths of particular classes.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

- A pre-test contains questions of Maths from the syllabus and general awareness regarding subject will be given to teachers and there previous knowledge will be tested.

MANAGEMENT OF TEACHER TRAINING

The management of teacher training requires human approach in dealing with problems. The ability to treat the child as a human being, to gain mutual respect and understanding, to have her/his trust, to win her/his cooperation without any command or coercion is among the essential qualities that characterise the truly successful teachers. In order to function effectively on the human relations front, a teacher should be impartial, open minded and fair in dealing with the everyday problems of her/his class. She/he must be easily approachable by her/his class and listen to their problems with care and sympathy. Effective teacher training is being imparted to develop the following qualities in the teachers for the better management of the classroom activities

- Positive attitude
- Clear Instructions
- Personal Contact
- Open communications
- Teamwork orientation

When all the students are involved in the planning and decision making activities of the classroom, the communication becomes successful. Therefore proper use of the group management system in the classroom is being made. It implies providing environment to the students in the classroom with different aptitudes, talents, aspirations, needs and motivation for their proper academic growth and development. Such an approach helps in increasing the potential for the academic attainment of the students.

Therefore, the management requires that principles of sociology, psychology and group dynamics as well as management of resources i.e. child, money, material, motivation and building work and performance and culture are applied in the classroom. The objective is to achieve the target for proper growth and development of the child. To achieve this, integrated plans for teacher education are required both at pre-service and in-service training levels. These training programmes focus on making teachers committed to goals, teachers who can work in terms and teachers who are a part of the community.

CHALLENGES OF EDUCATIONAL SCENARIOS

Teaching is a multidimensional, multidisciplinary profession. A teacher is required to plan, to lecture, to demonstrate, question, guide and even keep silent, keeping the situation in mind the flow of information and changes in the communication programmes.

All pre-service teacher education programmes are being designed and organized in such a way as to make for substantial initiation into an adequate preparation for the different roles envisaged in the Punjab Education Policy and POA 2002 and future education. Programmes at all levels are geared to certain basic and general objectives and which may be commonly applicable in varying degrees to all the levels.

During the past fifty years or so, significant changes have taken place in the social, economic, technological and political environment of Indian education. However, recent policies, both educational and economic, and trends towards globalization have suggested many changes for the educational organizations. These changes cannot be

ignored; instead serious and scientific efforts are required to execute innovative mechanisms of developing skills and competencies of teacher trainees. Such an effort will prepare the teachers to accept the emerging challenges. Changing technology is leading to obsolescence of present skills and to tough competition. Changing international environment is building academic pressures due to emphasis on e-mail, Internet and multimedia techniques in teaching learning. Changing profiles of teachers, increased educational level, rising participation of women in the teaching profession and increased emphasis on fulfillment of psychological needs is changing the social as well as value structures of the society.

The above trends will have a tremendous impact on the teachers of future who will have to act as Change Agents or "Change facilitators". Therefore, a judicious use of various mechanisms is required for the teachers' training to meet the challenges of future environment. It is required that the teacher training is so professionally oriented that it has the capacity and capability to train the teachers from experiment, action, past experiences and the experiences of others and transfer of learning to all for greater educational effectiveness. The concept of TQM (Total Quality Management) in the education is one experience, which can bring far-reaching improvements in the system and can contribute to the teacher development on a continuous basis.

With the changes coming in the wake of advance technology, new jobs need to be created and many old jobs may become redundant. There is a general apprehension of impending unemployment. In the competitive world of today, education cannot hope to survive for long with old technology. The problem of unemployment resulting from modernization may be solved by properly assessing the educational needs and training the teachers in alternative skills. Changes and modernization have to be accepted because these are so essential for professional as well as personal growth and development and unavoidable for survival of the system.

Computerization will have a revolutionary impact on the management of teaching learning process as well as management of educational systems. This aspect of education will effect:

- The decision-making processes at higher levels.
- Teaching learning processes in the classrooms.
- Collection and processing of data.

It is being visualized that management of human relations in the future will be more complicated than it is today. This will be in part the result of change in the value systems coupled with interference of advanced technology. This will mean that the teachers should be so professional and so trained that they are responsible and do their jobs for the strengthening of the system. This requires the creation of not only on academic considerations but also cultural or specific psychological considerations. The teacher training in future therefore needs to be modified accordingly. Open communication systems, which involve sharing of information, sharing of ideas and sharing of skills, need to be encouraged. These will also strengthen the concept of total quality management involving encouragement of creativity, motivation and commitment. This will help the teachers in becoming effective professionals with readiness for change. This will also create an atmosphere of trust in the system.

IMPROVEMENT OF SCIENCE EDUCATION SCHEME

TIME-TABLE FOR MIDDLE SCIENCE SEMINAR YR. 2003-4 (5.5.30 TO 14.5.03)

VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB

Day	9:30 to 10:15	10:15 to 11:00	11:00 to 11:15	11:15 to 12:00	12:00 to 12:45	12:45 to 1:30	1:30 to 3:30	3:30 to 4:30
1	Registration	Inauguration	T e a	Assignment	Library	L u n c h	Practical of phy. chem. bio according to syllabus	Discussion regarding problems faced by teachers and teacher's presentation
2	Element, compound & mixture	Health and Diseases		Work & Energy	Pre-test		as above	
3	Heat and Flow of Heat	Nature of matter & separation of substances		Micro-organisms	Moral values/maths		as above	
4	Useful Plants and Animals	Light and its projections		Rocks, Minerals & Metals	Educational excursion		Educational Excursion	
5	Acid, Base & Salt	Conservation of natural resources		Sound	Participation of teachers		Practical of phy. chem, bio according to syllabus	
6	Magnetism	Carbon and its compounds		Our Environment	Film Librarian (OHP, slide, projector)		as above	
7	Animal Systems	Electricity		Man-made Materials	Post Test		as above	
8	Chemistry according to choice of seminararians	Biology according to choice of seminararians		Physics according to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement	

IMPROVEMENT OF SCIENCE EDUCATION SCHEME

TIME-TABLE FOR HIGH SCIENCE SEMINAR YR. 2003-4 (5.5.30 TO 14.5.03)

VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB

Day	9:30 to 10:15	10:15 to 11:00	11:00 to 11:15	11:15 to 12:00	12:00 to 12:45	12:45 to 1:30	1:30 to 3:30	3:30 to 4:30
1	Registration	Inauguration	T e a	Assignment	Library	L u n c h	Practical of phy, chem, bio according to syllabus	Discussion regarding problems faced by teachers and teacher's presentation
2	Nature of Matter	Diversity in the living world		Energy	Pre-test		as above	
3	Human Diseases	Classification of elements		Sun and Nuclear Energy	Maths		as above	
4	Magnetism	Chemical bonding		Natural Resources	Population Education		as above	
5	Chemical Reactions	Light		Participation by Teachers	Moral Values		as above	
6	Carbon and its Compounds	Our Environment		Electricity and its Applications	Assignments		as above	
7	Life Processes	Educational Excursion		Educational Excursion			Educational Excursion	
8	Heredity and Evolution	Metals and Non-metals		Universe	NTSE		Practical of phy, che, bio, acc to syllabus	
9	Chemistry acc to choice of seminararians	Biology acc to choice of seminararians		Physics acc to choice of seminararians	Post Test		as above	
10	Biology acc to choice of seminararians	Chemistry acc to choice of seminararians		Physics acc to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement	

MIDDLE MATHS SEMINAR (8 DAYS)

Day	9:00	9:30 to 10:30		10:45 to 11:45	11:45 to 12:45		1:30 to 2:30	2:30 to 3:30		3:45 to 4:30
1	Attendance & Morning Assembly & Moral Values Talks	Registration	T e a	Regarding Seminar	Pre-test	L u n c h	Number Systems-I	Linear equations	T e a	Assignments Mathematica teaching problems faced by teachers and discussions in a planned manner
2		Basic Geo Concepts		Square and Cubes	NTSE		Number System-II	Word Problems		
3		Shares & Debentures		Indices and Exponents	Physics		Basic Geo Concepts	Geo Construction		
4		Shares & Debentures		Area	Env. Ed.		Triangles	Geo Construction		
5		Banking		Volume	Chemistry		Quadrilaterals	Teaching Aids		
6		Statistics		Educational Excursion			Educational Excursion			
7		Algebraic Concepts		Percentage, Profit-Loss	Biology		Circles & Related Concepts	Teaching Aids		
8		Algebraic Expressions		Interest (simple, compound)	Population Education		Concluding session			

HIGH MATHS SEMINAR (8 DAYS)

Day	9:00	9:30 to 10:30		10:45 to 11:45	11:45 to 12:45		1:30 to 2:30	2:30 to 3:30		3:45 to 4:30
1	Attendance & Morning Assembly & Moral Value Talks	Registration	T e a	Regarding Seminar	Pre-test	L u n c h	Factorisation, LCM, HCF	Linear Equations	T e a	Assignments, Mathematical teaching problems faced by teachers & discussion in a planned manner
2		Basic Geo Concepts		Income Tax and Sales Tax	NTSE		Function and Relation	Word Problems		
3		Trigonometry		Surds	Physics		Basic Geo Concepts	Geo Construction		
4		Height and Distance		Area	Env. Ed.		Similar Triangles	Geo Construction		
5		Banking		Volume	Chemistry		Quadri-laterals	Teaching Aids		
6		Statistics		Educational Excursion			Educational Excursion			
7		Statistics		Remainder Theorem	Biology		Circles & Related Concepts	Teaching Aids		
8		Simultaneous Equations		Sequence & Series	Shares and Debentures		Circles & Related Concepts	Locus		
9		Quadratic Equations		Probability	Shares and Debentures		Geo Concepts on Area	Some more figures		
10		Rational Expressions		Compound Interest	Population Education		Concluding Session			

IMPROVEMENT OF SCIENCE EDUCATION SCHEME							
TIME-TABLE FOR HIGH SCIENCE SEMINAR (MEDICAL GP.) YR. 2003-4 (5.5.30 TO 14.5.03)							
VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB							
Day	9:30 to 10:15	10:15 to 11:00		11:15 to 12:00	12:00 to 12:45		1:30 to 3:30 3:30 to 4:30
1	Registration	Inauguration		Assignment	Pre-test		Practical of Phy, Chem, Bio acc to syllabus
2	Matter-Nature & Behaviour (che)	Diversity in living world (bio)		Force (phy)	Library		as above
3	Periodic Table (che)	Biology acc to choice of seminararians		Measurement, units & motion (phy)	Basic Algebraic Concepts (maths)		as above
4	Chemistry acc to choice of seminararians	Sun & Nuclear Energy (phy)		Electricity (ohy)	Population Education		as above
5	Chemistry acc to choice of seminararians	Number System (maths)	T E A	Participation by teachers	Moral Values	L U N C H	as above
6	Carbon & its Compounds	Physics acc to choice of seminararians		Light (phy)	Assignments		as above
7	Heat (Phy)	Educational Excursion		Educational Excursion			Educational Excursion
8	Physics acc to choice of seminararians	Electricity (phy)		Basic Geometrical Concepts (maths)	NTSE		Practical of Phy, Chem, Bio acc to syllabus
9	Magnetism (phy)	Chemical Bonding (che)		Human Diseases (bio)	Post-test		as above
10	Universe(phy)	Carbon & its Compounds		Biology acc to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement

IMPROVEMENT OF SCIENCE EDUCATION SCHEME							
TIME-TABLE FOR HIGH SCIENCE SEMINAR (NON-MEDICAL GP.) YR. 2003-4 (5.5.30 TO 14.5.03)							
VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB							
Day	9:30 to 10:15	10:15 to 11:00		11:15 to 12:00	12:00 to 12:45		1:30 to 3:30 3:30 to 4:30
1	Registration	Inauguration		Assignment	Pre-test		Practical of Phy. Chem. Bio acc to syllabus
2	Matter-Nature & Behaviour (che)	Cell & Cell Structure (bio)		Diversity in living world (bio)	Library		as above
3	Periodic Table (che)	Human Diseases (bio)		Human Diseases (bio)	Construction & Theorems in Geometry (maths)		as above
4	Chemical Bonding (che)	Sun & Nuclear Energy (phy)		Biology acc to choice of Seminarisians	Population Education		as above
5	Chemistry acc to choice of seminarisians	Life Processes (bio)	T E A	Participation by teachers	Moral Values	L U N C H	as above
6	Chemistry acc to choice of seminarisians	Physics acc to choice of seminarisians		Life processes (bio)	Assignments		as above
7	Heredity (bio)	Educa-tional Excursi-on		Educational Excursion			Educational Excursion
8	Evolution (bio)	Physics acc to choice of seminarisians		Biology acc to choice of Seminarisians	NTSE		Practical of Phy, Chem, Bio acc to syllabus
9	Magnetism (phy)	Carbon & its Compounds (che)		Sustainable Agriculture (bio)	Post-test		as above
10	Electricity (phy)	Carbon & its Compounds (che)		Our Environment (bio)	Science Kit		Valedictor y & TA/DA disbursement

Material Prepared for SSA

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Title/Description	Objective	Language	Source material	Circulation	No of Item
Teacher Training					
ਆਪਣੇ ਕੌਮੀ ਚਿੰਨ੍ਹ ਅਤੇ ਕੌਮੀ ਏਕਤਾ Our National Symbols and National Integration	Teacher Training	Punjabi	NCERT	School level	1
ਜਨਸੰਚਾਰ ਸਾਧਨ ਅਤੇ ਕੌਮਾਂਤਰੀ ਸਮਝ Communication Media and Understanding	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/In-Service Training Centre	1
ਸਹਾਇਕ ਸਾਧਨਾਂ ਦੀ ਤਤਕਾਲੀ ਸਿਰਜਣਾ Improvising Teaching-Aids	Teacher Training	Punjabi	NCERT	Block level	1
ਸਿੱਖਿਆਰਥੀ ਮੁੱਖੀ ਪਹੁੰਚ Learner-centred Approach	Teacher Training	Punjabi	NCERT	Block level	1
ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਘੱਟ ਦੀ ਆਦਤ ਪਾਉਣਾ Developing Inquiry skills in students.	Teacher Training	Punjabi	NCERT	Block level	1
ਕਦਰਾਂ ਬੀਮਤਾਂ ਵੱਲ ਸੋਧਤ ਸਿੱਖਿਆ Values oriented Education	Teacher Training	Punjabi	NCERT	Block level	1
ਨੈਤਿਕ ਸਿੱਖਿਆ -ਸੰਚਾਰ ਅਤੇ ਮੁੱਲਾਂਕਣ Moral Education : communication and Evaluation	Teacher Training	Punjabi	SSA, Punjab	School level	1
ਵਾਤਾਵਰਣ, ਸਕੂਲ ਅਤੇ ਬੱਚਿਆਂ ਦੀ ਸਫ਼ਾਈ Environment, School and children cleanliness	Teacher Training	Punjabi	SSA, Punjab	School level	1
ਪ੍ਰੇਰਣਾ (ਰੁਝਲਤਾਵਾਂ ਲਈ ਪ੍ਰੇਰਕ ਸ਼ਕਤੀ) Motivational Skills & Self Motivation	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਵਾਤਾਵਰਣ ਅਧਿਐਨ -ਅਧਿਆਪਕ ਅਗਵਾਈ ਪੁਸਤਕ Environment Care - a teachers /-manual	Teacher Training	Punjabi	NCERT	Manual School Level	1
ਸਕੂਲ ਮੁਖੀ -ਇਕ ਕੁਦਰਤੀ ਲੀਡਰ Leadership skills	Teacher Training	Punjabi	SSA, Punjab	Manual School Level	1
ਸੰਚਾਰ ਕੁਸ਼ਲਤਾ Communication Skills	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਸਫਲ ਸਕੂਲ ਮੁਖੀ A proficient School Head	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਸਿੱਖਣ ਵਿਚ ਸਮੱਸਿਆਵਾਂ ਵਾਲੇ ਬੱਚੇ : ਉਨ੍ਹਾਂ ਦੀਆਂ ਸਿੱਖਿਆ ਲੋੜਾਂ Children with learning problems: Their Educational Needs	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸਰੀਰਕ ਅਤੇ ਮਾਨਸਿਕ ਚੁਣੌਤੀਆਂ ਵਾਲੇ ਬੱਚਿਆਂ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ ਸਿੱਖਿਆ ਲੋੜਾਂ Special Educational needs of physically and mentally challenged children	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸੁਣਨ ਦੇ ਵਿਕਾਰ ਅਤੇ ਭਾਸ਼ਾ ਵਿਕਾਸ Hearing Impaired and Language Development	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸਿੱਖਿਆ ਅੰਕੜਿਆਂ ਦਾ ਮਿਆਰੀਕਰਨ Updation of Educational Data	School Planning and management	Punjabi	NIEPA	District Block	1
ਸਿੱਖਿਆ ਯੋਜਨਾਵਾਂ ਲਾਗੂ ਕਰਨ ਲਈ ਯੋਜਨਾਬੰਦੀ Planning for implementation	School Planning and Mangament	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਿੱਖਿਆ ਵਿਕਾਸ ਦੇ ਸੰਕੇਤਕ ਭਵਿੱਖੀ ਸਕੂਲੀ ਦਾਖਲੇ: ਅਧਿਆਪਕ ਅਨੁਮਾਨ Indicators of Educational Development. Future School, School Enrolments: Teacher Projection	Planning management	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
ਸਿੱਖਿਆ ਯੋਜਨਾਬੰਦੀ ਤੇ ਸਿੱਖਿਆ ਵਿਕਾਸ ਦੀ ਪਤਛੋਲ Educational Planning Diagnosis of Educational Development	Planning & Management	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਜ਼ਿਲ੍ਹਾ ਪੱਧਰੀ ਵਿਦਿਅਕ ਯੋਜਨਾਬੰਦੀ- ਧਾਰਨਾ ਤੇ ਸੰਭਾਵਨਾ District level Educational Planning	Planning & Management	Punjabi	NIEPA	Distt. Level	1
ਸਿੱਖਿਆ ਬਾਰੇ ਰਾਸ਼ਟਰੀ ਨੀਤੀ: ਅਧਿਆਪਕਾਂ ਲਈ ਭਾਵ ਅਰਥ, ਸੰਸਥਾਗਤ ਯੋਜਨਾ ਅਤੇ ਪ੍ਰਬੰਧ National Educational Policy meaning & scope for teachers Institutional Planning	School Planning and management	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਿੱਖਿਆ ਬਾਰੇ ਰਾਸ਼ਟਰੀ ਨੀਤੀ (ਮੂਲ ਰੂਪ ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ) National Educational Policy-1986 Punjabi Translation of the original document	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਕੂਲ ਯੋਜਨਾਬੰਦੀ ਉਦੇਸ਼ ਅਤੇ ਵਿਸਤਾਰ School Planning	Planning & Management (work book)	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਯੋਜਨਾ (ਮਾਡਿਊਲ) School Planning	Planning & Management (Module)	Punjabi	SSA, Punjab	School level	1
ਪੰਜਾਬ ਸਿੱਖਿਆ ਨੀਤੀ 2002 ਅਤੇ ਇਸਦਾ ਕਾਰਜ ਪੋਗਰਾਮ Punjab Education Policy 2002 and Programme of Action	Policy, Programme of Action	English	SSA, Punjab	State District level	1
ਵਿਰਢੇ ਸਮੂਹ ਸਿੱਖਿਆ ਦੇ ਬਰਾਬਰ ਮੌਕੇ Disadvantaged groups: Equal Educational opportunities to women	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਅਧਿਆਪਕ ਸਿਖਲਾਈ ਕਿੱਥੇ ਹੋਵੇ Training Manual for Teachers	Teachers training	Punjabi	SSA, Punjabi	Cluster/block/DIETS & inservic training centres	1
ਮੁੱਢਲੀ ਬਾਲ ਸਿੱਖਿਆ ਅਧਿਆਪਕ ਅਗਵਾਈ ਪੁਸਤਕ - I, II, III & IV Pre-Primary Education- a teachers manual -- I, II, III & IV	ECCE/EGS training	Punjabi	NCERT	School & Anganwari level	4
Learning Material for EGS					
ਈ. ਜੀ. ਐਸ. ਪ੍ਰਾਇਮਰ -1 E.G.S. Primer-1	Learning material	Punjabi	SSA, Punjab	EGC	1
ਅਭਿਆਸ ਪੁਸਤਕ ਈ. ਜੀ. ਐਸ. ਪ੍ਰਾਇਮਰ -1 E.G.S. Work Book	Learning material	Punjabi	SSA, Punjab	EGC	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
Community Participation and Monitoring /PASWAK					
ਪਸਵਕ ਦੇ ਹਿਸਾਬ-ਕਿਤਾਬ ਰੱਖਣ ਦੀਆਂ ਵਿਧੀਆਂ - ਸਿਖਲਾਈ ਮੈਨੂਅਲ Accounting procedures of PASWAK: Training Manual	Planning & Management (VEDC) Training Manual	Punjabi	SSA, Punjab	School level	1
ਪਸਵਕ ਦੇ ਕੰਮਾਂ-ਕਾਰਜਾਂ ਲਈ ਨੋਮ Procedures of functioning of PASWAK	VEDC (Rules)	Punjabi	SSA, Punjab	Village level, School level	1
ਪਸਵਕ- ਉਸਾਰੀ ਵਿਧੀਆਂ ਅਤੇ ਅਧਿਕਾਰ Procedures of construction by PASWAK	VEDC (Rules Manual)	Punjabi	SSA, Punjab	Village level, School level	1
ਐਸ. ਐਸ. ਏ. ਬੁੱਝਰ SSA Brochure	Motivation and awareness	Punjabi	SSA, Punjab	School level	1
ਏਸ ਏਸ ਏ ਚੋਸ਼ਾ SSA Brochure	Motivation and awareness	Hindi	SSA, Punjab		1
ਹਿਸਾਬ- ਕਿਤਾਬ ਰੱਖਣ ਦੀਆਂ ਵਿਧੀਆਂ Accounting Procedures for PASWAK	VEDC (Accounts,Manual)	Punjabi	SSA, Punjab	School level	1
ਪਸਵਕ ਆਮਦਨ, ਖਰਚੇ, ਸਟਾਕ, ਇਨਸਪੈਕਸ਼ਨ, ਵਰਤੋਂ, ਸਮਾਜਿਕ ਆਡਿਟ ਅਤੇ ਮਤੇ ਸਬੰਧੀ About Paswak income, stock, inspection, utility, social audit, expenditure and resolution SSA/PASWAK/1,1-R,2,3,4,5,6,7,8,9,10	VEDC (Accounts)	Punjabi	SSA, Punjab	School level	11
ਮਾਸਿਕ /ਸਾਲਾਨਾ ਪ੍ਰਗਤੀ ਰਿਪੋਰਟ ਕਲੱਸਟਰ, ਬਲਾਕ, ਅਤੇ ਜਿਲ੍ਹਾ ਪੱਧਰ ਐਸ. ਐਸ. ਏ / ਪਸਵਕ II/III/IV/10 Monthly/Yearly Progress Report SSA/Paswak/II/III/IV/10	VEDC (Accounts)	Punjabi	SSA, Punjab	Cluster	3
ਪੋਸਟਰ ਐਸ. ਐਸ. ਏ. 1,2,3,4,5,6,7,8,9,10,11,12 Posters SSA 1,2,3,4,5,6,7,8,9,10,11,12	Motivation and awareness	Punjabi	SSA, Punjab	School level	12
ਐਸ. ਐਸ. ਏ ਦਾ ਲੋਗੋ ਮਾਨਵ ਸੰਸਾਧਨ ਮੰਤਰਾਲੇ ਵੱਲੋਂ ਤਿਆਰ SSA Logo prepared by MHRD	Management/awareness	Punjabi	MHRD SSA, Punjab	School level	1
ਈ. ਜੀ. ਐਸ. ਕੇਂਦਰ (ਜਾਣਕਾਰੀ, ਤਿਆਰੀ ਅਤੇ ਕਾਰਗੁਜ਼ਾਰੀ) E.G.S Centres (Introduction, Initiation and activity)	Learning Material	Punjabi	SSA, Punjab	EGC	1
ਸਰਕਾਰੀ ਸਕੂਲੀ ਇਮਾਰਤਾਂ ਦੇ ਕੰਮ ਕਾਰਜ School Building works	VEDC (Construction Draw-ings and schedules of material)	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਮੁਲਾਂਕਣ ਤੇ ਗਰੇਡੇਸ਼ਨ School evaluation & gradation		Punjabi	SSA, Punjab	School level	1

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Title/Description	Objective	Language	Source material	Circulation	No. of
Household Survey					
<p>ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ, ਉਮਰ ਬੰਦੀ ਅਨੁਸਾਰ ਬੱਚਿਆਂ ਦੀ ਵੰਡ, 3-19 ਸਾਲਾਂ ਦੀ ਪਿੰਡ, /ਵਾਰਡ ਵਿਚ ਕੁੱਲ ਵਸੋਂ, ਪ੍ਰੀ, ਪ੍ਰਾਈਮਰੀ ਅਤੇ ਸਕੂਲ ਨਾ ਜਾਂਦੇ ਅਤੇ ਮਜ਼ਦੂਰੀ ਕਰਦੇ ਬੱਚੇ ਅਤੇ ਬੰਦੀ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. 1,2,3,4,5</p> <p>Family survey for universalisation of education, classification of children as per age, population of 3-19 age group, Pre school and school not going to school and doing labour and school going children category wise</p> <p>SSA/FS/VI,2,3,4,5</p>	Family Survey	Punjabi	SSA, Punjab	School level	5
<p>ਬੰਦੀ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ/ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ)</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/6</p> <p>School going children category wise (village/ward, cluster, block and district) SSA/FS I,II,III,IV/6</p>	Family Survey	Punjabi	SSA, Punjab	School level	4
<p>ਉਮਰ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ)</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/7</p> <p>Age wise School going children (village/ward, cluster, block and district) SSA/FI,II,III,IV/7</p>	Family Survey	Punjabi	SSA, Punjab	School level	4
<p>ਬੰਦੀ ਅਤੇ ਉਮਰ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ)</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/8</p> <p>Category wise School going children age (village/ward, cluster, block and district) SSA/FS I,II,III,IV/8</p>	Family Survey	Punjabi	SSA, Punjab	School level	4
<p>ਸਕੂਲ ਨਾ ਜਾਂਦੇ/ ਮਜ਼ਦੂਰੀ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ)</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/9</p> <p>School not going working children (village/ward, cluster, block and district) SSA/FS I,II,III,IV/9</p>	Family Survey	Punjabi	SSA, Punjab	School level	4
<p>ਉਮਰ ਅਨੁਸਾਰ ਸਰੀਰਕ ਮਾਨਸਿਕ ਚੁਣੌਤੀਆਂ ਦਾ ਸਾਹਮਣਾ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ)</p> <p>ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/10</p> <p>Age wise Physically/Mentally handicapped children (village/ward, cluster, block and district) SSA/FS I,II,III,IV/10</p>	Family SurveyII	Punjabi	SSA, Punjab	School level	4

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Title/Description	Objective	Language	Source material	Circulation	No of Item
ਬ੍ਰੈਟੀ ਅਨੁਸਾਰ ਸਰੀਰਕ/ਆਨਸਿਕ ਚੁਣੌਤੀਆਂ ਦਾ ਸਾਹਮਣਾ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/11 Category wise Physically/Mentally handicapped (village/ward, cluster, block and district) SSA/FS I,II,III,IV/11	Family Survey	Punjabi	SSA, Punjab	School level	4
ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ ਨਿਰਦੇਸ਼ ਪੁਸਤਕ ਐਸ. ਐਸ. ਏ./ਐਸ. ਆਰ/1 Family survey Instruction - book for general expansion of Education SSA/FS/SR/1	Family Survey	Punjabi	SSA, Punjab	School level	1
ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ ਨਿਰਦੇਸ਼ ਪੁਸਤਕ-1&2 Family Survey Instruction book - 1&2	Family Survey	Punjabi	SSA, Punjab	School level	2
ਪਿੰਡ/ਵਾਰਡ ਦਾ ਨਾਨ-ਸਕੇਲ ਨਕਸ਼ਾ Non-Scale map of the Village/ward	Family Survey	Punjabi	SSA, Punjab	School level	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
Research and Evaluation EMIS					
ਕੁੱਲ ਸਕੂਲਾਂ ਦੇ ਕੋਡ ਰਿਕਾਰਡ ਦੀ ਕਿਤਾਬ (ਮੁੱਹਲਾ/ਬਸਤੀ, ਕਲੱਸਟਰ, ਬਲਾਕ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ - I,II,III/1 Records of schools code (Mohalla / basti, cluster & block) SSA/SET-I,II,III/1	Survey/EMIS	Punjabi	SSA, Punjab	School level	3
ਤਿਮਾਹੀ ਐਨਰੋਲਮੈਂਟ ਅਤੇ ਅਧਿਆਪਕਾਂ ਦੀ ਸੂਚਨਾ ਅਤੇ ਵੇਰਵਾ (ਸਕੂਲ ਬਲਾਕ ਅਤੇ ਕਲੱਸਟਰ, ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ - I,II,III,IV/2, ਅਤੇ 2.1 Quarterly Enrolment and Teachers Information and details (school, cluster, block and district level) SSA/SET-I,II,III,IV/2 and 2.1	Survey/EMIS	Punjabi	SSA, Punjab	School level	5
ਤਿਮਾਹੀ ਐਨਰੋਲਮੈਂਟ ਅਤੇ ਅਧਿਆਪਕ ਸੂਚਨਾ ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ/1/2.2 Quarterly Enrolment and Teachers Information SSA/SET/1/2.2	Survey/EMIS	Punjabi	SSA, Punjab	School level	1
ਅਪਰ-ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੀ ਗਿਣਤੀ ਬਾਰੇ ਰਿਪੋਰਟ (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ- II,III,IV/3 Number of Upper Primary School/Sections (cluster, block & district) SSA/SET-II,III,IV/3	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਤਿਮਾਹੀ ਸਕੂਲ ਐਨਰੋਲਮੈਂਟ ਸੂਚਨਾ ਜਮਾਤ I ਤੋਂ V (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ-II,III,IV/4 Quarterly School Enrolment Information I To V class (cluster, block & district) SSA/SET-II,III,IV/4	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਤਿਮਾਹੀ ਸਕੂਲ ਐਨਰੋਲਮੈਂਟ ਸੂਚਨਾ ਜਮਾਤ VI ਤੋਂ X (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਸ. ਈ. ਟੀ-II,III,IV/5 Quarterly School Enrolment Information (cluster, block & district) VI To X class SSA/SET-II,III,IV/5	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੇ ਅਧਿਆਪਕਾਂ ਰਿਪੋਰਟ ਸਬੰਧੀ (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ. (ਐਸ. ਈ. ਟੀ.- II,III,IV/6 Reports on Teachers of Primary Schools/Sections (cluster, block & district) SSA/SET- II,III,IV/6	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਅਪਰ ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੇ ਅਧਿਆਪਕਾਂ ਸਬੰਧੀ ਤਿਮਾਹੀ ਰਿਪੋਰਟ (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ. (ਐਸ. ਈ. ਟੀ.- II,III,IV/7 Report on Teacher of Upper Primary School/Sections (cluster, block & district) SSA/SET-II,III,IV/7	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਸਕੂਲ ਸੂਚੀਕਰਨ School Listing	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	3

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Title/Description	Objective	Language	Source material	Circulation	No of item
ਜ਼ਿਲ੍ਹਾ ਆਂਕੜਾ ਪੁਸਤਕਾਂ District Data Books	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	17
ਬਲਾਕ ਆਂਕੜਾ ਪੁਸਤਕਾਂ Block Data Books	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	216
ਸਕੂਲ ਮੁਲਾਂਕਣ ਅਤੇ ਗ੍ਰੇਡੇਸ਼ਨ ਪ੍ਰਕਿਰਿਆ School Evaluation and Gradation Process	Research/Evaluation	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਮੁਆਇਨਾ ਫਾਰਮੈਟ I ਅਤੇ II School Inspection Format I and II	Research Evaluation	English	SSA, Punjab	State, District	1
(Funds Distribution to VEDCs and their Monitoring) - Management					
ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ, ਬਲਾਕ ਪੱਧਰ, ਕਲੱਸਟਰ ਪੱਧਰ ਤੇ ਸਕੂਲ ਪੱਧਰ ਅਤੇ ਟੀਚਰ ਗ੍ਰਾਂਟਾਂ ਅਤੇ ਸਿਵਲ ਵਰਕਸ, ਸਕੂਲ ਮੁਰੰਮਤ ਦਾ ਵੇਰਵਾ। ਐਸ. ਐਸ. ਏ. /ਡੀ. ਐਂਡ ਐਮ. -1,2,3,4,5,6 Details of Block grants at District level SSA/D&M-1/2/3/4/5/6	Funds monitoring	Punjabi	SSA Punjab	District	6