

MIZORAM BOARD OF SCHOOL EDUCATION

CURRICULUM AND SYLLABI

FOR

HIGH SCHOOLS
CLASSES VIII TO X



1982
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FOREWARD

The Mizoram Board of School Education has brought out a new curriculum for the Ten-Year School in Mizoram, and the syllabi are being presented in the form of three books, one each for the Primary School (Classes I-IV), the Middle School (Classes V-VII) and the High School (Classes VIII-X).

On the whole, the syllabi framed by the National Council of Educational Research and Training have been taken as guide, but changes are inevitable in many subject areas to suit the local situation. Educational system has been undergoing changes everywhere, and the new syllabi have been carefully worked out to serve as an effective instrument for the desired changes. It is however, to be borne in mind that a flawless syllabus can never be worked out because of the fast changes taking place in many fields of knowledge in the present world of knowledge explosion. The syllabi will, therefore, have to be periodically revised to come abreast with the advance of knowledge.

The Board is now presenting the syllabi which have been approved by the Syllabus Committee of the Board in the hope that all those concerned with education at different levels will use and find it much improved on the preceding syllabi which are now out of date.

The preparation of curriculum and framing the Syllabi calls for considerable expertise and effort in planning the work and screening. Also it is an on-going process and hence every suggestion from teachers in the light of their experience is most welcome.

Dated Aizawl,
the 18th June '82

C. LALMUANA
Secretary,
Mizoram Board of School Education
Aizawl.



Sub. National Systems Unit,
National Institute of Educational
Planning and Administration
17-B, Sri Aurobindo Road, New Delhi-110016

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CONTENTS

1. Core & Additional Subjects	I
2. Scheme for HSLC Examinations	II
3. Pass Marks & Criteria for Classification of Successful Candidates.	IV

CORE SUBJECTS

4. Lushai	1
5. English I	13
6. English II	24
7. Alternative English	29
8. Mathematics	35
9. Science	49
10. Social Sciences I (History & Civics)	55
11. Social Sciences II (Geography & Economics)	67
12. Work Education	73

ADDITIONAL SUBJECTS

13. Advanced Mathematics	47
14. History	81
15. Commercial Geography	87
16. Elements of Civics & Economics	91
17. Home Science	95

CURRICULUM FOR HIGH SCHOOL

CLASS VIII - X

A. Core Subjects :

1. First Language - Any one of the following languages: Lushai, Hindi, Nepali, Bengali, Assamese, Manipuri, English (Alternative English)
2. Second Language - English
3. Mathematics
4. Science
5. Social Sciences
6. Work Education

- B. Additional Subject : Any one of the following subjects : History, Civics & Economics, Commercial Geography, Home Science, Advanced Mathematics.

1.1 SCHEME FOR HSLC EXAMINATION FROM 1984 ONWARD

The Mizoram Board of School Education will conduct HSLC Examination at the end of Class-X as per scheme detailed below under the new 10+2 pattern of school education.

Subject	No. of Paper	Duration (Hrs)	Maximum Marks	Minimum Pass Marks
A. Compulsory subjects				
1. First Language	2	3 each	75 each	53 (combined)
2. Second Language	2	3 each	75 each	53 (combined)
3. Mathematics	2	3 each	75 each	53 (combined)
4. <u>Science</u>				
(a) Physics	1	2	50	53 (combined)
(b) Chemistry	1	2	50	
(c) Biology	1	2	50	
5. <u>Social Sciences</u>				
(a) History & Civics	1	3	100	70 (combined)
(b) Geography & Economics	1	3	100	
6. Work Education	1	-	100	35
B. Additional Subject	1	3	100	35
TOTAL :				
	12/13	30/33	900	40% Agg. 360

Note: 1.1 The First Language will consist of one of the following languages :
Lushai, Hindi, Nepali, Bengali, Assamese, English, Manipuri.

1.2 For all the candidates, the Second Language will be English. The Second Paper in this subject will have an oral component (reading and dialogue between the examiner and the examinee) of 20% of the maximum marks allotted for the paper.

1.3. The three papers in Science will consist of Physics, Chemistry and Biology respectively. When it becomes feasible to introduce practical examination, the three papers will be as follows:

- (a) Physics and Chemistry
(Physical Sciences) 1 paper of 40+30=70 marks
and of 3 hours duration.
- (b) Biology
(Life Sciences) 1 paper of 35 marks and of
2 hours duration.
- (c) Practicals
(Physics, Chemistry
and Biology) 1, paper of 15+15+15=45
marks and of 3 hours
duration.

1.4 Social Sciences will consist of 2 papers which will be as follows :

- (a) History and Civics - First Paper
- (b) Geography & Economics - Second Paper

1.5 Work Education will have internal and external components of 75% and 25% of the maximum marks respectively.

1.6 One of the following subjects may be offered by the candidates as Additional Subject if he/she so desires.

History, Civics & Economics, Commercial
Geography, Home Science, Advanced Mathematics.

Home Science will consist of 2 papers as follows :

- (a) Home Science (Theory) 1 paper of maximum marks
70 and of 3 hours duration
- (b) Home Science (Practical) 1 paper of maximum marks
30 and of 3 hours duration

1.7 The excess over minimum pass marks in the Additional Subject will be added to the total aggregate marks obtained by the candidate irrespective of the candidate passing/failing in other subject(s).

1.8 All the private candidates will be required to take one of the subjects listed under No. 1.6 above in lieu of Work Education. The subject taken should, however, be other than the one offered as Additional Subject, if any. No private candidates will be allowed to offer Home Science either as Additional Subject or as a subject in lieu of Work Education.

2.0 PASS MARKS AND CRITERIA FOR CLASSIFICATION OF SUCCESSFUL CANDIDATES

2.1 A candidate will be required to obtain a minimum of 35% marks in order to pass in an individual subject. For passing the HSLC Examination, the candidate will be required to obtain a minimum aggregate of 40% of the maximum aggregate marks.

2.2 The classification of successful candidates will be done as follows :

2.2.1 DISTINCTION : Candidates obtaining aggregate marks of 75% and above.

2.2.2 1ST DIVISION : Candidates obtaining aggregate marks of 60%, below 75%

2.2.3 2ND DIVISION : Candidates obtaining aggregate marks of 50%, below 60%

2.2.4 3RD DIVISION : Candidates obtaining aggregate marks of 40%, below 50%

Letter in individual subject : 80% and above.

SYLLABUS FOR CLASSES VIII -X

L U S H A I
(MIZO TAWNG)

Mizo tan chuan Mizo tawng hi mahni tawng leh pian chhuahpui a nih avangin, naupang pawhin sikul an rawn luh hma-in tantak chu an lo thiam sa tawh thin. Heng hi an chhungkua leh an thiante hnen atanga an thiam a hi ber a. An tan chuan he tawng hi a hlu em em a; an ngaihtuahna leh an mang lam chenin an chhawr a ri. Chuvang chuar, an pianpui tawng hi thildang zir nan an hmangin, an thiam belh chhoh zel a tul a ni.

Pianpui tawng zir hi tawng dang zir nen chuan a inang lo deuh hlek a. Tawng kan zir reng reng hian hetiang kawnga thiamna hi kan chhawr thin :

- I. Tha-chhawr tulna (Mechanical skills)
- II. Tha-leh-thildang chhawr tulna (Semi-Mechanical skills)
- III. Ngaihtuahna leh hriat belh zel theihna te (Thinking and creative abilities)

Pakhatna hi dik taka lamrik thiam te, a spell dik taka ziak leh kut ziak mawi taka ziak chham te hi a ni a. Heng hi thiam turin kan tha leh nun tam tawh hman a ngai thin.

Pahniha-ah hian chuan, tha chu tel te bayk mahse, tang tehchiam lemlo pawhin tawng a thiam theih a. Chung te chu tawngka-a inbiak te, chhwar leh ziak te, tang vak lemlo pawha kan tih theihthe hi a ni a. Dik taka lam rik leh ziaakte hi chu tha thawh ngai a ni a; mahse thu tam zawk, nitina kan hman hi chu kan hmui atangin ngaihtuah lawk vaklo pawhin a lo chhuah ve zung zung mat thin a ni.

Heng a chungka kan sawi takte hi chu, kan pianpui tawng kan zir emaw, tawng dang kan zir emaw, thiam a tul reng reng a. Mahse, pianpui tawng zir nan chuan heng bak hi thiam tul a la awm ta cheu va.

Chuvang chuan pianpui tawng zir turin, a chungka kan sawi tak, pathumna, ngaihtuahna te, rilru a hriatna te leh mahni ngei pawha zawn chhuah thiamna te hi

chhawr a tul ta a ni. Hei hi pianpui tawng zir nan chuan a pawimawh ber a ni a. Naupangte chu anmahni rilru hmandan zir tur leh ngaihndan te nei thei tura kan zirtir loh chuan pianpui tawng zirtir hi a sawt tampui lo hle ang.

Pianpui tawng zirna tur Syllabus tha tak siam tur chuan, heng kan sawi tak thiamna chi thumte hi thiamtir thei ngei tur chi-a buatsaih tur a ni a. Pakhatna (Mechanical skills) khi chu naupangin Class-V an zawh chuan an thiam tawk turah dah ila, pahnihna (Semi-mechanical skills) pawh hi Class-VIII an zawh chuan an thiam tawh tura dah a ni bawk a ni.

Class tin naupangte thiam chin tur pawh syllabus ah tarlan theih zel hi a tha a. Hengte hi hlawm nga-ah a dah theih ang :-

- I. A awmzia hriat leh sawi thiam
- II. Chhian thiam
- III. Ziak thiam
- IV. Tawng dik leh diklo thlian thiam
- V. Ngaihtuahna hman thiam

Heng panga-te pawh hi an inkungkaih tawn vek a. A awmzia hrethiam turin tawng zirtir a ngai a, chhian thiam turin ziak pawh zirtir tel a ngai bawk. Chhian thiam turin, a tawng hriat a tawk mai love, mahni rilru chhungril lam thuk ber thlenga chhawr thiam a ngai bawk a ni.

SYLLABUS FOR CLASSES VIII X
M U S H A I

Class VII thlengin, Mizo tawng zirna-ab khan, a tawng ngau ngau zirna lam uar a ni deuh a. Naupangte'n tawng leh ziaik leh chhijar lamah, hman an thiam thawkhat tawh tura ngaih a ni.

Class VIII atang chuan thu ziak dan mawi leh dik (Literature) lam hawia Mizo tawng hi cir a ni tan tawh ang. Tawng kalhmang hriat lamak hma an sawn zel pahin, tawng hausakna te an ngaisang thiam bawh tur a ni. Chuvang in hemi lam hi bre reng chungin tawng kalhmang chhuina lam chu Class IX leh X syllabus ah hian dan pawimawh a ni.

*1. A TUM BULFUI TE

1. A awmia bre zel chungo chhijar tur leh thu ngaihthia thiam turin.
2. Tawng leh ziaika thil sawichhuak fiah thiam turin.
3. Naupangte chu an hriatna tizau tur leh ngaihnam tih vanga mahni-a lehkha chhijar an chin theih nan.
4. Tawng (thu) hman tur awm tak hmang thiam tur leh a hmanna tur taka kawngro su thei tur zawnga hmang thiam turin.
5. Naupangte chuan an pianpui tawng kalhmang an hriat chian thēih nan.
6. Naupangte'n thumal an hriat belh deuh deuhva, a hman dan tha zawk an thiam deuh deuh theih nan.
7. Thu ziak dan dik leh mawi (literature) chi hrang hrang an hriat theih nan.
8. Mahni pianpui tawng hausakna te an ngaihsan theih nan.
9. Tawng mawi ngaihsanna te, mahni-a zawichhuah ve tumna te, ngaihtuahna leh thil thar siam chhuah ve thiamna te an neih theih nan.
10. Thil a nibna chhan ngaihtuah chhuak ve thiam deuh deuh turin.

11. Mahni pianpui tawng an zir azarah, an hriatna (ngaihtuana) leh an phurna te a taka chantir turin.
12. An pianpui tawng leh hnam nunphung chu an ngainat deuh deuh theih nan.
13. Mihring nuna thil mawi leh thate naupang zinga tuh nghet turin.
14. Mahni pianpui tawng lo than chhoh zel dan te, a tawng peng hrang hrang te, lehkhabu ziaktu leh hla phuahtu lar deuh deuh hrechiang turin.

II. NAUPANGTE THIAM CHIN TURA BEISEI

Mahni pianpui tawng, a awmzia hriat te, tawng thiam leh chhiar thiam leh ziak thiam lama naupangte thiam phak chin tura beisei te ohu hengte hi a ni.

A. A AWMZE HRIAT

1. Mi thusawi, inbiakna te, thusawi hona te reng reng class leh radio amite pawh a awmzia a hre thei zel tur a ni.
2. Thinur thu, thu hlimawm, thu uarna leh a dangte a sawitu landan atangir a hre thei tur a ni.
3. Thusawitu reng reng, a thusawi chu mahni ngaihndan a ni emaw, ni lo emaw, ngun tak leh dawhthei taka ngaihthla-in a ngaihndan chu a ngaihsan pui thei ve tur a ni.
4. Bengvar nan, ngaihnawm atan leh intih hark nan thusawi ngaihthlak a ching tur a ni.

B. TAWNG THIAM

(a) Lam rik dan leh sawi chhuah dan

1. Fiah tha tak leh thluk dik taka tawng thiam
2. Awlsam tak leh nal tawk taka tawng thiam.
3. Thu sawi reng rengin, thu iman tur dik tak leh a hmandan dik taka hman thiam.
4. An thinlunga an pai, lawmna te, thinurna te, lungngaih na te leh thil dangte sawi chhuah fel thiam.

5. A hun azira tawngkam hman thiam.
6. Thupui fel taka kalpui a, thu indawt leh inla zawn fel taka sawi thiam.
7. Thu chu fiah tak, tawi fel tak, inla mar tha tawk, a tul dik tak chauh sawi thiam.
8. Aw pawh ngaihnawm leh mi hneh thei zawnga tihrik thiam.
9. Mahni kum phu tawk ang thupui hmanga minute reilote chung phuahhawpa sawi theih.
10. Inhnial fiamna te, thusawi hona te, vantlang hma-a thusawina te leh lemchan-ah te tel ve theih.
11. Thawnthu ngaihnawm taka sawi thiam.
12. Hla, benglut taka chham thiam.
13. Au rinna (Mike) hmanga thusawi theih.

C. CHHIAR THIAM

1. Lehkha a ri-a chhiar hi uluk a ngai em em a ni. Fiah taka lamrik te, a thluk dik taka thluk a, a uar lai tur te uar a, ring tawk leh rang tawk chauhva chhiar thiam hi a tul a ni.
2. Thu ziak chi hrang hrang - thawnthu, essay, mimal chanchin, lemchan leh zin chhuah vah chanchin te hi, a chhiarin a awmzia a hre thiam tur a ni.
3. Hla chi hrang hrang - sakhaw Pathian biakna te, lengzem hla, khawhar hla, ram ngaih hla, hla lenglawng leh a dangte, ngaihnawm ti takin a chhiar thei tur a ni.
4. Hla thu bik lar zual deuh deuh te leh a tlar tin thu lamdan inmil leh inkawp dikte chu a hrethiam tur a ni.
5. Mahni hnam, Pi-Pu atanga nunphung leh lan dan kan chhawr thlak zel chanchin te pawh thlan chhuah a, chhiar tur a ni.

D. ZJAK THIAM

(a) Ziak dan thiam

1. Thumal a hriat tawh zawng zawng chu a spell dik tak leh a inzawm leh zawmlo turte a hriain a ziak thiam vek tur a ni.
2. A spell a dik leh dikloh, Dictionary atangin a zawng chhuak thiam tur a ni.
3. Chhinchhiahsa hrang hrang (punctuation mark) te chu a hmanna tur dik takah a hmang thiam tur a ni.
4. Lekha ziaxin, thumal hman tam thiam deuh deuh a zir tur a ni a, hriat belh zel a tum tur a ni.
5. Thumal te, idioms & phrases te a hmanna tur leh a hman tangkai dan a thiamin, thil kawh thuhmun neite chu finkhur taka hman tur a ni.
6. Tawng chr dik take a hmanna ture hman a ching tur a ni.
7. Lekha ziak dan (style) mahni ngein a nei hran ve tur a ni.
8. Thu hlawn hrang hrang, a dah dan a thiam tur a ni a, paragraph-in a then hrang thiam tur a ni.

(b) Ziak dan hrang hrang

1. Hawrawb chi hrang hrang, a te leh a lian, kutziak leh khawlehut a ziak thiam tur a ni.
2. Thil dilna lekha a ziak chhin thinin, form dahkhah dante a zir tur a ni.
3. A tana harsa lutuk lo essay chi hrang hrang a ziak thiam tur a ni.
4. Thupui engemaw bik hmangin, a chanchin khawi khawi atangin emaw khawkhawm hnu-ah essay a ziak thiam tur a ni.
5. A thu tlangpui zamsa hmangin chawnthu a ziak thiam tur a ni.
6. Thawnthu tluantlinglo, ziak chaurzawm a thiam tur a ni.

7. Mahni phudathawp thawnthu leh inbiakna thu te a ziak thiam tur a ni.
8. Thil danglam bik lo thleng apiang, a hmuh dan a ziak thiamin, a ngaihdan a ziak thiam tur a ni.
9. Thu leh hla, khawila ami pawh, a hrihfhah thiam
10. Mi chanchin (biography) a ziak thiam tur a ni.
11. Thawnthu, chu lomchan atan, inbiakna angin a dahthiam in, lomchan-thawnthu pawh thawnthu tluang pangngai-in a ziak thiam tur a ni.
12. Inkhawma leh puipunna atana hrihfhahna a ziak thiamin, chung inkhawma chanchinte chu a ziak thiam bawh tur a ni.
13. Thu ziak khaikhawm leh a thupui ziak chhuah a thiam tur a ni.
14. Thu ri-ruatsa a sawi zawmin, a sawi chipchiar thiam tur a ni.

(c) Thu phuah

Naupangin hengte hi a thiam tur a ni

1. Thu ziak dan chi hrang hrangin mahni ngaihdan a ziak chhuak thiam tur a ni.
2. Eng chungchang pawh, ngaihdan leh thluk dan sawi chhuah nan, thu phuah dan chi hrang hrang zinga a inrem ber tur a zawng chhuak thiam tur a ni.
3. Lehkha thawn te, inbiakna thu te, thawnthu te, essay te leh a dangte pawh, a dan . . . kalhmang chu dik takin a zawm tur a ni.
4. Ama duh dan kawng kawngin, ngaihdan leh rilru-a a paite chu a ziak chhuak thiam tur a ni.
5. A ngaihdan leh a rilru te chu fiah tak, zalen tak leh kawngro su takin a ziak thei tur a ni.
6. Thupui chiang tana tarlangin, thu indawt fel takin a ziak tur a ni.
7. Tawi fel tak leh hlawn fel takin a ziak tur a ni.

8. Thu ziak reng reng-ah, mi tihsa ring mai lovin, mahni ir-awm thuchhuak ngeia ziak a ching tur a ni.

E. NGAIHTUAHNA HMAN THIAM

1. Thil indawt dan fel tak a hre tur a ni.
2. A chhan leh a vang leh a rahte inlaichin dan a hre tur a ni.
3. A ngial-a-ngan-a a tum leh a tum inthukru te pawh a hrethiam tur a ni.
4. Thil thliar hhran fel dante leh khaikhin dante a thiam tur a ni.
5. Thu hlawmkhawm dan te, a tum lakchhuah dan leh a tlipna siam dan te a thiam tur a ni.
6. Thu rawt engpawh a sawi fiah thiamin, a that lohna leh a thatna te a sawi thiam ve ve tur a ni.
7. Thu khuh leh a thawia thu sawi a hre thiam thei tur a ni.
8. Thu awmge pawnglang zawk leh chhungrii zawk a thliar hrang thei ve ve tur a ni.
9. Mahni ngaihndan hran a nei ve thei tur a ni.

F. NGAIHSAN TURTE

1. Mipui thuneihna humhalh zawng-a thlirna (ngaihndan siam)
2. Sakhaw lam sawi lova thlir
3. Mipui thatna tur hawi zawnga thil thlir
4. Mahni ram leh hnam ngaihsanna
5. Mawhphurhna hriat
6. Mahni inthununna
7. Dikna leh felna
8. Mi lainatna
9. Roreina dik leh hleih neihlohna
10. Thudik sawi
11. Intanpui tawna.

12. Tlawngaihna
13. Thil thar rawt chhuah leh tan chhuah thiamna
14. Hruaitu nih tlinna
15. Mahni hnam ro leh nunphung ngaihsan
16. Taihmakna
17. Janghithlawng dik.
18. Rinawmna
19. Hnam inpunhatna

III. GRAMMAR

Class IX leh X a Grammar zir hian a tum ber chu, mahni pianpui tawng hriatfiah zawk theih nan leh hman dan dik leh tha leh mawi zawka hman theihna tira tanpuitu atan a ni.

Grammar ah a tlangpuiin heigte hi zirtir a ni ang :-

1. Tawng : A lo pianchhuah dan, a inremkhawm dan leh a hnathawh te.
2. Phonology : Pianpui tawng, a thluk, a lamrik dan, a hawrawb vowel leh consonant te, lam harsa bik lam rik dan te, hawrawb awm zawnte, uar lai tur te, lamrik dikloh thin leh a dik zawk te.
3. Graphology & Orthography. : Mahni pianpui tawng ziak dan, hawrawb leh chhinchhiahna te, spell dan leh inzawm leh zawmlo tur, ziak dikloh thinte leh a dik entirna, chhinchhiah na (punctuation marks) etc.
4. Thu tawngkam kim leh thumal, thu hlawm etc.
5. Noun : Noun hi enge a nih? a hmanna te, a chi hrang hrang, a nu leh a pa sawina te, a zat, (tam lam) sawina te.

6. Pronoun : Enge a nih? a hmanna te, a chi hrang hrang, person, a nu leh a pa sawina te, a zat (tam lam) sawina te.
7. Adjective : Enge a nih? a hmanna te, thil uar na a nih dan te, uar dan indawt dan.
8. Verb : Enge a nih? a hmanna te, a chi hrang hrang te.
9. Adverb : Enge a nih? a hmanna te .
10. Conjunction & Interjection. : Enge a nih? a hmanna te.
11. Post position : Enge a nih? a hmanna te.
12. Idioms & phrases. : A awmzia, a hmandan te.
13. Composition : Thu phuan dan.

ZIRLAT BU
CLASS -VIII

- A. ZIRLAT BU (TEXTBOOK)
- B. ZIRLAT PUTTU BU (SUPPLEMENTARY READER)
- C. GRAMMAR

A. ZIRLAT BU

1. Mizoram hmun hrang hrang khawsak dan
2. Thingtlang khaw nun - Lo neih, thil siam etc.
3. Mizo nunphung ro (culture)
4. Hriselna leh thianghlina
5. Hnam tana inpekna
6. Hnam inpumkhatna
7. Thu tha leh zirtir nei te
8. Ram ohhuah leh zin velna chanchin
9. Nungcha leh Kam hnim
10. Ram thenawma chengta
11. Hla chi hrang hrang.

- 1 -

ZIRLAT BU
CLASS - IX&X

1. ZIRLAT BU (PROSE) .. THU THLANKHAWM
2. ZIRLAT BU (POETRY) .. HLA THLANKHAWM
3. ZIRLAT TANPUITU BU
4. GRAMMAR

* Hla (Poetry) zir tur atan hengte hi thlan a ni:-

- A. PATHIAN BIAKNA HLA
- B. HNAM HLA/RAM NGATH HLA
- C. LENGZEM HLA
- D. KHA'WJAR HLA
- E. HNAM ZAT

THE ENGLISH SYLLABUSIntroduction

Learning of any language involves the basic stages of listening, speaking, reading, writing, language analysis and critical thinking. These abilities are inter-related but the process of learning the language necessarily involves this gradation. Moreover, language learning involves the development in the learner of various linguistic skills and abilities divided into the following categories.

- (a) Mechanical Skills : involving pronunciation, correct spelling and good handwriting.
- (b) Semi-mechanical skills : involving conversation, reading and writing.
- (c) Thinking and Critical Abilities : involving all forms of composition.

These are also in developmental stages, one leading to the other.

The emphasis in learning any language must be that one should learn THE LANGUAGE and not ABOUT THE LANGUAGE. Learning about the language comes at a much later stage when the language itself is mastered to a reasonable degree. Moreover, there must not be any unhealthy gap or isolation between literature and language. Both must proceed simultaneously. Literature is a means to learn the language and is not an end in itself.

SYLLABUS AND TEXTBOOKS

The syllabus for English is based on graded structures and controlled vocabulary. All the major language or grammatical aspects are covered by these structures.

The teaching materials consist of a Text Book and a Work Book. The Text Book provides for comprehension of passages and some language items, both Prose and Poetry Pieces are included with annotations. The Work Book consist of exercises in grammar. Language, it is hoped, will become a matter of habit as a result of these exercises.

The Teacher may make use of the "Teacher's Guide" which will be of great benefit in planning the methodology of English Language Teaching.

The Text Books in use from Classes III to X consists of the English Reader (Special Series) prepared by the Central Institute of English and Foreign Languages, Hyderabad. This series consists of

- (a) Let's Learn English I, II, III for Classes III, IV and V; Work Books for these classes.
- (b) English Reader (Special Series) Book I - V for Classes VI-X; Work Books for these Classes.

SPECIFIC OBJECTIVES OF TEACHING ENGLISH IN CLASSES VIII-X

The goals of teaching English in the High School are the same as those in the earlier stages. Only the priorities are slightly altered. Comprehension of written and spoken English is highlighted as English will eventually be used as a vehicle for the acquisition of information.

1. Ability to understand English spoken at normal conversational speed.

(a) Competence Specifications :

- i) The student understands the meaning of words, phrases and sentences in connected speech introduced at the high school stage.
- ii) The student understands questions, comments, descriptions and follows directions given orally.
- iii) The student follows the sequence of ideas expressed or events narrated, grasps the substance and central idea of what is spoken

(b) Content Specifications :

Conversation, dialogues, narration, stories, passages, read aloud etc.

2. Ability to speak English intelligently.

(a) Competence Specifications :

- i) The student speaks English intelligibly using correct standard English speech sounds, words stress, sentence stress and intonation patterns.

- ii) The student uses appropriate vocabulary and structures to convey meaning while making statements, asking questions, giving instructions etc.
- iii) The student puts ideas in a proper sequence.
- iv) The student evokes required response in his listeners.

7b) Content Specifications :

Exchanges conventional greetings, asks and answers questions reports events, makes requests, gives directions, narrates stories etc. Participates in language games.

These will be controlled by the prescribed range of vocabulary and structures and by the experience to which the learner has been exposed.

3. Ability to read English with ease and comprehension

(a) Competence Specifications :

- i) The student grasps the meaning of words, phrases and sentences from the context.
- ii) The student follows the sequence of ideas, facts etc.
- iii) The student locates significant details.
- iv) The student acquires a reasonable speed in reading silently with comprehension.
- v) The student interprete ideas, events, actions etc. and identifies relationships between ideas, events, facts etc.
- vi) The student acquires the ability to use a suitable dictionary.
- vii) The student draws inferences based on his experience and ability.
- viii) The student comprehends materials falling outside the prescribed text.

(b) Content Specifications :

Further training in silent reading of prescribed texts and other materials written to similar specifications; use of dictionary.

4. Ability to write English correctly

(a) Competence Specifications :

- i) The student acquires correct writing habits, writes legibly and neatly using correct punctuation marks and capital letters.
- ii) The student spells words correctly.
- iii) The student uses appropriate vocabulary and structural items as specified in the syllabus.
- iv) The student expresses himself clearly and presents ideas and experiences coherently.
- v) The student organizes ideas into paragraphs.
- vi) The student displays imagination in writing semi-controlled compositions like stories, events, processes (e.g. making tea, playing cricket etc).

v) Content Specifications :

Drills and exercises in grammatical patterns, dictation of short passages, writing pieces of semi-controlled composition like narrating and completing stories, reporting speech, writing letters, personal informal, invitations, applications, replying to advertisements for job etc.

5. Ability to enjoy simple poems

(a) Competence Specifications :

- i) The students reads poems with proper rhythm and intonation.
- ii) The student enjoys reading poems aloud
- iii) The student memories lines that interest him-
- iv) The student grasps the theme of the poem.

(b) Content Specifications :

Short, simple poems, about 10 to 15 poems not exceeding 250 lines. The thematic content of the poems should preferably be relevant to the environment of the students.

6. Interest in library reading and listening.

(a) Competence Specifications :

- i) The student reads widely on his own materials which are simplified and adapted and children's magazines.
- ii) The student listens to radio broadcasts, watches television programme and films in English.

(b) Content Specifications :

Newspapers, children's magazines, simplified books, different audio-visual media etc.

CONTENT SPECIFICATIONS FOR HIGH SCHOOLS STAGE

class

CLASS VIII

LANGUAGE STRUCTURES

- 1. as + adverb + as + clause : (THE BOY RAN AS FAST AS HE COULD)
- 2. in which, to whom + clause : (THE ROOM IN WHICH THE GOLD WAS KEPT. THE BOY TO WHOM THE PRIZE WAS GIVEN).
- 3. Adjectival clause (with preposition at the end): (THE MAN HE IS TALKING TO IS AN ARTIST)
- 4. Adjectival clause (beginning with 'when and 'where') (THAT IS THE HOUSE WHERE I LIVED LAST YEAR. SUNDAY IS THE DAY WHEN MORE PEOPLE GO TO CHURCH)
- 5. Adverbial clause (Manner) : (DO AS I TELL YOU)
- 6. 'as clause (time) : (AS THE TEACHER ENTERED THE CLASS, THE BOY STOOD UP)
- 7. 'though' clause : (THOUGH I RAN, I COULN'T CATCH THE BUS)
- 8. so...that : (THE STARS IN THE SKY ARE SO MANY THAT WE CAN'T COUNT THEM)
- 9. Reported questions (with whether): (ASK HIM WHETHER HE CAN SPEAK HINDI)
- 10. 'where' clause adverbial : (YOU CAN'T GO WHERE I AM GOING)
- 11. Shortened Adverbial clauses : (IF SO , WE WILL WRITE TO YOU ABOUT IT)
- 12. Reported question (with if) : (AS HIM IF HE CAN TYPE).

13. Conjunctive + infinitive : (HE DID NOT KNOW WHAT TO DO)
14. Past perfect (reported speech) : (HE SAID HE HAD COMPLETED THE WORK)
15. Present Perfect Continuous : (WE HAVE BEEN WAITING FOR THE BUS FOR AN HOUR)
16. Use of by and other idiomatic prepositions with the passive voice : (HAMLET WAS WRITTEN BY SHAKESPEARE; HE WAS PLEASED WITH THE PICTURE)
17. Extension of passive to perfect and progressive tense: (THIS QUESTION HAS OFTEN BEEN ASKED) (THE CAUSES OF CANCER ARE STILL BEING STUDIED)
18. Infinitive (as subject) : (TO WORK IS TO PRAY)
19. Past Participle (as object complement) (I FOUND THE ROOM LOCKED)
20. Neither...nor (NEITHER JOHN NOR HIS BROTHER TURNED UP)
21. Neither and either (as pronouns) (NEITHER OF THE BROTHERS WENT TO SCHOOL) THESE TWO PENS ARE BOTH VERY GOOD. YOU CAN BUY EITHER OF THEM.

TEXTBOOKS)

- (a) English Reader (Special Series) : Book III
- (b) English Reader (Special Series) Work Book III

CLASS IX

LANGUAGE STRUCTURES

1. to and 'to' infinitive : (YOU CAN GO HOME WHENEVER YOU WANT TO)
2. used to : (I USED TO PLAY CRICKET WHEN I WAS AT SCHOOL)
3. 'as' clause (reason) : (AS THE RAINS FAILED LAST YEAR, THERE WAS NOT ENOUGH FOOD)
4. what (a) + noun : (WHAT A SURPRISE)
5. what (a) + adjective + noun : (WHAT A FINE DAY!)
6. be afraid/sure/certain etc + 'that' clause:
(I AM SURE (THAT) I CAN FIND MY WAY)
(I AM AFRAID (THAT) HE HAS LOST HIS WAY).

7. ought to + verb : (PEOPLE OUGHT TO RESPECT THE LAWS OF THE COUNTRY)
8. past participle (forming adjectival phrases)
(THE MAN SAVED BY GOPAL WAS HIS OFFICER)
9. to be used to : (I AM USED TO LIFE IN A COLD COUNTRY)
10. as well as : (HE CAN PLAY FOOTBALL AS WELL AS CRICKET)
11. unfulfilled past condition : (IF YOU HAD LEND ME SOME MONEY, I WOULD HAVE BOUGHT THE BICYCLE)
12. besides : (SRI KRISHNADEVA RAYA WAS A GREAT RULER , BESIDES, HE WAS A GREAT POET)
13. It is + noun-adjective + 'that' clause : (IT IS STRANGE THAT HE SHOULD TALK IN THIS MANNER. IT IS A PITY THAT HE FAILED)
14. may (possibility) : (IT MAY RAIN VERY HEAVILY TONIGHT)
15. Noun clause (as subject) : (WHAT HE SAID WAS TRUE)
16. might (past tense of may) : HE SAID HE MIGHT LEAVE TONIGHT)
17. Adverbial clause (with 'so that') : (WE TOOK A GUIDE WITH US SO THAT WE MIGHT NOT LOSE OUR WAY)
18. However : (THE KING WAS VERY TIRED, HOWEVER, HE HAS READY TO LISTEN TO THE POOR MAN'S STORY)
19. Passive Infinitive : (EVERYONE LIKES TO BE PRAISED)
20. HAVE_{me}GET (causative) : (I MUST GET MY WATCH REPAIRED)
21. Passive voice (with direct object and with/without by):
(HE WAS ASKED SEVERAL QUESTIONS.
I WAS TOLD BY THE GATEKEEPER THAT I WAS LATE)
22. Unless : (I CAN'T MOVE THIS TABLE UNLESS SOMEONE HELPS ME)
23. Since (in adverbial clause of reason): (SINCE I HAVEN'T MUCH MONEY I CAN'T BUILD A HOUSE)
24. not only...but also : (HE WAS NOT ONLY INTELLIGENT BUT ALSO HARD WORKING)

25. while (duration) : (THE MOTHER WAS COOKING WHILE THE BABY WAS ASLEEP)
26. participle phrase : (FEELING SHY, THE LITTLE GIRL SAID NOTHING)

TEXTBOOKS

- (a) Mizoram English Reader (Special Series) : Book IV
- (b) English Reader (Special Series) : Work Book-IV

CLASS X

LANGUAGE STRUCTURES

1. might/should/ought to/could + have + past participle.
(YOU SHOULD HAVE WORKED HARDER)
2. The + comparative adjective..the + comparative adjective
(THE LONGER THEY QUARRELED THE HARDER LIFE BECAME FOR THEM)
3. Adverbial clause (with 'now that')
(NOW THAT YOU MENTION THE MATTER, I REMEMBER IT)
4. Adverbial clause (with 'as long as')
(THERE COULD BE NO QUARREL AS LONG AS YOU ACTED RIGHTLY)
5. 'd' (for emphasis) : (DO COME IN)
6. But for + noun + pronoun : (BUT FOR PENTICTLLTN, NUMEROUS LIVES WOULD HAVE BEEN LOST)
7. 'hardly' (meaning 'nearly not')
(SHE COULD HARDLY REMEMBER HAVING SEEN ANY HUMAN FACE)
8. as for + noun : (AS FOR CALTBAN, HE HARDLY LOCKED HUMAN)
9. Adverbial clause (with 'in case') : (I WAS READY TO DEFEND THE COUNTRY IN CASE THERE WAS AN INVASTON)
10. Absolute construction : (THE UNIVERSE CONSISTS OF MILLIONS OF GALAXIES, OUR OWN BEING ONE OF THEM)
11. in spite of : (IN SPITE OF HIS BEST EFFORTS HE DID NOT SUCCEED)

TEXTBOOKS

- (a) Mizoram English Reader (Special Series) Book V
- (b) English Reader (Special Series) Work Book-V

H.S.L.C. EXAMINATION : COURSE OF STUDIES

The HSLC Examination in English will consist of two papers each carrying 75 marks. The First Paper will be based on the Texts of the books prescribed in Classes IX & X. There will be Language Usage component. The weightage given to the three components is as follows :

- | | |
|--------------------|------------|
| (1) Prose | : 25 marks |
| (2) Poetry | : 20 marks |
| (3) Language Usage | : 30 marks |

Prose

Selected pieces from Mizoram English Reader IV & V as notified by the Board from time to time.

Poetry

Same as above.

The language usage portion will be modelled on the exercises given in the Work Book/Text Book and devoted to testing the mastery of the structures in actual usage.

The question Paper will have mainly three types of questions; Objective Type (Matching, Multiple, Choice, Fill in the gaps, True-False), Short Answer type (one sentence or two) and Essay Type.

Language Usage

Exercises in the usage of the structures as found in the Readers with particular reference of the following structure :

VERB FORMS

1. Present Continuous - is/isn't + verbing-ing +object
(JOHN IS/ISN'T READING A BOOK)
2. Simple Past Tense
(THE KING WENT TO A FOREST, HE SHOT A LION)
3. Simple present (habitual) - everyday, every morning.
(RAM PLAYS FOOTBALL EVERYDAY. THE SUN RISES IN THE EAST)
4. Past Progressive
(JOHN WAS READING AT EIGHT O'CLOCK THIS MORNING)
5. Present Perfect Tense - just, already
(HE HAS JUST OPENED THE BOX)
6. Past Perfect (reported speech)
(HE SAID THAT HE HAD COMPLETED THE WORK)

7. Present Perfect Continuous
(WE HAVE BEEN WAITING FOR THE BUS FOR AN HOUR)
8. Unfulfilled past condition
(IF YOU HAD LENT ME SOME MONEY, I WOULD HAVE BOUGHT THE CAR)

SENTENCE PATTERNS

9. Questions (DID RAM KILL THE SNAKE? WERE THEY READY?)
10. Questions Tags (YOU SEE A BAG, DON'T YOU? HE WAS NOT THERE, WAS HE?)
11. Indirect Object + to/for (I GAVE A RUPEE TO THE BEGGAR)
12. Infinitive of purpose (I WENT TO THE POST OFFICE TO SEND A MONEY ORDER)
13. Infinitive as subject (TO WORK IS TO PRAY)
14. Negative commands (DON'T TAKE YOUR NOTEBOOK AWAY)
15. Comparative and Superlatives, more, the most-er-est.
(MORE IMPORTANT THAN ... THE MOST IMPORTANT MAN IN TOWN, RICHER, RICHEST etc)
16. Reported Statements (Past tense) (THE DOCTOR SAID LAST WEEK THAT IT WAS JUST ORDINARY FEVER)
17. Reported Speech (Use of suitable pronouns)
(HE SAID 'MY MOTHER IS SAYING HER PRAYERS'
HE SAID THAT HIS MOTHER WAS SAYING HER PRAYERS)
18. Reported questions with if/negative commands
(I ASKED HIM WHERE THE KING WAS
ASK HIM IF HE CAN TYPE
I TOLD HIM NOT TO RUDE)
19. Passive voice (simple past tense)/perfect tense/
present tense (I WAS TAKEN TO A MINT
THIS QUESTION HAS OFTEN BEEN ASKED
THE PLACE IS CALLED KANTAKUMARI)
20. Passive Voice with direct object and 'by'
(I WAS TOLD BY THE GATE KEEPER THAT I WAS LATE)

CLAUSES

21. Adverbial Clause with 'if' (IF YOU TURN THIS STRAW INTO GOLD, I WILL MARRY YOU)
22. Adverbial clause with 'when' (WHEN I GROW UP, I WILL TRAVEL ALL OVER INDIA)

- 23. Adverbial clause with 'with' 'before' 'till'
(THE PRINCESS KNEW NOTHING ABOUT THE MATTER
TILL SHE REACHED PERSTA)
- 24. Adverbial clause with 'as' (TOO MUCH EXERCISE IS BAD
JUST AS TOO LITTLE EXERCISE IS BAD)
- 25. Adjectival clause with 'whose'
(THERE ARE FIVE PUPILS IN THIS CLASS
WHOSE FATHERS ARE MERCHANTS)
- 26. Adjectival clause with preposition at the end
(THE MAN HE IS TALKING TO IS AN ARTIST)
- 27. Adjectival clause (beginning with 'when ' and 'where'
(THAT IS THE HOUSE WHERE I LIVED LAST YEAR)

DETERMINERS, CONJUNCTIONS, PREPOSITIONS, ARTICLES

- 28. Preposition in , on, under, from, to, between, at,
into, for, by, of, with.
- 29. Might, should, ought to, could + have + past
participle. (YOU SHOULD HAVE WORKED HARD)
- 30. In spite of, while (Duration) however
(INSPIRE OF HIS BEST EFFORTS HE DID NOT
SUCCEED. WHILE MOTHER WAS COOKING....
THE KING WAS TIRED. HOWEVER HE LISTENED
TO THE FARMER'S TALE)
- 31. May, might (Past tense of may): (IT MAY RAIN VERY
HEAVILY TONIGHT) HE SAID HE MIGHT
LEAVE TONIGHT)
- 32. Pairs of words, not only...but also
(HE WAS NOT ONLY INTELLIGENT BUT ALSO
HARD WORKING)
- Neither...nor (NEITHER JOHN NOR HIS BROTHER
TURNED UP)
- Either....or (GIVE EITHER A PENCIL OR A PEN)
- So that....(THE STARS IN THE SKY ARE SO MANY
THAT WE CAN'T COUNT THEM)
- too....to (THIS TABLE IS TOO HEAVY FOR ME TO LIFT)
- 33. Since, Unless, in order to, besides, though
(SINCE I HAVEN'T MUCH MONEY I CAN'T BUILD
A HOUSE. I CAN'T MOVE THIS TABLE UNLESS
SOMEONE HELPS ME. THE BOY HAD TO BORROW
SOME MONEY - IN ORDER TO BUY HIS BOOKS.
KABIR WAS A GREAT SAINT BESIDES, HE WAS A
POET THOUGH I RAN, I COULDN'T CATCH THE BUS.

34. Pronouns in self
(HE BOUGHT THE CHAIR HIMSELF. SHE DID HER
HOMEWORK HERSELF)

35. The, a, an
(THIS IS THE PEN I WANTED. GET ME A CHAIR.
SEND HIM AN INVITATION)

The detailed Syllabus for Second Paper is given below :-

English paper-II will consist of Rapid Reader, composition and oral dialogue between the Examiner and examinee. The Weightage given to the three components is as follows :-

Rapid Reader	: 25 marks
Composition	: 35 marks
Oral	: 15 marks

1. Oral dialogue : There will be an oral dialogue between the examiner and examinee to assess how much a student can converse in the language.
2. Rapid Reader : As prescribed by the Board.
3. Composition

(a) Translation/Amplification :

Pupils should be practiced in the translation of easy passages (a paragraph or a number of sentences) from the Regional language into English.

The translation into English should be within the range of structures and vocabulary expected of Class-X students.

In lieu of translation there will be amplification of a theme/idea into a paragraph of about 150 words.

(b) Essay Writing

should be about 300-400 words on subjects of interest to the pupils. Essays may be of the following types-

- i) Descriptive : vivid, clarity, use of comparison and similes, personal impressions.
- ii) Narrative : flash back method, creating interest and tension, characterization, dialogue.
- iii) Expository : clarity and sequence, use of correct and expressive words, variety in sentence construction.
- iv) Argumentative : exposition of problem, arguments for and against consequences, facts to prove the arguments.

(c) Letter Writing

The different parts of a letter to find a place:
Heading, Salutation, Body of the letter, Subscription,
Signature, Address.

Letter may be: Personal, Business like, for
Application of different kinds
(admission; leave; job etc)

(d) Comprehension

The questions set on a given passage could include:

- i) reproduction, in the pupils own words, of the substance of a part of the passage.
- ii) Listing of important ideas, arguments, reasons etc. as given in the passage according to its nature.
- iii) giving the meaning of special words and phrases as given in the passage (one word or short phrase answer)
- iv) Explanation of certain phrases, words and ideas.
- v) deduction of implied meaning from a sentence or paragraph.
- vi) choice of a few selected words to be used in sentences without change in form but with a different meaning from that used in the passage.
- vii) summarising in one or a few words, the substance of a sentence or a paragraph.
- viii) Other Multiple Choice, True-False, Matching, Fill in the Blanks items.

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METHODS AND TECHNIQUES OF TEACHING ENGLISH

Contextualisation

The learning of English, according to the present syllabus is achieved through a series of graded structures and controlled vocabulary. An effective method of presenting structural items is contextualisation or teaching in situations. It is the most natural method of learning of languages. One learns the language by its actual use in situations and not by memorizing rules of grammar. It is by the use of the language in day to day situation that any language becomes the vehicle of communication. There are three different kinds of situations that can be used in the classroom.

- (a) physical situations which consists of gestures, actions, activities or objects.
- (b) verbal situations which comprise words
- (c) pictorial situations which are made up of pictures or sketches.

Pattern Practice or Drills

Proper contextualization illustrates the meaning and usage of language items. The student learns to handle the language items with ease and facility only after he has used them himself in appropriate contexts or situations. One of the most effective devices for acquiring mastery over English is pattern practice or drills. Pattern practice or drills follow once the teaching items have been explained and used in situations or contexts. The importance of pattern practice lies in the fact that language items become a matter of habit and we speak and use a language as a matter of habit.

The student in the English class must not be a passive recipient of information but an active one in the different language activities. Maximum time and opportunities should be made available to the students for using English. He participates in the lesson through structural drills, exercises in comprehension and composition etc. The Text Books and Work Books demonstrate on the language items can be used in real life situations which may not be able to contrive in the classroom.

The structures are orally drilled and hence the importance of spoken English in the earlier stages.

Use of Mother Tongue

The mother tongue is used to explain the meaning of content words (like flood, skills, starve etc); the usage of some language items (some, any, everyone etc); or how the language items behave in actual use; and some grammatical aspects (future tense, present tense but future meaning etc). The use of the Mother Tongue facilitates comprehension and saves time which would be spent on lengthy explanations. The Mother Tongue

may also be used for quick oral testing of meaning of words, sentences, and passages.

Reading

After oral comprehension, the students are initiated into the mechanics of reading and writing, words (hand, foot) and sense units (my hand, my foot) are written on the blackboards or flash cards/charts and the pupils reads the words/word groups after the teacher. In this way, the visual image is formed in the mind of the students. Pictures and sketches are also used to strengthen these images of words and facilitate reading by associating the written symbol with its visual representation. The words/verbal units are read in chorus and individually. After this stage, the student is led to the reading of complete simple sentences. As he progresses, the students must read both intensive (textual) and extensive (rapid reading).

Writing

The mechanics of writing are to be mastered as early as possible. The learner starts first by copying and later he writes letters (alphabets, punctuation marks) on his own. This is followed by writing words and sentences. In writing the small letters are taught first and then the capital letters.

The following is a suggested grouping based on the shapes of the letters :

- o a c a d b g p q
- m n h r t j l i f y u
- w v x z k
- s

Grammar

Grammar is an integral component of language and the teaching of words, phrases and sentences pattern is the essence of teaching grammar. It is this variety of grammar that makes the learner use the language as a functional tool for communication and interaction. Grammar is not taught in a formal way but the rules of grammar are learned and internalised through pattern practice and learning of structures. After such

drills, some grammatic aspects are explained. Formal grammar learning will start when the students have had enough practice in English, that is after 5 or 6 years of learning English.

Evaluation

The whole progress of teaching and learning is punctuated by tests and examinations. Besides, measuring attainments, tests serve two other purposes; first, diagnosing mistakes and areas of non-learning and affecting remedial measures; and second, of predicting future progress. Tests measures the acquisition of linguistic abilities of listening, speaking, reading and writing in relation to the structural and lexical items taught.

: To assess the students attainments, the following types of questions may be used :

- (a) objective type (Multiple choice, matching, true-false). There is only one correct answer and this type of questions is never subjective.
- (b) short answer questions which require brief answers and can be scored more objectively than the essay. They cover a wide area of syllabus and wide range of pupils achievements.
- (c) Essay type which require long answers for testing abilities like summarising and writing coherently. These should be used only in the higher classes.

The question paper should be set bearing in mind the objectives of the course and assigning proper weightage to the different components of the course and the different types of questions.

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ALTERNATIVE ENGLISH

Introduction

Alternative English is offered in lieu of the First language/Modern Indian Language. It is primarily meant for those students whose mother-tongue is not taught in the schools and secondarily for those who have genuine difficulties with the mother tongue.

The emphasis in teaching English as an Alternative to the First Language, is on the systematic learning of the intermediate and advanced-level skills of reading and writing. The students should be exposed to the variety of styles and theme in current writing as well as to the living idiom of the language.

OBJECTIVES

1. to develop in the students the higher level abilities in listening and reading to ensure comprehension, appreciation and judgement.
2. to enrich the vocabulary of the students and thus facilitate greater expression both oral and written so that they can write independently, accurately and creatively on subjects of general interest.
3. to acquaint the students with the various forms of literature and familiarise them with the development of literature.
4. to make them appreciate literature, both prose and poetry and develop their aesthetic sense, originality imagination and creativity.

SPECIFICATIONS

L I S T E N I N G

1. to develop the ability to listen with attention and comprehension to lectures, talks, speeches etc.
2. to improve the ability to understand humour, sarcasm, emphasis implied in speech.

S P E A K I N G

3. to achieve good pronunciation (correct articulation of vowels, diphthongs and consonants; proper stress and intonation; expression of different moods).
4. to maintain sequence, coherence, clarity and unit of topic in speech and achieve fluency in speech.

5. to participate in extempore speeches, recitations, debates etc.
6. to recite and relate poems and stories effectively.

R E A D I N G

7. to read orally with correct pronunciation, fluency, stress, intonation, speed, pitch and according to the punctuation marks thus ensuring proper phrasing.
8. to read silently with speed, attention and comprehension
9. to acquire effective control over increasingly large vocabulary.
10. to grasp the gist and line of argument of the text and thus understand the main facts and thoughts.
11. to read various forms of literature, prose and poetry.

W R I T I N G

12. to write with speed in a legible and good handwriting.
13. to spell correctly words and use correctly the punctuation marks.
14. to use the dictionary effectively for finding the meaning and spelling of words.
15. to use grammatically correct language and increase the active vocabulary for writing.
16. to develop the habit of writing paragraphs with coherence and relevance.
17. to be able to write dialogues, essays, short stories letters etc. of all sorts.
18. to be able to summarise or expand and answer comprehension questions.

THINKING

19. to understand the sequence of facts, ideas, incidents etc
20. to be able to analyse and compare.
21. to be able to draw inferences and conclusions
22. to be able to give arguments for and against a proposition.
23. to be able to understand implicit meanings besides the explicit ones (humour, sarcasm, irony etc.)

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COURSE FOR HSLC EXAMINATION

The HSLC Examination in Alternative English will consist of two papers each carrying 75 marks.

(a) Paper I

Paper I will include Selections of Prose & Poetry pieces from the Gul Mohar Series Readers VII & VIII studied in Classes IX & X respectively and a Rapid Reader - The weightage of marks given to each section is as follows :-

Prose : 35 marks
Poetry : 25 marks
Rapid Reader : 15 marks

(b) Paper II

Paper II will consist of two sections, the first being devoted to the study of a Play and the second comprising of Grammar and Composition. The weightage of marks given to each section is as follows :-

Play : 35 marks
Grammar &
Composition : 40 marks

Text Books for Classes IX & X

- Paper I
- i) Gul Mohar Series Reader VII & VIII
(Published by Orient Longman)
 - ii) Wonder Tales from Greece OR
Strange Tales from the Arabian Nights
(Published by Macmillan)
- Paper II
- i) Play : Abraham Lincoln by J. Drinkwater.
 - ii) Grammar & Composition : any book may be used, a suitable one being "A Functional Grammar with usage and Composition" by Prof. M.L. Tickoo and Prof. Subramaniam (Published by Frank Bros & Co. New Delhi)
The detailed syllabus for Grammar & Composition is given below.

PAPER I

Prose : (Selected Pieces)

- Unit I
- (a) Albert Schweitzer - 1 L.W. Leavitt
 - (b) Albert Schweitzer - 2
 - (c) Abraham Lincoln K.N. Devidas
- Unit II
- (a) Television
 - (b) The Story of Ra. R.L. Green
 - (c) Toasted English R.K. Narayan
- Unit III
- (a) I Met a Bushman
 - (b) Maggie Cuts Her Hair. George Eliot
 - (c) Dusk. Saki

- Unit IV (a) The Triumph of the Cockroach. J.D.Radcliff
(b) My Donkey Sally. Gerald Durrell
- Unit V (a) Conan Doyle. H.M.King
(b) The Blue Carbuncle. A.C. Doyle
(c) The Princess Who Wanted the Moon. M.J.Thurber
(d) The King's Warrant. Ronald Gow.

Poetry : (Selected Pieces)

- Unit VI (a) The Glove and The Lions. Leigh Hunt
(b) The Enchanted Shirt. John Hay
(c) Simon Snots Wishkers. Unknown
- Unit VII (a) Wolsey's Farewell. William Shakespeare
(b) With a Swimmer's Stroke. Lord Byron
(c) Home They Brought Her Warrior Dead.
Lord Tennyson.
- Unit VIII (a) Lines Written in Early Spring
William Wordsworth
(b) Unwritten Registry. E.V. Emans
(c) A Joy For Ever. John Keats
- Unit IX (a) An Irish Airman Foresees his Death.
Y.B.Yeats
(b) Night Journey. Theodore Roethke
(c) A Poison Tree. William Blake

Rapid Reader. Wonder Tales from Greece OR
Strange Tales from the Arabian Nights.

PAPER II

A. PLAY : Abraham Lincoln by John Drinkwater.
(Orient Longman)

B. GRAMMAR

1. Sentences

- a) simple, compound, complex
b) affirmative, Negative, Interrogative, Exclamatory
c) transformation of sentences : simple-compound,
simple-complex, compound-complex and vice-versa;
positive-negative; narrative-interrogative exclamatory.

Transformation of sentences without changing the
meaning of the sentences.

- d) sentence corrections, question tags.

2. Phrases and Clauses

- a) distinction between the two
b) noun, adjective and adverb clauses
c) clauses analysis (easy sentences)

3. Nouns

- a) countable and uncountables
- b) singular and Plural
- c) proper, common, collective, abstract

4. Determiners

- a) articles, adjectives, prepositions, conjunctives
- b) phrases, nouns in oppositions, adverbial, particles relatives.

5. Verb

- a) systematic study of the tense : present, past, future, simple, continuous, perfect.
- b) time-tense, study (present tense-future time etc)
- c) agreement of subject with verb
- d) special verbs : anomalous finites, non-conclusive verbs, inchoative verbs, group verbs.

6. Voices

- a) active and passive, change in tense

7. Reported Speech

- a) commands, questions, requests, narration, exclamations.
- b) change in tense and the form of pronouns and adverbs.

8. Adjectives

- a) comparatives and superlatives
- b) gerunds and participles

9. Punctuations

- a) (.), (,), (" ") (Capital letters) (?) (!) (:) (;) (')

10. Vocabulary

- a) synonyms, antonyms, diminutives, simple phrases and idioms.
- b) similarity pronounced words, substitution of single words.

C. COMPOSITION

1. Amplification/Precis

Pupils should be practiced in the amplification of a theme into a paragraph OR a PRECIS that is condensing a passage into about one-third of its original length.

2. Essay Writing

should be about 300-400 words on subjects of interest to the pupils. Essays may be of the following types :

- a) Descriptive : vivid, clarity, use of comparison and similes, personal impressions.
- b) Narrative : flash back method, creating interest and tension, characterization, dialogue.
- c) Expository : clarity and sequence, use of correct and expressive words, variety in sentence construction.
- d) Argumentative : exposition of problem, arguments for and against, consequences, facts to prove the arguments.

3. Letter Writing

The different parts of a letter to find a place:

Heading, salutation, Body of the letter, subscription, signature, Address.

Letter may be : Personal, Business like : for Applications of different kinds (admission, leave, job etc)

4. Comprehension

The question set on a given passage could include :

- a) reproduction, in the pupils own words, of the substance of a part of the passage.
- b) listing of important ideas, arguments, reasons, etc as given in the passage according to its nature.
- c) giving the meaning of special words and phrases as given in the passage (one word or short phrase answers)
- d) explanation of certain phrases, words and ideas.
- e) deduction of implied meaning from a sentence or paragraph.
- f) choice of a few selective words to be used in sentences without change in form but with a different meaning from that used in the passage.
- g) summarising in one or a few words, the substance of a sentence or a paragraph.
- h) other Multiple, True-False, Matching, Fill in the Blanks items.

M A T H E M A T I C S

GENERAL OBJECTIVES

I. Teaching of Mathematics at the Primary stage is aimed at

- (1) introducing the pupils to the world of numbers and associated basic concepts, terms and processes;
- (2) providing the necessary background for the study of mathematics at higher stages of schooling;
- (3) helping the pupils in solving their day-to-day problems relating to mathematics;
- (4) developing the habit of precision and accuracy;
- (5) developing the habit of clear-thinking, concentration, self-reliance and discovery;

II. Teaching of Mathematics at the Secondary Stage is aimed at

- (1) helping the pupil to know the mathematical terms, concepts, principles and processes required in carrying out his day-to-day problems;
- (2) providing the necessary background for understanding the related concepts from other subjects;
- (3) providing the necessary background for the study of higher mathematics;
- (4) developing interest in mathematical processes and reasoning;
- (5) developing the habit of precision and accuracy;
- (6) developing appreciation of the role of mathematics in the present-day-world;
- (7) inculcating the habit of self-reliance and discovery.

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CLASS - VIII

1. Real Numbers

- (a) Review of rational numbers
- (b) Representation of rational numbers as decimals
- (c) Expressing a decimal number (terminating) as a rational number.
- (d) Property of density for rational numbers
- (e) Irrational number and its representation on a number line.
- (f) Properties of real numbers
- (g) Simplification of square root radical

2. Exponents and Radicals

- (a) Proof of laws of exponents
- (b) Exponential value
- (c) Laws of fractional exponents
- (d) Radical
- (e) Binomial surds

3. Algebraic Expression

- (a) Polynomial
- (b) Kinds of polynomial
- (c) Like and unlike terms
- (d) Degree of a polynomial
- (e) Addition, subtraction, multiplication and division of polynomial.
- (f) Division of rational expression
- (g) Addition of rational expression
- (h) Subtraction of rational expression

4. Factorisation

- (a) Some special products : $(a+b)^2 = a^2 + 2ab + b^2$
 $(a-b)^2 = a^2 - 2ab + b^2$
 $(a+b)(a-b) = a^2 - b^2$
- (b) Factorisation of binomials : $ax^2 + bx + c$
- (c) Factorisation by grouping
- (d) Square of trinomial : $(a+b+c)^2$
- (e) Cube of binomial : $(a+b)^3, (a-b)^3$
- (f) An identity

5. Equation

- (a) Simple equation in first degree
- (b) First degree equation in two variables
- (c) Graphical representation of equation in two variables
- (d) Solution of simultaneous equations.

6. Use of Table

- (a) Use of Table in finding simple interest
- (b) Use of Table in finding square roots
- (c) Table of cubes and cube roots

7. Set

- (a) Definition
- (b) Set notation, use of capital letter
- (c) Equal sets
- (d) Membership of a set
- (e) Finite and infinite sets
- (f) Empty set and unit set
- (g) Sub-sets and null set
- (h) Universal set
- (i) H.C.F. and L.C.M.
- (j) Set builder form, roster form
- (k) Equivalent set
- (l) Complement of a set
- (m) Disjoint set
- (n) Venn diagram
- (o) Union of set
- (p) Intersection of sets
- (q) Application of sets in solving problems

8. Statistics

- (a) Preparation of frequency distribution table
- (b) Discrete and continuous variable
- (c) Expressing a discrete data in continuous form
- (d) Cumulative frequency
- (e) Average (mean, median and mode)

GEOMETRY

9. Three or more points which lie on the same line are called collinear.
10. Three or more points in the same plane are called coplanar.
11. Two or more lines are concurrent if there is a single point which lie on all the lines.
12. Kind of angles : (a) acute angle (b) right angle (c) obtuse angle (d) straight angle
13. Pair of angles : (a) adjacent (b) linear pair (c) supplementary (d) complementary (e) vertically opposite angles.
14. The bisector of an angle is a ray which divides the angle into two equal angles.
15. Kinds of triangle : (a) scalene (b) acute (c) right (d) isosceles (e) equilateral (f) obtuse (g) equiangular.
16. Sides of a triangle : (a) hypotenuse (b) perimeter (c) median (d) altitude (e) angle bisector
17. Congruency of figures
18. Angles of a linear pair are supplementary
19. If two adjacent angles are supplementary then their outer sides are opposite rays.
20. If two angles are supplementary to the same angle or to equal angles, they are equal to each other.
21. If two angles are complementary to the same angle or to equal angles, they are equal to each other.
22. If two lines intersect, the vertical angles are equal.
23. Parallel lines :
 - (a) If two parallel lines are cut by a transversal,
 - i) pairs of corresponding angles are equal, and converse
 - ii) pairs of alternate interior angles are equal, and converse.
 - iii) co-interior angles are supplementary, and converses.

24. Triangles

- (a) The sum of the angles of a triangle is 180°
- (b) The acute angles of right triangle are complementary
- (c) If three angles of a triangle are equal to three angles of another triangle, the triangles are equiangular.
- (d) The sum of the exterior angles of a triangle is 360°
- (e) If two sides of a triangle are unequal, the angles opposite to those sides are unequal, and the angle opposite to the longer side is larger.
- (f) If two angles of a triangle are unequal, the sides opposite to those angles are unequal and the side opposite to the larger angle is the longer side.
- (g) The perpendicular segment from a point to a line is the shortest segment from the point to the line.
- (h) The hypotenuse is the longest side of a right triangle.
- (i) The sum of any two sides of a triangle is greater than the third side.

25. Congruency of triangle

- (a) S S S postulate
S A S postulate
A S A postulate
- (b) If two angles of a triangle are equal, then the sides opposite those angles are equal.
- (c) If two sides of a triangle are equal, then the angles opposite those sides are equal.
- (d) An equiangular triangle is an equilateral triangle.

26. Quadrilaterals

- (a) The sum of the interior angles of a quadrilateral is 360°
- (b) The sum of the exterior angles of quadrilateral is 360°
- (c) The diagonal of a parallelogram separate it into two congruent triangles.
- (d) The opposite sides of a parallelogram are equal
- (e) The opposite angles of a parallelogram are equal.
- (f) The diagonals of a parallelogram bisect one another.

27. Circle

- (a) Review of work done in previous classes
- (b) Chord and the perpendicular from the centre
- (c) Equidistant chord
- (d) Central angle
- (e) Minor arc and major arc
- (f) Semi-circle
- (g) Measure of an arc
- (h) Angle inscribed in an arc
- (i) Angle intercepting an arc
- (j) The possible intersection between a line and a circle.
- (k) Secant
- (l) Tangent and point of tangency
- (m) The possible intersection of two circles.

Constructions

- (a) To construct a tangent at a given point on the circle.
- (b) From a given point outside a circle to construct tangents to the circle
- (c) To find the centre of a given arc

28. Areas and Volumes

- (a) Area of irregular rectilinear figures
- (b) Area of circle
- (c) Circumference and area of a circle
- (d) Areas of the sector of a circle
- (e) Volume of cube, cuboid, right prism, right pyramid, right circular, cylinder, cone, sphere.

M A T H E M A T I C S
SYLLABUS FOR CLASS - IX

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Unit

- I. Set language and set notation - only the preliminaries.
(Set operations & Venn Diagrams to be done in ~~Class-X~~).
- II. The Number System : natural numbers, integers, rational numbers, fractional numbers, decimal fractions.
- III. Commercial Mathematics : Simple Interest, Problems and percentage, profit and loss.
- IV. Mensuration : Concept of Perimeter, areas of (i) square, (ii) four walls of a room, (iii) path within a rectangle, (iv) parallelogram, (v) rhombus, (vi) quadrilateral, (vii) triangle, (viii) circle, (ix) trapezium, (x) circular ring.
- V. Algebra : (i) Addition, subtraction, multiplication and division of algebraic expressions and polynomials.
- (ii) Formulae and their applications
- (iii) First degree equations and inequations and their solutions.
- (iv) Solution of simultaneous equations
- (v) Factorisation of linear expressions and second degree expressions.
- (vi) H.C.F. & L.C.M.
- (vii) Graphical representation of linear equation of first degree in one variable.
- VI. Statistics : (i) Collection and tabulation of statistical data.
- (ii) Graphical representation of statistical data :
- (a) Pictograms or isotypes
- (b) Bar graphs
- (c) Histograms
- (d) Frequency polygons
- (e) Pie charts.

VII. Trigonometry : (i) Trigonometrical Ratios : $\sin x$,
 $\cos x$, $\tan x$, $\cot x$, $\sec x$,
 $\operatorname{cosec} x$ when $0^\circ \leq x \leq 90^\circ$.

(ii) Simple trigonometrical Identities.

VIII. Geometry : (i) Angles at a point :

If two lines intersect, the vertically
opposite angles are equal.

- (ii) Parallel Lines : (a) When a transversal
intersects two
parallel lines,
then
- (1) the corresponding
angles are equal;
 - (2) alternate angles
are equal;
 - (3) sum of the interior
angles on the same
side of the trans-
versal is 180° ; and
the converses of
the above.
- (b) Lines which are
parallel to the
same line are
parallel to one
another.

(iii) Triangles and rectilinear figures :

- (a) The sum of the three angles of a
triangle is 180° .
- (b) Congruence of triangle : SAS, SAA, SSS &
SH postulate for right-angled triangles.
- (c) If two sides of a triangle are equal,
the angles opposite to these sides are
equal and the converse.
- (d) If two sides of a triangle are unequal,
the longer side has the greater angle
opposite to it and the converse.
- (e) Of all the segments that can be drawn to
a given line from a given point outside
it, the perpendicular is the shortest.
- (f) The opposite sides and the angles of a
parallelogram are equal, each diagonal
bisects the parallelogram and the
diagonals bisect each other.

- (g) If a pair of opposite sides of a quadrilateral are equal and parallel, then it is a parallelogram.
 - (h) The line drawn through the mid-point of one side of a triangle parallel to another side bisects the third side.
 - (i) The segment joining the mid-points of any two sides of a triangle is parallel to the third side and is half of it.
 - (j) If there are three or more parallel lines, and the intercepts made by them on a transversal are equal, the corresponding intercepts on any other transversal are also equal.
- (iv) Loci :
- (i) The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the segment joining the two points.
 - (ii) The locus of a point which is equidistant from two intersecting lines consists of a pair of lines which bisect the angles between the two given lines.
- (v) Areas :
- (i) Parallelograms on the same base and between the same parallels are equal in area.
 - (ii) Triangles on the same base or equal bases and of the same or equal altitudes are equal in area.
 - (iii) Triangles with equal areas and on the same or equal bases are of same or equal altitudes.
- (vi) Pythagoras Theorem : In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides, and the converse

MATHEMATICS SYLLABUS
FOR CLASS - X

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Unit

- I Set Language and Set Notation : Set Operations and Venn Diagrams
- II Logarithms : Logarithm to base 10, Laws of Logarithm, Use of Logarithmic Table.
- III Commercial Mathematics : Compound Interest, Investment and Loans in Banks, Hire-Purchase Problems, Payment in Equal Instalments, Shares and Discount.
- IV. Problems on Time and Work, Problems on Time and Distance.
- V. Numbers : Squares, Square Roots and Reciprocals;
- VI. Mensuration : Volumes of Cube, Right Prism, Cylinder, Cone and Sphere.
- VII. Algebra : Quadratic Equations and their solutions, Laws of Indices, Graphical representation of linear equations of first degree in two variables.
- VIII. Statistics : Measures of Central Tendency and Dispersion - Mean, Median, Mode, Deviations with particular stress on Standard Deviation.
- IX. Trigonometry : Values of $\sin x$, $\cos x$, $\tan x$, for $x = 0^\circ, 30^\circ, 45^\circ, 60^\circ, 90^\circ$.
- Simple Trigonometrical Identities involving Trigonometric Ratios and Standard Angles.
- Use of Trigonometrical Tables.
Simple Problems and Heights and Distances.
- X. Geometry :
- (i) Circle :
- (a) Perpendicular from the centre of a circle to a chord bisects the chord, and the converse.
 - (b) There is one circle, and only one, which passes through three given points not in a line.
 - (c) Equal chords of a circle are equidistant from the centre, and the converse.
 - (d) In congruent circles (or in the same circle) if two arcs subtend equal angles at their centres, they are congruent.

- (e) In congruent circles (or in the same circle) if two arcs are congruent, they subtend equal angles at their centres.
- (f) In congruent circles (or in the same circle) if two chords are equal, they cut off congruent arcs; and conversely, if two arcs are congruent, the chords of the arcs are equal.
- (g) The angle subtended by an arc of a circle at its centre is twice the angle subtended by it at any point on the remaining part of the circle.
- (h) Angles in the same segment of a circle are equal; and, if a line segment joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.
- (i) The angle in a semi-circle is a right angle, and the converse.
- (j) The opposite angles of any quadrilateral inscribed in a circle, are supplementary, and the converse.
- (k) The lengths of the two tangents to a circle from an external point are equal.
- (l) If two circles touch each other, the point of contact lies on the line joining their centres.
- (m) If a line touches a circle, and if from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.
- (n) If two chords of a circle intersect, either inside or outside the circle, the rectangle contained by the parts of one is equal in area to the rectangle contained by the parts of the other.

(ii) Similar Triangles :

- (a) If a line is drawn parallel to one side of a triangle, the other two sides are divided in the same ratio, and the converse.
- (b) If two triangles are equiangular, their corresponding sides are in the same ratio, and the converse.
- (c) If an angle of one triangle is equal to the corresponding angle of another triangle and the sides including these angles are in the same ratio, the triangles are similar.
- (d) If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other.
- (e) The ratio of the areas of similar triangles is equal to the ratio of the squares on the corresponding sides.

ADVANCED MATHEMATICS
FOR CLASSES IX & X

GENERAL OBJECTIVES

The teaching of Advanced Mathematics at the Secondary stage is aimed at

- (1) providing the necessary background for the study of Mathematics at higher stages;
- (2) developing logical sense of the pupils;
- (3) developing the power to think in generalities as well as in particularities;
- (4) reflecting the changes taking place in the field of mathematics;
- (5) developing interest in mathematical principles; processes and reasoning;
- (6) developing the habit of precision and accuracy in mathematical manipulations;
- (7) developing the sense of appreciation of the importance of mathematics in the present day world.

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1. ALGEBRA

CLASS - IX

Irrationals and their properties; rationalisation of irrationals; square root of an irrational number.

Real numbers and their properties; set of real numbers as superset of the sets of natural numbers, integers, rationals and irrationals.

Set operations and De Morgan's Laws.

Division in polynomials; Remainder and Factor Theorems.

Quadratic equations and their solutions (different methods).

Variation : direct; inverse and joint variation. Powers and roots; Laws of indices. Logarithm;

Laws of logarithm; Common logarithm; Use of log Table.

2. TRIGONOMETRY

Trigonometrical ratios and their mutual relationships, simple identities on them; trigonometric functions of complementary and supplementary angles; elimination; trigonometric functions of $0, \pi, \frac{\pi}{2}, \frac{\pi}{3}, \frac{\pi}{4}, \frac{\pi}{6}$; addition and subtraction formulae.

3. CO-ORDINATE GEOMETRY OF 2-DIMENSIONS

Rectangular cartesian co-ordinates; distance formula; section formula; area of a triangle; equation of straight line in intercept, slope and 2-point forms; point of intersection of two lines; conditions for : (i) three points to be collinear and (ii) three straight lines to be concurrent.

Note: The pupils are expected to apply the principles learned in solving simple related problems.

ADVANCED MATHEMATICSCLASS - X1. ALGEBRA

Complex numbers; Argand diagram; real and imaginary parts and modulus of a complex number; conjugates; elementary properties of complex numbers.

Binary operation in sets; elementary idea of relations and functions.

Surds, their types and properties; rationalisation of surds.

A quadratic has only two roots; nature of the roots; relationship between the roots and the co-efficients; formation of quadratic equations with given roots (simple cases only).

Basic concepts of A.P. and G.P.; relation between A.P. and G.P.; $\sum n^2$; $\sum n^3$; sum of infinite G.P. series.

Elementary study of permutation and combination; values of ${}^n P_r$ and ${}^n C_r$; ${}^n C_r = {}^n C_{n-r}$; ${}^n C_r + {}^n C_{r-1} = {}^{n+1} C_r$.

Binomial Theorem for positive integral index; general term, middle term and equidistant terms in binomial expansion.

Concept of determinants upto third order and their properties.

2. TRIGONOMETRY

Trigonometric ratios of multiple and sub-multiple angles; transformation of a product into sum and difference; properties of triangles; sine and cosine rules (including expressions in half angles); area of triangle.

3. CO-ORDINATE GEOMETRY OF 2-DIMENSIONS

Angle between two lines; conditions for parallelism and perpendicularity; length of perpendicular from a given point on a given line; equation of circle (origin as centre, any given point as centre); general equation of a circle; circle with given two points as the extremities of its diameter; circle passing through any three given points; intersection of a line and a circle.

Note:- The pupils are expected to apply the principles learned in solving simple related problems.

S C I E N C E Classes VIII-X

OBJECTIVES :

1.0 The pupil knows the advances in Science.

Specifications : The pupil

- 1.1. knows the basic facts and principles of modern science;
- 1.2. knows the significant discoveries and inventions in science and technology;
- 1.3. develops scientific attitude—open-mindedness, commitment to free enquiry, demand for more and more evidence before arriving at conclusions, readiness to revise opinions and hypotheses with new evidence coming to light; and
- 1.4. enjoys the thrills of understanding nature and natural phenomena, and appreciates the unity of life and life processes, orderliness and harmony in nature.

2.0. The pupil is able to weigh out the importance of science.

Specifications : The pupil is able to realise that

- 2.1. science has influenced almost all aspects of human life and the influence is growing;
- 2.2. no community, state or nation can prosper without scientific and technological development;
- 2.3. knowledge of science does not recognise geographical boundaries but is the property of every individual and every nation;
- 2.4. a technological society demands of everyone higher standards of work and deeper understanding; and
- 2.5. technological advance may often times bring an imbalance in the individual and in the society and this must be consciously corrected.

3.0. The pupil develops requisite competence to live with science.

Specifications : The pupil

- 3.1. acquires competence to read and appreciate simple scientific and technological literature;
- 3.2. learns to approach problems of life scientifically with an open mind and tackle them with the orderly methods of science that he has developed;
- 3.3. understands the working of simple mechanical appliances and handles them with skill and intelligence to make his living more efficient;
- 3.4. gains confidence to perform complex mechanical operations when necessary;
- 3.5. expresses himself through project, science clubs, fairs and other scientific activities.

CLASS - VIII

PHYSICS

- UNIT 1 Heat energy : heat and temperature; thermometer; maximum and minimum thermometers; measurement of heat; unit of heat; specific heat; change of state; heat of fusion; vapourisation; effect of pressure on boiling point; transference of heat; conduction; convection and radiation.
- UNIT 2 Light energy : light is a form of energy; sources of light; light travels in a straight line; transparency; translucence and capacity; lunar and solar eclipses; reflection of light; formation of images; plane; concave and convex mirrors; refraction through prism and lenses.
- UNIT 3 Sound energy : sound is a form of energy; vibration; propagation of sound; medium of sound; echo; preservation of sound; musical sound.

CHEMISTRY

- UNIT 1 Valency of element; variable valency; formulae of compounds; chemical equations.
- UNIT 2 Air and its composition; air is a mixture.
- UNIT 3 Lavoisier's experiment; properties of air; oxygen; oxides and oxidation; burning of candles; respiration and burning.
- UNIT 4 Hydrogen : preparation, properties and uses; reactions of substitution or displacement.
- UNIT 5 Acids : Hydrochloric acid; Sulphuric acid; properties of acids.
- UNIT 6 Water : Water cycle; natural water; pollution and purification; hard and soft water; action of water on metals; solution; solubility; bases; properties of bases; neutralization; formation of salts.

B I O L O G Y

- UNIT 1 Cellular structure of plants; seeds and germination; conditions for germination of seeds.
- UNIT 2 Roots : soils and composition; fertilizers; types of roots; parts of a root; internal structure of roots; functions of root.
- UNIT 3 Stems : external features; buds; types of stem; internal structure; path of conduction; stem modifications; functions of stem.
- UNIT 4 Leaf : structure of leaf; parts of a leaf; arrangement of leaves; modification of leaves; functions of a leaf; transpiration; respiration and leaf; leaf-fall.
- UNIT 5 Vertebrates : pisces; their general characteristics and parts; maintenance of buoyancy; respiration and movement of fish; usefulness of fish.
- UNIT 6 Amphibia : frog; its features; movement on land and water; food; respiration and reproduction.
- UNIT 7 Reptiles : features; lizards and snakes; food of reptiles; their movement; reptiles of the past.
- UNIT 8 Birds : features; internal and external organs; flying; fossil birds; life-history of birds; migration; usefulness of birds.
- UNIT 9 Food and digestion : sources of food; digestion of food; balanced diet.
- UNIT 10 Respiration : respiratory organs; breathing; harmful effects of smoking; ventilation; air-borne diseases.

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CLASS - IX

PHYSICS

- UNIT 1 Wave motion and sound : sound production; reflection of sound; recording and reproduction of sound; pitch of sound.
- UNIT 2 Light : sources of light; propagation of light; shadows and eclipses, reflection of light; mirror and images; plane and spherical mirrors; refraction of light through glass and prism; dispersion of light; lenses; defects of human vision.
- UNIT 3 Electricity : electrical charges; electric field; electroscope; charges in atoms; conductors and insulators; electrons and electrifications; electrical inductions; charging by induction; lightning and thunder.
- UNIT 4 Electric current : nature of electric current; electric cells; storage cells; electric circuits and components; effects of electric current; measurement of electricity.

CHEMISTRY

- UNIT 1 Inorganic compounds : metallic oxides and properties; non-metallic oxides and properties.
- UNIT 2 Acids and their properties : effect of acids on metals and oxides; reaction of acids with chlorides, basidity of acids; oxy-and non-oxy acids; uses of acids.
- UNIT 3 Bases; general properties of bases; reaction of bases with acids and salts; uses of bases; salts; solubility of salts; salts and metal reactions; chemical properties of salts; salts and bases; hydrated salts; effect of heat on salts; deliquescence and efflorescence.

UNIT 4 Chemistry in agriculture; soil testing; types of soil; plant nutrients; chemical fertilizers; types of fertilizers; calcium and ammonium nitrates; ammonium sulphates and urea; super phosphates; micro-and mixed fertilizers; pests; pesticides and fungicides.

B I O L O G Y

UNIT 1 Flower and inflorescence : parts of flower; pollination and fertilizations; fruits; dispersal of fruits and seeds; vegetative reproduction; plant as a living organism.

UNIT 2 Worms : features, feeding habit, respiration, reproduction and usefulness.

UNIT 3 Arthropoda : crustacea; crabs and their uses to man; daphnia; hermit crab.

UNIT 4 Insects : parts of the body; cockroach and its digestive and circulatory systems; reproduction, usefulness and control of insects.

UNIT 5 Mollusca and arachnida : spider and scorpion; different kinds of mollusca; their feeding habits and their locomotion.

UNIT 6 Blood : its composition; circulation of blood; functions of blood; blood grouping; immunity; blood pressure.

UNIT 7 Excretion : excretory organs; skin and hygiene of the skin.

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CLASS - X
PHYSICS

- UNIT 1 Potential difference; resistance; factors of resistance; rheostat; electro-magnetism; magnetic poles; magnetic fields; Lines of force of a magnet; magnetic field due to current; magnetisation by induction; telegraph; electrical bell; earth's magnetism; magnetic substances.
- UNIT 2 Electrical energy and power; electric current and energy; electric power; unit of electrical energy; electric meter; heating effect of electric current; electric bulb; electric heating appliances; safety devices in electrical circuits.
- UNIT 3 Atom; atomic energy; structure of atoms; nuclear structure; radio activity; nuclear energy.

CHEMISTRY

- UNIT 1 Carbon and its compounds; graphites; charcoal; diamond; coal; properties of carbon; carbon dioxide; preparation, properties and uses; fire extinguishers; carbonates; carbon monoxide; methane and its importance and properties; characteristics of good fuels; combustion and flames; flame structure.
- UNIT 2 Organic compounds; carbohydrates; cellulose; fats and proteins; their compositions and uses of fats.
- UNIT 3 Metals and their properties; metals and alloys; reaction of metals with water and oxygen; some common metals like iron and steel; aluminium and its properties; copper and silver; their uses and properties.
- UNIT 4 Action of electricity on common substances like sodium chloride, sugar, hydrochloric acid and copper sulphate; electroplating; copper plating; electrolysis.

B I O L O G Y

- UNIT 1 Diversity of plants; moss; algae; bacteria and their usefulness; nutrition and reproduction of fungi and bacteria; lichens and ferns; their reproduction and usefulness; cone bearing plants; interdependence of plants and animals.
- UNIT 2 Protozoa - acquisition of food; respiration and reproduction; malarial parasites.
- UNIT 3 Coelenterata - coelenterate structure; movement and food habit; respiration and reproduction.
- UNIT 4 Nervous system of human body and its components; eye and its parts; working of the eye; spectacles; ear and its parts; working of the ear; sense of balance; the sense organs of smell and sight.
- UNIT 5 Enzymes & hormones; pituitary glands; thyroid glands;
- UNIT 6 Reproduction and heredity; reproductive cells; process of reproduction; family planning; heredity; determination of sex; hereditary diseases.
- UNIT 7 Human body as an integrated whole.

CLASSES VIII-X
SOCIAL SCIENCES
(HISTORY & CIVILS)

For the majority of students who reach this stage, the secondary school is the last opportunity to benefit from formal education; they may not go on to College or University. At this stage Social Sciences for many students provides the last opportunity to learn from an organized study of the social sciences, for greater specialization comes after the end of this stage. Social Science in the higher secondary school carries, therefore, a heavy responsibility to prepare students for their social and political role in a democracy. As a consequence, the purpose of teaching, what is taught and how is taught, have to be planned in terms of social values, attitudes of mind, appreciation of democratic processes and skills and habits required for productive living, intelligent participation in the activities of society and continued quest for knowledge, insight and sophistication in matters of social importance.

The social science programme for this stage is built on what has gone before. It recognises what has been learnt at the lower levels and also tries to make the most of the greater maturity of the student at this stage. It takes into account the fact that the intelligent citizen must be aware of the current scene in its broad outline, in India and in the world and also must understand the historical roots which help the students to become familiar with such sources of information from the fields that can throw light on the changes of and developments in India and the world.

Good citizenship demands the best information that is available, an understanding of problems and the kinds of efforts needed to solve them, learning desirable methods of study and acquiring idea of the direction which the development should take. Social Science at school has to furnish those to help the preparation of future citizen of the nation.

Students at this stage are well along in the period of adolescence when physical, emotional and intellectual changes are rapid. Characteristics of this period are increased awareness of self as well as expansion of interests. Students now demonstrate an increasing desire for independence and adventure. They become critical of themselves and some of their families and of those around them. They tend to generalise after on little information or experience. They are more impatient of passively listening to what they should know or do. Their minds are more and more inquisitive, questioning and doubting Orthodox wisdom. Physically, they tend to be full of energy and capable of sustained work, though easily diverted by trifles. Emotionally they are capable of extreme loyalty and dedication to individuals and causes. They are anxious for recognition as individuals and eager to find a role to play in the family, in the school and even in local affairs. They work for rapid changes and quick solutions.

These characteristics vary of course from student to student, they generally present problems for the family and the school. At the same time, they present educational challenges and opportunities. These characteristics can be fully utilized to produce a person who is self-disciplined, active, constructively critical, intelligently participating in public affairs, dedicated to the improvement of society and anxious to learn more and more of things of importance to himself and to his country. Such a self-disciplined, active, critically minded and socially conscious citizen is necessary for a democratic society in the process of changes. The content of Social Science programme, the method of teaching and teacher-pupil relationship should, therefore be so designed and executed as to produce such citizens for future nation.

THE PROGRAMME (its implications)

The programme for this stage builds on the attitudes and understandings developed earlier at school. It makes use of the knowledge and understandings absorbed at

the middle school stage of Indian history, Civics and Geography. It makes an attempt on behalf of the school to prepare the students to undertake the responsibility in society keeping in mind the purpose of the subject, and also the students interests and their abilities. The purposes focussed on certain basic ideas include an understanding of the problems of India today, the nature of the present day world and India's place in it and the historical background to understand the current scene and to play a part in shaping the future.

Full knowledge of the historical background cannot be acquired here, chiefly, because the limitation of time. Material, therefore, must be selected in terms of understanding from history which can be used in the interpretation of the world today. Furthermore, the citizen needs the ability to understand the inter-relationships between different sets of factors-historical, economic, social, geographical, political and psychological. He needs ability to think in terms of the integrated nature of culture, his own as well as that of other peoples. Therefore, the historical material to be studied should be broadly conceived in order to help the students to appreciate some of the important 'lessons' from history and to achieve certain understandings about man's experience which have meaning for India and the world. This indicates that the programme at this stage should be of an integrated nature based on a broad view of selected materials from world history and dealing largely with present India and the world.

The methods used for teaching-learning are equally important. The objects of Social Science teaching are such that learning must be viewed as an active process, not a passive one. The teacher does not teach so much as he helps the students to learn. The creative teacher should be capable of fully utilizing the energy, the questioning attitudes, the impatience of change, the ability to generalize and the desire for active participation that characterise the students at this stage.

While lectures and the textbook will continue to be used as the means of learning and teaching, other methods also should be made use of to make learning more meaningful. Group discussions should provide the opportunity to comprehend more clearly basic questions of values, national goals and individual responsibility and problems awaiting solutions. Students should be led to plan and carry out projects individually and in groups. Different methods of learning how to study a topic have to be tried making right use of information and ideas from different sources interpreting the information collected, organizing oral or written report on what has been learnt.

Students should be taught frequently to evaluate what they are learning. There may be formal tests, but more frequently, the teacher and the class should be able to discuss how far the ways of learning have been successful in achieving the ultimate purpose. Evaluation techniques are numerous, but they should always focus on understandings, attitudes, abilities and skills without ignoring the importance of information.

MAJOR OBJECTIVES

Very naturally, these objectives to some extent overlap those of the middle school but take them to be a mature level. It should be clearly understood that neither those objectives nor understandings are to be directly taught to the students. They are meant only for the teacher, who should keep them in mind when he is presenting the content or organizing activities in class. Little will be accomplished by asking students to memorise statements of understandings, generalizations, values, ideals etc.

A. Major understandings

1. The culture of different societies of the past and of today are integrated wholes and can be understood fully only through a study of inter-related parts of the culture.

2. Increasingly through history, the development of different groups of people has been influenced by contacts and ideas from other groups of people and has in its turn influence others.
3. For the most part for societies develop through internal process, influenced by ideas from other societies. Indian history furnishes an excellent example of the process of assimilation and synthesis.
4. Cultures which have flourished for long periods of time have tended to possess values and processes conducive to changes - e.g. India's tolerance of ideas from other cultures is one of such value which has encouraged change.
5. Change has been, and continues to be, a normal condition of human institutions and cultures; to a degree man can influence the order and direction of change, taking into account historical forces, the nature of human institutions and the interdependent nature of the peoples of the world.
6. Certain events in history, because of their timing place of occurrence and significance have had unusual influence on events to follow. The Renaissance, the industrial Revolution and some political revolutions are good examples of such events.
7. The great religions of the World have made significant contributions to the development of culture and civilization : in Indian history they have a strong influence on values and institutions.
8. In India and throughout the world, development tends to be towards greater democracy and recognition of human rights.
9. Democracy involves the recognition of man's ability to govern himself through institutions and procedures based on majority opinion, decentralization of power and responsibility, rule according to established law, freedom of conscience, and expression and justice.

10. The economic and social development of India requires the greatest possible care in the use of available resources and intelligent, planned effort on the part of the government and private groups.
11. Science holds unlimited promise for an easier, better and more challenging life for all people, provided man has the ability to apply the knowledge of science to human problems.
12. Scientific and technological development in the world today are helping to bring all peoples to closer communication with one another.
13. To maintain peace in today's world and to allow for natural development of people according to their own traditions and desires, it is necessary that every nation should refrain from interfering in the affairs of others.
14. As the world become more and more a system of inter-relationships among other interdependents nations, nationalism and sovereignty must be re-interpreted in terms of loyalty to the world ideas and institutions.
15. The United Nations is the latest effort toward an organized programme to maintain peace and Co-operative relations among nations.

II. Major Attitudes

1. Belief in the positive values of the Indian heritage and recognition of the problems of adjusting that heritage to modern conditions and national goals.
2. Respect for accomplishments of mankind throughout history in solving problems and in taking civilization gradually to greater heights.
3. A patriotic pride based on a fair and first appreciation of India's past and her promise for a bright future.
4. Recognition of the need for change as a normal process through which human existence is improved.
5. An appreciation of the human and spiritual values which throughout history man has striven to enunciate and live by.
6. Tolerance for the different views of life developed by different groups of people; recognition that variety in outlook enriches living; and understanding of the types of efforts needed in the solution of life's perplexing problem.
7. Recognition that the various ethnic and cultural groups in India are a source of strength and enrichment; belief that in India Unity can be (should) be developed without undue compromise of cultural variety.
8. Respect for democratic processes of decision making and acceptance of responsibility, compromise of personal desires with the common will, and appreciation of followership leadership roles.
9. Respect for the individual personality, for individual right to freedom and liberty, equality for opportunity, freedom, of belief and religions expression and for all other rights and liberties normally associated with the democratic ideal.
10. Willingness to work for the solution of family, local and national problems, and a recognition of that man can shape his destiny and improve his lot through an energetic application of knowledge to problems.

11. Respect for the problem solving method of dealing with persistent ills of society; recognition that application of the scientific method to human problem is more likely to achieve better results.
12. Abhorrence for war, violence and other emotional means of dealing with differences among peoples and nations. Commitment to non-violence and peaceful means of solving conflicts of all kinds.
13. Recognition of the need for continued learning throughout life, and the ability to use all available resources for continued learning.

C. Major Skills and Abilities

1. Knowledge of where to find needed information and ability to use the simple tools of the social sciences, such as, globes, charts, graphs, statistical data and government reports.
2. Skill in analyzing and organizing data and information into a meaningful statement and interpreting it in terms of the problems under investigation.
3. Ability to present information in written or oral form so that the others understand what the report is intended to convey.
4. Skill in critical thinking, in recognising bias, in evaluating sources of information, in weighing evidence, in recognizing and resisting propaganda, and in arriving at independent judgements.
5. Ability to participate constructively as a member or leader in group discussions, ability to help in group activity towards or desired accomplishment.
6. Ability to apply the problem solving method to problems, to gather appropriate information to formulate possible solutions to them; to test alternative solutions and to arrive at a reasonable solution or solutions based on evidence.
7. Ability to withhold judgement on critical problems until all sides have been investigated and to base decisions on evaluated information, not merely emotions!

CLASS - VIII
H I S T O R Y

1. India in the Eighteenth Century : Decline of the Moghul Empire. Rise of the Marrathas, Society in the 18th Century.
2. The coming of the Europeans. Growth of East India Company. The Second and Third Karnataka Wars, Causes of the English success.
3. The conquest of Bengal : Battles of Plassey and Buxer. Treaty of Allahabad, Dual System of Bengal.
4. The Conquest of India : Relations with Mysore, Marrathas, Policy of Non-Intervention, Subsidiary Alliance, The Second and the Third Mysore War.
5. Expansion of the British Empire (1823-1856). Expansion under Lord Amherst, Lord William Bentinck, Lord Auckland, Lord Ellenborough, Lord Hardinge, Lord Dalhousie.
6. Administration under the East India Company. Dual System, Regulating Act, Pitts Indian Act. Administrative Organization under the Company's Rule.
7. British Economic Policies in India (1757-1857), Land Revenue Policy, The Permanent Settlement of Bengal, Ryotiwari System, Mahalwari System. Effects of the British Economic Policies.
8. Education and Social Reforms (1757-1857) Education under the Company's Rule. Effects of English Education; Social and Religious Reforms.
9. First War of Independence 1857; Social, Economic, Political and Military Causes. Causes of the Failure, Effects of the War.
10. India under the Crown, Acts of Parliament, Provincial and Local Administrations, Relations with the Princely States : India's Relations with Burma, Afghanistan and Tibet.

11. Growth of New India : Causes of the Rise of Nationalism in India, Birth of Indian National Congress, National Movement.
12. Struggle for Swaraj : Montegu Chelmsford Reforms, Rowlat Act. Non-Co-Operation Movement, Civil Disobedience Movement, The Government of India Act 1935. Quit India Movement 1942.
13. Changes in Economy after 1858 : Economic Impact of the British Rule. The Ruin of Indian Handicrafts. Growth of Modern Industries.
14. The Indian Reawakening after 1858 : Religious and Social Reforms.
15. India after Independence.

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C I V I C S

1. Our National Goals I. Democracy, Secularism, National Integration.
2. Our National Goals II. A Welfare State,
~~International Co-Operation.~~
3. Citizenship in Democracy : Principles of democracy. Qualities for Citizenship.
4. Education for All : Education and Democracy, spread of school and University Education, Adult and Women Education.
5. Social and Economic Reconstruction : Causes of Poverty, uprooting of Poverty
6. The Growing Population : Evil Effects : Reasons for Growing Population, Need for Population Check.
7. Caste System : Effects and Fight Against Casteism.
8. Five Year Plans and Agriculture : Planning, Objectives of Planning, Improvement in Agriculture, Rural Construction after Independence.
9. Five Year Plans and Industrial Development, Need, our Industries.
10. Protection of Our Country's Boundaries : Our Army, Navy, Airforce, Other Forces.
11. Citizens and Defence.
12. India and the World : The world as a Family of Nations, International Dependence, organization and Functions of the United Nations .
13. The Foreign Policy of India Form Basic Principles.

SOCIAL SCIENCE
(GEOGRAPHY & ECONOMICS)

CLASSES VIII- X

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The courses in Geography at this stage is a part of the general education and deals with the geography of the world as a whole. Preparation of good citizenship today can no longer be limited to a knowledge and understanding of only a part of the world - of one's own local community, state or world. We are so closely related to other parts of the world that we need to know about the whole world and then only we can know our country better.

Students at the middle stage have already covered elementary principles of physical and economic geography and life in different parts of the world which will provide a sound basis for studying the subject in greater depth at this stage. By this time students are able to see and understand world patterns of natural and cultural phenomenon as for example surface forms, climate, natural vegetation, agricultural and mineral resources, distribution of population and patterns of economic and social development. This knowledge will help them in understanding the world problems and also develop interest in studying other subjects as economics, political science and history.

Keeping this in view the geography syllabus has been divided into two parts. In class IX, physical geography of the world and India and in Class X, human and economic geography of the world and India will be dealt with.

O B J E C T I V E S

1. To help students identify the varieties in the distribution of physical and economic phenomena over surface of the earth that are really associated and that give distinctive character to particular parts of the earth's surface.
2. To help students analyse the ways of living of the people all over the world and their problems in the light of their varying environments and their stages of economic and technological development.
3. To develop an appreciation of interdependence of various geographical regions.
4. To help students makes generalizations with the help of geographical concepts, the knowledge of which is of great value in understanding, evaluating and reaching decisions about world problems.

S Y L L A B U S

CLASS - VIII

UNIT 1 Lithosphere and Landforms

1. The crust of the earth and its relation to the earth's interior.
2. The rocks
3. Earthquakes and the volcanoes.
4. Process of gradation and the agents of gradation.
 - i) Weathering formation and conservation of soil.
 - ii) Running water
 - iii) Ground water
 - iv) Moving ice
 - v) Winds
 - vi) Sea waves

UNIT 2 Europe - Land and Peoples

1. Land, climate, vegetation and wild life
2. Gifts of nature and the people
3. France, the United Kingdom and Germany

UNIT 3 India - Physical Setting

1. Relief Features
2. Climate, vegetation and wild life

UNIT 4 India - Its Agriculture Resources

1. Soils
2. Irrigation
3. Crops
4. Methods of Farming

UNIT 5 India - Minerals and Industries

1. Mineral resources - Iron, Coal, Petroleum, Bauxite, Manganese.
2. Industries - Textiles, Sugar, Oil refinery, heavy industries, small-scale and Cottage industries.

UNIT 6 India - Trade, Transport and Population

1. Trade - Internal and External
2. Transport - Land, water and air and modern means for communications.
3. Population - structure, distribution and density.

UNIT 7 Practical Work - Weather Study

1. Understanding "today's Weather" - temperature, rainfall, relative humidity and wind direction.
2. Observation and recording.

CLASS - IX

PHYSICAL GEOGRAPHY OF THE WORLD & INDIA

SEMESTER I

UNIT I Land forms

- i) The earth as a planet-structure of the earth-crust and interior layers.
- ii) Landforms of the first order-continent and oceans-their distribution.
- iii) Mountains-types-fold mountains, block mountains, volcanic mountains-distribution of mountains-their significance.
- iv) Plateaus-types-distribution of plateaus-their significance.
- v) Plains-types-distribution of plains-their significance.
- vi) Land forms of India in details

UNIT II Climate

- i) Temperature-horizontal distribution-summer and winter conditions.
- ii) Pressure and winds-horizontal distributions-summer and winter conditions.
- iii) Precipitation-horizontal distribution-summer and winter conditions.
- iv) Climatic regions
- v) Climate of India in detail

SEMESTER II

UNIT I Soils, Flora and Fauna

- i) Soils-types of major soil groups of the world-their distribution.
- ii) Natural vegetation types-distribution of each type.
- iii) Wild-life-types-distribution
- iv) Conservation of resources-need and methods.
- v) Soils, natural vegetation and wildlife, of India in detail.

UNIT II Oceans

- i) Oceans-ocean basins-salinity surface circulation of ocean waters-main deposits-flora and fauna.
- ii) Details discussion of the Indian ocean basin

UNIT III Major Natural Regions of the World

- i) Regions of low latitudes-characteristic features of each region.
- ii) Regions of middle latitudes-characteristic features of each region
- iii) Regions of high latitudes-characteristic features of each region.

CLASS - X

HUMAN AND ECONOMIC GEOGRAPHY OF THE WORLD AND INDIA

SEMESTER III

UNIT I Natural Resources of the Earth and Basic Occupations.

- i) Exhaustible and non-exhaustible resources.
- ii) Potential and developed resources
- iii) Occupations - primitive
 - pastoral and agricultural
 - industrial

UNIT II Agriculture

- i) Principal agricultural areas
- ii) Cereal crops (a) Wheat, rice and millet
 - (b) Sugarcane, tea and coffee
 - (c) Cotton and rubber
- iii) Indian agriculture in detail

UNIT III Mineral and Power Resources

- i) Mineral as industrial raw-material
- ii) Mineral as fuels
- iii) Distribution of minerals -Iron, aluminium, copper, radioactive-coal, petroleum. hydro-electrical, solar and wind power.
- iv) Mineral resources of India

SEMESTER IV

UNIT IV Industries

- i) Traditional Industrial base
- ii) Modern Industry
- iii) Location of Industry
- iv) Major industrial regions
- v) Industries in India

UNIT V Pattern of Transport and Communication

- i) Significance of Transport and communications
- ii) Land transport-roads, railways
- iii) Water transport-inland waterways, seaways, international canals.
- iv) Airways
- v) Shrinking world
- vi) Transport and communication network of India.

UNIT VI International Trade

- i) From simple barter to international trade
- ii) Imports, exports, foreign exchange balance of trade.
- iii) Important commodities entering world trade
- iv) Relative share of developed and developing countries
- v) Ports as gateway of international trade
- vi) International trade of India

UNIT VII World Population

- i) World population - distribution and density
- ii) Growth rates-regional contents-population growth.
- iii) Demographic structure
- iv) International migration pattern
- v) Demographic

UNIT VIII Pattern of Economic Development

- i) Stages of development - advanced
 - intermediate
 - developing

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E C O N O M I C S
CLASSES IX & X

The study of Economics in the High School stage is designed in such a way that students should know the elementary ideas and principles of Economics.

Objectives of the study of Economics

1. To enable the pupil to acquire basic ideas and principles of Economics and its relation with other Social Sciences.
2. To develop abilities to participate intelligently and actively in different economic activities both as an individual and a member of a group.

SYLLABUS OF ECONOMICS

1. Definition and scope of Economics :
Topics : Divisions of Economics; Economic Laws; Relation with other Social Science; Utility of economic studies.
2. Some Fundamental Concepts :
Topics : Goods; Wealth; Classification of Wealth; Classification of Goods; Value; Price.
3. National Income :
Topics : Gross National Product; Net National Product.
4. Factors of Production :
Topics : Meaning : Factors of Production and their characteristics; Land labour; Efficiency of labour.
5. Natural Resources :
Topics : Characteristics of Land; Law of diminishing returns; Limitations; The law of manufacturing industries.

6. Labour and Population :

Topics : Population Theories; Efficiency of Labour.

7. Capital :

Topics : Capital and wealth; Different Kinds of Capital; Functions of Capital; Efficiency of Capital; Growth of Capital.

8. Organisation of Production :

Topics : Division of Labour - Advantages and Disadvantages; Limits to division of labour; Machinery and labour; Location of industries; Large-scale Production.

9. Forces behind Demand :

Topics : Law of diminishing utility; marginal utility and total utility; Demand; Law of Demand; Elasticity of Demand.

10. Money :

Topics : Quality of good money; Functions of money; Different Kinds of money.

WORK EDUCATION
(WORK EXPERIENCE/SUPW)

NEED :

The existing system of education in our country is too bookish, theoretical and academic in nature. The students very often come out of schools with half baked knowledge and raw skills which cannot be made use of in their life. They also have no courage to take up jobs of self employment nature. Many of them are compelled to run after wage-employment in which they can manage to keep their collar white and clean. They do not bother about the manual work or the development of the whole community because they are mostly self centred individuals. The basic malady of our educational system is the absence of the work oriented component in it.

CONCEPT :

Work Education may be described as purposive, meaningful manual work resulting in either goods or services which are useful to the community. Purposive productive works and services related to the needs of the child and the community will prove meaningful to the learner. As recommended by the Government of India, Work Education should be an integral part of education at all stages by making it compulsory for all.

Work Education may take many forms such as continued activity spread over periods, say, a few weeks or months or of a short duration for an hour or two or a few days. At the Primary stage of education Work Education will compose of a number of activities generally of short duration. The activity becomes purposeful and meaningful to the child only when he knows the purpose in advance, plans it and relates with his studies at large. The concept of productivity has two facts, viz; the creation of general utility value i.e. usefulness to the child, home, school or community and creation of exchangeable utility value i.e. saleability of the end product of the activity. Similarly services too, are of two types, i.e. those which have an exchange value and are performed with the idea of serving all other than the self, the school, the neighbourhood and the community at large.

Creativity is also another ingredient of Work Education activities. Routine activities or mechanical type in which the child is not required to think, plan, understand and put in something from his own imagination become uneducational though they may be productive in the sense of the exchange value.

IMPORTANCE :

The importance of Work Education as an integral component of education is self evident. At the primary stage of education its importance is all the greater.

- It makes education more meaningful to the child because it was the knowledge and mental skills acquired by him in a natural and purposeful situations.
- It reduces the boredom of receiving passive classroom instructions.
- It is helpful in developing some personal and social qualities in the child such as self reliance dignity of labour, positive attitude towards manual work and physical labour.
- Develops in the child a sense of being useful to others.
- Helps him to develop team spirit and learn the technique of working in groups.
- Provides chances of using his imagination and creativity.
- Develops in him an insight to locate individual and social problems and a will to solve these problems.
- Develops in him a sense of sympathy and appreciation for those who do hard physical labour.
- Encourages them to participate willingly in the family profession.

GENERAL OBJECTIVES

1. To prepare pupils to practise and perform manual work individually and collectively
2. Acquaint children with the world of work and services to the community and develop in them of respect for manual work.

3. To develop a desire to be useful member of society and contribute their best to the common good.
4. To inculcate in them attitude of team work and socially desirable values like self-reliance, dignity of labour, tolerance, co-operation, sympathy and helpfulness.
5. To help in understanding the principles involved in the various forms of work.
6. To lead children to participate increasingly in productive work as they go from one stage of education to another and thereby to enable them to earn while they learn.

ORGANIZATION OF LEARNING EXPERIENCES

Implementation of Work Education programme is the burning question in the field of education in India today. There are six stages of implementation viz; planning, selection, organization, execution, evaluation and reorganization. Each stage has to be implemented carefully and seriously. Though there is assumption that teacher's guide will be prepared, yet the following points are worthy to be noted.

1. The success of the programme will depend on the creation of the proper climate in and outside the school.
2. Proper climate can be created in the school by the involvement of the teachers, students and by optimum use of available resources.
3. Public support and co-operation can be sought by (i) communicating with them (ii) acquainting them (iii) by involving the parents in the programme (iv) holding exhibitions of children's work
4. The 'teachers guide' will contain all information regarding the theory, practice and evaluation of the activities.
5. The teacher is the most important part for the successful implementation. He should know all the essentials of the Work Education.

6. The teacher will provide first hand experience to the children through visits to factory, farm or concerned areas. The children will observe the process which will create in them understanding of the world of work.
7. The students should be given necessary guidance for the exploration of materials in their surroundings.
8. Activities may be performed either individually or in groups depending on the activities and the interests of the students.
9. The approach should be to motivate the children by giving them necessary guidance.

Techniques of Teaching

In Work Education activities the process is more important than the products and the development of skill is the major goal. For the achievement good results the following suggestive guidelines are given.

1. The development of techniques should be the primary point of attack.
2. Teacher's demonstration is the most economical method of presenting the skill aspect.
3. The class should be divided into groups working at drill level best suited to their individual abilities and purposes of the drill should always be kept before the students.
4. The teacher should be co-operative in attitudes, quick to praise the students' success and anxious to help them to overcome their failures.
5. The teacher should set attainable goals for each student according to his potentialities.
6. The teacher must be able to guide the student against wrong approaches and direct him towards the correct ones.

E V A L U A T I O N

Purposes

1. The main purpose of evaluation is to form basis for remedial instruction and feedback in the teaching learning process.
2. Diagnosing the students weakness and providing suitable learning experiences.
3. Measuring the achievement of the students in terms of objectives.
4. Getting evidence of the students progress in the desired direction to the predetermined objectives.

Areas to be evaluated

(a) Knowledge aspect (b) Attitude (c) Skill.

Tools and Techniques of evaluation

1. Written examination
2. Oral examination
3. Practical examination
4. Observation records.

WORK EDUCATION PROGRAMME (Individual)

CLASS VIII

First Term :

Boys : Collection of raw materials : making of vegetable basket or wooden stool (with un-saw~~o~~ or sawn timber)

Girls : Weaving plain cloth : Demonstration and practice of 'Bulthat'

Second Term :

Boys : Collection of raw materials and tools for the work : making 'Themtleng' or 'Tukrel' or 'Hreiha'

Girls : Knowledge of the process of measurement Teacher to demonstrate and experiment with paper - how to cut the cloth for various garments : making of baby suit etc.

Third Term :

Boys : Collection and preparation of raw materials for the work - Making of 'Waste Paper Basket'

Girls : Knitting of handglove.
Crocheting a table mat.

CLASS IX

First Term :

Boys :- Observation of man at work in any of the following :- 'Paikawig' or book binding or 'Sum' leh 'Sukte'. Collection of raw materials and making any one of them.

Girls : Weaving of ordinary/shaple 'puan' with slight embroidery design in the corner

Second Term :

Boys : Making a board with roller for making chapati etc.

Girls : Theoretical knowledge - maintenance of garments and selection of colours - Practical in stitching of button hole; cutting of clothes for boy's, shirt & girl's shirt.

Third Term :

Boys : They shall be given the theoretical knowledge and then practise in any one of the following. Book binding or making Bookshelf or Money Box or strap.

Girls : Theoretical knowledge - knitting and abbreviations of knitting - making children's Sweater or Pullover.

CLASS X

First Term :

Boys : Boys who opt for N1 1 or 2 or 3 should opt the corresponding number in the first and second terms.

Any one of the following

1. Tailoring : Knowledge of different parts of the sewing machine; dismantling,

2.1a

assembling and servicing of the parts.
Collection of information about cutting, measurement, requirement of cloth for particular size. Paper cutting on the model of shirts and shorts.

2. Cane Work : Observation of Man at Work in 'Herhsawp' and 'Fawngthuai'. Collection and preparation of raw materials for work practice.

OR

3. Carpentry Work : Observation of man at work in table making. Identification, collection and preparation of raw materials and tools for the work.

Girls : Weaving 'Fuan' with embroidery or 'Puantlan' with minimum 'Hnanchawii'.

Second Term :

Boys :
1. Making shirt
2. Making Herhsawp
3. Making Table

Girls : Theoretical knowledge : Ironing of clothes, cutting for skirts of six pieces, Necktie and blouse or tightfitting skirt.

Third Term :

Boys : anyone of the following :
1. Making shorts pants
2. Making 'Fawngthuai'
3. Varnishing a Table.

Girls : Theoretical knowledge : Knitting and abbreviations of knitting connected with knitting : making a Sweater.

WORK EDUCATION PROGRAMME (GROUP)

CLASSES VIII - X

1. Cleaning the classroom and school compound.
2. Fencing of school compound and school garden
3. Minor repairs of school building and furniture
4. Pot culture; preparation of seedbeds.
5. Improving playground, village water points, waterpoint approach road etc.
6. Preparation of dustbins and construction of public latrines and urinals.
7. Masonry Work.

In case the Work Education programmes listed out here for various classes are found to be unpracticable or unsuitable for any school(s), alternative Work Education programme may be prepared and followed by the school(s) provided the following conditions are fulfilled :-

- (1) The alternative Plan of Activities (Individual and Group) is prepared well in advance and submitted to the Board for approval.
- (2) Written permission from the Board should invariably be obtained by the school before taking up such alternative Work Education programme.
- (3) The difficulty level of the alternative Work Education programme must be the same as the existing one.
- (4) The utility of the alternative Work Education programme evolved by the school should be the same, if not more.

HISTORY

I. Rationale

The people as individuals or as groups are the product of both their physical and social environments and their heritage. Man, in order to be an effective member of society, must understand his heritage which he has succeeded in creating through patience, toil and intelligence at various times. Fundamentally, history is the story of man and his development in society from the earliest times to the present day. History as a process of growth and change gives a basic idea that the human society is not stationary, but is marked by change and progress. Historical change is all comprehensive, social, economic, political and cultural. It is, therefore, necessary to change the emphasis from dynastic and political history to social and economic conditions and the growth of various aspects of culture.

II. Objectives

The main objectives of teaching the course in history may be as follows :-

1. To promote an understanding of the processes of change and development through which human societies have evolved to their present stage of development.
2. To promote an understanding of the common roots of human civilisations and an appreciation of the basic unity of mankind.
3. To develop an appreciation for the contributions made by various cultures to the total heritage of mankind.
4. To develop an understanding that the mutual interaction of various cultures has been an important factor in the progress of mankind.
5. To develop the ability to think critically and creatively for their conscious-participation in the establishment of a just social order.
6. To develop a spirit of enquiry among the pupils.

7. To promote the understanding of historical development of India in relation to and in the perspective of world history.
8. To develop an awareness of the dimension of time.
9. To develop the skills of framing historical maps and time-line charts.

Major area of study : (i) Indian History
(ii) World History

(i) INDIAN HISTORY FOR CLASS IX

* Students will be expected to be able to draw time line charts and map of India showing the extent of empires and dominions in different ages of Indian History.

Contents :

1. Source of early History of India in general.
2. The Pre-Historic Age : Paleolithic Man, Neolithic Man, The Age of Metals, Copper and Iron Age. The Indus Valley Civilization- The Pre-Aryan races, the Dravidians and the Mongolians.
3. Life in the Vedic Age : Village, Family, Caste System, Social and Religious Life.
4. Life in the Later Vedic Age : Kings and Kingdoms, Social, Political and Religious Life.
5. Jainism and Buddhism : Teachings and Differences of Jainism and Buddhism.
6. Rise of the Mauryan Empire : Area of Kingdom, Conquest, Megasthenes Accounts.
7. Ashoka The Great : Buddhism and the efforts to spread Buddhism, Arts and Administration.
8. India after the Mauryan : The Satavahanas, The Cholas, The Pandyas and the Cheras. Short History of the Economic, Political and Social Life of the People.

9. Indo-Greeks, Shakas & Kushans. Buddhism, Arts, Literature and Science, Trade and Commerce.
10. The Age of the Guptas : Chandra Gupta I & II Administrations : Fahien's Accounts of the Economic, Religious Conditions, Spread of Sanskrit. Science and Arts and Architecture.
11. Harshavardhana : Hiun Tsang's Accounts on Harsha's Administration, Religion and Nalanda University.
12. The Chalukyas and the Pallavas : Architecture and Religion.
13. India's contact with Foreign lands : Rise and Spread of Islam.
14. Kingdom of the North : The origin of the Rajputs, Economic, Social and Political Life, Religion, Architecture and Paintings.
15. Kingdoms of the South : The Rasthrakutas, the Cholas, their Social, Economic and Political Life.
16. Early Muslim Invasions of India : Muhammed Ghori; Causes of the Muslim Success.
17. The Delhi Sultanate; The Slaves and the Khiljis : Administrations.
18. The Delhi Sultanate : The Tughlaks and the Lodhis, Muhammad Bin Tughlak's Experiments and Administration. Invasion of Tamarlan.
19. The Administration of the Sultanate and the Life of the People. Administration, Society, Economic conditions, Language and Literature, Architecture, Painting and Religion.
20. Kingdoms in the Deccan : Bahmani Kingdom, Vijaynagar Kingdom, Their Economic and Social Life : Art & Architecture.

21. The Bhakti Movement : Preachers and their Works
22. Babar, Humayan, Sher Shah : Their Revenue and Political Administration : Communication, Coming of the Europeans.
23. Akbar The Great : Conquests and His Administration, Religious Policy, Arts and Architecture.
24. Moghul Power at its Height : Jehangir, Shah Jehan and Aurangzeb : Their Wars, Arts, Architecture and Paintings, Aurangzeb's Policies.
25. Administration and Society under the Moghuls : Society Administration, Religious Conditions, Architecture, Paintings, Music, Literature.
26. Last Days of the Moghul Empire : Last Emperor and His Administration; Foreign Invasion; The Rise of the Europeans, Causes of the Downfall of the Empire.

CLASS - X

Students will be expected to be able to draw time line charts and map of India showing the extent of empires and dominions in different ages of Indian History.

1. India in the Eighteenth Century : Decline of the Moghul Empire. Rise of the Marathas, Society in the 18th Century.
2. The coming of the Europeans. Growth of East India Company. The Second and Third Carnatic Wars, Causes of the English success.
3. The conquest of Bengal : Battles of Plassey and Buxer, Treaty of Allahabad, Dual System of Bengal.
4. The Conquest of India : Relations with Mysore, Marathas Policy of Non-Intervention; Subsidiary Alliance, The Second and the Third Mysore War.
5. Expansion of the British Empire (1825-1856) Expansion under Lord Amherst, Lord William Bentinck, Lord Auckland, Lord Ellenborough, Lord Hardinge, Lord Dalhousie.

6. Administration under the East India Company. Dual System, Regulating Act, Pitts Indian Act, Administrative Organization under the Company's Rule.
7. British Economic Policies in India (1757-1857) Land Revenue Policy. The Permanent Settlement of Bengal, Ryotiwari System, Mahalwari System, Effects of the British Economic Policies.
8. Education and Social Reforms (1757-1857) Education under the Company's Rule. Effects of the English Education; Social and Religious Reforms.
9. First War of Independence 1857; Social, Economic, Political & Military Causes. Causes of the Failure, Effects of the War.
10. India under the Crown, Acts of Parliament, Provincial and Local Administrations, Relations with the Princely States: India's Relations with Burma, Afghanistan, and Tibet.
11. Growth of New India : Causes of the Rise of Nationalism in India, Birth of Indian National Congress, National Movement.
12. Struggle for Swaraj : Montagu Chelmsford Reforms, Rowllat Act, Non-Co-Operation Movement . Civil Disobedience Movement, The Government of India Act 1935. Quit India Movement 1942.
13. Changes in Economy after 1858 : Economic Impact of the British Rule. The Ruin of Indian Handicrafts. Growth of Modern Industries.
14. The Indian Reawakening after 1858 : Religious and Social Reforms.
15. India after Independence : The Constitution of India, The Democracy and the Parliament.

(ii) WORLD HISTORY (For Classes IX & X)

1. World Civilisations : Indus, Babylonian, Chinese, Greek, Roman & Egyptian Civilization.
2. The Medieval Europe : Christianity; Feudalism and the Crusades.
3. Renaissance - growth of rationalism, humanism, reformation
4. The English Revolution (Struggle against absolute monarchies in Europe)
5. Industrial Revolution - Factors responsible, spread of Industrial Revolution : Social and Economic consequences.
6. Nationalist and Revolutionary movements : Nationalism - struggle for democracy.
7. The American Revolution : the causes and the results of the War of Independence.
8. The French Revolution : Social and Economic conditions- Impact on Europe and the World.
9. The Russian Revolution 1917. Social and Economic conditions before and after the Revolution
10. First World War : Causes - the birth of League of Nations : Achievements of League of Nations - Failures.
11. Second World War : Causes and Results.
12. The World after Second World War - Military blocs - Cold War - Role of United Nations - Non-Aligned Nations, Problems of disarmament.

COMMERCIAL GEOGRAPHY

CLASSES IX & X

Objectives :

The teaching of Commercial Geography is intended to help the pupil become an informed, active and intelligent participant in a developing society. This may be done by helping pupils to discover some basic understanding relating to :-

- A. 1. Most of the phenomena observed around can be explained in terms of the scientific knowledge man has gathered so far (Cause and effect relationship)
2. The physical environment effects man's way of living and man in his turn modifies his physical surroundings.
3. Differences in the physical environment are in part responsible for difference in patterns of living.
4. The application of the knowledge of science and technology has enabled man to make fuller use of his natural resources to satisfy his needs of life.
5. People living in various regions of the world are dependent upon one another in meeting their every day needs.

B. Attitudes :

1. Respect for patterns of living other than one's own.
2. Appreciation for the value of co-operative efforts at the local, national and world levels.
3. Appreciation of the different ways used by man in different physical and climatic conditions to solve his problems.

C. Practical

Maps and sketches of topics taught, drawing of Geographical symbols and their meaning.

D- Skills :

1. Use of tools of geography : flat maps; globes; Atlas, models.
2. Representing geographical data through maps, sketches models, charts.
3. Acquaintance with the methods of study used by geographers.

1. Meaning and scope of Commercial Geography.
2. Relation of Commercial Geography to other branches of Geography.
3. Importance of Commercial Geography in the Modern World.
4. Man and His Environments - Physical and Non-Physical.
Physical - Country's Situation, Shape and Size, Coastlines, Sea, Deserts, Forests, Marsh, Climate, Rivers and Mountains.
Non-Physical - Race, Religion, Government, Population.
5. Natural Regions of the World, with important occupations associated with each of the Regions.
 - i) The Cold Lands.
 - ii) The Cool Temperate Lands.
 - iii) The Warm Temperate Lands.
 - iv) The Hot Lands.
6. Population :
 - i) World Distribution of Population
 - ii) Factors affecting the distribution of population
Deserts, Mountains, Manufacturing Areas, Agricultural Areas.
 - iii) The World Population Explosion.
7. Towns, Ports and Trade Centres - Conditions for Sites.
8. Occupation of Man.
 - A. Pastoralism - World Distribution, Products - Mutton, Beef and Dairy Produce.

B. Agriculture - Conditions for Growth, Areas of Production.

The Cereals - Wheat, Maize, Rice, Oats, Barley,
Rye, Millets, Potatoes.

Other Food Products - Tea, Coffee, Cocoa, Sugar-cane,
Sugar-beet.

Fibre Crops - Cotton, Jute, Flax, Hemp.

Misc. Crops - Rubber, Tobacco, Oil seeds.

C. Mining - World Distribution and Production.

Iron-Ore, Copper, Lead, Zinc, Tin, Gold,
Salt, Aluminium, Silver, Uranium,
Fertilizers, Cement, Nickel, Tungsten,
Mercury, Manganese, Asbestos, Sulphur.

D. Industry - Factors influencing Location -

World Distribution and Production :
Cotton, and Woolen Textiles,
Iron and Steel, Chemical
Industries etc.

E. Fishing - World Distribution and Production -

Major Fishing Grounds - Industries
connected with Fishing.

9. The Power Resources of the World - Coal, Mineral Oil,
Natural Gas, Water-Power-

10. The Forest Resources of the World : Different
Types of Forests, Evergreen,
Deciduous Coniferous etc.
Distribution of Forests - Products.

11. World Communications

A. Ocean Routes : The Routes of the Atlantic Ocean,
The Mediterranean -
Suez Route
The Route of the Pacific Ocean
Panama vs-Suez.

B. Air Routes : The N. Atlantic and N. America
The S. Atlantic and S. America
Europe and the U.S.S.R.
The Middle East
India, The Far East, Australia
and New Zealand.
Africa
The Pacific

C. The Trans - Continental Railways : North America
Eurasia
South America
Africa
Australia

12. India :

- i) Forest Resources : Different types, important products, export trade.
- ii) Population : density and distribution
- iii) Transport Systems : Railways with Zones, Roadways, Inland-Waterways, Airways, Ports and Harbours.
- iv) Industries : Cotton Textiles, Iron and Steel, Chemical Industries.
- v) Mining : Coal, Iron-Ore, petroleum, aluminium, gold, copper, manganese, Mica etc.
- vi) Agriculture : Crops, their production and distribution.
- vii) Power : Sources of Power-

13. Economic and Commercial Products of N. E. India and Mizoram.

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ELEMENTS OF CIVICS & ECONOMICS.
CLASSES IX - X

Objectives of the study of Civics and Economics.

1. To enable the pupil to know the basic ideas and principles governing Civic and Economic Organisation of a Society and to have an acquaintance with the political structure and economic system of India.
2. To enable the pupil to understand the civic and economic relationship of group, society, association, state and world; to understand the salient features of the growth of national life and contributions made by important personalities.
3. To enable the pupil to analyse different political and economic situations in the country and to draw inference.
4. To enable the pupil to develop appropriate skill to prepare and use charts, maps, graphs, tables and other diagrams to interpret facts of civic and economic organisations.
5. To develop abilities to participate intelligently and actively in the different political and economic activities both as an individual and a member of a group to lead a co-operative life to take part in various activities of school students' Union.
6. To develop interest of the pupil in the problems of economic planning and development, national unity, security, freedom and progress of India and also in international peace and co-operation.
7. To develop positive attitude to adhere to democratic way of life, to express his own views with courage and conviction and to respect and tolerate other people's point of view, to be open minded towards new changes and to co-operate with other people in civic and economic life, to develop interest in reading news papers and magazines so as to be able to grasp the meaning and nature of political and economic development of India.

A. CIVICS

CLASS - IX

Major Area : 1 - Subject matter and fundamental concepts

Relevant Topics :

What is civics and what does it deal with. Importance of study of civics.

Fundamental Concepts :- Society, Association, State, Government, Law, Rights, Duties, Liberty, Equality, Suffrage, Nation and Nationality.

Major Area : 2 - State and Citizenship.

Relevant Topics :

Evolution of the State, Characteristics of State-population, Territory, Govt. and Sovereignty,

Distinction between State and Association, State and Society and State and Government.

Citizenship :- Meaning, rights, duties, qualities of good citizenship, Participation of the citizens in the government, Public opinion - agencies and formation of public opinion.

Major Area : 3 - Government

Relevant Topics :

Forms of Governments, Democracy-direct and indirect, merits and demerits, conditions for successful working of democracy. Totalitarian Govt., its characteristics.

Unitary Govt. and Federal Govt., Parliamentary govt. and presidential govt. Organs of govt : executive, Legislature and judiciary and their relationship.

CLASS - X

Major Area : 4 - Local Self Government in States.

Relevant Topics :

Local Self-Govt. Organisation of local self-govt.

in States. Panchayats under 1972 Act- Mahkuma

Parishad, Anchalik Panchayat and Gaon Panchayat.

Municipality and Town Committee. Composition, powers and functions of these local bodies.

Major Area : 5 - Indian Administration

Salient features of the Indian constitution - The Union Executive; President of India-election, position, powers and functions. Prime Minister and the Union Cabinet - appointment of the Prime Minister, formation of his cabinet, powers and functions of the cabinet. Indian Parliament: Composition, powers and functions. State Administration - Governor - appointment, powers and functions- Chief Minister of the Cabinet. High Court - composition, powers and functions.

Major Area : 6 - U.N.O.

U.N.O. - agencies, organization and functions.

B. ECONOMICS

CLASS - IX

Major Area : 1 - Subject matter and basic concepts :

Relevant Topics :

Economic activities and non-economic activities :

Subject matter of Economics : Utility of the study of Economics. Goods : Material and non-material; Free Goods and economic goods : Consumption goods and producer goods. Utility : Kinds of utility. Wealth: Characteristics and classification of wealth. Value -in-exchange, National Income : Gross National Product and Net National Product.

Major Area : 2 - Consumption .

Relevant Topics :

Consumption : Meaning, Characteristics and classification of wants & Law of Diminishing utility.

Major Area : 3 - Production.

Production : Meaning, Factors of Production and their characteristics and land labour : characteristics. Efficiency of labour.

Major Area : 3 - Production (continued)

Relevant Topics :

Capital : meaning, classification, function: Capital formation. Organisation : meanings entrepreneurial functions. Division of labour and localisation of industries : Small scale Production : their merits and demerits.

Major Area : 4 - Value

Relevant Topics :

Market : Meaning: Law of Demand: Law of Supply,
Equilibrium.

CLASS - X

Major Area : 5 - Distribution.

Relevant Topics :

Rent : contract rent and economic rent : Real and
nominal Wage: Factors determining real wages :
Difference in wage. Interest: Gross and net interest :
Why interest is charged and paid? Gross and net profits.

Major Area : 6 - Money and Public Finance :

Relevant Topics :

Money - meaning, characteristics, classification and
functions - Public finance-Sources of Public revenue :
direct and indirect taxes and their merits and demerits.

Major Area : 7 - Economic Problems of Mizoram

Relevant Topics :

A brief account of natural resources of Mizoram and
their economic importance.:
Agriculture in hills : Present position : Problems and
remedies.
Industry : Small scale and Cottage industries in
Mizoram : their present position : Problems and remedies.
Transport : River and Road transport in Mizoram :
Present position and future development.

Major Area : 8 - Five-Year-Plans :

Relevant Topics :

A brief outline of Five Year Plans in India with
special reference to the latest Five Year Plans
of Mizoram .

Note: Adequate use of graphs and diagrams by
both teachers and pupils is to be insisted.

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HOME SCIENCE
CLASSES IX & X

Objectives : The pupil

1. secures the necessary abilities and skills to assume his/her position and responsibility in the family.
2. learns ways and means to supplement family income.
3. plans for leisure hours and recreation.
4. believes in the dignity of labour.
5. makes the necessary adjustment between the demands of home and career.
6. develops a sense of responsibility as a member of the family.
7. cultivates good relationship with others at home, school and society.
8. develops the desire to be healthy and well-groomed.
9. appreciates and develops a good personality.
10. understands the functioning of the family and realises the importance of a good family life.
11. develops aesthetic sense in daily life.
12. becomes an efficient home maker, dutiful parent and purposeful citizen.
13. leads a happy and contented life, within his/her home.
14. contributes towards improving economic, social, moral, ethical and spiritual standards of their homes and community.

Content :

1: 00 Food and nutrition :

1:10 Importance of food : What is meant by food and nutrition, Development of the concept of nutrition, food and health. Malnourished and well-nourished children. Signs of good nourishment. Classification of food. Body-building food, energy-yielding and protective food, Functions of food. Carbohydrates, fats, proteins, minerals, vitamins and water.

- 1:20 Study of foodstuff : Cereals, pulses, milk, meat and fish, egg and poultry, vegetables and fruits. Importance of these in our diet. Functions of common foodstuff. Sources of common foodstuffs, Cooking of foodstuffs. Effect of deficiency of these foodstuff.
- 2:00 Childcare and mothercraft :
- 2:10 Care of children. Principles of child development. How children grow and develop. Milestones in development. Motor development-raising head, grasping, crawling, sitting, walking, language development and social behaviour, physical fitness-standards of growth in children. Emotional and physical needs of young children from birth. Meeting the problems of weaning children. Preparing the baby's food suitable for baby food supplementing mother's milk, Method of preparing the child's diet. Addition of fruit juice and soft foods. Clearing and care of the feeding the child.
- 2:20 Children at home and their development :
- Bath time - Care during bathing children. Regularity in giving bath, Dress-type of clothing suitable for children emphasis on comfort. Washability and ease of handling. Choice of fabrics for children's clothing.
- Repairs and renovation of children's clothing :
- Fresh air - importance of fresh air for children. Taking your baby out for a walk in the morning or in the evening Play - Early habits and toys - observation on language and other development.
- Games and toys : Games and toys suitable for different age-groups to help motor development co-ordination of muscles, and language development, Toys suitable for the ages of 'exploration', 'discovery', 'imitation', 'achievement', and 'group activity'.
- 3:00 Textiles, clothing and laundry-work.

- 3:10 Importance of textile and clothing - The aim in studying textiles and clothing. History and growth of textiles and clothing. Textiles fibres-what are they- How yarns are made- their types. How are fabrics woven. How does variation in their inter-lacing affect woven materials. How is knitting done.
- 3:20 Classification of textile fibres-Type of fibres-natural vegetable. Animal and mineral. Artificial fibres-cellulose polyester and production and manufacture of fibres-their properties and uses.
- 4:00 Home management.
- 4:10 The necessity and choice of a house. The need for building or erecting a house. Study of the house in general and in connection with importance of fresh-air and sunshine to health. Factors in selection of site and location. Aspect and orientation.
- 4:20 Allocation of space in the house for essential purpose-allocation of space of living-room, bed-room, kitchen, bathroom, dining-room, study, store-room and nursery. Study of house-improvising single room for multipurpose, cost of building. Factors to be borne in mind before constructing a house.
- 5:00 Hygiene and home nursing.
- 5:10 What is sign of good health. Proper heights and weights to age-factors affecting health-how to maintain good health.
- 5:20 Community hygiene - Community sanitation and health regulation. Dangers of spitting and throwing garbage everywhere. Study of environment, water-pure and impure. Water-borne diseases: purification of water. Air-importance of air-pollution of air and its prevention. Air borne diseases and their prevention. Food and disease, food-borne disease, habit of taking clean and safe food-dangers of eating in public places.
- 6:00 Food and nutrition :

6:10 Classification of food and balanced diet. Energy-yielding food-carbohydrates, fats. Body-building foods- proteins, minerals, Protective foods-Vitamins. Carbohydrates, fats and proteins-nature, composition function and sources, effects of deficiency. Minerals-Calcium, phosphorus, Sodium Magnesium, Potassium, Iron, iodine, copper etc.- composition, functions sources, effects of deficiency.

Vitamins-nature (Water soluble and fat soluble) composition, function, sources and importance, Effects of deficiency Water-nature, composition, functions sources and importance. Effect of dehydration Balanced diet-Meaning and importance. Different food groups needed in balanced diet. Cereals, pulses, roots and tubers, other vegetables. Green and leafy-vegetables. Milk and its products. Fruits, oils and fats, sugar, egg and poultry, meat and fish.

6:20 Planning of meals-Principles of meal-planning, factors affecting the planning of meals-age and sex, climate, season, body-build, occupation, income. Planning of normal diet-diet for the infant-diet for growing children, diet for the sick.

PRACTICAL :

1. Preparing charts for different balanced diets.
2. Using balance and other household balanced diets.
3. Cooking sample dishes-Rice, dal, vegetable-curry, vegetable bhaji, khicheri, chappati, parota, Puri (Luchi), Singara-both sweet and salted, Boiled and fried eggs. Banana-milk shake, rice pudding(Pyas).

7:00 Childcare and mothercraft :

7:10 Habit formation-Teaching children about sleep and rest-Importance of sleep and rest, Sleeping hours for different ages Child under 1 year, child from 1 to 6 years; and 6 to 12 years. Eating habits-food fads and follies. Cultivating good eating habits-Teaching about personal cleanliness-care of teeth, ear, nose, hands, nails etc. Taking regular bath. Care of personal clothing and other belongings.

7:20 ~~Minor ailments-care of the children-their common~~
diseases like cold, constipation, diarrhoea,
vomitting, worms, Taking baby's temperature when
suffering from cold. Ear troubles, eye troubles,
skin troubles etc. their causes, prevention and
treatment..

PRACTICAL : Observation of children in the nursery school.
The students will observe and note the motor
development, muscular development, speech
development etc. in growing children in a
nursery school.

CLASS - X

1:00 Clothing and laundry :

1:10 Study of vegetable, animal and synthetic fibres in
detail and their comparison. Study of cotton, linen,
silk, wool, artificial silk, synthetic fibres etc.
under microscope. Reactions of these fibres with acids,
alkalies, heat, water, sunlight, smoke, bleaches,
dyes etc.

1:20 Principles of stain removal-Stains-what are stains-
their different types and reactions. Principles to
be followed in removing stains, Equipments needed for
stain removal-Stain removing agents, Method of
removing stain-care while handling.

PRACTICAL : Use of the microscope. Identification of
textile fibres under the microscope. Common stains
and their removal (grease, ink, lipstick, iron, grass,
Vermillion, haldi, betelnut, curry, blood, milk,
egg and perspirations tains)

2:00 Home management :

2:10 Cleaning and care of the house-value of cleanliness-
Insects in the house and their prevention. Daily
cleaning-cleaning various parts of the house-
Weekly cleaning, cleaning the bed, living room,
kitchen, store-room etc. Seasonal cleaning of the
entire house, white-washing, painting and minor
repairs.

2:20 Cleanliness of the surroundings

Sanitation-Sanitation arrangement in the house, care of drainage. Proper disposal of waste material.

Lighting : Types of lighting-natural and artificial.

PRACTICAL : Cleaning of floor, application of floor-polishes, cleaning of walls, ceilings and windows. Cleaning and polishing of furniture, cleaning of glass, brass, aluminium, steel, utensils, cleaning and polishing of silver ware and ornaments.

3:00 Hygiene and home nursing

3:10 Personal hygiene-importance of personal hygiene and developing good habits. Rest, sleep, exercise, work, Cleanliness of the body : nose, mouth, hair, nails etc. Clothes-material and their suitability in different climates and different seasons of the year. Care of clothing.

3:20 First aid in cuts and burns, shocks, drowning, artificial-respiration, convulsions, Poisonous-bites, intake of poisons and sunstroke, In simple and compound fractures. Control of bleeding-use of bandage and splint.

PRACTICAL : Different types of bandages. Use of splint and slings. Artificial respiration. Shock-treatment. Treating cuts and wounds.

4:00 Food and nutrition.

4:10 Principles of cooking and serving : Kitchen-its arrangement, different types of kitchen utensils and their selection. Safety in the Kitchen. How cooking process started-aims of cooking, advantages, and disadvantages of cooking, methods of cooking : frying, boiling, roasting, steaming, stewing backing, cooking under pressure. Effects of cooking on-cereals, pulses, meat, milk, vegetables. How to preserve nutritive value in cooked food. The best method of cooking to be used at home, Cooking for the invalid. Cleanliness in food handling. The dining-room-utensils and equipments for serving-Methods of serving.

4:20 . Preservation and storage of food. - The aims and principles of food preservation. Methods of preservation and their advantages and disadvantages, Methods of preserving dry or fresh food-dehydration, refrigeration, (freezing, salting, pickling, drying, oiling, canning)- Preparation of jams and jellies, morabbas, chutneys, selection of food for preservation.

4:30 Arrangement of storeroom, equipments needed in the store-room, methods of storing dry and fresh food. Cleanliness and care of the store-room.

PRACTICAL : Arrangement of kitchen-various methods of cooking in relation to nutritive values, colour, taste and appearance.
Effect of length of time on cooking-preparation of invalid and sick diet, diet for growing children, pregnant and expecting mother, planning and preparation of entire meals like breakfast, lunch for different occasions, tea and dinner.

Preparation and preservation of chutneys. jams-jellies, morabbas etc. Preparation of fruit-juice.
Arrangement of store-room.

5:00 Childcare and mothercraft.

5:10 As the baby grows-Problems of children, when children quarrel, thumb-sucking, nail-biting, temper tantrums, when children start lying, delinquency. Feeling of inferiority, problem of the only child.

5:20 Human relationship - companionship-parent-child relationship-the position of the child in the family-security at home. Responsibility and duty towards children. The home is a place of learning- charity begins at home-

Teacher-child relationship. The school-what it means to children. The school is a place of all round development. The role of the teacher in moulding the child character. The child's duties to the school.

Children and the community Children and their friends, neighbours, Festival days in the family and neighbourhood, Good citizenship.

PRACTICAL : Visit to health and child welfare centre.

6:00 Textiles and clothing.

6:10 Principles of washing -Arrangement of laundryroom of place for washing clothes, Selection of equipments for the laundry room. Means of washing. Hard and soft water. How to test water for softness. Making hard water soft, soap, washing-soda, detergents used in washing. Objects of washing cloth.

Preliminary preparation for laundering-sorting, mending-removal of stains, Different steps in laundering-soaping, boiling, washing, blueing, starching, dyeing and ironing.

Dry cleaning-equipments, agents, methods and precautions.

6:20 Selection of cloths, care of clothing-clothing and personality, selection of clothing according to the cost and durability. Amount of clothing needed and the family's budget for clothing.

Suitability of cotton, silk, wool and synthetic fibres to suit various climates.

Daily, weekly and seasonal care of woolen, silk and cotton cloths, Sorting of garments and care of bedding, drying and storing of cloths.

PRACTICAL : Arrangements of washing area. Mending, patching, darning, stitching of buttons, hooks Making button holes. Different types of fancy stitches. Washing of cotton, woolen, silk and lace. Dry cleaning.

7:00 Home management

7:10 Interior design-Rooms of a home-The living-room, grouping furniture for comfort and convenience. Order in furniture arrangement--the importance of books and accessories colour for walls. Pattern for wall, ceilings, woodworks and floors and floor coverings. Textures and design in the curtains, Hanging of curtains. Planning and colour-scheme. Lighting, lamps and furniture for dining-room, kitchen, bedroom. Use of paint and flower decoration.

7:20 Duties and responsibilities of a home-maker. Division of work in the home. Work simplification and planning of labour, time and material. Supplementary family income. House-hold budget and account keeping. Saving and investment. Saving institution.

PRACTICAL : Flower arrangement, Painting and pots-Floor decoration. Making a family budget. Arrangement of different rooms at home.

8:00 Hygiene and home nursing.

8:10 Care of the sick : The sick-room-its location and ventilation, lighting, air and sunlight. Equipments for the sick-room and their selection. Making the patient comfortable. Details of home nursing and feeding the sick. Planning sick diet-Giving medicines.

8:20 Disinfectants and their use-meaning of disinfection different types of disinfectants--their selection. Use of disinfectants. Method of disinfecting a room in the house and its surrounding.

PRACTICAL : Making a sick-bed.

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Sub. Natl. Hygiene Unit,
National Institute of Educational
Planning and Administration
17-B, SriAurobindo Road, Delhi-110016
DCC. No. D-7/1062
Date: 21/5/82

NIEPA DC



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