

**Analysis of the New NCERT Textbooks prepared  
according to New National Curriculum  
Framework for School Education (NCFSE 2000)**

(14<sup>th</sup> and 15<sup>th</sup> September 2002)

**REPORT**

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## PREFACE

In consonance with the spirit of **National Curriculum Framework for School Education (NCERT) 2000**, the National Council of Educational Research and Training (NCERT) developed new syllabi for different subjects in School Education. As an outcome of this, new instructional materials were planned and the corresponding textbooks were prepared.

A two-day workshop to analyse the new NCERT textbooks prepared according to the new National Curriculum Framework was organized in RIE, Mysore on 14<sup>th</sup> and 15<sup>th</sup> September 2002.

The textbooks analysed were for the classes I, III, VI, IX and XI. Fifty-four members comprising of Kendriya Vidyalaya, Jawahar Navodaya Vidyalaya, Demonstration School and private schools participated in the workshop along with some faculty members of Regional Institute of Education, Mysore.

The textbooks were analysed using an 'education tool' developed by the RIE faculty. The comments and suggestions of the evaluators were later consolidated and brought out in the form of this report.

It is hoped that the NCERT will examine the suggestions made by the evaluators and implement them in the forthcoming editions of the book.

We heartily thank all the resource persons for their active involvement in the task and for offering constructive suggestions.

We sincerely thank Prof G Ravindra, Principal of this Institute for providing all the help and guidance for the smooth conducting of the programme. Our thanks are also due to the staff members of the Computer Processing Unit for neat computer processing and bringing out this report in time.

**Ms Shubha Kesavan**  
**Coordinator**

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## INTRODUCTION

The National Council of Educational Research and Training has brought out textbooks for Classes I, III, VI, IX and XI in various subjects in accordance with the recommendation of National Curriculum Framework for School Education (NCFSE-2000). A two day Workshop was organised by RIE, Mysore during 14<sup>th</sup> and 15<sup>th</sup> September 2002, to analyse these textbooks as per the directive of the NCERT.

More than fifty participants comprising of teachers from Kendriya Vidyalaya, Navodaya Vidyalaya, Demonstration School, local CBSE Schools, participated in the Workshop alongwith faculty members of Regional Institute of Education, Mysore. The participants analysed the text material individually and also through group discussions and they have made a sincere effort in the available time, to make a thorough meticulous study of the books, offering comments and constructive suggestions.

The criteria for analysis involves the following major aspects of the book (wide Annexure-2).

1. Content and Presentation.
2. Evaluation and exercises.
3. General Aspects.

A brief summary of comments and suggestions made on each Unit subject-wise, class-wise is presented in the following pages. It is hoped that these suggestions are examined and incorporated in the forthcoming editions.



# **I Standard**

English  
Mathematics

**“LEARNING ENGLISH”**  
**TEXTBOOK I FOR CLASS I**

**General**

**G.1 Physical Aspects**

1. Title Page :  
Learning English textbook I for Class I  
Edited by Nasiruddin Khan, Sandhya Rani Sahoo, Nirjala Vaidyanathan.
2. Size of the book and type :  
It is handy and size is appropriate.
3. Quality of Paper :  
The texture of paper and the print are good.
4. List of Contents : Appropriate

**G.2 Structure of the book**

- i) There is uniformity in indentation.
- ii) Uniformity of indentation of exercises is missing.  
Eg. Page 27/Ex.V 1,2,3,.....  
Page 22/Ex IV a,b,c,.....  
In most of the pages, the exercises are to be numbered.  
Eg. Page 14 / Ex IV  
Page 17/Ex IV  
Page 25/Ex I  
Page 32/Ex IV

**G.3 Visuals**

1. Illustrations – The illustrations are appropriate.  
Page 39/Ex.II  
Since the exercise deals with colours, only a single colour to be used.
2. Diagrams are appropriate.

**Content and Presentation**

**C.1 Syllabus Requirement**

The prescribed text caters to the skills of reading, writing and speaking. Whereas, there is no exercise provided for the development of listening competency. Hence a cassette could have been provided for it with the model accepted pronunciation.

## I STANDARD MATHEMATICS

### Content and Presentation

#### C.1 As per approved syllabus

- a) Is it in accordance with the syllabus requirements ?  
The textbook fulfills the requirements of the syllabus. It is in accordance with the syllabus.
- b) Can it be satisfactorily covered in a year ?  
It can be covered in a year.

#### C.2 Presentation of the Content

- a) Linkage with previous knowledge  
All the chapters/topics are properly linked with student's prerequisite knowledge.
- b) Appropriateness of the Introduction  
All the topics are properly introduced.
- c) Correlation within the unit and from unit to unit  
The topics within the unit and from unit to unit are properly correlated.
- d) Simple, logical and sequential presentation  
The concepts are well presented logically and sequentially.

#### C.3 Accuracy

- a) Free from factual, conceptual and numerical errors  
Textbook has a few conceptual, factual and numerical errors.
- b) Correct and upto date scientific data.  
Does not apply to this book. Yet the data provided are accurate.
- c) Logical, correct and complete derivations  
Does not apply.
- d) Consistent use of symbols, nomenclature terms, notations and units (SI)  
Use of symbols is consistent.

#### C.4 Illustrations and Examples

- a) Variety in graded example and illustrations to develop concepts.

- b) Adequate number of graded and varieties of worked examples  
Different variety and adequate number of examples are used.
- c) Use of graphs, diagrams and numerical data  
Diagrams and numerical data are used properly as per the requirements of the syllabus.
- d) Provision for self-learning activities and investigatory projects  
Provides opportunity for students for self-learning.

### **Evaluational Exercises**

#### **E.1 Appropriateness**

- a) Syllabus  
Syllabus is appropriate for standard I.
- b) Overall coverage  
Covers all aspects which caters to the need of students of Standard I.
- c) Level of students  
Syllabus suits well to the level of students.

#### **E.2 Exercise**

- a) Grading with respect to difficulty level  
Graded activity problems are given.
- b) Adequate number of questions.  
Sufficient questions are given.
- c) Types of questions.  
The given types are sufficient.
- d) Answers provided.  
Required answers are properly provided.

#### **E.3 Construction of Questions**

- a) Clarity  
Clarity is maintained in the construction of questions.
- b) Correctness  
Questions are correct.
- c) Sufficiency of data  
Data provided is sufficient.

## General Aspects of the Book

### G.1 Structure

- a) Uniformity in numbering of units/sections/sub-sections.  
Maintained.
- b) Uniformity in numbering exercises, diagrams and notes  
Numbering exercises, diagrams and notes is not done since it is not required at this stage.
- c) Introduction and Exercises in Units  
Units and their exercises are nicely introduced.
- d) Sequencing of Units  
Units are sequentially arranged.

### G.2 Visuals

- a) Clarity and attractiveness of figures, diagrams, graphs, etc.  
Clear and attractive pictures are used. Nicely printed.
- b) Appropriateness to the content  
There are many extra pictures given (printed) along with the topics which may confuse the students to include those pictures in the regular study.
- c) Accuracy and Adequacy  
On page 50 and 85, an animal hanging on to a tree and a bird sitting on the tree is printed to depict one item. Students may get confused and count them as two different objects.
- d) Proper referencing of the figure and proximity with the content.  
Has been done.
- e) Proper scaling, labeling and title.  
Satisfactorily done.

### G.3 Physical Aspects

- a) Suitable size of the book and types  
Size of the book is suitable to the standard.
- b) Quality of paper  
Good.
- c) Quality of printing and binding  
Printing is nice. But binding is not good. Pages of the book come out easily. Binding of the book should be done neatly so that pages don't come out since it is handled by small children.
- d) List of contents  
List of contents is printed correctly at the proper place.
- e) Get up of the book  
Good.

### Content Analysis Part

Reference (Page No)	Textbook Version	Suggested Version
Chapter 1, Page 9	In second picture, the picture of fruit in the ellipse given appears like that of a cricket ball.	The picture should be similar to the one given on the tree.
As many as, Page 10	In the third box, there are five balloons and six suns.	Equal number of suns and balloons should be there.
Match the picture with the correct number. Page 37	There are eight pictures in all. But only seven numbers are given in the circle.	Number 5 can also be there in the circle. Since box representing 5 objects is shown in the page.
Count and write the number. Page 50	Funny picture on the branch. Picture of two objects are given here.	Picture showing only one object can be shown to avoid confusion.
Ordering of numbers Page 60, 61, 62	Almost dry and wild tree is shown.	The picture of the tree may be made more natural.
Chapter 3, Page 77	Printed as chapter 2 in the bottom of the page (in one of the books referred)	It should be Chapter 3.
Zero in addition. Page 85	Picture of bird sitting on branch. Two objects are shown.	Picture showing only one object can be shown.
Chapter 4: Splitting and Partitioning of collections, Page 89	Figure 4 and 5 In fig. 4, only 4 objects are given. In fig. 5, only 7 objects are given.	8 objects have to be printed and partitioning would have been done.
Chapter 6 – Money, 122	Coins we use in our currency.	Coins may be bifurcated as – coins we use in our daily life, and coins we were using.
Chapter 6 – Money, Page 124	Buying with coins. 1 paise, 2 paise, 3 paise etc. price tags are given.	Coins which are out of use may be avoided.

Reference (Page No)	Textbook Version	Suggested Version
<p>Chapter 8. Measurements Taller of the same height and shorter – Page 137. Thickest and thinnest – Page 139 Farther and Nearer – Page 141, 142, 143</p>	<p>Picture of the houses are given. Of the same height different types of houses are given. Pictures of dry trees are given. There is no reference point for the pictures shown in this page.</p>	<p>Same type of houses may be given which avoids confusion. Green plants may look better. Reference point may be shown (observation point). Otherwise there may be confusion as to which is bigger and which is smaller.</p>
<p>Heavier and lighter – Page 144, 145, 146</p>	<p>Pictures of some objects are given to indicate the heavier and lighter objects.</p>	<p>The figures are shown such that the large objects are heavy and small objects are lighter whereas students observe in their daily life that some objects, though small in size are heavy. Therefore, objects made of same material but of different size may be given.</p>

# **III Standard**

English

Mathematics

Environmental Science



## III STANDARD ENGLISH

### “LEARNING ENGLISH 3”

#### General

#### G.1 Physical Aspects

1. Title Page : Learning English 3  
Edited by Shabnam Sinha, Feb. 2002
2. Size of the book and type :  
It is handy and the type size is appropriate.  
  
Comment:  
Quality of cover page could be improved for better durability keeping in mind the age of the children.
3. Quality of Paper : The texture of paper and the print are good.  
Comment : the binding has to be improved (by increasing the number of clips).  
List of contents is appropriate.

#### G.2 Structure of the book

- i) There is uniformity in indentation.
- ii) Uniformity of indentation of exercises is missing.  
Eg. Unit 1 / page 5 / Ex. III  
Page 16 / Ex. II  
Page 43 / Ex.II

In some pages the exercises are to be numbered.

Eg. Page 37/Ex.II  
Page 74/Ex.I

- iii) All the units end with exercises.
- iv) The content is sequenced in all the units.
- v) The titles are highlighted.

#### G.3 Visuals

1. Illustrations : At a few places ,they are inappropriate.  
Eg. Unit 1/ Page 4  
Stethoscope missing with the doctor.

Page 8 'Where is Thumbkin'. The ring finger could be visualized from the palm side as in other pictures.

Unit 2/Page 9/A timely help.

The picture shows children playing on the lawns which is incorrect. Instead, it could have been shown as children playing on the playground.

Page 10/'A timely help'

The dress code of the nurse is inappropriate.

Page 11/Exercise III

Dress code of gardener, clarity of bird and nest, size of the sun, the style of holding the baby by the mother are all inappropriate.

Page 24/Exercise I

The picture of keyboard is missing.

Unit 9 / The Zebra's Stripes/page 61

The figures of animals are not natural and proportionate.

Page 38 and 39

The pictures of the animals are not drawn well.

Page 68/If nothing changes

The picture of the cuckoo is colourful. Instead, it should be black.

2. Diagrams : All the diagrams given are appropriate.

### **Content and Presentation**

#### **C.1 Syllabus Requirement :**

The prescribed text caters to the skills of reading, writing and speaking. Whereas, there is no exercise provided for the development of listening competency. Hence a cassette could have been provided for it with the model of accepted pronunciation.

2. Core curriculum values being reflected.

- Scientific temper
- Social justice
- Democratic Values
- Protection of environment

The above values have been taken care of in the prescribed texts. But the values like equality of gender and secularism are not covered in it.

Eg. Page 53/Ex-II

The pictures of festivals like Diwali and Id have been given. Along with it a picture of Christmas celebration could have been included.

### Presentation of Content

1. The following topics are to be rearranged for sequential learning.

#### Textual Version

Lets plant trees  
The Little Plant  
Brownie the seed

#### Suggested Version

Little plant  
Brownie  
Lets plant trees

2. **Selection of content :**

There is equal weightage being given for prose/poetry and is very much in the interest of children.

- a) **Varieties :**

The text contains stories, legends, autobiographies in the interest of children. Apart from these, a story from the Panchatantra could have been included instead of the lesson Zebra's stripes. Also a small skit and a biography of a national leader should have been included.

- b) **Language**

It is appropriate and also at par with the difficulty level of III Std students.

The vocabulary part is as per the prescribed syllabus. The new words in each Chapter could have been highlighted within a box at the beginning of each chapter and the meanings of difficult words could be put at the bottom of each corresponding page.

### E.1 Evaluation and Exercises :

Exercises have regular occurrence after each unit. Also there are varieties of them included after each chapter. The difficulty level is also taken care as the chapters proceed. The suggestions regarding the exercises are as follows :

There are exercises on spellings like jumbled words/missing letters, etc. Apart from these, an exercise on choose and encircle the correct spelling could have been included.

Page 30/Ex-II

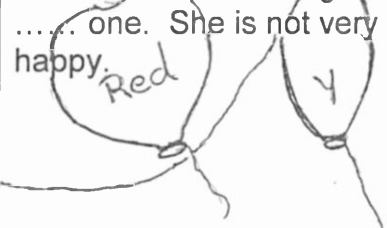
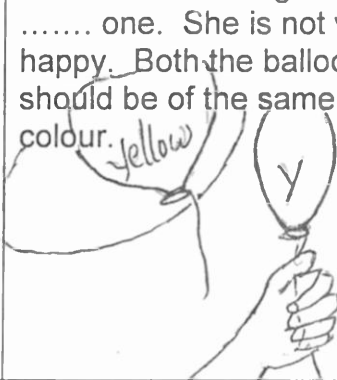
Deals with oral practice exercise on tenses. Following this a few more written practice exercise could have been included which would reinforce the concept.

Page 59/Ex-III

1. Ratan loves to *sit* in the paddy field (Textual version).  
Ratan loves to *sit* in the field (suggested version).

The word paddy could have been dropped from the above sentence as it is not shown so in the text and moreover it leads to a wrong concept of destroying the environment.

### Analysis of Workbook (Learning English 3, Workbook for Class 3)

Page No	Textual Version	Suggested Version
1 to 12 Worksheets 1 to 12	These worksheets involving cursive writing should be excluded as the formation of letters are not appropriate.	Teacher could introduce handwriting practice in the class using four-lined notebook.
Worksheet 13/Page 14 Ex-3	Deals with homophonic sounds. Eg. Eye – I Sea – See	The same could have been tested using sentences.
Page 32/ Worksheet 20 Ex-A.	Somya was the daughter a carpenter who lived .... The word 'of' is missing.	Somya was the daughter of a carpenter who lived.....
Page 621 Worksheet 32 Ex-I(2)	Kanta wanted a .....balloon, but the balloon seller gave her a ..... one. She is not very happy. 	Kanta wanted a balloon, but the balloon-seller gave her a ..... one. She is not very happy. Both the balloons should be of the same colour. 
Page 26 Worksheet 17 Ex-3	The clarity of the pictures given is not good.	Could be improved.
Page 41/ Evaluation Sheets Ex-2	Write down pairs of rhyming words. One is done for you. Eg. Green – seen It does not specify whether it has to be done from poem or in general.	Write down pairs of rhyming words from the poem. One is done for you.
Page 44/ Worksheet 25	The picture shows a van which is supposed to be an ambulance.	The picture of ambulance should have been coloured white with a red cross.
Page 46 Worksheet 26/Ex-2	Use can and make questions with the phrases given in the box. Question is incomplete.	Use can and make questions with the phrases given in the box. Now write their answers looking at the picture.

<b>Page No</b>	<b>Textual Version</b>	<b>Suggested Version</b>
Page 50, Worksheet 27	Only one line is given for each answer.	Atleast two lines should be given for each question and answer and the spacing has to be increased.
Page 56 Worksheet 30	The spelling of the word is wrong. "Smal"	The spelling has to be corrected. "Small".

### III STANDARD MATHEMATICS

#### Content and Preparation

##### C.1 As per approved syllabus

- a) Is it in accordance with the syllabus requirements ?  
It is according to the prescribed syllabus.
- b) Can it be satisfactorily covered in a year ?  
Yes.
- c) Presentation of the content
  - i) Linkage with previous knowledge.  
It takes care of the previous knowledge of the child.
  - ii) Appropriateness of the introduction  
Good.
  - iii) Correlation within the units and from unit to unit.  
Properly correlated.  
Concepts are arranged logically and sequentially.

#### Accuracy

Wherever some errors are found (numerical errors and errors in figures), illustrations and examples have been identified and tabulated in content analysis page.

Variety of items and adequate number of examples are given as per the requirements. Opportunity for self-learning is provided.

#### Evaluational Exercises

Evaluational exercises are suitable for standard III. Caters to the needs of the students. Syllabus is appropriate for Std. III.

Graded exercises are given from simple to complex. Different types and sufficient number of questions are given. Required answers are provided properly wherever necessary.

Questions are clear, correct and sufficient.

## **General Aspects of the Book**

Uniformity in numbering of units/sections/sub-sections/exercises/ diagrams and notes is maintained.

Concepts are generalized appropriately.

Diagrams are attractive and adequate and are suitable to the chapters.

Size of the book is suitable for children. Quality of the paper issued is good. Get up of the book is good.

Proper care should be taken in binding the book. Since it is a text cum workbook and the book is used by small children, the book should be stitched such that the pages do not come out of the book.

## **General Observations**

The textbook is really good, but here and there, there are some mistakes occurred when we observe the list of participants. The addresses should be corrected properly.

Eg.

M Maruthy

Lecturer

Yasanthamahal

Vidaya Vitthala Vidyashala

Kunempunagar

Vidyarangapuram

Vasanthamahal

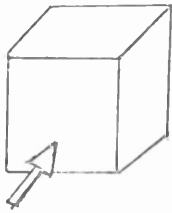
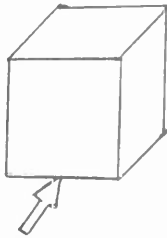
Vijaya Vitthala Vidyashala

Kuvempu Nagar


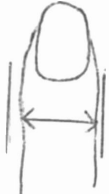
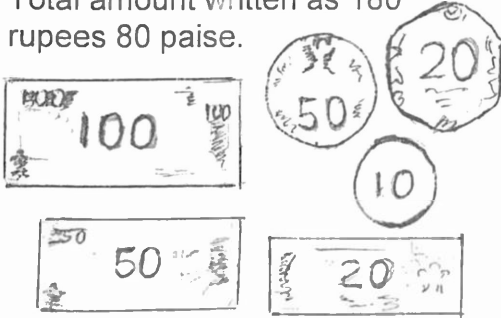
Vidyaranyapuram

The binding of the book must be taken care so that the small children will utilize it properly.

**Textbook Analysis – Class III Mathematics**

Reference	Textbook Version	Suggested Version
Chapter 1, Page No.2	Comparison of Number : Reference on rules stated as P.32 whereas it is printed in P.26.	Change P.32 to P.26. of p.2.
Chapter 2, Page 38	2.2 Addition – A process of increment/forward counting.	Word increment can be deleted.
Chapter 3, Page 63  Page 79 Page 80  Page 81	Syllabus covers only upto 1000 only whereas some products crossed 1000. Eg 93 $\times 11$ 1023 $300 \times 4 = 1200$ $41 \times 100 = 1400$ again product exceeds 1000. In Ex.3.7, $900 \times 6$ , $500 \times 8$ , $600 \times 5$ , $700 \times 7$ should be deleted.	Product may be within 1000. 93 $\times 10$  $41 \times 100 = 4100$  Product should not be more than 1000 as per the syllabus.
Page 82	Ex.3.8, $23 \times 100$ , $17 \times 100$ , $42 \times 100$ and $500 \times 100$ should be deleted.	Product should not be more than 1000 as per the syllabus.
Chapter 4, P.96	The shapes of the geometrical figure (traffic signals) are confusing. (Eg. Circle and square both are printed in the group).	Specific shape can be given.
Page 97,98	Overlapping geometrical shape figures leads to confusion.	Overlapping geometrical shapes can be avoided.
Page 102	Drawing/paper folding to half circle, quarter circle are not given as per the syllabus. Cube picture, straight edge is wrongly mentioned.  	May be included the half circle, quarter circle, paper folding/drawing. Mention correctly.  
Chapter 5, p.112	1 <sup>st</sup> drawing 3 hands of a clock are shown but not mentioned one of the hands, second-hand.	Either mention the second hand or delete it.
P.113	The clocks hands are not clearly distinguished.	Can be distinguished clearly to write the correct time.



Reference	Textbook Version	Suggested Version
P.120	The sentence below the I clock diagram among the 6 pictures 10 minutes past 1.	It should be corrected as 10 minutes Past 4.
P.127	365 days make 1 year. 12 months make 1 year. 30 days make 1 month 7 days make 1 week.	12 months make 1 year can be placed 1 <sup>st</sup> .
Chapter 7, Subtraction P.134	Picture 2-2 may confuse the child (2 bunches of groups are given).	Individual or single items can be given.
P.142	Ex.No.6.9 b) $482 - 196 = (482 + 4) - (196 + 4)$ $= 482 - 200$ $= 286$	b) $482 - 196 (482 + 4) - (196 + 4)$ $= 486 - 200$ $= 286$
P.148	Framing word problem 7-5. Seven students of a class went to a picnic, 5 of them were girls, how many are boys ?	Seven can be given as number 7.
Page 152	The diagram given 	Should be corrected as 
Unit 7, P. 162, 164	Exercise to reinforce the topic/concept are missing for the concept of mass and capacity.	Some exercises can be given.
Unit 8	Nil	
Unit 9 P. 197	Total amount written as 180 rupees 80 paise.  180 rupees 80 paise	Should be corrected as  170 rupees 80 paise
Unit 11 P. 243	Answer for 3(d) is given as 125.	Answer for 3(d) must be given as 105.

Reference	Textbook Version	Suggested Version
Chapter 10, p.217 Fraction	In Ex. No.101. The picture is repeated twice.	Can be replaced by another picture.
P.223	Repetition of parallelogram.	Can be replaced by another picture.
P.226	Ex.No.10.3. Shading $\frac{1}{3}$ object of 3 birds sitting on branch can be shaded easily but the students try to divide the branch also.	Birds picture alone is sufficient.

### III STANDARD ENVIRONMENTAL SCIENCE

#### General Aspects

##### Title

Title is apt and conveys the contents covered by the text.

##### Cover Page

The cover page is not very attractive. The colours used look very faded and unattractive. Even the subject title "Environmental Sciences" is not very distinctly coloured. The cover page needs to be more bright and the colour scheme used could use contrasting colours.

##### Physical Aspects

**Binding :** The pages are centrally glued. Handy but they may be easily removed.

##### Quality of Paper

**Cover page :** The cover page is not very durable and likely to be torn easily by the III standard student.

The quality of paper used is good and is suited for printing and illustrations.

##### Size of the book

The size of the book is suitable and can be easily carried by the child without any added burden.

##### Quality of Printing

The size of the printed matter is suitable to the child's needs and adequate for easy reading.

##### List of contents

List of contents is provided in the beginning of the book. The lessons are distributed into 6 units which are graded and arranged.

##### Get up of the book

A little more clear and brighter illustrations would make the book more attractive.

## Visuals

### a) *Clarity and attractiveness of figures, diagrams, etc.*

The pictures provided at the beginning of each unit is not very clear and attractive. The figures need to be more brighter and catchy.

### b) *Appropriateness to the content*

The visuals are appropriate to the concept wherever provided.

### c) *Accuracy and Adequacy*

#### **Unit 1 : Lesson 1 : Page No. 5**

The 4<sup>th</sup> visuals show palms, when the content of the lesson needs the visual to show hands. So the picture needs to be changed to depict hands instead of mere palms.

#### **Page No. 9 (Figure 1)**

The picture showing the functions of the legs. Only one such visual is provided which is inadequate. A few more visuals showing running or dancing or playing need to be included.

#### **Page No. 9 Figure (2)**

The visual number (1) showing the role of the mouth by showing a girl holding a bowl is inaccurate. The role of the mouth is not emphasized here. Instead a picture showing a child singing or chewing could be introduced.

The lesson needs to have a picture showing the human body with the parts labeled – which is missing in the text.

#### **Lesson No. 3**

#### **Page No. 21**

Visuals showing the children playing with the dog and parrot are not very clear. The pictures of the dog and parrot need to be enlarged, for the students have a clear view of the paws, nest, claws, beak, etc.

The visuals showing natural environment (like coastal areas, hills, flora and fauna) need to be included to make the book more visually pleasing.

#### **Page No. 36 : Visual showing the Snake and Ladder Game**

The visual is too small for the child. Even the font size is too small for the child to read. The visuals can either be enlarged to cover two pages of

the text or made into a fold up poster which the student can preserve for future use.

**Lesson No. 5 : Page 41 Figure 1.**

The rain bearing clouds need to appear darker and placed lower in the picture. The previous normal cloud looks darker than the rain bearing cloud.

**Page 41. Figure 2**

The visuals showing the formation of snow on mountains is inaccurate. The frozen ice is depicted green in colour. It looks more of a coastal region than a snowy area. Instead, the picture of a snow-capped mountain could be provided. Eg. Pictures of glaciers or the polar regions could be utilized.

The formation of rivulets and streams from melting of ice can be depicted in a well illustrated diagram.

**Lesson No. 6. Page No. 47**

The visuals showing the handling of water need to be enlarged when compared to the figure showing the crockery used to store water.

**Lesson No. 7. Page No. 52**

The visuals provided have very small size. They need to be enlarged.

**Lesson No. 10 Page 71**

The figure showing the children being divided into groups is small. So it needs to be enlarged and the different tasks assigned to each group also needs to be shown.

**Lesson No. 13 Page No. 92**

The picture of the traffic signal does not appear clearly. So a picture showing an enlarged traffic signal with the colours clearly labeled and their significance printed must be provided in the book.

**Page No. 93**

The figure shows a zebra crossings without a traffic signal. So the signal must be included into the figure.

**Lesson No. 15 Page Nos. 104 and 106**

The slope in page 104 does not seem like a slope and the pulley in Page 106 needs to be enlarged. A figure showing a wind mill also can be included in the lesson.

## Lesson No. 16 Page No 115

The post box appears in the center of the post office. The post box must be placed outside the post office and the counters in a post office must be shown clearly.

## Lesson No. 17 Page No. 122

The phases of the moon – all the 15 figures can be shown and the shading could be darker.

## Lesson No. 18 Page No. 132

A picture showing the “Red Fort” could be included to show the celebration of Independence Day.

### d) Proper referencing of the figure and proximity with the content :

The figures provided are very close to the description provided. So the figures are at close proximity to accompanying description.

### Structuring

Page No. 17, Page no. 102 the numbering is inconsistent.

### Content and Presentation

- a) The content is in accordance with the syllabus requirements. It can be satisfactorily covered in a year.

### C.2 Presentation of the Content

- a) The content is linked with previous knowledge of the child.
- b) The presentation of the introduction is appropriate to link the topic with the previous knowledge and to develop an interest in the child to move towards the topic of the day.
- c) Correlation from unit to unit is very encouraging. The sequencing of the units need to be changed a little to improve the correlation.

Eg.	Unit I	Knowing Myself
	Unit III	Our Neighbourhood
	Unit II	We need them to live
	Unit VI	Different but beautiful
	Unit IV	Reaching places
	Unit V	Too far too near

Within the unit, the correlation exists between the lessons.

- d) The presentation in Lesson 6, Page 47 and 48 is not sequential. The sequence should be

- i) Uses of water
- ii) Properties of water
- iii) Safe and unsafe water
- iv) Handling of water

Here point (iii) regarding “safe and unsafe” water does not appear in the text, but is of great importance. So it must be included into the textual matter.

### **Illustrations and Examples**

#### **C3. Accuracy Lesson No. 4, Page No. 35**

The text provides an information regarding healthy eating habit saying “eat all types of food items” which is conceptually incorrect. The statement must be corrected as “eat healthy or nutrient rich food”.

#### **Lesson No. 6 Page No. 47**

Properties of water :  
“Water has no colour  
Water has no taste”

could lead to some confusion in the children as they are used to drinking water from different sources like taps, borewell, wells, etc. which have different tastes or colour.

So instead, these can be called to be the properties of pure water.

#### **Lesson No. 6**

The unit aims to attain the outcome namely – knows about different ways of keeping drinking water clean.

But the Lesson 6, Page No. 47, provides information about only ways to handle water. But the students further need to know the different ways of keeping the water clean like filtering, boiling, chemical treatment, etc. Thus the concept is not attained by the content.

#### **Lesson No. 7, Page 50**

The title of the lesson is “how clean is our neighbourhood” but the content deals with the concept of air pollution. So the title can be changed to “How clean is our air ?”.

#### **Lesson 8 : Page 60**

The matter regarding the adjoining figure which is the concept of direction has not been sufficiently described.

**Page No. 61 :** Too many Hindi words like Mausā-Mausī, Chāchā-Chāchī, Māmījī-Māmājī etc. have been used. The adjoining activity too emphasizes these. But in English language there are only a few general relations like uncle, aunty, nephew, niece, cousins. So the adjoining exercise can be instructed to be completed in the regional languages.

### **Lesson No. 17 Page No (120-123)**

The term heavenly bodies has not been mentioned anywhere in the text.

#### **Evaluation Exercises**

##### **E1. Appropriateness**

The evaluational exercises appear to be suitable to the syllabus. There is overall coverage of the content and the level of student has also been considered.

##### **E2 Exercises**

The number of questions are adequate, the exercises are graded according to difficulty level, there are enrichment exercises provided. No answers have provided in the text.

##### **E3 Construction of questions**

The construction of question appears to be suitable to the content and the level of the learner. There is clarity and sufficiency of the provided data.

### **Lesson No. 7 Page 53-54**

The evaluation part gives emphasis to the cleanliness of the surroundings while the content speaks about the cleanliness of air.

### **Lesson No. 9 Page No. 67-69**

The evaluatory part has questions pertaining to occupations undertaken by people while the content part has no description about this topic.

### **Lesson No. 10 Page 73**

#### **Question II – 2 (b) – Mark whether (✓) or (X)**

“A teacher paints the blackboard”



This could either be true or false because in the lesson the teacher is painting (as a help) but as a professional teacher is not a painter.

**Lesson No. 14 Page No. 102**

**Question 6 Fill in the blanks :**

Text version

1. A bicycle moves ----- than a bullock cart.
2. A bus moves ----- than a ship.

**Suggested Version :**

From the given mode of transport : arrange them according to their speed.

Tonga, bus, aeroplane, ship, bullock cart  
Fast                      Slow

# **VI Standard**

English

Mathematics

Science & Technology

Sanskrit

## VI STANDARD ENGLISH

### I General Aspects

#### G.1 Physical Aspects

- a) Title Pages-Titles: 1 Modern English Text Book for Class VI  
2 Modern English Work Book for Class VI  
3 Modern English (Supplementary Reader for Class VI)  
Pathways Edited by Nasiruddin Khan  
Year of Publication: March 2002.
- b) Suitable size of book and type: Handy and comfortable for reading.
- c) Quality of paper: Good.
- d) Quality of printing and binding: Good
- e) List of contents: Clear, informative, well indented
- f) Getup of the book: Good.

#### G.2 Structure

- a) Uniformity in indentation: Uniformity maintained.
- b) Uniformity in indentation of exercises and notes: Maintained.
- c) Introduction and exercises for units : Well done.
- d) Sequencing of Units : i) Each unit has a prose piece followed by a poem in the English Reader.  
ii) Communicative tasks and cues are provided.  
iii) Adequate composition work both in the area of spoken and written skill is there.
- e) Highlighting of titles subtitles in exercises: Done vividly.

#### G.3 Visuals

- a) Illustrations (Pictures): They are adequate and aptly conceived though at times they don't concur with the details for which they are intended in the text. For example, in Pathways (pages 18-19) the sentence in page 18 states "In the middle of the river. 'The picture intended for this situation in page 19 shows the crocodile and the monkey close to the bank of the river. Remaining such errors in the Work Book and Pathways are furnished along with detailed analysis of the textbooks.
- b) Tables : Appropriate.
- c) Space provided to respond to tasks in the written form is at times inadequate. For example Exercise V page 18 worksheet 4 in the Work Book.

## Evaluational Exercise

### E1 Appropriateness

- a) Is it as per Syllabus : Yes
- b) Overall coverage : Adequate.
- c) Level of students : Yes, up to the level of students.

### E2 Exercises

- a) Grading with respect to difficulty level : Appropriate.
- b) Adequate number of questions : Yes.
- c) Types of questions: There are varieties of questions.
- d) Enrichment exercises : Adequate.
- e) Answers provided : None.

### E3 Construction of questions.

- a) Clarity : At times it is not there. Details enclosed in content analysis.
- b) Correctness : At times it is not there. Details enclosed in content analysis.
- c) Aspects that are significant parts of Language learning but are not covered through the Language Syllabus and the corresponding textbooks. : Listening Skill Texts and Tasks and the materials required for it. Phonetic requirement at the world level is adequate.

**Suggestion :** Regional Institute of English Bangalore, has produced such materials for both Primary and High School level to cater to the requirements of the Southern States of India which are under its Jurisdiction as far as ELT is concerned. We have already procured the materials for High School to be used from classes VI to VIII in our school (DMS, RIE, Mysore).

### C1 As per approved syllabus

- a) Is it in accordance with the syllabus requirement ? Yes
- b) Can it be satisfactorily covered in an academic year?  
Yes provided it is made available by the first day of the prescribed academic year.

### C2 Presentation of the content.

- a) Linkage with previous knowledge : Yes
- b) Appropriateness of the introduction : Appropriate
- c) Correlation within the unit  
And from unit to unit : At times it is not there within the unit though there is scope for the same. For example in pages 15-17 between II unit and V unit of worksheet 4 in the Work Book. There is correlation from unit to unit.

- d) Simple, logical and sequential presentation : By and large yes. But at times no. Detail enclosed in textbook analysis.

### C3 Accuracy

- a) Free from factual and conceptual errors: At times there are errors. Details in Textbook analysis.

### C4 Illustration and examples.

- a) Adequate number of graded exercises and varieties of worked examples : Yes.  
b) Provisions for self-learning activities : Yes.  
c) Provisions for investigator projects : No. It is beyond the scope of the learner at this stage of language mastery.

## LESSON-WISE CONTENT ANALYSIS OF THE TEXT BOOKS (Note: The details here are restricted to the lessons with anomalies)

**Lesson 1 Trees** It does not motivate the children. The first four paragraphs read like a Biology lesson. The last paragraph doesn't go with the rest.

**Suggestion: Dialogue mode would suit better.**

Page 4. Vocabulary I main item 1. This exercise caters to advanced level. For an average child it is confusing and misleading. This has been observed after classroom trial. There is a sense of completeness in the passage. No logical connection is there between the 'problem' and being 'welcomed with a loud bark'.

**Suggestion:** The last sentence in the passage could be drafted as follows:- *The loud bark of the dog used to frighten his and so it was tied to a tree. Not more than two students could attempt item 2 in this main.*

Page 5 III is very easy. The exercise for composition is not a composition task. It is very difficult misleading and does not help in language acquisition.

**Lesson 3 A Dialogue on Light** Page 21 Vocabulary I main item 4. A true leader is always in the -----of the \*battle against corruption. The expression \* battle against corruption' which is a figurative usage, is far above the conceptual level of the child.

**Suggestion:** The sentence could be drafted as follows:- *A good Captain is always in the -----of his army during war.*

**Lesson 4 Taro's Reward** Page 26 II main item 5. The first four sentences concur with the information in the text. The fifth one does not. It lends itself two interpretations. Students were confused.

**Suggestion:** There is a need to avoid such anomalies.

Question 3 is a good item. It lends itself to be a forerunner to introduce the concepts of adjective, comparatives and superlatives. It is also a handy cue to introduce discourse markers like but and whereas leading on to composing a paragraph on character sketch.

II main: Improper sequencing of the questions  
The sequencing in the text

Suggestion

1----->	3
2----->	4
3----->	5
4----->	1
5----->	2

**Lesson 5 Portrait of Bapu**

Page 40 composition. Doubt: What is intended in this exercise? Is it a context to practice reported speech in 1<sup>st</sup> person narration or is it an extended activity aimed at cultivating spoken skill in a cohesive manner by describing a visit to the fair by the child itself, wherein it uses the cue in the text and picture. In case it is the latter what content is left other than the issue of the 'Lucky Shop'?

**Suggestion:** Based on the cue provided in the text and by relating it to a visit to an exhibition or a carnival or a fair or a shandy they could be made to first speak about it and then write about it.

**Poem 4 The Wind** Page 49 Item 4 The logical connection that is expected from the child is beyond its purview of perception. For example they are expected to associate the phrases listed below with the lines from the poem, which can in turn be associated with the song of the wind. The demands made on their abstract logical prowess is too much. In this task the teacher perceives that the following connection is expected from the child.

- (i) The rustling of leaves - 'Like ladies' skirts across the grass', '.....of field and tree'.
- (ii) flapping of birds' wings - 'And blow the birds about the sky'.
- (iii) the whistling sound - 'a blowing all day long', 'O blower....'

- (iv) rattling of windows - 'I felt you push, I heard you call',  
(v) Creaking of doors. - 'I felt you push, I heard you call',

**Suggestion:** It could be converted into a match the following task with extra distracters. It would serve the same intent of appreciating poetic expression.

**Poem 6 My Dear India** - The whole poem is a bad selection keeping the mental age of the student in mind.

**Suggestion:** Rabindranath Tagore's Poem 'Where the Mind is Without Fear' would be a better selection, serving the same intent of rousing patriotism.

Page 73 Activity 3 'My soul is free' refers to (iii) freedom of mind and spirit. 'This is too high a level of expectation for children to react and speak about. They won't be able to conceive the very concept.

### Modern English Workbook for Class VI

**Worksheet 4** Page 15-16. If the pictures of items 1, 2 and 3 Conceptually speaking the child perceives Lata to be short and Mala to be tall and Neha to be taller. And it is stated the 'Lata is tall'. The child would be confused by the contradiction between the picture and the statement. So it wouldn't serve the intended objective of using comparatives and superlatives. The same is the case with item 2 and 3.

**Suggestion:** Along with the pictures the measurement of their height and weight could be provided for 1 and 2. And for item 3 the men could be shown with carrying loads of different volume.

Page 17-18 Composition. V main in the telephone conversation the topic shifts so suddenly and in such unexpected directions as shown below:

Courtesy call ----> invitation to movie --- > tired and rest ----- > age ----  
--- > reading and TV viewing. And it doesn't serve the purpose of cohesive completion of the composition.

**Suggestion:** The task could be re-drafted to use comparatives and superlatives in the composition.

**Worksheet 5** Page 21-22 Composition V main the rubric doesn't mention the help box at the end of the exercise.

**Suggestion:** The last sentence in the rubric could be drafted as follows: "Use suitable words from the box in place of numbers. The box could be provided before the passage starts.

**Worksheet 7** Page 28 Comprehension III main No relation with the picture and the statement. The word workman is used for the well-dressed man in the picture and the sailor in the passage looks like a fisherman. This could confuse the child with reference to its perception of a sailor and a workman.

**Suggestion:** They could be referred to as a fisherman and a worker/Labourer/man.

Page 29 question 3 This question is presented in a complicated manner.

**Suggestion:** It could be simple and direct as follows: According to the workman what type of a place was the sea? So what did he expect the sailor to feel?

**Worksheet 9** Page 35-36 II main item sequenced 'a' and 'd' lend themselves to use the connector 'or' rather than 'but' and 'and', whereas the instruction restricts to the use of only 'and' and 'but'.

**Suggestion:** The connector 'or' could be included in the rubric and the corresponding example be provided.

**Worksheet 10** Page 43 V main (a) Look at the pictures.

**Suggestion:** Since there is a likelihood of the story being familiar to the students they could be asked to put the pictures in the right sequence by numbering them.

### Modern English Pathways Supplementary Reader for Class VI

**Lesson 1 A Tale of Two Birds** Page 3 question 3 What did the first bird say to the \*stranger?

**Suggestion:** When related to the word 'robber' need to replace \*stranger. Consequently, the word \*him' at the end of question 4 need to be replaced by 'king'.

#### **Lesson 5 The Monkey and the Crocodile**

Page 16 2<sup>nd</sup> sentence in the first para after the introduction—  
\*He lived in it happily eating to his heart's content the fruit of the choice' this word order sounds unusual.

**Suggestion:** He lived happily in it eating the fruit of his choice to his hearts content.

Page 17 Unit II last but 2<sup>nd</sup> para: " I want to eat his heart \*so much". This word order also sounds unusual.



**Suggestion:** I so very much /very much want to eat his heart.

Page 18-19 Relating text with picture: The statement on page 18 says, "In the middle of the river, when the current was strong..." The picture on page 19 related to that shows the crocodile and the monkey close to the bank of the river.

**Suggestion:** This anomaly has to be rectified.

### **Lesson 6 The Wonder Called Sleep**

Page 23 question I 'What is the most \*Obvious advantage of sleep?'  
Doubt: What is intended in using \* obvious ? In the student point of view it doesn't aid any specific purpose of comprehension but, just complicated it.

**Suggestion:** The question could be redrafted as follows:

**What is the greatest/best/most important advantage of sleep?**

### **Lesson 7 A Pact with the Sun**

Page 26, last paragraph, line 7--- > 'The road to the earth is blocked by an army of thick \*mucky clouds. In this context \*mucky is used to mean 'dark and unpleasant'. The dictionary entry for the word suggests that it means dirty / dirty animal drops spread on a land as manure. So the word, the word \*mucky here is wrongly used.

**Suggestion:** The word 'murky' is an apt substitute as it means 'dark and unpleasant' as in example, 'a murky night' given in the dictionary.

Lines 10-12 of the same paragraph:' One of them, \* though, who had made a pact with little Saeeda said, "Sir, I can't stay back."  
Doubt: What is the role of \*though in this sentence. Doesn't it sound out of place.

**Suggestion:** Remove the word \* though from the sentence so that clarity is attained.

Page 27-28 Vocabulary Picture correlation: The word \*bolster is used in the line 5 of the 1<sup>st</sup> paragraph on page 28. As such the expression is uncommon to the child and it doesn't play any significant role in comprehending the details in the context. The picture on page 27, related to this situation too doesn't show the picture of a \*bolster.

**Suggestion:** Either include 'blaster' in the picture or remove the word from the Sentence. This word is aptly introduced in the next lesson, both contextually and by being supported by the picture.

Page 28 Questions The last but third question,' What is your own \*formula for keeping good health?'

**Suggestion:** It could be redrafted in a simpler way as follows: "What is your way of keeping good health."

Task 2 at the bottom of the page:

**Suggestion:** This task has scope to introduce the idea of a quack against a genuine physician. There is no need to talk about a specialist who proves to be costly. Why introduce a mucky issue gnawing our society. The same aspect holds good to the text. One could talk about belief, superstition, doctor and quack, education (in a limited contextual sense) and awareness.

### **Lesson 8 a Strange Wrestling Match**

Page 31 last paragraph, last line: 'people generally\*started back in horror, when they met him'.

**Suggestion:** Though the phrase 'started back' is good enough here, this situation has apt scope to introduce the word 'startled' whose meaning could be contextually puzzled out by the child by relating it to horror.

## VI STANDARD MATHEMATICS

REFERNCE	SUGGESTIONS / REMARKS
Page 1 Lines 17-18	The sentence "The number of letters on any..." may be deleted, as a page may be blank.
Page 2 Lines 15-16	The sentence "We can go on counting..." can be clubbed with the fact No.4 in line 18.
Page 3 Line 14	"though $1=1+0...$ ", This may be clubbed with fact number 2 in line 13
Page 3 Line 22	"we can not ..." This may be clubbed with fact number 4 in line 18
Page 3 Line 25	"if the distance from...". Here, the word 'unit 'needs explanation.
Page 3 Lines 26-28	"however, the whole numbers..." The word "whole" may be replaced with "natural"
Page 4 Paragraph 1	The words "may be regarded as" may be replaced by "represents"
Page 4 Line 18	"For example...". In this sentence, "0 is the predecessor of 1" may be replaced with "2 is the predecessor of 3".
Page 4 Line 24-25 Remark	This entire remark may be deleted.
Page 4 Exercise 1.1 Q2	"Write..." This question may be deleted.
Page 5 Exercise 1.1 Q5	"How many..." One example of this type may be included in the text.
Page 5 Exercise 1.1 Q7	"Write the next..." This may be reworded as "Write four consecutive natural numbers starting from: i) 53 ii) 721 iii) 856
Page 5 Exercise 1.1 Q10	In this question, the sub questions vii and viii may be dropped.
Page 5 Exercise 1.1 Q10	In this question, the sub questions ix and x may be placed in the beginning.
Page 5 last line	"i.e., whole number" This may be reworded as "the sum of two whole numbers is a whole number".
Topic No.1.6 in pages 5-6	The detailed explanation in the second and third paragraphs of this topic may not be required as the student at this stage is quite familiar with operations on whole numbers.

Page 9 line3	Property IV may be reworded as "For every whole number a, $a+0=a$ . 0 is the only whole number with this property.
Page 10 line 14	In property V " $b + c = a$ " may be replaced by " $c + b = a$ ".
Page 11 Question 9	This question may be reworded as: Kuber had Rs.25000 with him. Out of this, he spent Rs.5425. How much money remained with Kuber after this?
Page 17 Questions 4,5,6	In these, the words " odd whole number" and "even whole number" may be replaced with "odd number" and "even number" respectively.
Page 18 Questions 15-18	These may be shifted to Exercise 6.4
Page 20	These The following properties may also be included:1) 0 divided by a is 0 provided a is not 0. 2) $(a + b)$ divided by c = a divided by c + b divided by c provided c is not 0"
Page 22 Question 2	In this the sub questions I,ii,iii,iv and v may be converted to fill in the blank type
Page 22 Question 7	This question may be avoided.
Page 22 Question 11	The answer (in page 295) should be " yes; yes.
Page 23 Question 13 (iv)	The given answer is wrong. This statement is not true.
Page 23 Questions 14-15	May be shifted to Exercise 6.4
Page 25 line 14	In this line the word "minus" may be replaced with "negative"
Page 26 line 14-15	The last sentence in this paragraph may be reworded as" In fact, the negative of the negative of any integer is that integer itself
Page 27 Topic 2.7	The meaning of -n (where n is a natural number) as a number which is n less than zero may be used to order integers rather than the number line.
Page 28 Exercise 2.1	Questions of the following type may be included: 1) $ 2  +  -2  = \underline{\hspace{2cm}}$ 2) $ 2  \times  -3  \underline{\hspace{2cm}}  -2  \times  -3 $ (compare)
Page 28 Topics 2.7.1 - 2.7.2	If a vertical number line is used, the children may better understand the addition of integers.

Page 32	The following property may be included: If $a = b$ then $a + c = b + c$ .
Page 33 Example 4	The same question as in example 3 of page 32 may be worked out using the alternative method.
Page 34 Exercise 2.2 Question 5	This may be put in the form of "fill in the blank" questions.
Page 34 Exercise 2.2 Question 6 Sub question (v)	In this the part "Since $-4 < -3$ ," may be deleted.
Page 35	The following properties may be included: 1) $0 - a = -a$ 2) $a - a = 0$ 3) $a - b = -(b - a)$ .
Page 36 Exercise 2.3 Q 9 Sub Questions vii and viii	These may be shifted to Exercise 2.7
Page 37 Exercise 2.3 Q 10	May be deleted
Page 37 Exercise 2.3 Q 13	The last term may be given instead of the number of terms
Page 38 Rule 1 and Rule 2	"like" and "unlike" may be replaced with "same" and "different" respectively
Page 38 lines 5 - 14	The explanation for the multiplication of two negative numbers may be given using the distributive property of multiplication over addition
Page 38 Rule 2	In this rule, the last part, "and assign positive sign to the product" may be deleted to be consistent with the text.
Page 38-39	The illustrations following the properties I, II and III may precede the respective properties as elsewhere in the text.
Page 39 Property VI	The right distributive properties may also be included.
Page 41 Exercise 2.4 Question 3	The part of the question "Find the value of:" may be reworded as "Find the value of the following using the properties of multiplication:"
Page 42 Exercise 2.4 Question 8	The part of the question "Compare (i.e., state which is greater):" may be reworded as "State which is greater:"
Page 42 Exercise 2.4 Question 10	Sub questions iv and v may be deleted.
Page 42 last line	The word "always" may be deleted.

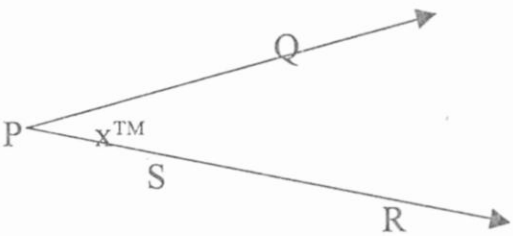
Page43 Property V	In this property, it is also necessary to exclude the case when $a = 0$
Page 43	The following properties may also be included: 1) $a \div (-a) = -1$ provided $a$ is not 0 2) $a \div (-1) = -a$ 3) $(a + b) \div c = a \div c + b \div c$ provided $c$ is not 0.
Page44 line 16 (Topic 2.11)	The part "raised to the exponent 2" may be deleted.
Page44 line 18 (Topic 2.11)	The part "raised to the exponent 3" may be deleted.
Page 44 Topic 2.11	The fact that a positive integer raised to either an even or an odd exponent results in a positive value may be included.
Page 46 paragraph 1 of topic 2.12	The term "expression" may be explained in an appropriate place before it is used.
Page 46 Topic 2.12(a)	The DMAS rule may be explained with some justification
Page 47 line 2	This is not according to the DMAS rule being illustrated.
Page 48-last three lines	The words "some brackets" may be replaced with " a bracket":.
Page 48-last three lines	The reason for this procedure may be given.
Page 49 first line	The words "some brackets" may be replaced with " a bracket"
Page 49 first three lines	Each of the preceding four procedures may be followed by suitable specific examples.
Page 49 Topic 2.13	This topic may be deleted, as the operation "of" is not relevant in the context of integers.
Page 50 Topic 2.14	The BODMAS rule may replaced with the order of operations with suitable examples.
Page 51 Exercise 2.7 Q2	This entire question may be deleted in view of the suggestions above.
Page 51 Exercise 2.7	Some exercise is needed on writing mathematical expressions using brackets.
Page 53 items No.16	May be modified according to the suggestions above.
Page 53 item No.17	This may be replaced with "Innermost bracket is to be removed first".
Page 53 items No.20	May be deleted.
Page 56 line 7	Include "as they can not be primes" at the end of this step.
Page 64 Factor tree for 420 at the end of the page	The factor tree may be presented as in the texts of lower classes.

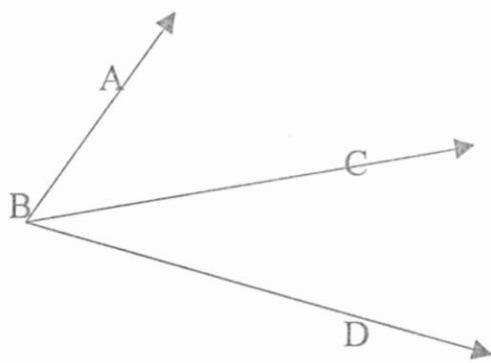
Page 65 Topic 3.7 point No.1	This point may be deleted as it is redundant in view of point No.2
Page 93 Topic 4.4	The explanation given for the unitary method (before example 19) is quite difficult and is not actually necessary. The children already know this method (without the idea of ratios)
Page 95 Example 22 (ii)	Such questions may be avoided.
Page 97 Q19(i) and Q20(i)	May be avoided.
Page 98 line 1 of paragraph 1	The word "you" may be replaced with "we" as in line 1 of paragraph 2.
Page 98 line 5 of paragraph 2	The word "advantages" may be replaced with "uses".
Page 99 Example 1	In the solution , the following procedure may be used: $1/2=(1/2)\times 100\%=50\%$
Page 100 Example 2	In the solution, the following procedure may be used: $25\%=25/100=1/4$
Note in Page 101	This Note: may be deleted.
Page 102	In this page, the positions of examples 5 and 6 may be interchanged.
Page 104 Q12	The words "custom duty" may be avoided.
Page 106 Example 10	The solution may be simplified as: $(3.5/25)\times 100=3.5\times 4=14$
Page 106 Example 11	The word "contains" may be replaced by "contained"
Page 107 Question 8	The words "excise duty" may be avoided.
Page 109 line 2	The words "big shopkeeper" may be replaced with "wholesaler" with proper explanation.
Page 110 Example 14	The question may be changed as: A cloth merchant bought 20 sarees for Rs.5000.He sold them at Rs. 240 per saree. Find his profit or loss.
Page 114 Q19 and Q20	These may be avoided
Page 114 Topic 5.6	The simple interest formula may be included in this topic as so many examples of unitary method are not required. The method may be used to derive the formula.
Page 115	The note 2 at the top of this page may be deleted.
Page 118 Q11 and Q12	These may be avoided
Page 119	Point No.11 may be avoided.

Page 127 Topic 6.2 Paragraph 1	This may be rewritten as : Term: It is a number or the product of two or more numbers. Example: 12, x,-5,-78ab are all terms. Expression: It is a term or the sum of two or more terms. Example: -5xy,a+b+c,2x+y+6,ab-4 are all expressions. Note: The expression ab-4 is the sum of the terms ab and -4.
Page 127 Paragraph 4	This may be deleted.
Page 129 Exercise 6.2 Q6	The word "equal" may be replaced with "the same".
Page 130 Topic 6.3	"Operations on Algebraic Expressions" may be preceded by "Operations on Terms".
Page 130 Topic 6.3 Paragraph 1 line 2	The word "Therefore" may be deleted.
Page 131 Example 11	Adding in a row may also be illustrated.
Page 131 Example 12	The solution may be replaced with: $(15xy+6yz+7zx) - (12xy-5yz-9zx)$ $= (15xy+6yz+7zx) + \text{the negative of } 12xy-5yz-9zx$ $= (15xy+6yz+7zx) + (-12xy+5yz+9zx)$ $= (15xy-12xy) + (6yz+5yz) + (7zx+9zx)$ $= 3xy + 11yz + 16xz$
Page 132 "Alternative method" at the end of this page	In the first line, the word "terms" may be replaced with "expressions".
Page 134 Questions 9,10,13 and 16	This type of questions may be avoided. Instead, some more questions for practice of addition and subtraction may be included.
Page 136 Things to Remember	Points 3 and 4 may be changed as suggested earlier for the text.
Page 136 Things to Remember Point 8r	Addition and Subtraction may be given as separate points to remember.
Page 137	The chapter heading may be rewritten as "Simple Equations". Corresponding changes may be made in the text.
Page 140 Last paragraph	Instead of the example of the working of a balance, the following properties may be illustrated with examples: 1) If $x + a = b$ , then $x + a - a = b - a$ 2) If $x - a = b$ , then $x - a + a = b + a$ 3) If $ax = b$ , then $ax/a = b/a$ provided $a$ is not 0 4) If $x/a = b$ , then $(x/a) \times a = b \times a$



Page 145 Things to Remember Point 3	In the second line of this point, the word "equation" may be replaced with "equality".
Page 149 sentence before Fig 8.6	This may be replaced with "It is read as the 'line AB' or the 'line BA'".
Page 150-151	The last three lines of page 150 and the first two lines of page 151 may be avoided.
Page 151 paragraph 1 of topic 8.4	This entire paragraph may be avoided. The discussion may start with the Activity 1.
Page 151 - 152	One activity per property may be enough.
Page 155 Paragraph after Fig 8.18	The second sentence may be deleted.
Page 156 the Remark at the end	The first sentence of the remark may be replaced with "The point of concurrence of three or more lines is also the point of intersection of any two of them".
Page 159 Q8	May be avoided, as the concept of midpoint is not clear to the children at this stage.
Page 160 Q14	This question may be deleted from the exercise and included as an activity in the text.
Page 164-170 Topics 9.3, 9.4, 9.5, 9.6	These may be simplified and shortened. Sub topic (iii) of 9.3 (Comparison by tracing) may be avoided. Addition of adjacent line segments may be included.
Page 172 Q1	In this, the question heading may be reworded as "Measure the two line segments given in Fig. 9.18"
Page 173 Q6	The word "verify" may be replaced with "verify by measuring".
Page 175 Paragraph after fig.10.1	This entire paragraph may be deleted.
Page 175-176	In the explanation for the term "ray" reference to light rays may be avoided, as these rays do not extend endlessly as claimed but are stopped on the way.

Page 180 Q5	This question may be subdivided into three questions: i) How does a ray differ from a line? ii) How does a ray differ from a line segment? iii) How does a line differ from a line segment?
Page 181 last sentence	This sentence may be shifted to the end of the topic in page 182. Further, an arrow at the end of the arc is needed to show that an angle is the result of rotation.
Page 182 Paragraph 2 line 3	The words "initial position" may be replaced with "initial point".
Page 182 Topic 10.3.1	The alternate symbol ( $\cap$ ) is to be included.
Page 183 line 1	The word "sometimes" needs explanation.
Page 184 Example 2	This may be replaced with the following: "Name the angle below in different ways: <div style="text-align: center;">  </div> Solution: i) $\angle P$ ii) $\angle QPS$ iii) $\angle QPR$ iv) $\angle x$ v) $\angle RPQ$ vi) $\angle SPQ$
Page 184 Fig 10.21	The interior of the angle is to be shaded. Some points in the interior may be named and referred to in the text.
Page 184 Topic 10.3.2 Paragraph 2	This paragraph needs to be split into two by separating the first sentence from the rest. Further, the rest of the matter may be replaced with: "Points which lie on the arms of the angle are said to be on the angle. Points, which are neither in the interior of the angle nor on the angle, are said to be exterior points. These exterior points constitute the exterior of the angle."
Page 186 Q3	This may be reworded as : "Draw four angles and name them."
Page 191	For explaining 180° angle, the concept of opposite rays may be used. Concepts of zero angle and reflex angle may not be needed at present and hence may be avoided.

Page 193 Notes	The entire "Notes" may be deleted.
Page 199 Topic 10.6 (iii)	The second sentence of this paragraph may be reworded as : "Consider the following angles formed by the two line l and m at O"
Page 202	<p>The concept of sum of two adjacent angles is to be included after topic 10.6 :</p>  <p>In the figure, <math>\angle ABC</math> and <math>\angle CBD</math> are two adjacent angles. Here,</p> <p>i) <math>\angle ABC + \angle CBD = \angle ABD</math>  ii) <math>\angle ABD - \angle CBD = \angle ABC</math>  iii) <math>\angle ABD - \angle ABC = \angle CBD</math></p>
Page 203 Examples 8 and 9	For these questions, figures are not relevant.
Page 205 Q 4 and Q 5	For these questions, figures are not relevant.
Page 206 Q 9	This question may be avoided.
Page 206 Q 13	Fig 10.68( i ) needs correction.
Page 215 Topic 11.3.1	The concept of distance between a point and a line is to be developed first. This may then be used to explain the difference between parallel lines and non-parallel lines more clearly.
Page 216 lines 15-16	This sentence in italics may be replaced with: " <i>Given two parallel lines, the distance between any point on one of the lines and the other line is the same.</i> "

Page 224 Things to be Remember -point 5	In point 5 (I),(ii) and (iii), The words "the angles of" may be avoided.
Page 235 Q 16	In the first line of this question, the word "positive" may be avoided.
Page 235 Q 17	This question may be avoided.
Page 241 Steps of construction	In step 2, the last sentence may be avoided.
Page 243 Exercise 13.1 Q 1	In this the words "magnitude" and "smaller" may be deleted.
Page 253 Topics 13.4.2 and 13.4.3	These may be interchanged. Diameter may be explained as a chord, which passes through the centre of the circle. Suitable other changes may be made in the texts of these topics. The relations: 1) $r=d/2$ and 2) $d=2r$ may be illustrated with suitable examples.
Page 254 Fig.13.12 and Fig.13.13	In these figures, the line segments PQ may be removed.
Page 255 Fig.13.16	The shading of the exterior of the circle is misleading.
Page 256 Exercise 13.3 Q 12	This question may be reworded as follows: Label a point as O. With O as centre, draw two circles of radii 2 cm and 4 cm respectively. Label a point 3 cm away from O as P. Does P lie in the interior of the larger circle? Does P lie in the interior of the smaller circle?
Page 262 Exercise 13.5 Q 2 and Q 3	These may be deleted in view of suggested changes in page 202.
Page 262 Exercise 13.5 Q 11	This may be deleted.
Page 263 Sixth line from bottom	The words "Join PQ" may be replaced with "Draw PQ" or "Join P and Q". Similar changes may be done elsewhere.

Page 265 line3	The sixth step may be reworded as : "Draw the line AH and label it as m."
Page 269 line 17	In this line, the word "region" may be replaced with "of the curve".
Page 270 Illustration 1	In this, the second sentence may be reworded as: "After making a full round, it reaches the starting point."
Page 274 Topic 14.4	In this, it is sufficient to show the truth of the relation "Perimeter of a square = 4xside" using one of the three alternatives given in the text.
Page 280 and 281	The explanation for the word "standard" may be reduced and simplified.
Page 283 Fig. 14.23	This figure is misleading and may be deleted.
Page 284 Fig. 14.25	In this, different colours may be used instead of numbers to distinguish between complete squares, half complete squares, etc.,.

**Some general comments:**

- 1) Use of capital letters may be avoided when not required.
- 2) Figures of 3-D objects need improvement.
- 3) Unnecessary words like "always" may be avoided wherever possible.
- 4) Solutions to examples may be given in small steps wherever possible.
- 5) Formal definitions such as that of exterior angles in page 210 may be avoided.
- 6) "Fill in the blanks" type questions may contain enough number of blanks corresponding to the number of words or numbers in the expected answer.
- 7) Consistency may be maintained in following conventions. For example in the chapter 5, the symbol "%" is not used in presenting answers to examples worded in a particular way. But in the answers to the exercise questions (at the end of the book) this is not so.

## VI STANDARD SCIENCE & TECHNOLOGY

### General Observations and Comments

- The book is in accordance with the syllabus requirement and may be covered in a year.
- It would be useful to provide the learning outcomes for each chapter.
- Content presentation satisfactory in some topics and unsatisfactory in a few.  
Example:- chapter No.11, 8.
- Quite a few topics attempted to pass on information without giving importance to scientific method.
- More scope could have been given to develop critical thinking ability.
- Most of the definitions need verification and correction.
- Content given in some areas is inadequate or confusing. Eg:- page 107, classification of vertebrates, page 125 on reproductive system. In page 65-discussion on desirable or undesirable change is given. Any change desirable or otherwise is subjective and contextual.
- Some photographs, biographies of scientists and other additional information given in the boxes have enhanced the quality and attractiveness of the book.
- Some of the diagrams given need modification and a few others serve no purpose and may have to be dropped.
- There is a fair attempt to provide adequate content and self learning activities for developing scientific and technological literacy.
- The activities in general are simple requiring inexpensive and indigenous materials.
- Some more scope could have been given to qualification.
- Numbering is not consistent in a few. For example-In chapter 8 the numbering stops at 8.2 itself.
- Care should have been taken to make the book free from gender bias of the 60 figures of human beings only five are females.
- Most of the exercises need a critical review and modification.
- Constructions of questions- fill in the blanks type are poor in many areas.
- Some thought provoking questions could have been included.
- The general get up of the book such as size, quality of paper, letter size, spacing, diagrams, layout are by and large satisfactory.
- In some visuals dark background mass the effect.
- Binding is not satisfactory.

**Chapter 1      Our Earth**

<b>Page No.</b>	<b>Sub Topic</b>	<b>Suggestion / Modifications/ Comments</b>
2	Fig. 1.1 Planet	Should have been printed in natural colour of the earth. Definition is not appropriate.
7	Water Cycle (Line No.21) Exercises	Explanation and definition of condensation should be clear. Short Answer Type Questions should be given.

**Chapter 2      Our Environment**

21	Food chain	Diagrammatic representation of the food chain may be given in the box.
37	Solids, liquids and gases	The definitions mentioned gives the impression that it is matter itself.
42	Diffusion	Correct Definition should be given.
45	Exercises	Fill in the blank type of items need reconsideration as they do not elicit an objective response.
47	Pure substances and mixtures	Proper definitions and explanation of Elements, compounds and mixtures should be given. Diagrammatic representation may also be included.
54	Fig.	It is not just a filter. There are many other processes involved here.
55	Fig. 4.21	Does not show the process of purification of water. Actually it should be the process of making water potable.
56	Evaporation, Crystallization Fig. 4.28 (v)	Proper definitions should be given. This figure is faulty, unless there is room for the escape of air, the filtration does not occur.

Page No.	Sub-topic	Suggestion/Modifications/ Comments
58	Fig. 4.28(i), (ii), (iii), (viii)	These figures do not serve any purpose.
59	Distillation set up	A better diagram should be given.
65	Difference between desirable and undesirable change	The desirability or otherwise of any change is subjective and contextual, Eg. Mention of the phase of moon – it is not possible to say whether or not this change is desirable.
	Exercises	To be reconsidered.
73	Question No.4	This experiment should be given in the textbook or it should be an activity.

## Chapter 6 Measurement

81	Measurement of Area Definition should be given in bold letters to highlight it.  More number of activities may be given.	Activity may be given.
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## Chapter 7 Characteristics and classification of the living

Page No.96		Chapter heading may be characteristics & classification of the living things.
Page-97	Left side last paragraph	'Chhui-mui' word to be shown in brackets instead of touch me not.
Page-97	All living things grow from a single cell.	Sentence may be modified.
Page 99/2 <sup>nd</sup> Paragraph	Side heading not given	Respond to stimuli (irritability) to be given as paragraph heading in bold letters.
Page 99/2 <sup>nd</sup> Paragraph	Earth worm moves away from saline medium and light	The words 'Saline medium' may be deleted as it is abstract for the class level.



Page No.	Text	Suggestions/Modifications/ Comments
Page 100	Fig 7.5.	The diagram showing the response of earthworm is confusing.
Page 100/2 <sup>nd</sup> Paragraph	Reproduction that is production of offsprings.	The words 'and seeds' may be deleted.
Page 100/activity 2 Page 101	Activity 2 -	This activity 2 is not properly given.  This I paragraph is irrelevant , hence may be eliminated.
Page 101	List the most commonly available plants and animals of your locality.	This paragraph could have the heading as Activity 2. The students may be asked to exercise the list and try to guess the basis for classifying organisms into plants and animals. That would make the activity challenging and useful. There seem to be a deliberate attempt to pass on information rather than the attempt to develop the process skills.
Page No.101 15 <sup>th</sup> line.	Plant and grass do not move.	It may be modified as plant and grass do not move from place to place (do not exhibit locomotion).
Page No.101/II paragraph last sentence left side.	Here.....their movement	The sentence may be modified with the addition movements 'from place to place'. (as the sentence may give wrong concept).
Page 101/right side 3 <sup>rd</sup> paragraph	Contrary to this plants <u>do not move.</u>	Wrong concept. It may be plants do not move form place to place or do not show locomotion.
Page 101/ right side last paragraph Page 102/right side last sentence.	Both plants and animals have definite organs. The plants can also be classified into trees shrubs and herbs on the basis of their size shape and life span.	Wrong concept. The paragraph may be eliminated.  Wrong concept. The words shape and life span may be deleted. This applies also to the sentence given in page 104, 15 <sup>th</sup> line on left side.

Page No.	Text	Suggestions/Modifications/ Comments
Page 103	The distinction made between annual plants and biennial plants.	It is not clear. The examples given for biennial plants are confusing.
Page No.104 & 105	Fig. 7.13 & Fig 7.14	Name of the plant may be given with the diagram.(Datura, Water hyacinth)
Page 105/I Paragraph on right side.	Definitions for saprophyte and also parasite given.	Definitions for saprophyte and also for parasite are wrong. They need to be corrected.
Page 106/II paragraph on left side.	They have bony skeleton with a backbone.	Sentence to be corrected.
Page 106/ II paragraph on right side.		The whole paragraph may have to be eliminated along with diagram Fig 7.17.
Page 104 / plant habitat	Plant habitat	Animal habitats are not mentioned and only plant habitats are discussed.
Page 106 / III paragraph on right side.	Parasitic animals	The definition is wrong, need correction.
Page 107 / Left side	Activity 5 Classify vertebrates into Pisces..... aves (birds) and mammals.	Students cannot do this without learning the characteristics of different classes (or groups).
Page 107 / right side	7.13 Scientific name Thus scientific name includes two names as is.....nomenclature.	Wrong concepts The scientific name has two words and not two names.
Page 109 / I paragraph	Activity 6.	This activity is too high and also not useful for VI Std class level.
Page 111	Definition of microbes	Is erroneous.
Page 111/ I paragraph left side.	'gobar' is used to get manure.	This word may be replaced by cow dung.
Page 111/ II paragraph left side.	7.15 Harmful plants and animals.	The whole paragraph has concept errors. They need correction after verification.
Page 111/ I paragraph right side.	Dead animals and decaying plants.	The word 'decaying' may be deleted.

Page No.	Text	Suggestions/Modifications/ Comments
Page 112 / summary	Plants can be classified into trees ..... Sizes, shapes and life span.	Delete the words shapes and life span.
Page 112 / summary	Plants provide us with oxygen, besides food, silk and .....	The words 'silk' may be deleted or shifted to next sentence about animals.
Page No. 113	Q.NO.6	This question is rather high or difficult for VI std as they may not have made observation. This question may be modified as 'different kinds of covering on their bodies ( and not .....)
Page 114 8.1 Left column	Tissues	Concept of Tissues is little high at this level. May be deleted. The lesson can start with organs & organ system.
117 Act -3 2 <sup>nd</sup> line left column	Spellings cucurbit Neighboring	Should have been cucurbita. May be corrected- Neighbouring
Fig 8.8 & 8.12	Labelling- 2 leaves are labelled. Labelled in different seeds.	Single leaf } to be Single seed } labelled
118 17 <sup>th</sup> & 18 <sup>th</sup> line	All flowers have the same basic parts as shown in Fig.8.10.	Correction needed Male & Female flowers.
119. 8.2 14 <sup>th</sup> line left column	Organ system in Human . Some of these are visible.	Some of these are visible from outside.
R.Column	Cells → Tissues → Organ system → human body.	Either deleted or diagram representation needed.

## Chapter 8: Structure & Function of Living organism.

Page No.	Text	Suggestions/Modifications/ Comments
120. Fig 8.13	<u>Digestive System:</u> Mouth not shown in the diagram size of liver too big compared to other organs. Pancreas not clear.	Diagram needs modification. Diagram of only Digestive system needed. Sense of proportion not displayed in the diagram.
121. 3 <sup>rd</sup> line left column	<u>Small Intestine:</u> Digestion of food starts in the stomach & is completed in the duodenum & small intestine.	<u>To be included:</u> Digestion of food starts in the mouth & is completed in small intestine.
121 8.16	Respiratory system. Diaphragm is shown as part of Lung.  Definition of respiration	Diagram needs correction. Diaphragm to be shown separately. Not very clear. May be defined properly. Reproductive organs not mentioned.
124. Fig. 8.19	Diagram Not needed.	
125 11 <sup>th</sup> line Right column	Sex organs.	Reproductive organs not mentioned. Instead of sex organs reproductive organ can be used.
125 Box 125 8.20	Questions in the box. 1 <sup>st</sup> & 6 <sup>th</sup> question. Excretory System. Zygote definition.	Could have been given before this. Urethra is not drawn. Not clear.
126. Box	Key words. Given at the end of the lesson.	Key words may be given in the beginning of the lesson.

Page No.	Text	Suggestions/Modifications/Comments
126. Box. 15 <sup>th</sup> point	Summary Digestive system included feeding, digestion, absorption, and defecation.	Digestive organs to be mentioned & not processes.
16 <sup>th</sup> Point	Mouth & its organs.	To be corrected as Mouth and its parts. (Salivary glands & teeth)
	Digestion of food begins.	Here it is O.K. but needs correction on page 121.
17 <sup>th</sup> Point 127	<u>Exercises</u>	
	Question No 1 2 Question No. 4,5,8,10,14 very vague.	May be deleted. To be modified. We should specify the objective . Framing of Questions needs modification.
129	Question .No 25,23,26,27, very vague	May be framed properly Q.25- maize, sugarcane, Banyan are all plants.

## Chapter 9

## Force and Motion

Page No-130	Activity 1	
	More examples are given & students are asked to identify among them as objects at rest and objects in motion.	Scope can be given to the students to identify some more examples by observing their surrounding & than ask them to clarify them as objects at rest and objects in motion.
Page No-131 Second para 9 <sup>th</sup> & 10 <sup>th</sup> lines	Example In a moving ceiling fan, every point on the blade remains at the same distance from the rod from which the fan is suspended. But every point on the blade changes its position with time.	To be verified

Page. No	Text	Suggestions / Modifications/ Comments
Page No.132- Line 31	The movement of the piston in the engines of automobiles is also oscillatory.	At this level students are not familiar with the piston in the automobile. This may be deleted.
<b>Chapter 10 Work and Energy</b>		
Page 150	No work is said to be done. 'distance moved by the object...'	The word "said" may be dropped. This may be written as 'displacement of the object'.
Page 151	Potential energy definition.	Not correct. A moving body can also have potential energy.
Page 152	Heat is produced when coal and wood are burnt.	Heat is produced when <i>fuels</i> are burnt or Heat is produced when substances like wood, coal, etc. are burnt.
Page 152	James Watt invented the steam engine. Words such as 'hauled', 'photo voltaic cell', conveyor belt, diaphragm, etc.	Factual error. The usage of these words may be beyond the level of comprehension of VI Std. Level of the students.
Page 155	Exercise Sl. No. 4 and 6.	Are difficult.
<b>Chapter 11 Health and Hygiene</b>		
Page No 156 3 <sup>rd</sup> paragraph 9 <sup>th</sup> line	You must have heard the saying early to bed..... .....enjoys the benefits of nature.	Validity of statements to be verified.
Page 156 112 food for health 2 <sup>nd</sup> line	Both over eating and lack of food intake.	May be modified as both overeating and (under eating or ) eating less food.

Page. No	Text	Suggestions / Modifications/ Comments
Page 157 1 <sup>st</sup> line	Food can also be classified according to their nutrient content	Definition of 'nutrient's to be provided in the beginning.
Page 158	Evaluation items – Fill in the blanks (I), (ii), (iii), (iv).....	All the items lack clarity (vagueness) and hence to be deleted or replaced.
Page 158 Table 11.2		Table 11.2 I column heading to be Sl.No.
Page 158 11.3	11.3 your daily meals .....	Some alternate non vegetarian foods also to be given along with vegetarian foods.
Page 158 11.3	Maintenance of good health- whole paragraph on traditional Indian meals	The presentation may be in the form of an issue for debate immediately after discussion on balanced diet, instead of giving information as absolute truth.
Page No. 159 3 <sup>rd</sup> paragraph 3 <sup>rd</sup> line	Wheat flour if not sieved is also rich in fibre.	Sentence may be modified as wheat flour (atta) is more rich in fibre than maida.
Page 160 2 <sup>nd</sup> paragraph	Paragraph given-Although taking.....good for health".	Whether the given information is scientific and valid to be verified. Also it is out of place as it disturbs the sequence in content.
Page 161 2 <sup>nd</sup> paragraph	(i).....(x)	Additional points may be included such as (xi) provide adequate exercise to the body. (xii) have pleasant mood while eating (xiii) Avoid eating stale food. (xiv) maintain hygiene.
Page 161 3 <sup>rd</sup> paragraph	The daily diet of 10-12 yr .....	The authenticity of data may be verified as the diet mentioned appears to be inadequate.
Page 161 20 <sup>th</sup> line	Summary in box-as – "Chlorination is the process..... .....for drinking.	Sentence needs alteration as the definition needs verification.

# ANALYSIS OF NCERT TEXT BOOKS

Sub : 1) Sanskrit - श्रेयसी

VI th Std. Text Book

संस्कृत धारा

2) A additional text book for I language.

## ANALYSIS OF NCERT TEXT BOOKS

श्रेयसी - प्रथमो भागः षष्ठवर्गाय-

-संस्कृतपाठ्य पुस्तकम्

"Shreyasi" A Samskrit Text Book for  
Vi Standard (April 2002)

General Aspects :

G1 : Physical Aspects :

(a) Title Page :- श्रेयसी - अन्वर्थ नाम अस्ति ।

परन्तु अत्रैव (मुखपृष्ठे एव) प्रथम भाषा /-

द्वितीय भाषा अथवा तृतीय भाषा पठ्यपुस्तकम्

इति स्पष्ट निर्देशः अपेक्षणीयः अस्ति ।

(b) Size & Type : - यथा अपेक्षितम् अस्ति ।

(c) Quality of Paper :- तृप्तिदायकम् अस्ति ।

(d) Duality of Printing binding ect :- कुत्रचित् स्थानेषु चित्रस्य विषयस्य सम्बन्धः नास्ति

(e) Fore word :- अत्र शिक्षकेभ्यः अधिकसूचनाः

अपेक्षिताः सन्ति । अर्थात् पुस्तकमिदं प्रथम/द्वितीय/तृतीय भाषासु कुत्र-कथं पाठयमस्ति यदि प्र. भाषात्वेन पाठयते तर्हि न्यूनात्न्यूनं  
षट् अवधयः (Periods) अपेक्षिताः । व्याकरणस्य भाषा कौशलानाम् अभिवृद्धयै अधिक महत्त्वं भवति यदि तृतीय भाषात्वेन पाठयते  
तर्हि एतादृशं प्रामुख्यं न भवति । केवलं भाषायाः अर्थज्ञानं तत्र अपेक्षितं भवति । अतः शिक्षकेभ्यः एतादृश विषयेषु स्पष्टसूचनाः देयाः ।

(f) Table of Content :- अनुक्रमणिका तावत् - सरलात् कठिणतरं प्रति (Symple to complex) इति नियमः सुष्ठु,  
अनुसृतः इति भाति ।

(g) पुस्तकमिदम् अपेक्षितानुसारम् कालोचितम्, छात्रचित्ताकर्षकम् च अस्ति ।

G2 :- Structure :-

(a) Uniformity in Identation -

समीचीनतया लिखितमस्ति ।



(b) Exercises for unit : -

छात्रोत्साहवर्धकम् - अध्ययनोन्मुखम् च अस्ति ।

(c) Highlighting :- पाठ्यपुस्तकम् वस्तुतः अत्याकर्षकं वर्तते । तथापि केचन देषाः (अक्षरदोषाः) परिवर्तन योग्य अंशः सन्ति ।

(i) Page No. 28 अधरं मधुरं ..... इति श्लोकस्य स्थाने द्वितीया विभक्ति प्रतिपादकः- इधोगिनं पुरुषसिंहमुपैति लक्ष्मीः..... इत्थं श्लोक अन्वर्थः भवति ।

(i) Page No. 35 (श्रेयसी) - कौशल्या - कौसल्या  
- (कोसलस्य अपत्यं स्त्री - कौसल्या)

(ii) Page No. 51 अत्र पाठान्ते दत्तः श्लोकः अस्ति - अष्टादश पुराणेषु.....परपीडनम् - अयं श्लोक सुभाषितानि 20 पाठे देयं योग्यः । अत्र तु चतुर्थी विभक्ति प्रतिपादकः श्लोकः

विद्या विवादाय धनम् मदाय ।

शक्तिः पशेषां परिपीडनाय ।

ज्ञानाय दानाय.....इत्थं श्लोकः तत्र इतोऽपि अन्वर्थः भवति इति अभिप्रायः ।

(iii) Page No. 55 - अत्र अश्वाः मालाभिः भूषिताः सन्ति इति पाठे वर्णितः परंतु चित्रे नास्ति । केचन नराः अश्वम् आरोहन्ति, इति अस्ति । चित्र अश्वारोहणं न दृश्यते । अश्वः श्वा वत् अस्ति । किञ्चित् - उच्चकायः अपेक्षितः ।

(3.5) Page No. 61 - शब्दार्थे - प्रातराशे - जलपान में (यहाँ साहित्य में ऐसा अर्थ उचित नहीं होगा ।

In the Break fast सुबह के खाने में (जलपान - Drinking Water एसा अर्थ होगा) grametically ठीक होगा

(3.6) Page No. 63 :- 22 Line पुष्पाणि त्रोटयाम ?

त्रोटयामः ✓

(3.7) Page No. 73 :- शब्दार्थे -

(अ) वृक्षतले = पेड़ के नीचे (ऊपर) ✓

यहाँ (हिन्दी में तलका अर्थ नीचे होगा परन्तु) नीचे नहीं ऊपर जैसा अर्थ अन्वय होता है बन्दर पेड़ के नीचे नहीं बल्कि ऊपर रहता है ।

(आ) एकदा = एक समय ? (एक बार सुबोधः भवति)

(3.8) Page No. 95 सुभाषितानि 5 श्लोके

हस्तौ न पादौ - च ✓

अस्मिन् श्रेयसी पाठ्य पुस्तके विंशतिपाठेषु

पञ्चशः पाठाः (1) जन्तुशाला (2) मूर्खवानर कथा (3) रक्षकः भक्षकात् श्रेष्ठः (4) दशमः त्वम् असि (5) बुद्धिर्यस्य बलम् तस्य - इत्यादयः पुनरावृत्ताः सन्ति नवीन पाठ्य निर्माणे येषां समानाः अन्ये पाठाः ग्रहीतुं शक्याः आसन् ।

यदि पुनर्मुद्रण समये एते उपरि प्रदत्त अंशाः मनसि निधाय कार्यं क्रियते तर्हि बहु सम्मानं प्राप्यते इति मदभिप्रायः

### G3 Visuals :-

(a) Illustration : (1) Quantity (परिमाणः)

अत्र यदि संस्कृत पाठ्यपुस्तकमिदं श्रेयसी प्रथमभाषा स्थाने पाठ्यते चेत् द्वि-त्रि-अधिक पाठान् समायोजितुं शक्यन्ते । अवधयः ( ) 6 भवेयुः । अंकाः 100 भवेयुः ।

(ii) Quality :- (गुणः) उत्तमम् अस्ति ।

(iii) Relevance :- (सम्बन्धः) यथोचितमिति मे मतिः ।

## II Content & Presentation

### C1 As per approved Syllabus :

(a) भाषा प्रबुद्धता - यथोचितं उत्तरोत्तरं संवर्धितं छात्रावगम्यं च प्रस्तुतं अस्ति ।

(b) Core Values :

- (1) प्राचीन सत्परम्परा
- (2) (परिसर) प्रकृति ज्ञानम्
- (3) परस्पर मैत्री भावः
- (4) क्रीडा सहायोगः
- (5) सामान्य ज्ञानम्
- (6) पक्षि विज्ञानम्
- (7) (परिसर) प्रकृति संरक्षणम्
- (8) अतिथि सत्कारः
- (9) अनेके नीतिप्रदाः पाठाः सन्ति ।

अत्र यदि न्यूनात् न्यूनं (Weekly 4 periods) चत्वारः अवधयः दीयन्ते तर्हि पाठयितुं कल्पः न भवति । प्रथम भाषात्वेन पुस्तकमिदं-यदि पाठयं भवति तर्हि न्यूनात् न्यूनं षट् अवधयः (6 periods weekly) एवं द्वि-त्रि अधिक पाठाः अपेक्षिताः भवन्ति ।

पुस्तकमिदं सम्पूर्णं पाठनीयं चेत् प्रथम/तृतीय भाषात्वेन कतरस्मिन् स्थाने इति अयं अंशः प्रथमतः स्पष्टीकर्तव्यः अस्ति ।

यथा-तथा पाठयितुं सर्वथा सर्वदा अवकाशः वर्तते । परन्तु पाठ्य पुस्तके भाषा ध्यापनाय स्पष्ट निर्देशः अपेक्षितः अस्ति समयसारिणी (Time Table) अंकविभाजनम् (Marks Distribution) आधारेणैव पाठनस्य क्रमः अन्वेति ।

## ANALYSIS OF NCERT TEXT BOOKS

संस्कृतधारा - प्रथमोभागः - कक्षा VI  
(मातृभाषा हिन्दी के साथ संयुक्त पाठ्यक्रम, कक्षा 6 के लिए)

(Samskrutha Dhara - A Sanskrit Additional Text book for First languages as Hindi etc..)

पाठ्यपुस्तकमिदं सदुद्देशभरितं, सुयोग्यम्, अतीव छात्रोपयुक्तं च अस्ति । अच्चतर प्राथमिक शालासु प्रथमभाषारूपेण याः भारतीय आधुनिकभाषाः पाठयन्ते प्रायः सर्वासां तासां भाषाणां सहैव इदं संस्कृत पुस्तकं पाठ्यते चेत् तदा व्याकरणज्ञानं (सन्धि-समासादिकम्, पर्याय शब्दानां ज्ञानं-अन्यान्य विषयाश्च ज्ञातुं) भवति ।

सर्वप्रथमं शिक्षामन्त्रालयात् विद्यालयेषु स्पष्टनिर्देशः प्रेषणीयाः । एवं Curriculam & Syllabus इत्यादिषु अन्यान्य प्रथमभाषया सह संस्कृत सह पाठ्यक्रमस्य योजना स्पष्टतया प्रतिपादनीया । तेन ते सर्वे प्राचीनां पद्धतिं त्यक्त्वा संस्कृताध्यापनाय अवकाशं प्रदास्यन्ति सहकरिष्यन्ति च ।

प्रथमा भाषया सह संयुक्तपाठ्यक्रमस्य प्रस्तावे अवधिविभागः (Periods & Marks distributions) अंकविभागाश्च स्पष्टतया - देयाः भवन्ति । तदानीमेव पाठ्यपुस्तकस्यास्य निर्माणे - उद्देश्ये वा सार्थक्यं भवति ।

अस्मिन् पुस्तके दृष्टाः केचन

दोषा :-

- (i) Page 5 last line - संबोधन - ना ✓
- (ii) Page - 39. अंग्लदेशात् = इंग्लैण्ड में - से ✓

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# **IX Standard**

English

Mathematics

Science and Technology

## IX STANDARD ENGLISH

### I. General Aspects

#### G.1 Physical Aspects

- a) **Title Page** : Steps to English, Textbook for Class IX, Edited by Sandhya Rani Sahoo, March 2002.
- b) **Size of the book** : Suitable for handling  
**Type** : Correct, Easily readable
- c) **Quality of the Paper** : Good
- d) **Quality of Printing and binding** : Good  
**Quality of cover page** : A thin sheet of polythene/lamination is *desirable*.  
**Picture on cover page** : The steps lead to nowhere in the present picture. Suggestion: Two or three steps can lead to a *globe* symbolizing the world citizenship.  
**Colour of the Cover Page** : Orange at the bottom slowly fading into dark blue, the globe with green and blue.
- e) **Foreword and note to the teacher** : Brief but succinct
- f) **Getup of the book** : Satisfactory.

#### G.2 Structure of the Book

1. **Indentation** : In some books pages are wrongly arranged from pages 52 to 71.
2. **Unitwise Structure** : Lessons 1, 3, 5, 7 and 9, 11 have poems 1,2,3,4. Communicative tasks I, II, III, IV, V and VI  
Make Units 1,3,5,7,9 and 11  
Lessons 2,4,6,8,10 and 12 are independent units.  
Project I is in Unit 5 and Project II is in Unit 10.  
Abstract : 12 Prose lessons, 6 Poems, 6 Conversation Techniques, 2 Projects
3. **Additional Information** : Introductions are brief and sometimes casual. A few prelesson activities are welcome especially for the lesson – The Gonds.

4. **Sequencing of Units** : Poem VI Ozymandias may be placed before Lesson 11 – Grooming of a Boy.

\*The rationale of sequencing communicative tasks I – VI is not given clearly; tasks I and II are mechanical, no room for imagination. No purpose is achieved by mechanical repetition.

5. **Highlighting of the subtitles** : Well done.

### G.3 Visuals

- a) **Illustrations** : Quality is good, clarity is observed, placed approximately. Lesson 7, Poem-4 and Lesson-12 lack illustration.

Lesson 7 Page No. 72 – a photograph of the main hall of Bank of America, a picture of a dollar may be suitable.

Poem 4 , Page 83 – Sketch of huge waves lashing onto the seashore and rocks and light house with few people may project the idea.

Lesson 12 – Sketches of ideal villages with good farms, cottage industries may be given/ photographs of scientists.

- b) **Diagrams, Tables, etc.** : A few more maps, graphs and tables can be added.

The coverage is good and caters to different levels of learners.

## II. Content and Presentation

### C.1 As per approved syllabus

- i) **Syllabus requirement** : \*There is provision to practice all the four skills.  
\*Deliberate training in listening can be planned through good exercises.

- ii) **Core Values** : Scientific temper, equality, social justice and democratic values.

- iii) **Coverage** : Can be covered in one academic year.

## C.2 Presentation of Content

- i) **Selection** : Prose Section needs better planning in selection. Thematically there is good correlation among the units.  
Lesson 4 : The difficulty level of the skit "If I were you" is high and conceptually morbid and macabre.  
Lesson 7 : "How to borrow money?" – names and their pronunciation may be difficult for the teacher and students. The locale and the scenes may be confusing to the students as they may not understand transactions going on in a foreign bank.
- ii) **Variety** : The variety is maintained.  
Topics on sports can be included along with indigenous knowledge about medicine, art forms and handicrafts. (Autobiography, Travelogue, I person narration, play, Anthropological account, Science and technology, Speech, Biography, Animal accounts, Letter )
- iii) **Language** : American slang is used in Lesson 4 and Lesson 7.
- III. **Evaluation and Exercises** : The exercises are planned thoughtfully and promote reading. The number of questions are adequate. Questions in grammar and usage must be graded properly.  
(Tenses → Reported speech → Active, Passive Voice).  
Grammatical terminology need not be given explicitly.
- Suggestions** :
- A teacher's handbook with details and answer clues will help the teachers who need guidance.
  - The word *Role-play* has to be deleted in all communication tasks and the word 'Dialogue' to be introduced.
  - Project work can succeed communication tasks.
  - More vocabulary activities should be included.

### List of Errors and Suggestions

Page No.	Error	Suggestion
23	First line,. HAS A snake.	Small 'a' should be used.
54	Vocabulary 3.d Sita and Geetha ..... <i>later</i> is a Professor.	<i>Latter</i> should be used.
55	I need a <i>lone</i> of Rs.1000/-	<i>Loan</i> should be used.
80	Exercise III "Bare infinitives" only one example has been given.	A few more examples can be given. Eg. I let him do the work. I saw her leave the house.
82	D. Manas can claim <i>have</i> saved over 20 species.	Manas can claim <i>to have</i> saved....
101	C.4 Why do you blame of me for everything – goes wrong.	Why do you blame me for everything – goes wrong.
118	C(iv) the moon was <i>shinning</i> brightly.	The moon was <i>shining</i> brightly.

### Types of Exercises and Enrichment Questions

Page	Lesson	Observation	Suggestions
5	1	I. Comprehension , A, vii (a), (b) & (c) - Complete the following sentences - All sentences end with because	Other conjunctions like while, wherever, until, etc. can be used.
6	1	Discussion – group or pair work	Individual work to write a report on the activity can be given.
9	1	IV. Writing activities. 2. Write out a dialogue between you and your friend on 'Give your children your love, not your thought'.	a) Dialogue between Siva Subramania Iyer and his wife after Kalam leaves after dinner. b) Dialogue between Abdul Kalam's father and mother – how he convinces her about son's leaving.
18	2	D.1 Class activity (impairs or groups – oral) ,mark out the possible routes.	A photograph depicting the scenic beauty of a hill station with cues to describe it.



Page	Lesson	Observation	Suggestions
31	3	IV. Composition – Instructions are clear. A snake falls into your lap, what will you do ?	Hints should be given, word limited to be given. Twilight – beauty of sunset – cool breeze – lost in nature – Thud – a snake falls into lap – frozen in fear – used presence of mind.
57	5	Step 1 : lacks clarity in direction and mode of operation. Santhals cannot be found everywhere in India.	Without specifying the name, students should be guided to meet tribals in their vicinity. Language skills to be acquired should be specified.
71	6	Composition : Paragraph writing – Description of preparations - Description of scene	Letter writing can be introduced. Letter to friend about preparation to go to moon. Letter to Manager to book a room on Moon.
76	7	Unfamiliar names and situations existing in an American Bank.	Selected information about Indian Stock Exchange, functioning of banks – prepare students for real life situations. Field trip can also be planned.
91	8	D. Discuss in pairs or in Groups. “Straight forwardness and honesty alone will make India Progressive”. Students of class IX may not be able to tackle this.	Instead the topic can be “Co-education solves all our problems?”. Discuss about this – “Universities are the hopes of our national leaders”.
115	10	D. Discussion : Topics are too simple.	Film shows – Born free, African Safari, Jungle Book, Beautiful People and and discussion based on them.

Page	Lesson	Observation	Suggestions
<b>Communicative Tasks :</b>			
61	Task III	Role play is used for dialogue. Face to face – dialogue.	Face to face can be used for writing messages. Clue-  <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: right;"><b>15.9.02</b></p> <p><b>Dear Mother,</b></p> <p><b>Dr Jha .....</b></p> <p><b>.....</b></p> <p style="text-align: right;"><b>Rasi</b></p> </div>

**Supplementary Reader  
A Mosaic of Life.**

**Content and Presentation**

All the stories selected are good and appealing to students of class IX.

**Suggestions :**

- The comprehension questions can have word limit of 30-40 words for answers.
- One or two long questions with 100-120 word limit answers could be given for each lesson.

Page	Observation	Suggestions
44	Jonhsy's (spelling)	Johnsy's
50	Nothing does irritate	nothing <i>that</i> does irritate
51	10.5 pm	10.50 pm.

**Workbook for class IX  
Steps to English – Sandhyarani Sahoo**

Page	Observation	Suggestions												
1	Grammar and usage, Passive Voice, Worksheet 1	1. A situation to illustrate the use of passive voice should precede the worksheet (News headlines, Report, etc). 2. A situational context is preferable to individual sentences to practice passive voice usage.												
2	(vii) Elections to the Lok Sabha (hold) after every five years.	<i>After</i> can be deleted as every shows regular habitual programme – after denotes consecutive action only.												
3	<i>How helmets came to be used in cricket.</i> A negative and gloomy picture of an accident in cricket field.	Give a positive and cheerful situation – Kapil Dev, Sachin or U. Anand.												
4. Vocabulary Exercise 1														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">Rain</td> <td style="text-align: center;">Papers</td> </tr> <tr> <td style="text-align: center;">News</td> <td style="text-align: center;">Bringing</td> </tr> <tr> <td style="text-align: center;">Up</td> <td style="text-align: center;">Hood</td> </tr> <tr> <td style="text-align: center;">Child</td> <td style="text-align: center;">Forest</td> </tr> <tr> <td style="text-align: center;">Some</td> <td style="text-align: center;">Thing</td> </tr> </table>	A	B	Rain	Papers	News	Bringing	Up	Hood	Child	Forest	Some	Thing	Phrases/ Compound words should not be practiced by splitting them.
A	B													
Rain	Papers													
News	Bringing													
Up	Hood													
Child	Forest													
Some	Thing													
9	Worksheet 2 : Excellent worksheet.													

Page	Observation	Suggestions
15	Worksheet 3 : Reporting the given dialogue. Instructions are not adequate. Who should report it to whom? Is the whole dialogue to be reported to third person by Anil or Mohan ?	The beginning narration should be given. Eg. Anil asked Mohan ----- OR Rubrics should be given, you heard a dialogue between Anil and Mohan, report it to another friend. A few more exercises are required.
20	Composition : You went by ship to Lakshadweep with your friends. A storm drifted your ship....	Instead of <i>you</i> , the name of a person for e.g. Rakesh can be used in the rubric. Now write your experiences as Rakesh in about 100-120 words. Students find it easier to view events.
21	Comprehension and Composition Sample Unit Test – 1	Vocabulary items should be a part of testing comprehension.
29	Worksheet-4: Write a paragraph on yourself. This is based on simple past tense and present perfect tense.	It should be shifted to worksheet 2 after paragraph writing – Chilka lake.
40	Worksheet 5 Grammar and usage Simple past tense and past continuous tense.	Tables and flow charts could be given for vocabulary.
43	Worksheet 6 – Must, mustn't, should, shouldn't 4 – Use words underlined as verb and noun.	The objective of this Exercise is not clear as this exercise is on <i>Modals</i> / delete it from the worksheet. More exercises based on all modals needed.
56	Worksheet 7 Newspaper report You attended the seminar as a newspaper reporter.	Proper noun should be used in the place of II person pronoun. Mahipal Reddy attended ..... Imagine you are Mahipal Reddy and draft a report.
77	Question (xvi) I ----- (learn)_ Computer science these <i>day</i> .	I ----- (learn) computer science these <i>days</i> .
80	Combine the pairs of sentences using the linkers. Rakhee was determined to meet her commitment. She worked day and night.	Adverb clause of result "so that" does not suit the sentence, instead of <i>so that</i> "so.....that" (adverbial clause of purpose) suits. Rakhee was so determined to meet her commitment that she worked day and night.
83	Comprehension : Passage on Bhitarkanika with comprehension questions.	A table format may be given and name of any sanctuary mentioned in the first column. Then students can fill in details about flora, fauna etc. in other columns.

Page	Observation	Suggestions
90	Formal letter Worksheet 11: Addressee (wrong spelling)	Addressee
90	----- (Your signature) (R C Dey)	Students get confused. So modify the rubrics to suit the signature.
51	Worksheet 7 : Grammar and usage 'to' infinitive.	The difference between 'to infinitives and 'bare infinitives' should be given in practice exercises. This unit, could include 'Gerunds', 'participles' and their usage.
76-77	Sample Unit Test – 3 Questions on Transformation of sentences is given.	Transformation of sentences in more detail must be given in Worksheet 9.

## IX STANDARD MATHEMATICS

### Chapter 1 : Irrational Numbers

Can be divided into two chapters

1. Real Numbers
2. Surds

More number of questions where all the properties of Surds are used should be included. The chapter on Surds from previous class IX textbook can be taken as it is.

### Chapter 2 : Polynomials

Separate exercise for Division of polynomials should be included.

### Chapter 3 : Ratio and Proportion

Page No.44 – Under composition of ratios, the meaning of compounded ratio is not clear. Some more examples can be given.

Under the heading 'Note' correct as

“Since  $\frac{a}{b}$  is not equal to  $\frac{b}{a}$  .....

Same page, last but one line 'Note Example' should be deleted.

Page 51, relation 5, last step should be corrected as  $\frac{a + b}{a - b} = \frac{c + d}{c - d}$ .

Page 54, question 10(i) should be corrected as  $\frac{2a + 3c + 4e}{2b + 3d + 4f}$ . 10(iii) should be

corrected as  $\frac{5a - c - 2e}{5b - d - 2f}$ .

Page 55, question 14 – lines separating numerator and denominator missing.

### Chapter 7: Banking

Page 116, Question 4 – The first entry in the first column should be corrected as 1.10.94.

### Chapter 8: Lines, Angles and Triangles

Lengthy review of lines and angles not required. Too much of explanations can be avoided.

## Chapter 14 : Geometrical Constructions

Page 227, 14.1 – 2<sup>nd</sup> paragraph, 4<sup>th</sup> line – correct as “In a geometrical construction, the only two instruments used are graduated ruler and compasses”.

Fig. 14.2 – Page 228, the perpendicular bisector of CD is missing.

Some questions on concurrent lines in a triangle (median, altitude, etc) can be included in constructions.

## Chapter 15 : Trigonometry

Page 253, Question No. 4(ii) should be corrected as  $\sin A = \sqrt{\frac{1 - \cos 2A}{2}}$ .

## Chapter 16 : Mensuration of Plane Figures

Some more questions involving all the formulae can be added.

## Chapter 17 : Mensuration of Solid Figures

After review of solid figures like cube, cuboid, right circular cylinder, etc., the topic right prism and pyramids should be introduced. Tetrahedron and octahedron should be deleted.

Euler's formula can be given and the verification can be done using a table.

## Chapter 18 : Statistics

Page 298, last paragraph, 2<sup>nd</sup> line – to be corrected as ‘Class size or Class width’.

Page 321, 18.8 (i) to be written as ‘Mean of raw data or ungrouped data’.

Page 323, 18.8 (ii) to be corrected as ‘Mean of grouped data’.

**General Comment:** The syllabus is very heavy. Cannot be done properly within the prescribed time.

## IX STANDARD: SCIENCE AND TECHNOLOGY

### General Observations

- The text book is in accordance with the syllabus requirement.
- The text book covers a vast area of study in greater detail and hence coverage of portions may be difficult.
- The nature of science/ scientific method could have been emphasized further.
- Content seem to be a little heavy for a general science course at secondary level.
- Overall presentation satisfactory.
- A few factual or conceptual errors are noticed in some of the sections which need modification / deletion.
- The syllabus of each chapter could have been given at the beginning of each chapter.
- Listing of learning outcomes at the end of each chapter is useful.
- Diagrams, picture, photographs in general are good except a few to be eliminated or modified.
- Self learning activities provided are very few.
- Investigator projects have not found a place in the text.
- The load of numerical problems is rather heavy.
- Evaluation exercises are appropriate
- In a few areas questions are found repeated. Example Page 171 Q.2 in box and Page 180 Q.No.1 and 2 Page 166 Q.No.1 and Page 169 Q.No.1
- In chapter 7,8,9,10,11 and 12 there are 17 faces of human beings and all are of males. The gender concerns have not been taken care of here. However a fair treatment is given while giving exercises / numericals.
- In several chapters the questions given in the unit and exercises are too long. It will be a test of English comprehension rather than testing of science concepts. For example item 12 in page 104, item 15 in page 126, items 2,7 and 8 in page 88, items in page 116 and 117.
- In several chapters questions given in the exercises are too long.
- Some questions lack clarity
- Some thought provoking questions could have been provided to enhance quality.
- Enrichment exercises are either absent or not to the expected level,.
- Over all structure of the book is satisfactory.
- The biographies of scientists and additional information given in boxes, is interesting, useful and attractive.
- The Philosophical premise of scientific and technological literacy is not explained anywhere in the book as this information is essential for the teachers.
- The general aspects like size, quality of paper letter size, get up of the book-satisfactory. Binding needs to be done properly.



## Chapter 2: Nature of Matter

Page No	Reference	Suggestions/Comments/Modifications
12	2.2-discussion on physical and chemical changes.	Not very appropriate under the title-Elements compound and mixture.
13	Substance-definition	Definition is to be verified. One paragraph description on substance is rather unnecessary.
13	2.2 (I-column) Iron Oxide (rust)  II column 1 <sup>st</sup> line cleaned  8 <sup>th</sup> line	Ferric oxide (or) Iron III oxide.  This word is not needed.  After science, <u>a</u> is required.
15	<p style="border: 1px solid black; display: inline-block; padding: 2px;">Above the flow-chart</p> Fig 2.4-summarises the classification of matter basically based----- <p style="border: 1px solid black; display: inline-block; padding: 2px;">Below the flow-chart</p> Fig 2.4-Relationship among elements-----	Same explanation can be given.  Flow-chart itself is not correct.
16	2.3.1.....'Sharabat' and iodine.....        Solid Solutions.	Usage of salt under every heading is in appropriate.  Continuously explained. Instead may be numbered to avoid confusion. (1) Sharabat (2) I <sub>2</sub> is alcohol.  Is this needed?
2.3.1	In otherwords it will have same number of sugar and water molecules per unit volume.	This is incorrect. How can the number of water molecules be same as the no. of sugar molecules per unit volume?
16	Advantages of preparing solution.	The title seems to be misleading. The whole paragraph may be deleted.

Page No	Reference	Suggestions/Comments/ Modifications
2.3.2	Concentration of solution.	Unnecessary statements can be avoided. Just the quantitative, definition of concentration is sufficient deleting the paragraph.
17	In a saturated solution dissolved and undissolved solutes are in equilibrium.	There is sudden introduction of equilibrium.
27	Q.No.7	This question may be deleted.
<ul style="list-style-type: none"> <li>This whole chapter need to be rewritten avoiding discussion on solution, colloids, suspension. Treatment can only be on Elements, Compounds and mixtures, and the Laws of chemical combinations. The rest of the things can be deleted.</li> </ul>		
<b>Chapter 3: Structure of Atom</b>		
30	Fig 3.1	Labelling A and B, F and E to be reversed.
32	Question No.5	This question may be deleted as it is not objective base.
33	3.3 2 <sup>nd</sup> Paragraph Many scientists----- ----- -----	May be deleted upto X-rays (3 <sup>rd</sup> line from the bottom) due to lack of clarity and as there is no proper sequence.
35	Fig 3.8	Different colors of representation of atom and electrons may be avoided.
39	Tab 3.1	The column- "arrangement of electrons in shells" is not needed; as it is the explanation of the next column in words.
43	Fig 3.12 3.13	Proper diagrams may be given.
<b>Chapter 4: Classification of Elements</b>		
48	'Inverted' 5 <sup>th</sup> line (I-column)	This word shows be replaced by "reversal".

Page No	Reference	Suggestions/Comments/ Modifications
<b>Chapter 5: Chemical Bonding</b>		
58,59	Section 5.3 Dot representation of chlorine etc.	≡ symbol must be replaced by 'or' otherwise this may lead to the confusion of triple bond representation.
60	Exercise	This question may be worded as "Why do atoms combine?"
<b>Chapter 7: Motion</b>		
Page 73	Fig 7.1  Negative acceleration	The photograph given could have had better quality.  What is negative acceleration?
<b>Chapter 9: Gravitation</b>		
105	'The force of gravitation----- ----- -----	This sentence requires modification.
103	Evaluation items.	Some of the evaluation items are vague and lack clarity eg: item No.1
<b>Chapter 10: Work, Energy and Power</b>		
123	10.51 Sub-title	This is not appropriate. While giving titles a small aberration is observed. There is an exclamation mark against the title exercises in most of the chapters. In some it is missing.
<b>Chapter 11: Heat</b>		
134	Fig 11.7	This fig is not correct. The temperature of ice should not increase between 0° C and 4°C.

Page No	Reference	Suggestions/Comments/ Modifications
136	Fig 11.9	Liquid is not shown to have a surface.
138	3 <sup>rd</sup> point in blue is written as "Heat is through as-----"	It should have been "Heat is thought as -----" -----
143	Transverse Waves.	The definition is not generalizable for all kinds of transverse waves (eg.light)

### Chapter 13 : Cells and Cell Structure

Page No.	Text Ref.		Suggestion/Modification
155	Fig 13.2(A)	Labelling. Diagram not clear. Cell membrane & Nuclear membrane not clear.	Diagram needs modification
156	Fig 13.2(B)	Centro some not drawn (Animal cell). & labelled.	To be re drawn
157	Fig 13.4	Diagram not clear	
159	Fig 13.5	Title of the diagram Bacteria	Spelling to be corrected as Bacterium.
160.	13.6	Mitosis	Dark back ground not needed.
160.	13.7	Mitosis labelled Diagrammatic view	Size of the diagram to be increased.
	13.7	Metaphase (d)	Horizontal line around the metaphase plate to be deleted.
161	Table 13.3	Differences between Mitosis & Meiosis.	6 <sup>th</sup> box sentence to be modified. Chromosomes of the new cell will have the exchanged segments of the homologous chromosome, hence gene variation occurs.
161	14 <sup>th</sup> line	Chromosomes cross over	To be modified as homologous chromosomes.

Page No.		Reference	Suggestion/Comments/ Modifications
162	Exercises Q.N.2 Q.9  Q.16	Words." Describe and". Sub(a) become distinct chromosomes.  Questions.	To be deleted. To be written as chromatin visible as distinct chromosomes Question be modified as 'Describe the ultra structure of the cell.
162	Q.No.17	Question very vague	To be deleted.
158	13.2.3	Lysosomes 10 <sup>th</sup> line	To be modified as digestive organelle instead of ultra cellular digestive system .
162	Q.No.6	Digestive bags.	Replace the digestive bags by suicide bags.

#### Chapter 14: Tissues in Plants and Animals

Question given in the exercise are too simple. They are not thought provoking. Some more Questions can be given.

#### Chapter 15: Diversity in the Living world

Page No	Reference	Suggestions/Comments/ Modifications
Page No.176	Phylum Hemichordata	Modify the word as subphylum Hemichordata
Page No. 180 & 171 Page 172	Q.No.1,2 and the Q.No 2 in box respectively Fig 15.1 Thallophyta- algae	Questions repeated & may be altered Diagrams of familiar algae could have been provided instead of ulothrix, ulra & cladophora
Page 178 Page 179 Page 179 Page 179	(iv) Class amphibia (v) Class reptilia (vi) Class aves (v) Class mammalia	Additional information to be given:- Mention of Reproduction as a characteristic feature could have been given as it is given in the earlier groups.
Page 177 2 <sup>nd</sup> paragraph	Chordatas are divided into three subphyla urochordata, caphalo chordata and vertebrata. The first two subphyla.....	
		Modification may be as chordates are divided into 4 subphyla-Hemi chordata, uro chordata cephalochordata and vertebrata. The first three subphyla.....

Page No	Reference	Suggestions/Comments/Modifications
Chapter 13 Page 169	Q.No.1 and Q.No.11	Comments Q.No.1 and Q.No.11 are repeated as they are already given in box in page 167 and 168 and hence may be changed.

### Chapter 16: Food, Nutrition and Health

Page No.183	Table.16.1 Energy requirements varies with weight age and occupation	Table provided is incompletely filled in, hence it needs to be verified.
Page 185	16.4.2. Protein Proteins are made up of smaller units called amino acids.	Additional sentence may be provided. The elements in proteins are carbon hydrogen oxygen nitrogen and sulphur.
Page 186 7 <sup>th</sup> line	Fat gives 9.3k cal.	Modification suggested fat gives 9.3 k.cal (37 KJ)
Page 187	Table 16.5 Functions (last column) 3 <sup>rd</sup> sentence & 12 sentence.	Examples for cation to be provided within brackets.
Page 191	Right side-first sentence.	Suggested Modification for the sentence ultra violet radiations have also been used to destroy many micro organisms present in water supplies.

### Chapter 17: Human Diseases

194	Fig 17.1	Different stages of Malaria	Not proper. Arrow marks not needed. Diagram may be deleted.
195	7 <sup>th</sup> line Left column	Usage of insect repellents	Not advisable, as some people are allergic. Such advises to be avoided.
196	Fig 17.2 17.4 T.B.	Diagram Dog bite Tuberculosis.	Not needed Needs correction.
197	Fig 17.5	Typical Fever pattern	Needs correction No of days not mentioned.

Page No.		Reference	Suggestions/Comments/ Modifications
197	Fig 17.6 L.C	Pulmonary Tuberculosis.	To be deleted. It is irrelevant.
197	Fig 19.7	Vibrio cholerae.	Diagram looks like a balloon rather than bacterium.
200	Fig 17.12	A child suffering from kwashiorkor	A photograph is preferred no purpose is served by the poor diagram.
201	17.2.5	Xerophthalmia- symptoms	Sentences to be reorganized. Permanent blindness to come at the end.
201	17.2.6	Rickets-under vitamin deficiency disease.	It should come under Vitamin and mineral deficiency disease. Role of phosphorous not mentioned.
202	17.2.8 17.15	Pellagra B4 or B5 Symptoms of pellagra	To be verified. To be deleted.
202	Act 2	Table	The table does not specify the age group. Age group to be included.
203	Exercises	Too simple. Thought provoking Questions are needed Framing of questions needs modification.	
<b>Chapter 18: Natural Resources</b>			
Page No-204 Fig-18.2			Green house effect- not represented properly. This may be illustrated with picture of green house and then relate it to the effect in the environment.  Logical thinking and creativity can be given scope in the chapter.
Table 18.1		Power generation in India.	Places of the plants may be either mentioned or students can be given scope to identify them.

Page No.	Reference	Suggestions/Comments/ Modifications
	Pictures are not given	Some pictures of these plants can be given to support the sources of energy (Solar cells, biogas plants, wind, will, etc).
Page No.208	Questions-direct questions are asked.	Creative questions, problem solving situations and decision making situations may be given as part of the evaluation.
<b>Chapter 19: Coal and Petroleum</b>		
Page No. 212	Fig 19.2- Petroleum refining	Diagram is not clear it may be drawn clearly [Fractionating tower should be clearly shown]
Page No.132	Oscillatory motion-definition is not properly given.	When an object moves to and fro about its mean position. Periodically and repeatedly its motion its called oscillatory motion.
		Oscillatory motion need not be periodic motion.
Page No 134.	Answer these (ii) When you hold a bucketful of water, the bucket ----- your hand (pushes/pulls)	Question is wrongly stated This may be corrected or discarded.

### Chapter 20: Food Resources-Crop production

221	20.1 10 <sup>TH</sup> Line L.C.	Butter-Animals produce	It is a product not a produce.
223	20.2.2	Fertilizers	Harmful effects in plant not mentioned. This should be added.
225	Fig 20.1& 20.2	Pictures /Photos	Not clear. To be discarded.
236	Fig 21.1	Picture-ground nut & sun flower. Inter cropping Exercises. Page 229 Q.1 and Q.7 may be simplified.	Groundnut plants not seen. Picture to be discarded.



# **XI Standard**

English

Physics

Chemistry

Mathematics

Biology

Geography

Accountancy and Business Studies

## XI STANDARD ENGLISH

### I. General Aspects :

#### G.1 Physical Aspects :

- a) **Title Page** : English with a purpose.  
Textbook for Class XI (Core Course).  
Edited by Sandhya Rani Sahoo and V K Bajpai  
Year of Publication : July 2002
- b) **Size of the book** : Handy, convenient to carry and handle.  
**Type** : Good, suitable for 16+ age group.
- c) **Quality of the Paper** : Good
- d) **Quality of Printing and binding** : Good
- e) **Foreword** : Clearly outlines the objectives of teaching English at +2.
- f) **Note to the Teacher** : Introduces the features of the book and guides teachers as to the utilization of the book.
- g) **Getup of the book** : Satisfactory.

#### G.2 Structure of the Book:

1. **Indentation** : Uniform and continuous throughout the book.
2. **Unitwise Structure** : There are 10 lessons in the book.  
Lessons 1,3,5,7 and 9 form 5 units.  
Each unit has a poem and a conversation technique attached to the lesson.  
Lessons 2,4,6,8 and 10 exist as individual units.  
Project 1 – Our Composite Culture  
Project 2 – Evolution of the Communication System  
are attached to Unit 5 and 9 respectively.
- Abstract – 10 lessons, 5 poems, 5 conversation techniques, 2 projects
3. **Additional Information** : Each lesson has the information about the author suffixed.  
Each poem has a prologue prefixed.

4. **Sequencing of Units** : Unit 3 should have become Unit 1.  
The conversation techniques introduced in Unit 1,3,5,7 and 9 do not have anything common with the content presented in the Lesson and the Poem.  
Conversation techniques should be an extension of lesson content.  
The Projects 1 and 2 are properly sequenced and are relevant to the content presented in the preceding lessons.
5. **Highlighting of the subtitles** : Good.
- G.3 **Visuals**
- a) **Illustrations** : Good, relevant, appropriately positioned. Of the 31 illustrations 19□ 6□ and 6 neutral.
- b) **Diagrams, Tables, etc.** : Good and relevant
- II. **Content and Presentation:**
- C.1 **As per approved syllabus**
- i) **Syllabus requirement** : \*There is provision to practice all the four skills.  
\*However there is more stress on Reading and Writing.
- ii) **Core Values** : These values are reflected in the content.
- iii) **Coverage** : Can be covered in one academic year.
- C.2 **Presentation of Content:**
- i) **Selection** : Of the 10 lessons, 1,3,10 Indian English and 2,8 – British English and 4,6,7,9 American English, 5 – from Holy Bible.  
Of the 5 poems – 2 – Indian English, 1,3,5 – British English and 4 – American English.  
**More Indo Anglican write-ups could have been used.**
- ii) **Variety** : (well represented in lessons).  
As speech, letter, narration of personal experience, humorous essay, philosophical sermon, story, travelogue, play, scientific information and biography.  
In poems – lyric, ballad, satire, irony, narrative poem.

iii) **Language** : Difficulty level of language is high in Lesson 1.  
Except – The portrait of a lady and the other side.  
Other lessons are dull and boring.

III. **Evaluation and Exercises** :

- Very well planned exercises comprising of Reading, Discussion, Words and Usage and Writing skills.
- Especially the writing skills are well planned and almost all the writing skills evaluated at the end of +2 are introduced here itself.
- The conversation techniques help in developing oral, aural skills.
- The item **Discussion** is very effectively planned.
- The projects are well planned.

**But Project 2 – Evolution of the Communication System is difficult for students of Commerce and Humanities Stream.**

## XI STANDARD ENGLISH WORKBOOK

### I. General Aspects :

#### G.1 Physical Aspects :

- a) **Title Page** : Working with English (Core Course) J P Kaushal, July 2002.
- b) **Size of the book** : Handy, convenient to carry and handle.  
**Type** : Good, suitable for 16+ age group.
- c) **Quality of the Paper** : Good
- d) **Quality of Printing and binding** : Good
- e) **Foreword** : Clearly outlines the objectives of practicing higher order Reading and Writing Skills.
- f) **Note to the Teacher** : Clear, unambiguous guidelines to classroom teachers.
- g) **Getup of the book** : Satisfactory.

#### G.2 Structure of the Book:

- 1. **Indentation** : Maintained
- 2. **Unitwise Structure** : Unit I : Phonetics – 4 worksheets  
Unit II : Tenses – 9  
Unit III : Determiners – 7  
Unit IV : Reading Comprehension - 5  
Unit V : Paragraph Writing – 4  
Unit VI: Making notes, writing summaries – 2  
Unit VII : Writing letters, Applications – 2  
Each unit has 2-9 worksheets.
- 3. **Additional Information** : Each worksheet has the relevant theory preceding it.
- 4. **Sequencing of Units** : Sequencing is properly done.

5. **Highlighting of the subtitles** : Well done.

G.3 **Visuals**

a) **Illustrations** : None

b) **Diagrams, Tables, etc.** : Adequate

II. **Content and Presentation:**

C.1 **As per approved syllabus**

i) **Syllabus requirement** : Not adequately covered.  
\* The Reader presents  
- Vocabulary, dictionary usage, suffixes, infinitive, prefixes, word formation, synonyms, compound words and collocation - for which there are no worksheets offered in the workbook.  
- the writing skills presented are :  
speech making, diary entry, paragraph writing, reporting, writing a short story, dialogue writing – for which there are no corresponding worksheets.

ii) **Coverage** : Can be profitably used to practice –  
1. Note making and summarizing  
2. Letter Writing  
3. Reading Comprehension  
4. Tenses  
5. Determiners

**Types of Exercises and Enrichment Questions**

Page	Observation	Suggestions
2	Unit I, Worksheet 1. The Sonnets of English 1. Pick out the word in which the underlined part is pronounced differently. Eg. <i>Attention</i> , <i>Question</i> , <i>digestion</i> , <i>combustion</i> . The answer given is <i>attention</i> .	<i>Digestion</i> is also pronounced as <i>attention</i> and not as <i>question</i> . This makes the student conscious of spelling and not sound.
	Another group of words is <i>question</i> , <i>digestion</i> , <i>exhaustion</i> , <i>conduction</i> . Which is the odd man out ?	Different sets of words may be given.
6	Worksheet 2 Please remember that different dictionaries use slightly different symbols to show some of the vowels.	What can a student do ? It is better to give a list of symbols (standardized).

Page	Observation	Suggestions																																				
13-33	Unit – II dealing with Tenses. Very well done																																					
36	Unit - III Determiners Usage of All, every, each with diagrams is very effectively and clearly presented.																																					
44	Unit III Determiners - Worksheet 5 The table showing the preferred order of determiners is as follows:	<p>This confuses the students as they tend to connect the words horizontally and end up reading - an handsome tall white silk woman in the <i>absence of proper rubrics.</i></p> <p>If the horizontal lines are removed with the five words in each box,</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table> <p>they will connect the words in a right order.</p>																																				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Deter- miner</th> <th>Feeling</th> <th>Size, shape, etc.</th> <th>Colours</th> <th>Noun, Gerund</th> <th>Noun</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Beautiful</td> <td>Little</td> <td>Red</td> <td>Indian</td> <td>Doctor</td> </tr> <tr> <td>An</td> <td>Handsome</td> <td>Tall</td> <td>White</td> <td>Silk</td> <td>Woman</td> </tr> <tr> <td>The</td> <td>Nice</td> <td>Round</td> <td>Yellow</td> <td>Wooden</td> <td>Table</td> </tr> <tr> <td>This</td> <td>Ugly</td> <td>Old</td> <td>Light</td> <td>Steel</td> <td>Saree</td> </tr> <tr> <td>That</td> <td>Lazy</td> <td>Young</td> <td>Dark</td> <td>Cotton</td> <td>chair</td> </tr> </tbody> </table>		Deter- miner	Feeling	Size, shape, etc.	Colours	Noun, Gerund	Noun	A	Beautiful	Little	Red	Indian	Doctor	An	Handsome	Tall	White	Silk	Woman	The	Nice	Round	Yellow	Wooden	Table	This	Ugly	Old	Light	Steel	Saree	That	Lazy	Young	Dark	Cotton	chair
Deter- miner	Feeling		Size, shape, etc.	Colours	Noun, Gerund	Noun																																
A	Beautiful		Little	Red	Indian	Doctor																																
An	Handsome	Tall	White	Silk	Woman																																	
The	Nice	Round	Yellow	Wooden	Table																																	
This	Ugly	Old	Light	Steel	Saree																																	
That	Lazy	Young	Dark	Cotton	chair																																	
45	Work sheet 6 – Comparison of qualities is well done. Diagrams enhance conceptualization.																																					
52-67	Unit IV : <i>Reading Comprehension</i> Worksheets 1,2,3 do not have questions on vocabulary.	Worksheet 5 : Providing a logical end should have had some clues to complete the passage.																																				

## XI STANDARD PHYSICS

### General Observations

#### Plus Points

- General getup is attractive.
- Size of letter and space within the line is good.
- Use of two colours makes it readable.
- Print and paper is good.
- Diagrams are generally nice.
- Biography of scientists is welcome. So are box items.
- Display of Tables is nice.
- Answers do not follow exercise questions.
- Appendix gives useful information.
- Bibliography is given.
- Science related values a welcome addition.
- Points to ponder section initiates thought action.

#### Points that need Attention

- Binding needs improvement.
- Writing Team/Review Team should be in 8 points. Names should not be repeated as Rashmi Bargoti as Page X.
- Worked examples and their answers should be in same colour to avoid confusion.
- Additional exercise should have hints.
- Proof should be read by other than those involved in write up/review.
- Two colours in figures are unwarranted at many places.
- Points to ponder should pose questions.
- Like many American books more sketches with persons in action can be involved/ incorporated.
- At many places technical words have been introduced without defining them.
- At places where recast is written continuity of thought lacks.
- When discussing a phenomenon writers have forgotten the understanding level of the students.
- Book lacks general nature of textbook that it should have varied readership and not some well-known schools of Metros. Hence at least 10% of the material from the text should have gone to "more information about the phenomenon" etc. For example, item 5.12, 7.5, 7.7 8.4, 11.5, 12.12, 14.11, part of 9.5.1.
- Some explanations within the articles could have gone as footnote in 8 points which are of advanced nature like p.262, 2<sup>nd</sup> column, 2<sup>nd</sup> para, p.258, 2<sup>nd</sup> para, etc.
- Some points have been partially correct p.305 first para.



- All total burden on average student could have been reduced by 20% and number of pages by 10%.
- Some English words have been used which are uncommon like those pointed out in Chapter 5.
- Subject index should be there.

## Chapter 1 : Physical World

Ref. to Text	Suggestions/Modifications
P. 2-4	Some unfamiliar technical terms like falsification, conjecture, entropy, encapsulation etc. may be replaced by simple familiar ones.
P.5	Include the year of contribution in Table 1.1.
P.8	Sections 1.4.3 and 1.4.4 may be clubbed together and presented in simpler form. A beginner cannot make out any meaning out of these two sections. Table 1.3 is enough.
P.11-13	Section 1.5 is too exhaustive. The vocabulary used is unfamiliar to the students. This section can be included under respective chapters. A mere mention of conserved quantities in 1-2 paras or in a tabular form is enough. Abstract terms like parity, strangeness, baryon no. can be postponed to 12 <sup>th</sup> Std.

## Chapter 2 : Units and Measurement

Box items containing data are not bold enough to make out positive or negative powers. Everything else is alright.

## Chapter 3 : Motion in a straight line

Ref. to Text	Suggestions/Modifications
P.43, Sec. 3.2	The 'direction' of 'displacement' to be emphasized. In the expression $t_2 > t_1$ , $t_2$ is a later instant of time than $t_1$ .
P.44 Fig. 3.2 (b)	Show some typical values of $x$ and $t$ on the respective axes.
P.44 Sec. 3.3	Numerical calculation of $\bar{v}$ over different time intervals may be worked out to show that $\bar{v} = \text{constant}$ .

Ref. to Text	Suggestions/Modifications
P.44 3.3	Fig. The figure can be reproduced on an 'actual' non-graph sheet, with some typical values of $x$ and $t$ . A 'free hand' diagram like this will not clarify the discussions made on this figure in the following Sections. Same comment applies to Fig. 3.4 (p.45) and Fig. 3.6 (P.46).
P.45 3.4	Fig. Point $p_1$ on the figure is missing.
P.50 3.11(a)	Eqns 'Box' or 'colour' all the equations of this set.
P.51 Ex.3.3	Before discussing the solution, it is worthwhile to introduce the sign conventions useful for solving such problems.
P.56 Summary Point 11	Include set of kinematic equations for uniform deceleration, freefall for comparison and as a guidance to solve numerical problems.

#### Chapter 4 : Motion in a Plane

P.64	First para fifth line remove comma before <i>only</i> .
P.65	Second para sixth line write over <i>the</i> letter not over <i>a</i> letter. Eighth line write $ v  = v$ not $v$ . Bold face $OP$ , $OP'$ , $PQ$ etc. should be replaced.
P.72	In text fig. 4.12(b) etc. whenever come should be written in brackets if not followed by in or see etc.
P.73	Fig. 4.13 should be redrawn.
P.76	Fig. 4.18 (d) is showing a by $\uparrow$ appropriate make shoot arrow.
P.77	At $t = 3.05$ , ... its magnitude is $v$ and not $-v$ .
P.81	Concept of acceleration acting towards the center as brought out in p.81 second column may be replaced by older version text. Because its 4 <sup>th</sup> line cannot be explained if read with p.77 first para, note that .....

Ref. to Text	Suggestions/Modifications
P.82	<p>Second para 5<sup>th</sup> Line "A thorough analysis .....center seeking" may be written as footnote with 8-point font because it is not a text material.</p> <p>Do not use R till equation 4.57 in other expressions with r only.</p> <p>Last para 6<sup>th</sup> line : Write angular displacement not distance so also in 8<sup>th</sup> line.</p> <p>See that <math>v^2/R</math> should be written together – 2<sup>nd</sup> line after 4.57.</p>
P.83	<p>Point 10, 3<sup>rd</sup> line <math>A =  A  = \dots</math> should be in the same line as earlier part.</p> <p>Point 12, 3<sup>rd</sup> line- Remove depending upon the value of <math>\theta</math>.</p>
P.87	<p>Point 7 should be deleted.</p> <p>Fig.4.23 line PBQ must also be blue. Include mark C with extreme right blue line.</p>

#### Chapter 5 : Laws of Motion

P.92	3 <sup>rd</sup> Para, last line should not be highlighted as it is a wrong statement.
P.92	Fig. 5.1 should be mentioned in the text.
P.95	1 <sup>st</sup> paragraph. It should be mentioned that it is the reaction to the frictional force which accelerates the car as a whole.
P.95	In many places bracket, exclamation mark etc. are replaced by question mark, which creates unnecessary confusion.
P.97	$F = k ma$ and $k = 1$ . It is to be mentioned reasonably on what basis, k is taken as 1.
P.98	Example 5.2. It is not mentioned which are the equations used in solving the problem (same is the case with eg. 5.3 also).
P.100	Example 5.4, in the solution, it is given. $(P_x)^{f_{\text{mal}}} = \mu \cos 30$ . It should be $(P_x)^{f_{\text{mal}}} = -\mu \cos 30^\circ$ . In the same example, the figure should be mentioned in the question itself.

Ref. to Text	Suggestions/Modifications
P.103	Since the figure 5.9 is not mentioned in the text, it should be properly placed within the respective text.
P. 108	1 <sup>st</sup> para. The symbol for acceleration, more familiar symbol like 'a' can be used instead of using 'α'.
P.109	Explanation of fig. 5.15. It should be corrected as "Newton's 1 <sup>st</sup> Law is valid in S and S' but not in S". S and S' are inertial observers while S" is non-inertial.
P. 109	Right hand side column, second para, the explanation is not given as footnote, even though the asterisk symbol is shown at the 1 <sup>st</sup> line.

### Chapter 6 : Work, Power and Energy

P. 123	2 <sup>nd</sup> line after equation 6.3 work depends on the not refers to the Remove "Work is done---- a certain displacement"
P. 125	Remove Example 6.4 along with answer. It is not logical.
P. 127	Article 6.7 5 <sup>th</sup> line transition to the sentence The earth's crust is ..... Fault line readjust. May be before this sentence one may write "Let us see how earth quake result due to changes in potential energy etc".
P. 128	Fig 6.4 shaded square may be removed, no arrow to horizontal axis. The order of equations 6.11 should be $E_0 =$ , $E_h =$ and $E_M =$ .....
P. 129	Second column remove $T_A - mg = \frac{mv_0^2}{L}$ where $T_A$ is the tension in the string at A.
P. 137	It follows that .....second line better to be substantiated with how?

### Chapter 7 : System of particles and rotational motion

Ref. To Text	Suggestions/Modifications	Remarks
P. 150	Para 1 line 4- Algebraic sum should be replaced by vector sum.	Forces are vectors.

Page No.	Reference	Remarks
P. 151	(a) Fig. 7.3 ,7.4(a) and 7.4(b) may be replaced by simpler examples. (b) The center of gravity may be defined in a simpler way. E.g. the point through which the resultant weight the body passes. (c) There is no mention of center of gravity in the curriculum, only center of mass has been mentioned in the text Book C.M. has not been highlighted.	Too complicated.

P. 154 Art 7.4 velocity vector is mentioned but not printed in corresponding fig 7-7.

P. 161 Example 7.5-Repitition of example 7.1 Page 153.  
  
Immediately after solved example 7.6, the combined motion begins, whereas the same could be given under separate caption.

P. 168 Second paragraph, after eg 7.37 and before eg.7.38 perhaps there is misprint.  
See  $T = \frac{dL}{dt} = L \frac{d\omega}{dt}$  where as must be  
 $T = \frac{dL}{dt} = I \frac{d\omega}{dt}$

**Chapter 8 : Gravitation**

P. 179 Solved example 8.2 appears to be a 3-D fig whereas the treatment is 2-D.

P. 179 Reference to the Appendix 8.1 is made, the page number should also be mentioned as appendices are there in the end of the book.

P. 181 Please explain as to how Law of conservation of angular momentum holds good if  $F \propto \frac{1}{r^3}$ .

P. 183 Art 8.5.2 : mg(d) is to be replaced by mg(d)

P. 184 Solved example 8.6, the solution steps are not given. So either it should be solved or may be deleted.

**Ref. To Text****Suggestions/Modifications**

P. 185 Generally by convention, the potential energy is represented by  $U$  and gravitational potential is represented by  $V$  whereas in the book it is given other way round.

**Chapter 10 : Mechanics of Fluids**

P. 225 Answer to eg. 10.1, instead of  $F = 40 \text{ g}$  it should be  $F = 40 \text{ kg}$ .

P.225 Explanation of the figure 10.2, the angles  $\theta_1$  and  $\theta_2$  referred in the text are not marked in the diagram.

P. 229 Para 3, it is printed that ' $\rho_f V_s g = \rho_f V_p g$ ' which is wrong. It should be ' $\rho_s V_s g = \rho_f V_p g$ '.

P.231 Derivation of Bernoulli's theorem. It should be corrected as "The change in gravitational potential energy is  $\Delta v = \Delta m g y_2 - \Delta m g y_1$ "

P.232 1<sup>st</sup> para, 2<sup>nd</sup> line should be "often this is expressed *explicitly* as"

P.235 Right hand side of the page, second line should be 
$$\frac{\text{Shear \& train}}{\Delta t} = \frac{\Delta x / l}{\Delta t} = \frac{v}{l} \text{ instead of } = \frac{\Delta x / l}{\Delta x} \text{ eg. 10.17.}$$
 Fig.10.13 caption 3<sup>rd</sup> line ..... upper on should be 'upper one'.

P.236 Even though the word 'angle of contact' is separately mentioned in the curriculum, it is not mentioned anywhere in the textbook. It should find place.

**Chapter 12 : Thermodynamics**

The Table 12.2 unit of specific heat is mentioned as " $\text{J kg}^{-1} \text{ K}^{-1}$ ".

General Binding of the Book is poor and sheets are coming out.

Ref. To Text	Suggestions/Modifications
Page 259	<p>2<sup>nd</sup> line below fig 11.6 should read <math>I_1+I_2</math> are the moment of inertia of the molecule about axes 1 and 2 respectively</p> <p>2<sup>nd</sup> para 7<sup>th</sup> line should read i.e. its atoms oscillate along the axis joining the atoms..</p> <p>2<sup>nd</sup> column 2<sup>nd</sup> para 5<sup>th</sup> line replace frequency with mode.</p> <p>3<sup>rd</sup> para 7<sup>th</sup> line replace most by more</p> <p>9<sup>th</sup> line replace mode by form 12<sup>th</sup> line delete energy. 18<sup>th</sup> line replace frequency by degree of freedom 19<sup>th</sup> line replace frequency with mode. 20<sup>th</sup> line replace energy modes by energies.</p> <p>Pootnote should be replaced with "The two oxygen atoms can be regarded as point masses and hence moment of inertial of atoms about an axis connecting the two atoms is negligible".</p>
Page 260	<p>Article 12.5.2 second line write like write like a dumbbell within brackets.</p> <p>2<sup>nd</sup> column 6<sup>th</sup> line replace discrepancies with disagreement.</p>
Page 261	<p>Answer 8<sup>th</sup> line delete predicted (and observed).</p> <p>2<sup>nd</sup> column first para last line averagely be replaced with given by</p>
Page 274	<p>2<sup>nd</sup> column 8<sup>th</sup> line "Its resistance..... range 4K to 77K" is wrong kindly correct.</p>
Page 275	<p>Line next to equation 12.15</p> <p>Use <math>\alpha_v = 3.7 \times 10^{-3} \text{ K}^{-1}</math> not <math>^{\circ} \text{ K}^{-1}</math></p>
Page 276	<p>2<sup>nd</sup> para last line "The free ends for expansion are at railway stations" need to be reviewed with railway authorities.</p>
Page 282	<p>2<sup>nd</sup> column point 2 line 2 there is nothing like inset in Fig 12.10</p>
Page 286 & 290	<p>Fig 12.13 * Fig 12.16 the upper isothermal curve conveys wrong impression as there is a lot of change in P through the effort of author telling that the stage of car not cycle need not be symmetric is worth appreciating.</p>

### Chapter 13 : Heat Transfer

Page 300 First line energy in transit not energy transfer

Ref. to Text	Suggestions/Modifications
Page 302	2 <sup>nd</sup> para 11 <sup>th</sup> line should be recast. Last line temperature does not become uniform. 2 <sup>nd</sup> column 4 <sup>th</sup> line –nothing is said about the group. Better if first para is recast of second column. 2 <sup>nd</sup> para last but one line not transmits out but transmits out.
Page 304	Para 2, 4 <sup>th</sup> line from last, pl. confirm 1600 Km/h 2 <sup>nd</sup> column, First para recast.
Page 307	First line should be to a draught of air,
Page 308	Fig 13.7 is incomplete.
Page 231	Deviation of Bernoulli's theorem. It should be corrected as "The change in gravitational potential energy is $\Delta v = \Delta m g y_2 - \Delta m g y_1$
Page 232	1 <sup>st</sup> para, 2 <sup>nd</sup> line should be "often this is expressed <i>explicitly</i> as".
Page 235	Right hand side of the page, second line should be $\frac{\text{Shear and strain}}{\Delta t} = \frac{\Delta x / l}{\Delta t} = \frac{v}{l}$ instead of $= \frac{\Delta v_1}{\Delta x}$ Eg. 10.17. Fig. 10.13 caption 3 <sup>rd</sup> line.... Upper on should ....upper one.
Page 236	Even though the word 'angle of contact' is separately mentioned in the curriculum, it is not mentioned anywhere in the textbook. It should find place.
<b>Chapter 14 : Oscillations</b>	
Page 314	Example 14.2 Part (iii) – It is not mentioned for what the 'S' of $\text{Se}^{-\text{wt}}$ stands.
Page 328	Derivation of Eq. 14.39 is beyond the easy comprehension of children.
Page 340	Question 14.25 of additional exercise – suitable hint should be given.



Ref. to  
Text

Suggestions/Modifications

- Page 327 Para 3, proper explanation should be given about the dimensionless ratio  $\frac{b}{\sqrt{m}}$ . No explanation is given about its origin or significance.
- Page 327 Solution to example 14.10. It is not shown clearly how the equation  $T_{1/2} = -2\pi \frac{I_n (1/2)}{b/2m}$  is derived by using equation 14.33.
- Page 326 Equation 14.34. Nothing is said about the derivation of the equation  $\omega' = \sqrt{\frac{k}{m} - \frac{b^2}{4m^2}}$
- Page 330 The symbol  $\psi(t)$  used as the symbol for displacement creates confusion, because in the same chapter, displacement is previously mentioned by the symbol  $x(t)$ .

**Chapter 15 : Waves**

- Page 346 5<sup>th</sup> para, 13<sup>th</sup> line states : "the waves on the *surface of water* are of two kinds. Capillary waves and gravity waves". Later in the 23<sup>rd</sup> line, it is mentioned that the oscillations of the particles are *not confined to the surface only*. The explanation is not clear. It is not mentioned whether gravity waves in water can also be seen.
- Page 348 4<sup>th</sup> paragraph. The constant  $\phi$  can be called 'initial phase' also. If this terminology is used, it will be easier for the children to understand the concept.
- Page 353 Equation 15.25. The equation number is printed wrongly under the equation.
- Page 353 Fig. 15.9. One more figure could have been introduced to show what would have happened if the two pulses completely overlap.

**Chapter 14 : Oscillations**

- P. 314 Example 14.2 Part (iii) – It is not mentioned for what the 'S' of  $S e^{-wt}$  stands.
- P.328 Derivation of eq. 14.39 is beyond the easy comprehension of children.

Ref. To Text	Suggestions/Modifications
P.340	Question 14.25 of additional exercise – suitable hint should be given.
P.327	Para 3, Proper explanation should be given about the dimensionless ratio $\frac{b}{\sqrt{km}}$ . No explanation is given about its origin or significance.
P.327	Solution to example 14.10. It is not shown clearly how the equation $T_{1/2} = -2\pi \frac{I_n(1/2)}{b/2m}$ is derived by using equation 14.33.
P.326	Equation 14.34. Nothing is said about the derivation of the equation $\omega' = \sqrt{\frac{k}{m} - \frac{b^2}{4m^2}}$ .
P.330	The symbol $\psi(t)$ used as the symbol for displacement creates confusion, because in the same chapter, displacement is previously mentioned by the symbol $x(t)$ .

### Chapter 15 : Waves

P.346	5 <sup>th</sup> Para, 13 <sup>th</sup> line states : "the waves <i>on the surface</i> of water are of two kinds. Capillary waves and gravity waves". Later in the 23 <sup>rd</sup> line it is mentioned that the oscillations of the particles are <i>not confined to the surface only</i> . The explanation is not clear. It is not mentioned whether gravity waves in water can also be seen.
P.348	4 <sup>th</sup> paragraph. The constant $\phi$ can be called 'initial phase' also. If this terminology is used, it will be easier for the children to understand the concept.
P.353	Equation 15.25 The equation number is printed wrongly under the equation.
P.353	Fig. 15.9 One more figure could have been introduced to show what would have happened if the two pulses completely overlap.

## XI STANDARD CHEMISTRY

All the eighteen units of XI Std. Chemistry textbook is in accordance with the prescribed syllabus. The presentation in most of the units is logical and sequential. Illustrations in the form of tables and figures provide sufficient information pertaining to the respective topics. One good feature of this book is that the explanations are quite exhaustive which will certainly help the teachers as well as the students. The worked examples given in most of the units are sufficient and are helpful in the understanding of the concepts pertaining to the units. The exercises given at the end of the unit has a good coverage and it reinforces the understanding. The students need not depend on any other additional reference book as the textbook has a very good coverage.

However, it is felt by the practicing teachers that the syllabus is heavy particularly in the area of Organic Chemistry as there is a wide gap between X and XI syllabus. The time available particularly for XI Standard is not sufficient to teach these units effectively.

Some specific comments on some units are presented below.

### Unit 2 : States of Matter

Page No.	Suggestions/ Modifications
31	Avogadro law: ' <u>amount</u> ' to be changed to 'mole' or 'no. of particles'.
32	Partial pressure in terms of mole-fraction may be avoided.
42	Intermolecular forces may be understood better after learning chemical bonding. <ol style="list-style-type: none"><li>1. Some worked examples on kinetic theory of gases and other gas laws may be included as it will help in understanding the concepts better.</li><li>2. Some of the answers provided for the numericals in the exercises are not correct. This may be rectified.</li></ol>

Page No.

Suggestions/ Modifications

**Unit 3: Atomic Structure**

- 53 A graphical representation of intensity vs. frequency of black body radiation may be included.
- 58  $E_n = \frac{-218 \times 10^{-18}}{n^2} \text{ atom}^{-1}$  formula can be given.
- 63, 64 Quantum mechanical model of atom – May be written in a simpler language with more clarity.

**Unit 4: Classification of Elements and periodicity in properties**

- 76, 4.1 The earlier classification of elements – based on Law of Triads, Law of Octaves, Mendeleev's system may be given a simple treatment avoiding too much of detailed description as these are also dealt in detail in the new IX Std. Textbook.
- 83 Actinoid Series must be Actinoid Series.

**Unit 5 : First Law of Thermodynamics and Chemical Energetics.**

- 96 Here the unit of 'Pressure' is 'torr' , while in the unit 2, 'Pressure' is expressed in 'bar'. Throughout the book, consistently the same unit may be maintained.
- 96 Footnote given below the figure is not clear.
- Fig. 5.1
- 97 Fig. Shown for 'adiabatic' process cannot depict heat constancy. This fig may be avoided in the set.
- Fig.5.2 B
- 105, 106 Definition of std. Enthalpy of combustion is incomplete need to be corrected \* Most of the definitions are not clear. In some cases incomplete-eg. Enthalpy of neutralization, enthalpy of phase transformations-need to be given correct statements.
- 5.6.1

Page No.

Suggestions/ Modifications

- 109/5.9 Title of the section:- must be the standard enthalpy of formation of compounds.  
The first sentence here needs some correction Std enthalpy Most of the standard books have specified the temperature as 298 K and pressure as 1 atm. Here in this book the pressure is 1 bar. [ 1 bar is not exactly 1 atmos.
- 113/ 5.9 Table 5.4  
The column- may include standard states.  
 $\Delta_f H^\circ$  at 298 K and 1 atm.  
 $\Delta_{Fus} H^\circ$  at the m.p. of the solid.  
 $\Delta_{\text{vap}} H^\circ$  at its B.P.

**Unit 6: Chemical Bonding and Molecular Structure**

- Sec.6.2 Kossel-Lewis treatment of ionic bond could be included in the ionic bond itself.

Lewis structure and resonance can be discussed together at the same section.

The concept of bond order without any introduction to Molecular orbital theory.

Resequencing of the subsections in this unit will make conceptual understanding more logical. The suggested sequence is as follows:

1. Electro negativity
2. Valence bond theory
3. Covalent bonding (Kossel-Lewis approach)
4. Lewis representation.
5. Limitations of octet rules.
6. Bond length.
7. Bond energy.
8. resonance structure.
9. Polarity of bonds.
10. The ionic bond
11. VSEPR- model.

- 141 Fig 6.17- The colour shading is not consistent, at some places grey is used for  $\sigma$ - bond and at some other blue. Similarly  $\pi$ - bonds are also shaded using different colours at different places.

Page No.	Suggestions/ Modifications
127	Fig 6.3- Separate diagrams for covalent radii and Vander Waal radii be given. Consistency of the terms may be maintained throughout the text book. Eg:- Unit 4 uses electron gain enthalpy and here electron affinity.
129 6.3.4	Bond lengths shown should at least approximately made uniform. In ozone structure II single bond appears to be shorter than the double bond. Resonance hybrid structures have to be shown.
130	Mention of Keto-enol tautomerism can be avoided here. The details of Pauling's and Mullikan's electro negativities can be given as extra information in the blue box. A simple treatment of electro negativities is sufficient at this stage. * The new symbols and terms used in the text book may be given at the appendix.
133	Table 6.6 The diagram should distinguish bonds and the shapes.
133	The last two assumptions of VSEPR theory may be suitably worded.

### Unit 7: Equilibrium-I

Page 148

Diagram 7.1 is not clear. Avoiding paragraph explanation, the experiment can be explained in steps. Conclusion may be included at the end. Use of first person may be avoided.

Page 150  
7.1.4

More examples to show constancy of macroscopic properties of equilibrium can be given, also may be made more illustrative with colourful figs.

152

Box Item It is doubtful whether this activity can demonstrate the dynamic nature of chemical equilibrium.

154

Definition of  $K_c$  may be reworded in a simpler manner.

156/7.4.1

$PV = nRT$  here 'n' is specified as the amount of the gas, it should be number of moles of gas. In the same page in some other context  $\Delta n$  is given as number of moles of products- number of moles of reactants.

157

Why is molar concentration explained in the box ?

Page No.	Suggestions/ Modifications
158/7.6	4 <sup>th</sup> point on application of 'equilibrium constant seems to be very much complicated for the students to comprehend. This may be rewritten in simpler form.
159/7.6.2	$Q_c > K_c$ the difference between $Q_c$ and $K_c$ is not clear.
162	Fig 7.8 may give some wrong ideas.
164	Fig 7.9 brown colour may be used depicting differ different intensities in the three test tubes.

#### Unit 8: Equilibrium-II

169	The use of the term dielectric constant is new . It may be removed as the detailed explanation of this is not given.
172	Introduction of the term 'Activity'- proper definition may be given.
174	More generalised definition of ' $\alpha$ '- the degree of ionisation may be given.
174	Solution 8.7 is worked out in a very complicated way.
186	A table of indicators based on PH range may be given.
188	$K_{sp} = Q_{sp}$ , a few lines on selective precipitation technique of analysing cations may be included.

#### Unit 9: Redox Reactions

Sufficient number of examples on redox reactions balancing of redox reactions are provided. A few more examples of cell representations and application of electrode potentials would be needed.

#### Unit 10 : Principles and Processes of extraction of elements

Page 213	2 <sup>nd</sup> line – “ molten melt” may be changed to “molten mass”.
Page 221	'NaCl'- The formula in the block- 'c' should be made capital letter 'C' for Chlorine "Cl".

**Unit 11: Hydrogen**

This unit is well written. Some worked examples may be included as there are none.

Page 228  
11.3.1 In the laboratory method of preparation of hydrogen, in words it is given as, prepared by the reaction of Zinc with dilute sulphuric acid, but in the equation 'HCl' is shown. Same acid may be used in both the places.

229 Below the fig 11.1  
Ortho and para hydrogen are referred as 'isomers'. This "isomers" should be corrected to "allotropes".

**Unit 12: s-block elements**

Diagrams of extraction of metals and of some important compounds are good. Sufficient number of questions under the exercises are given which are very useful to test the understanding of this topic for the students.

Page 241 Reasons may be included for  
I) 'K' being lighter than "Na"  
II) alkali metals and their salts impart colour to the flame.

242 The reactions may also be presented in tabulated form.

**Unit 13: Some p-block elements**

Allotropes of 'C' including those of Fullerenes are presented well. The structures and properties of oxides of nitrogen presented in tabulated form are very useful. Some more worked examples are required.

263 Fig 13.2 (a)  $B_2H_6$  – structure is not clear. Different colours may be used.



**Unit 14: Organic Chemistry – Some basic principles**

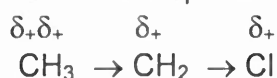
291 Table 14.4 – The captions given to 3<sup>rd</sup> 4<sup>th</sup> and 5<sup>th</sup> are not correct. They may be titled as:-

3	4	5
Prefix	Suffix	Example

This table 14.4 may also be re-arranged to give priority order of nomenclature. This being explained in words in page 292 may be avoided if a proper table is given.

293/ 14.4 A flow-chart of classification of organic compounds may be useful.

296 It is shown in the representation



$\delta_+\delta_+$  sign symbolises relatively smaller positive charge. The use of double  $\delta_+\delta_+$  may lead to misconception in the students.

298  $\quad \quad \quad + \quad \quad \quad +$   
 $\text{CH}_2 \text{ CH}_2$  ethyl cation should be  $\text{CH}_3\text{CH}_2$

**Unit 15 : Hydrocarbons**

309  
15.1.3 Oxidation of alkanes under special conditions may be avoided as many of the standard books donot give much importance to these and also the curriculum load is being too high, to complete in one academic year.

Page 311 Explanation of conformations in paragraph may be made simpler avoiding too many words. Conformation of proper and butane, discussion on dihedral angle etc. may be too high a concept at this level as high imagination is needed for the students to understand at the conceptual level.

Page 312 Flow-chart on Industrial preparation of some important chemicals from (A) methane (B) ethane may be avoided.

Page 332 Exercise 15.6 & 15.7 : Questions on projection formulae of propane and butane may be avoided.  
 Exercise 15.23: This question is on polymers, but in the text not much about polymerisation is discussed.

**Unit 16 : Purification and Characterisation of Organic compounds**

This unit discusses various methods of purification of organic compounds. The qualitative analysis of some of the elements are presented. The diagrams are good. The quantitative analysis of C,H,N and halogens may be omitted as it is likely to burden the students. Only one method of determination of molecular mass may be included. Mass spectroscopic techniques may be included as a 'box item' along with the other spectroscopic methods.

**Unit 17:**

Most of the teachers felt this descriptive treatment of organic halides could be included in the 12<sup>th</sup> std.

Page 354  
17.12 There is no example to show C<sub>sp</sub>-X bond.

Representation of  $\underset{\text{sp}^3}{\text{C}}-\text{X}$  ,  $\underset{\text{sp}^2}{\text{C}}-\text{X}$  ,  $\underset{\text{sp}}{\text{C}}-\text{X}$

May be shown as  $\begin{array}{c} | \\ -\text{C}-\text{X} \\ | \end{array}$  ,  $\begin{array}{c} =\text{C}- \\ | \\ \text{x} \end{array}$  ,  $-\text{C}\equiv\text{C}-\text{X}$

Page 354 Double-bond in vinylhalide seems to look longer than the single bond.

Page 355 Table 17.1  
In example 1-Chloro-1-phenyl methane, there is no need of 1- as there is only one carbon atom in methane.

Page 359  
17.5.3 Too many name reactions [Finkelstein, Swarts raan,] may be avoided.

Page 361 It was felt by most of the teachers that understanding of mechanisms of reactions may be difficult for the level of students at the +2 stage.

**Unit 18 : Environmental Chemistry**

Environmental protection is essential for the survival of mankind. In this context this unit is very important. Different types of pollution and possible remedies to control the environmental pollution are presented well.

## XI STANDARD MATHEMATICS

### CHAPTER – 1 : Sets

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions
1.	Page 2 Lines 14-15	In the set P of prime factors of 30, $3 \in P$ but $15 \notin P$ .	If P is the set of prime factors of 30, then $3 \in P$ but $15 \notin P$ .	Though the statement is in concurrence with previous statement, but because of the elements being numbers, it should be made explicit. Otherwise this sentence means as though 15 is also a prime factor of 30.
2.	Page 2 Line 21	Positive integers less than 7 is <i>described</i> .	Positive integers less than 7 is represented or listed.	The term “described” is used in set builder form and not appropriate to use in Roster Form.
3.	Page 3, Lines 8	The braces stand for ‘the set of all’.	To be deleted.	Braces cannot stand for something. The braces are already occurring in Page 2, Line 20.
4.	Page 3, Line 11	“the set of ..... and $3 < x < 10$ ”.	“The set of .....and lies between 3 and 10.”	Since it is in descriptive form, it is better to replace symbols with description.
5.	Page 3, Line 13	If we..... (a), (b) and (c) <i>in roster</i> .	If we.....(a), (b) and (c) of Roster Form in previous page.	
6.	Page 3 Line 17	$c = \{ z : z \text{ is an odd natural number} \}$	$c = \{ z : z \text{ is an odd number} \}$	
7.	Page 3, Line 25	Odd positive integer	Odd numbers	
8.	Page 4 Line 6	On the left <i>described</i>	On the left listed.	

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions
9.	Page 6 Line 3	$a = \{x : x \dots$ Presently studying in a school }	I feel that the whole para can be rewritten.	In a school there will not be a class XI. So one may infer that this is an example of an empty set. But in subsequent lines, the author wants to tell that this is not an example. It is better to give an example, then define and give a non-example. Give learning experiences with examples and non-examples which lead to the concept of empty set OR The sequence can be A : { x : Next B : { Next { x : x is an integer, $x^2 + 1 = 0$ } See the sequence given in page 7 of equal and equivalent sets. This is better.
10.	Page 6 Line 27,28			Better to introduce the finite sets with smaller number of elements. Then define the cardinality. Then have a question $c = \{\text{men in the world}\}$ . Give justification for this to be finite set.
11.	Page 8-9 Example 9	Example 9: State which of the .....  (v) ... set is infinite.	To be deleted.	This is an example for finite and infinite sets and hence should appear in page 7 after the description of finite and infinite sets.
12.	Page 9 Exercise 1-2.			The sequence of problems. The topics described in sequence are the empty set, finite and infinite sets, equal and equivalent sets. But the sequence in evaluation is finite and infinite sets, empty set, equal and equivalent sets.

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions
13.	Page 10 Definition 5	We write it as $A \subset B$ .	We write it as $A \subseteq B$ .	It is better to use this notation so that we can distinguish between a subset and a proper subset. So replace $\subset$ by $\subseteq$ in appropriate places.
14.	Page 11 Line 18	$n[P(A)] = 2^m > m = n(A)$	$n[P(A)] = 2^m > m$	In the previous line, it is shown that $n(A) = m$ . So it is unnecessary and is confusing.
15.	Page 11 Example 10 Line 2	(i) $\phi - B$ , (ii) $A - B$ , (iii) $A - C$ , (iv) $B - C$	(i) $\phi, B$ (ii) $A, B$ (iii) $A, C$ (iv) $B, C$	Better clarity.
16.	Page 12 Example 12	Note that an element of a set can never be a subset of it.	To be deleted.	It is rather confusing.
17.	Page 14, 1.10 Complement of a Set			The example which leads to the definition of complement of a set in page 15 is complicated by taking $A$ as the subset of $U$ which consists of all those prime numbers that are <i>not</i> divisors of 42. Use of this negative (underlined) made it difficult. Instead take the example 13 in P.15 to lead to the definition.
18.	Page 18 (c) Difference of sets	No definition is given.		See for union, intersection, definitions are given. Better to have uniformity.
19.	Page 29, Example 42, line 2	50 owned both A and B cars.	50 owned both cars A and B.	Better clarity.

**CHAPTER 2 : RELATIONS AND FUNCTIONS**

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions																																
20	Page 34-35 Page 35, Line 5	In view of the assertion in Example 3.	From (i) and (ii) of example 3, it is verified that $A \times (B \cap C) = (A \times B) \cap (A \times C)$ and from (iii) of example 3, it is verified that $A \times (B \cup C) = (A \times B) \cup (A \times C)$	For better clarification as there is no assertion.																																
21	Page 35 Line 9	$(a_{3,2}), (a_{4,2}), (a_{5,2})$ are in $A \times B$ .	$(a_{3,2}), (a_{4,2}), (a_{5,2})$																																	
22.	Page 36, Example 6 & 7		The sequence can be reversed.	The example 6 is too lengthy. Universal relation, empty relation can be deleted.																																
23.	Page 37 Lines 9-12 (Tabular form)	<table border="1"> <tr> <td>R</td> <td>4</td> <td>5</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td>3</td> <td>0</td> <td>1</td> </tr> </table>	R	4	5	1	0	0	2	1	1	3	0	1	<table border="1"> <tr> <td colspan="2"></td> <td colspan="2">B</td> </tr> <tr> <td>R</td> <td>R</td> <td>4</td> <td>5</td> </tr> <tr> <td></td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>A</td> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td></td> <td>3</td> <td>0</td> <td>1</td> </tr> </table>			B		R	R	4	5		1	0	0	A	2	1	1		3	0	1	For clarity or it can be deleted also.
R	4	5																																		
1	0	0																																		
2	1	1																																		
3	0	1																																		
		B																																		
R	R	4	5																																	
	1	0	0																																	
A	2	1	1																																	
	3	0	1																																	
24.	Page 37, Fig.2		<p>Include Equivalence Relations</p>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">R</div>																																

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions
25	Page 42, Example 17		An example of an equal function is to be given whereas the example given is not an equal function.	
26	Page 43 Example 20 And Example 21	Example 20 :..... Example 21:.....	Example 20 : Let $A = \{1,2,3\}$ Example 21: Let $f : R \rightarrow R$ be	The sequence is to be interchanged for easy understanding.

#### CHAPTER 10 : CARTESIAN SYSTEM OF RECTANGULAR COORDINATE

Sl. No.	Reference	Text Version	Suggested Modifications	Reasons/Remarks for suggestions
1.	Page 293, Last line	$OP = \sqrt{x^2 y^2}$	$OP = \sqrt{x^2 + y^2}$	Print mistake.
2.	Page 313 Fig.10.27		Figure is to be deleted.	It is misleading that whether the figure is drawn before doing the problem.

## Linear Inequations

1. Page 128 : Example 4

It is given that

$$6x + 87 \geq 24 + 16x$$

$$\text{or, } -10x \geq -63.$$

It is better to write clearly all the steps in between the above two steps by using Rule 1 for clear understanding for the children. So also the application of Rule 1.

$$\text{i.e. } 6x + 87 \geq 24 + 16x.$$

$$\text{or, } 6x + 87 - 87 \geq 24 + 16x - 87$$

$$\text{or, } 6x > 16x - 63$$

$$\text{or, } 6x - 16x \geq 16x - 63 - 16x$$

$$\text{or, } -10x \geq -63$$

2. Page 139, Ex-13.

It is given that  $x - 2y + 1 \leq 0$  represents the shaded region above the line  $x - 2y + 1 = 0$  including points on the line.

In such example of  $\leq$  inequality, it should be clearly explained that why the region is above the line instead of below the line.

3. Page 150 Line No. 21 Printing mistake

$$\text{Given that } \frac{1}{2} \leq y \leq \frac{1}{2}.$$

$$\text{It should be } -\frac{1}{2} \leq y \leq \frac{1}{2}.$$

## Quadratic Equations

1. Page 159  
Line No.14, Printing mistake

It is given that  $ax^2 + bx - c = 0$ ,  $a \neq 0$ .  
But it is  $ax^2 + bx + c = 0$ .

2. Page 170, Line No. 21.  
It is given that the value  $-3$  is called an extraneous root of the equation  $x - 3 = 0$ .  
The meaning of this extraneous root is not clear. More explanation needed.



## Sequence and Series

Page 191, Line No. 4

It is given that population of bacteria or human beings at different times form a sequence.

Such type of examples should be deleted. Because in general, it is not true, rather it happens at a particular time.

More examples should be given for the applications related to the daily life problems based on the fundamental concepts of AP and GP.

### Class – IX Mathematics Part – 1

Sl. No.	Page No.	Line No.	Given in the textbook	May be given as
1.	61	19	$P(1) : 2^n - 1 = 7$	$P(1) : 2^3 - 1 = 7$
2.	65	16	Inverse of these operations	Inverse of exponentiation
3.	106	25	$ z_1 + z_2 $ OR	$ z_1 + z_2  =$ OR
4.	239	14	Rotation	Position
5.	241	08	One complete revolution of the initial side.	One complete rotation of the initial side.

Get up of the textbook for Class XI Mathematics : Part – 1 can be improved.

## XI STANDARD BIOLOGY

### Content and Presentation

#### C1:

National Curriculum Framework for School Education, 2000 provided guidelines for framing the syllabus for XI Std. Biology. Accordingly, the content was identified, selected and written in the form of the textbook. The book provides exhaustive, comprehensive and contemporary biological information, put in the form of units and lessons. The book provides rich content suitable for one year scheme, but the teacher has to put in efforts to cover all portions in time and make students understand the concepts.

#### C2:

Keeping the background of the students, the selection of content is made and the whole content is organized in five units, logically organized, from simple to complex, from basics to applied aspects, concrete to abstract systematically. This enables a systematic learning approach for children. Units being interlinked with one another, the content is planned and placed sequentially keeping psychological and educational principles in mind. Thus the prerequisite suitably acts as a climbing ladder from lesson to lesson and from unit to unit.

Most appropriate and crisp, relevant introduction is used for each lesson. Every unit starts with a very interesting and informative page of a scientist, his contributions made in that field of subject relevant to that unit. The introduction part is narrative, *historical* account and also with most common day to day experiences. Certain new topics of contemporary biology in the field of Genetics and Biotechnology appropriately fit into the content. The textbook also emphasizes the importance of Biology in day today life and the related career options for children. The co-relationships with other branches of sciences like chemistry, physics and mathematics are aptly used up in making study of Biology more meaningful and useful. This is reflected in some of the topics like 'Understanding life, Molecules of cell, tools and techniques, genetics', etc. A

brief, but rich summary at the end of each lesson provides an opportunity to review the lesson.

**C3.** The content selection, organization in most of the lessons is accurate. In fact, adequate information is available for teacher and children. By going through the lesson, the teachers felt that very minor modifications in content can suitably be done. These modifications include some additions, omissions and some corrections. A very minor thing i.e. some spelling corrections are required. The list of suggestions in various lessons and units are enclosed herewith. Almost all the topics have rich content with very few errors. Relevant symbols, illustrations at appropriate places make the content more meaningful and colourful.

**C4.** The content is suitably supplemented with modern and relevant illustrations in the form of examples, diagrams, representations, graphs, etc. Inclusion of actual, natural colourful photographs, simulations, pictures, tables in varieties make lessons more interesting. Language is easy and free flowing and makes the reader interested in the subject. Provisions for self learning activities, projects for some topics can be made. Field activities be included. For example, the Chapter 4 of Unit II – The Systematics, where a mention is made about herbaria, museums, botanical and zoological gardens.

## **Evaluation**

Every topic ends with a set of evaluatory items and overall coverage of topic is made. This enables to test the achievements of the objectives of knowledge, understanding and application levels. The exercises in developing and testing various skills could be included through projects, group activities. The exercises could be made in a more uniform way by providing test items of all types, in all levels. For example, in some chapters of some units, fill in the blanks and other objective types find no place whereas in some they are included more in number. The chapters on Genetics are provided with exercises for using symbols, illustrations, solving problems

using knowledge of probabilities. Answer to these problems could be provided at the end. The exercises throughout the book are clear without vagueness and graded with respect to difficulty levels, to test all types of children.

### **General Aspects**

**G1.** As mentioned earlier, the content is divided into five units, further into chapters. Each unit, lesson is numbered sequentially. Further, the components of each chapter is numbered and heading are highlighted by bold and coloured letters. The diagrams, tables, are also provided with chapter number followed by figure number. Every lesson starts with introduction and ends with summary and exercises.

Important words and statements are written in bold letters. Important informative matter, additional informations, tables are displayed in separate boxes with proper headings.

### **G2. Visuals**

Sufficient number of attractive, colourful natural photographs, diagrams, pictures, tables make the textbook rich. Inclusion of some of the photographs of latest information is really very good. For ex. Genetic engineering, cloning, DNA diagrams, DNA finger printing, etc.

These illustrations are most appropriate at appropriate places, so that students need not struggle to look for subject and figures. Almost all illustrations are proportionate and look natural with proper scales. Excepting for few diagrams, labeling is neat and on right side of the diagrams.

### **G3. Physical aspect**

The text is of appropriate size not too bulky not too small. Book runs to 362 pages with suitable size, easy to handle while referring. Bright coloured, good quality paper is used with quality printing. Binding might require some improvement. The book is covered with beautiful thick covers with meaningful diagrams, for which

reference is given inside. It is very encouraging to read the “Science related Values” immediately after front pages. The content page is embedded with boldly engraved units, chapters with nice figures, showing page numbers. Overall the textbook is more informative, inquisitive and loaded with pictures, photographs, etc.

Following are some suggestions which can be incorporated only after scrutinizing the book and the suggestions.

Reference	Suggestions/Modifications
<b>Unit 1: Chapter 1</b>	
Page 11	Inclusion of knowledge of DNA finger prints of organisms in classifying organisms.
Page 12	Elaboration of Ecology as study of environmental science with applied ecology, population ecology, biodiversity, conservation, etc.
Page 14	Pencillium is a product of fungi but not a plant medicine.
<b>Chapter 2</b>	
Page 22	Definition of population is mentioned as individual make population to be checked.
Page 29	DNA double helix is spirally coiled around central axis.....
Page 36	In summary, include 3 types of pyrimidines – Cytosine, thymine and uracil.
<b>Chapter 4</b>	
Page 73	2 <sup>nd</sup> paragraph instead of distinctions, distinctive characters.
Page 77	4 <sup>th</sup> paragraph ‘Canidae’ in place of cancidae (sp).
Page 83	Example for Myxomycetes not given. 3 <sup>rd</sup> paragraph – potozoans to be corrected as protozoans (sp).
Page 84	2 <sup>nd</sup> paragraph – Correction. Should be like Agaricus (Edible mushroom) cite examples for Smut and rust. Otherwise gives different meaning.

<b>Reference</b>	<b>Suggestions/Modifications</b>
Page 88	No information about bracketed key in the lesson.
<b>Chapter 5</b>	
Page 92	In diagram (flow chart), fungi is included in Thallophyta, but in other chapters, Fungi is given a separate status. One type of classification is better.
Page 93	Mention protonema in the life cycle of Moss.
<b>Chapter 6</b>	
Page 104	Diagram of fish does not depict bilateral symmetry.
Page 105	Phylum protozoa and protista equated.
Page 108	Liver fluke diagram is inverted.
Page 109	In diagram spelling correction. Pseudocoelom.
Page 110	Example of South Indian genus Megascolex be included because it is the common genus available.
Page 114	Cephalochordata are not only acrania but other prochordates too.
<b>Unit 3: Chapter 7</b>	
Page 134	For nucleotide separation nitrocellulose paper is used (inclusion).
<b>Chapter 11</b>	The explanation of synaptonemal complex does not match with the diagram 11.5
<b>Chapter 12</b>	
Page 209	12.8 Example given as epistatis but it is for interaction of genes as co-dominance of genes.

Reference	Suggestions/Modifications
Page 210	12.9 F1 generation offspring are called as 'Mullatoes'. (In text, it is mentioned that there are 3 pairs of genes, in some books and some academicians believe in only 2 pairs).
<b>Chapter 13</b>	
Page 222	Fig.13.7 Crosses shown indicate hemizygous conditions. It could be homozygous.
Page 224	Fig. 13.9. The y-chromosome in diagrams is shown as long as x- chromosome. It could be shorter.
Page 226	Fig. 13.10. a) Deletion – F.gene missing in terminal deletion. b) Duplication – diagram to be modified.
Page 233	Spelling of pubic hair as public hair in Fig. 13.17.
<b>Chapter 14</b>	
Page 254	In Fig.14.15 the regulator gene produces active repressor and genes could be written in capital letters.
Page 258	In summary, the enzyme ligase could be DNA ligase.
<b>Chapter 15</b>	
Page 277	Exercise 13. The DNA strands could be denoted with primer ends as 5'3'.
<b>Unit 5: Chapter 16</b>	
Page 283	Fig.16.4. Examples for the figures could be mentioned, these figures could be in their natural colours (in fig. Radish red in colour, carrot white).
Page 284	Fig.16.5 in 2 <sup>nd</sup> diagram, the roots are not prop roots but stilt roots.
Page 307	Name of plant Asgand could be Ashwagandh.
<b>Chapter 17</b>	
Page 319	Under conjoint vascular bundles the third type could be concentric conjoint type.

Reference	Suggestions/Modifications
<b>Chapter 18</b>	
Page 333	A small diagram showing typhlosole could be included in text.
Page 333 to 335	For type studies, the heading for all systems like digestive system, circulatory system could be boldly written.
Page 338	Fig. 18.13 does not give complete picture of attachment of tongue. Could be modified.
Pages 340,342	Fig.18.15, 18.17 labelling can be on right side uniformly as done in other figures.
<b>Chapter 19</b>	
Page 349	Fig. 19.1 shows flowchart of classification of 'Epithelial tissue', it could be for 'covering epithelial tissue'.

These suggestions are mentioned only after consultation with senior faculty of RIE and University of Mysore.



## XI STANDARD GEOGRAPHY

### 1. FUNDAMENTALS OF PHYSICAL GEOGRAPHY (SEMESTER – I)

#### General Aspects

The supply of books in advance of New Curriculum Framework to the teachers concerned, would have served the purpose in a better way of analyzing and improving the get up of the book.

#### Content

The content under each chapter is more informative and useful for the present generation in meeting the objectives and the challenges of modern competitive world.

#### Syllabus Requirement

With reference to the syllabus requirement, there has been a sudden jump in understanding the concepts/contents from an ordinary school student to the student at +1 level, due to which the student may have to face a challenge of opting it as their optional subject in future.

#### Vastness of the Syllabus

The syllabus included under each semester is vast and not possible to cover within the academic framework. Thus, there is, again, failure of solving the traditional problem/burden of the teachers handling social science in the completion of the syllabus within the allotted time framework.

#### Cartographic Representation

Diagrams/pictures/photographs are the ways and means and said to be the best tools of understanding Geography. With the help of these, a teacher can make the difficult concepts/content easy and thus give an everlasting impression in both teaching and processing process. But the present text (Fundamentals of Physical Geography) for class XI (Semester-I), the cartographic techniques were neglected to the maximum extent and fails to use the contrasting colours (as used in revised Biology text for XI Std) and designs. This has kept both teacher and student away from understanding the concepts in an easy way. More emphasis could have been given for choropleth and isopleth techniques keeping the size of the book.

#### Points to Memorise

There could have been provision at the end of each chapter for important points to memorise/recapitulate the concepts/technical terms. This will enable the teacher to effectuate the same in his instructional objectives

and the student to concentrate much on them from the Board/Examination point of view.

### **Relevant Facts**

One move towards providing relevant facts at the end of each Chapter is appreciable, so as the book also provides adequate number of questions and enrichment exercises in testing the areas of learning along with clarity and correctness.

### **Size of the Book**

Standardization of the size of the books of NCERT in all the disciplines is again an appreciable good move, as it distinguishes itself than that of the books of other organizations.

## **CHAPTERWISE OBSERVATIONS**

### **Chapter 1**

- The concept of "Geography as Mother of all Sciences" could have been highlighted with appropriate diagrammatic representation.
- The figure (No.1.1) showing the diversified branches and sub fields of Geography is an improvised aspect over the previous text and is appreciable.

### **Chapter 2**

- 'Origin of the Earth' could have been supplemented with a minimum number of relevant diagrammatic representations which will attract and pay for right perception of the concepts and content under discussion.

### **Chapter 4**

- There has been an unnecessary attempt in having a diagram (Fig. 4.1) showing the particle motions in p-waves and s-waves,.
- Fissure and central eruption of volcanoes and the types of volcanoes could have been supported with suitable figures.
- No attempt towards world-wide and nationwide zone of occurrence of volcanoes and earthquakes through Map representation.
- In the context of this chapter, the diagrammatic representation in old text is far better than the present.

### **Chapter 5**

The index of Fig. Nos. 5.4 and 5.5 fails to give the details.

## **Chapter 6**

Fig. No. 6.1 showing the Rock cycle lacks in clarity in providing the details.

## **Chapter 7**

A Map showing different types of soils at national and world level could have been added.

## **Chapter 9**

In Fig. 9.1, partitions showing the different layers of atmosphere are also necessary to show the structure of the atmosphere in a clear way.

## **Chapter 10**

In Fig.10.2, showing the Terrestrial Heat Balance leads to some confusion and not as clear as shown in 9<sup>th</sup> Standard text of Geography.

## **Chapter 12**

Fig. 12.1 showing Relationship between moisture holding capacity and relative humidity lacks clarity in its representation and thus not served the purpose.

Fig. 12.2 No much variation is found among the types of clouds. Here the colour photos would have been the best source to represent.

## **Chapter 17**

Lacks in diagrammatic representation of concepts of Ecosystem.

## **2. EVALUATION OF PRACTICAL WORKBOOK IN GEOGRAPHY – PART I – XI STD.**

1. The present book consisting of Chapters 6 Nos in two units, Unit I – 3 Chapters and Unit II – 3 chapters does not clearly indicate the distribution for I and II semesters. It is only the teachers' understanding. Nowhere it is clear whether to follow semester system or not.
2. As far as adequacy and quality, it is laudable, except the chapter on remote sensing and satellite photo interpretation, no previous background/feedback for teachers – requires special workshops for this.

3. The graphic media is very less as far as the pedagogical considerations are concerned. It is in the context of instructional objectives, guidance for learning and teaching. Verbal communication is effective.
4. Chapter on Map projection does not provide the basic ideas of projection concepts and three dimensional and two dimensional maps and conversion. The old books provide better ideas whereas it is completely dropped in the new book. There should have been comparative aspects of types of projection or choice of projection.
5. The size of the book is O.K. and the quality of paper used is good. Printing, binding and get up of the book is very nice.
6. Clarity and attractiveness of the figures and diagrams should have been kept in mind keeping the size of the textbook and many diagrams can be improved as far as the conceptual development in the textbook. More number of diagrams, charts, pictures or instruments – photographs etc. should have been there in the book so that explanation and practically carrying out the ideas should become easy both for learning and teaching.
7. A Geography Lab. equipped with all required instruments and gadgets necessary to carry out and learn things practically is a *must*. For the time being practical geography has become like a theory class.
8. The review questions in the exercises at the end of each Chapter is clear in relation to the coverage of syllabus and level of the students.
9. In Unit II Topographic maps, remote sensing and weather maps – details and specific explanation of the concepts expressed in diagrams and photographs are missing. As there is no perfect bibliography for various references and their sources, the teachers are put to lot of strain in making the learner to learn. In this regard, a teacher's handbook or a guidebook is very much essential for his preparation and to do justice in the pedagogical course.

## **XI STANDARD ACCOUNTANCY AND BUSINESS STUDIES**

### **Observations**

Most of the chapters in both the subjects are by and large well written in accordance with the curriculum and the presentation is logical, simple and correctly stated and the content is free from errors except for some minor mistakes and typographical or print mistakes which are listed in the subsequent pages. The physical aspects of the books are in accordance with the requirements.

### **Accountancy (Part I)**

Some journal entries may be made simpler as in the initial stage of learning, cost of goods sold and transfer entries create difficulties in understanding for the students.

The introduction of ledger after journal is a welcome step for better understanding of the postings but problems in journal are not given in the exercises which need to be incorporated.

### **Business Studies**

Language needs improvement in some places to ensure better understanding by the students mainly related to the new topics covered under the new curriculum where inclusion of E-commerce is an important topic for the commerce students.

In the curriculum Chapter/Unit 6 "Sectoral organization of Business" is included in Part A. However, the Textbook content regarding the same is not in accordance with. Hence, it should be re-organized.

Also, the objective type questions which are very important for understanding the concepts are not included in the textbook.

Transportation as Service Sector is not explained in the Textbook and also does not find place in the new curriculum. It should be incorporated in syllabus and the textbook.

Lastly, a list of important terms and their meaning at the beginning of the book will enhance the utility of the book.

**Accountancy (Part I)**  
**List of figures**

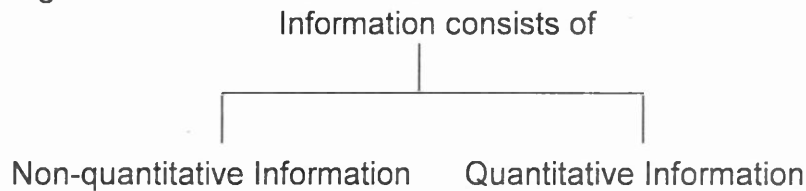
Reference	Suggestions/Modifications
1.4	Accounting Information System is not mentioned in the list. Hence, to be included.
3.9	Format of Bank Reconciliation Statement is not mentioned in the list. Hence it should be included.
4.2	Trial Balance for Illustration 25, Chapter 3, Page 95. Is not a figure or a format. Hence it should be omitted from the list.
6.3	Distinction of Bills of Exchange and Promissory Note neither a figure nor a format. Hence, to be removed from the list only.

**Chapter 1**

Page 2 Essential characteristics :  
2<sup>nd</sup> point recording\_ and communication.  
Comma not required and hence to be removed.

Page 3 Right Hand Side Column, First Line, Thas  
To be replaced by That.

Page 7 Fig. 1.2 should be as follows :



Note: Remaining Part is correct.

Page 8 1.3.4 should be made as -----  
"Purchase and Accounts Payable Sub-system".

Page 9 Fig.1.4 1. Tax Accounting Sub-System  
2. Expense Accounting Sub-System  
3. Final Accounting Sub-system  
The above aspects have to be explained.

Page 19 Checklist 1 (ii) Debtors to be replaced by Assets.  
List 4(v) Yes to be replaced by No .

## Chapter 2

Reference	Suggestions/Modifications
Page 21	Box 2.1 Content should be brought after "money measurement assumption".
Page 31	2.4 Accounting Standards – Nature and need should be explained in detail.
Page 34	Summary – "Accounting standard should be included".

## Chapter 3

Page 43	Preparation of vouchers not explained. To be explained as given in curriculum.
Page 54	Journal Entry May 10 Narration – 'Bank A/c' is given below the line. Should be brought above the line.
Page 56	Journal entries dated 7, 10, 12 and 18 Inventory, cost of goods sold, transfer entry. To be replaced by purchase, sales, etc.
Page 58	Sub-division No.3.5.3 should be 3.5.4. Sub-division No.3.5.6 should be 3.5.
Page 63	Fig. 3.3 cheque specimen shown Should be shown as crossed.
Page 63	Fig. 3.4 pay-in-slip specimen of savings a/c. Should be of current a/c.
Page 64	Fig. 3.5 Crossing of cheque shown horizontally. Should be shown diagonally.
Page 61-62	3.7.2 -2 no. missing.
Page 72	Illustration 10. Trade discount should be included and shown as deduction in details column.
Page 76	Illustration 12. Sales Journal, Purchase Return Journal and Sales Return Journal. Show debit and credit amount column. Should be replaced by Details and Amount Column.

Reference	Suggestions/Modifications
Page 78	Purchase Return Journal solution shows Invoice No. column. Should be made Debit Note No. Column.
Page 80	Sales Return Journal Solution shows Invoice No. Column. Should be made credit Note No. Column.
Page 95	Illustration 25. Solution space not left for credits on left hand side.
Page 101	Summary 8. Correct Bank Balance not given in summary. Should be given briefly.
Page 105	Problems on Journal and Ledger posting not given. Must be included as requires to be practiced by students.

#### Chapter 4

Page 114	Trial Balance Format A/C Code column not required.
Page 123	Errors C & D. To be in bold type.
Page 117	Illustrative Trial Balance – Fig. 4.3. Since Trial Balance represents mere list of debit and credit balances of various ledger accounts prepared at the end of the year to prove arithmetic accuracy, there is no need to present the accounts in Trial Balance under different heads of accounts like fixed Assets, etc. Further, representing with dots in different places will not only confuse the students and also it does not carry any significance. Hence trial balance should be prepared based on ledger balances.
Page 124	4.5.2 Errors of Principle. Sub-Division No. is wrong. It should be 4.5.3.
Page 125	4.6.1/3 Rectification –“of errors affecting trial balance and not affect Trial Balance”. Single and Double sided errors should be mentioned.



## Chapter 5

Reference	Suggestions/Modifications
Page 148	Fig. 5.2 Not to be shown as a figure.
Page 167	5.13.2 Provision for discount on Debtors, Sub-division number not in order.
Page 169	5.14 Number not in order after 5.13.
Page 144	5.6.1 In the tenth line the following should be added : This method is also called as original cost method as depreciation is calculated on purchase price.
Page 145	5.6.2 Formula for calculating depreciation should be given as $(\text{Book value} \times \text{Rate of depreciation})/100$ Instead of formula for rate of depreciation In Illustration 1, scrap value after 10 years is estimated to be Rs.10,000 and not Rs.50,000 as given in the question. In rate of depreciation calculation, /12 is not clear.
Page 146	In solution for Illustration 3, it should be 1999 January, not June 1.

Machinery A/c	
	1999
	March 31 Depreciation
1850	

Date of Depreciation should be changed as December 31, 1999 instead of March 31.

## Chapter 6 : Bills of Exchange

Page 181 : First line

1. In a business goods can be sold or bought .....
2. "accepted" on the face of it.....
3. Page 182 : Last two "." Dots to be eliminated.
4. Page 183 : Fig. 6.1  
Page 186 : : Three months after date ..... Received has to come down. Difference not a figure. Omit 6.3.
5. Page 189 – 6.8.1
  1. (a) On receiving the bill  
Bills Receivable a/c Dr.  
    To Drawee a/c  
(Not Debtor a/c)

Note : For credit part of Journal, it should start with the word "To Debtors /ac".

6. Page No. 190 :  
Subdivision number 6.9 should be made as 6.8.2. as it is other part of accounting treatment. Subsequent Numbers to be suitably changed.
7. 6.9 : Page 190  
On accepting the bill :  
Drawer a/c Dr.  
    To Bills Payable a/c.  
Note: Drawer a/c is more precise than creditor a/c.
8. Page 191 :  
A. Endorsing the bill  
Books of creditor :  
Creditors/Endorsee a/c Dr.  
    To Bills Receivable a/c.
9. Page 194  
IV..... Journal  
There is column called : Debit amount × Rs.  
But there is no need of the word "Amount, when 'Rs' is mentioned.
10. Page 195 : Illustration 2  
On 15<sup>th</sup> March 2001 Ramesh sold goods for Rs.28,000 – to be replaced as Rs.8000.
11. Page 201 :  
(iii) When the bill was endorsed to c : Narration for Third Journal; (C's acceptance dishonoured) should be changed as (C's acceptance endorsed).  
Narration for Fourth Journal : (B dishonoured disacceptance ..... ) should be changed as .....  
(B dishonoured his acceptance) .....

Page 203 :

Solution for Illustration 5 :

Third Journal Entry should be split and printed as .....

May 4 Mohan a/c Dr.           15000  
                    To Bills Receivable a/c       15000  
(Being the old bill cancelled).

Cash a/c Dr.           300  
                    To Interest a/c                   300  
(Being the interest received).

Page 205 :

Second Journal entry should be

Jan 15 B/R a/c Dr.           30000  
                    To Narain a/c                   30000  
Delete Bills Receivable a/c printed again.

Third journal entry should be  
 Jan 31      Bank a/c Dr      29250  
                  Discount a/c Dr      750  
    To Bills Receivable a/c      30000

Delete (remove) Cash a/c printed again wrongly.

April 19 Journal entry *should be*  
 Kapil a/c      Dr.      20800  
                  To Bills Receivable a/c      20000  
                  To Discount a/c      800

(Being the bill endorsed and discount received).

Page 210

Journal for narration should be  
 (Y dishonoured.....and bank paid Rs.50 as noting charges).

Seventh Journal entry is

April 4      B/R a/c      Dr.      5000  
    To Y a/c      5000  
 (Received two acceptances from Y).

Since the duration of two bills are different, the correct entry should be

B/R No.1 a/c Dr.      3000  
 B/R No.2 a/c Dr.      2000  
    To Y's a/c/      5000  
 (Being two bills received after acceptance).

Page 211 :

Third journal entry is

July 7      Cash a/c      Dr.      500  
                  Bad Debts a/c Dr      1500  
    To Y a/c      2000

The entry should be

July 7      Cash a/c      Dr      500  
                  Bad debts a/c Dr      1500  
    To Y a/c      2000  
 (a dividend..... bad debts).

Page No. 112

Sixth journal entry should be

April 4	X a/c Dr.	5000	
	To B/P No.1 a/c	3000	
	To B/P No.2 a/c	2000	

(Accepted two drafts).

Page No. 115

In Bills Receivable book, No. of bills – 3, amount Rs.310 printed in cash book folio. But it should be recorded in Amount Column Rs.310.

No. of bill – 1. The date printed as April 2002, but it should be 2002 April 7.

In Bills Payable Book,

No. of Bill : 1. The date is 2002 March 31; but it should be 2002 March 12.

Page 152

In solution 1, Depreciation.  
Written off to Machinery a/c.

## **Business Studies**

### **Chapter 1**

#### **Reference**

#### **Suggestions/Modifications**

Page 19      Box 1965-73 4<sup>th</sup> Line Fera (1973) - To be shown as FERA".

### **Chapter 2**

Page 27      2.3 (iv) Example of government regulation should be given.

### **Chapter 3**

Page 62      3.6.3 (i) Brand-Hijacking.  
"Specific meaning not given. To be explained".  
(iii) viruses -  
Meaning of virus not given. Should be mentioned.  
Transport – An important service sector has not been  
included in syllabus and the textbook.

## Chapter 4

Reference	Suggestions/Modifications
Page 72	Second Para –14 <sup>th</sup> line Janitorial Services – Concept not clear
Page 77	Types of Commercial Banks – explained - As per syllabus, types of banks to be explained.
Page 104	Project : Material – Questionnaire "Not given in the textbook as shown on Page 47.

## Chapter 5

Page 108	5.3.1 Joint Hindu Family business Should be Features of Joint Hindu Family Business.
Page 114	5.6.2 To be 5.5.2 - Wrong sub-division numbers
Page 115	5.6.3 To be 5.5.3
Page 116	5.7 To be 5.6

## Chapter 6 : Sectoral Organization of Business

Page 143 : After last paragraph of 6.2

Note : These days along with public sector, even private sector is allowed in providing essential utility services. Such areas are Insurance, water supply, Electricity, gas and transport. But there must be proper co-ordination between public and private sector in extending service.

Page 147 : Merits

- (v) As all financial dealings will be subject to budget, accounting and audit control, there can be proper accountability.

Limitations :

- (vi) Departmental Undertakings are at the mercy of Ministry and officials for any Expansion and other activities.

Page 163 : ISO 9000 should come at Page 255 under External Trade Chapter.

## Chapter 7 : Formation of a company

### Page 169

7.2 "The need for the formation of a Company came, to overcome the defects of sole trading partnership, such as limited capital managerial skill and unlimited liability".

As the need is not mentioned, suggested to include in the *beginning* of formation of a company.

### Page 170

There is no need to explain types of promoters, in the formation of company. It is suggested to remove the types of promoters.

### Page 176 :

7.3 In documents used in the formation of a company, the suitable specimens of important documents are not given.

For better understanding of documents, it is suggested to include some of the specimens of important documents.

## Chapter 8 :

### Sources of Business Finance :

### Page 198 :

Under 8.6, International Sources of Finance, safety measures for Indian business with foreign direct investment should be mentioned in a paragraph where more than 51% FDI is allowed.

## Chapter 9 : Internal Trade

### Page 235

Under 6, Franchise, the concept "décor" is not clear.

### Page 240 :

Under 9.7.2 Telemarketing, after explanation, some areas where telemarket is popular, with examples should be given.

### Page 258 :

#### 10.7 Export Import documents

Some of the important documents' specimens have not been given. For better understanding and practical oriented knowledge atleast some important documents' specimens should be given.

# CRITERIA FOR THE ANALYSIS OF NCERT TEXTBOOK

## Content and Presentation

- C1. As per approved syllabus
  - a) Is it in accordance with the syllabus requirements ?
  - b) Can it be satisfactorily covered in a year ?
  
- C2. Presentation of the content
  - a) Linkage with previous knowledge
  - b) Appropriateness of the introduction
  - c) Correlation within the unit and from unit to unit
  - d) Simple, logical and sequential presentation
  - e) Use of appropriate mathematical knowledge
  
- C3. Accuracy
  - a) Free from factual, conceptual and numerical errors
  - b) Correct and up-to-date scientific data
  - c) Logical, correct and complete derivations
  - d) Consistent use of symbols, nomenclature, terms, notations and units (SI)
  
- C4. Illustrations and Examples
  - a) Variety in graded examples and illustrations to develop concepts
  - b) Adequate number of graded and varieties of worked examples
  - c) Use of graphs, diagrams and numerical data
  - d) Provision for self-learning activities and investigatory projects

## Evaluational Exercise

- E1. Appropriateness
  - a) Syllabus
  - b) Overall coverage
  - c) Level of students
  
- E2. Exercises
  - a) Grading with respect to difficulty level
  - b) Adequate number of questions
  - c) Types of questions
  - d) Enrichment exercises
  - e) Answers provided
  
- E3. Constructions of Questions
  - a) Clarity
  - b) Correctness
  - c) Sufficiency of data

## GENERAL ASPECTS OF THE BOOK

- G1. Structure
  - a) Uniformity in numbering of units/sections/sub-sections
  - b) Uniformity in numbering exercises, diagrams and notes
  - c) Introduction and exercises in units
  - d) Sequencing of units
  - e) Highlighting of definition, generalization, formulae, etc.
  
- G2. Visuals
  - a) Clarity and attractiveness of figures, diagrams, graphs, etc.
  - b) Appropriateness to the content
  - c) Accuracy and adequacy
  - d) Proper referencing of the figure and proximity with the content
  - e) Proper scaling, labeling and title
  
- G3. Physical Aspects
  - a) Suitable size of the book and types
  - b) Quality of paper
  - c) Quality of printing and binding
  - d) List of contents
  - e) Getup of the book



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