

A textbook is a product for teaching learning process. It would be rather developed and not written. It should not be a piece of writing and not a piece of literature or mere compilation of fiction / stories and articles as it is understood but it should be a guide to learning. It should be encyclopedic in nature and relevant pedagogical in construction. It should be readable but in a proper discourse and with a proper display. The content of the textbook as we have already mentioned should be encyclopedic i.e. knowledge based facts, concepts, values and attitudes. There must be reading assignments, rewriting assignments, summaries, recalls and text included as teachable part of the textbook. The structure of a textbook is based on problem-solving technique. The coherence of a textbook needs clarity of ideas, i.e. readability with commenting words and phrases. A textbook should be appropriate to the topics by explaining in proper language and discourse, related with the previous knowledge and using graphs, illustrations, pictures, photographs to depict the concepts. Its talk should be friendly like "Have you ever been / heard". It is called meta-discourse. Activities, questions, projects, intellectuals and emotional engagements should be placed as a part of teaching in a textbook. A textbook is not only a student "aid, it is also a teachers tool", so a student should know that what he has to do with the text and a teacher should be given pedagogical points. Hence, it is recommendable that student's corner, and teacher points should be given in a textbook though there may be a separate work book or a teacher's guide.

Standards – Benchmarks & SLOs

Standards

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The competencies by descriptive statements specifying broadly, the knowledge, skills and attitudes that students will acquire, shall know and be able to do in a particular key area during the course of study. These are qualitative in nature and sets out the learning targets. They may not be subject specific.

Benchmarks: The standards indicate what the students will accomplish at the end of each development level. They are subject specific.

SLOs: The detailed statements describing what students are supposed to learn and be able to do at each grade level to achieve the specified benchmarks. They are activity specific and generally observable and measurable.

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A Paradigm Shift

From	To
Traditional approaches 1. Based on contents & topics 2. Focus on objectives 3. Learning Medium "Words" 4. Focus on teaching 5. Teacher centered 6. One way approach 7. Reading, writing, communication and using arithmetic (skills) 8. Assessment of content knowledge & simple understanding 9. Promote memorization	Standard based approaches 1. Based on standards 2. Focus on SLOs 3. Learning Medium "Images" 4. Focus on learning 5. Student centered 6. Variety of approaches 7. Interpersonal, team work and problem solving skills 8. Assessment of content ,skills and attitudes, deeper understanding, reasoning and application 9. Promote thinking

Qualities of a Textbook

Writing a good textbook requires the skills of a subject specialist, a curriculum expert, a good teacher with classroom experience, and an imaginative author.

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National Curricula and Matric Level Course Content

ENVISAGE TEXTBOOKS

- Providing knowledge which is useful for a developing society
- Inculcating problems-solving approach to create independent / critical thinking
- Creating skills and attitudes relevant with real life situation
- Reflecting innovative writing/modern production processes
- Containing up to date & age appropriate text
- Based on conceptual assessment, thinking based exercises instead of fact / memory questions oriented only

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CHAPTER CORE

- Add historical and current dates of interest.
- Include enough information to allow the reader to comprehend a specific concept maintaining breadth and depth for addressing the expected learning outcomes of the National Curriculum
- Build vertical linkage between various concepts from lower to higher level and at the same time horizontal linkage of concepts of one discipline with the others.
- Avoid overlapping of concepts vertically as well as horizontally. If need arises, give recall paragraphs.
- Relate the concepts to student's own experience and observation.
- Textual matter should be harmonized reflecting unity and coherence, discussing diverse viewpoints wherever appropriate.
- Provide guidance, as necessary, on safety, health and environment requirement pertaining to the learning event.
- Text and activities to demonstrate care and respect for the environment

Communication

- Fewer words are better. Be concise, use simple language which consists of short sentences. Prefer graded vocabulary.
- Present content using consistent nomenclature/ internationally accepted terminology/units.
- Highlight the headings, sub-heading, key words, terms and definitions. For distinction use level heading "A" 4.1, 4.2-----level "B" 4.1.1, 4.2.1-----level "C" (a), (b), (c)----- (i), (ii), (iii)-----and level "D" bold but unnumbered

Illustration

- Use the appropriate elements to promote comprehension – charts, tables, graphs, illustration, line drawings – cartoon types illustrations for children. Real life coloured photographs and illustrations make the substance vivid, attractive and easy to digest
- Draw figures to size and should be numbered as Fig.4.1, 4.2, 4.3----- followed by captions, label if needed
- All figures to be cited in the text

INTERACTIVE ELEMENTS

- Pre-reading
- Activities while reading
- Headers and footers
- Linkage of text and figures
- Elaboration of concepts with examples
- Interaction of text with society
- Puzzles
- Brain teasers

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- Quick quiz
- "Do you know" in boxes
- STS connections
- Field trips
- Clippings
- Flash cards
- Models
- Work sheets
- Flow charts
- Labeling a diagram
- Peer discussion
- Problems solving
- Clipart/Cartoons / caricatures
- Tidbits – speech bubbles
- Review question–re-enforcement activities
- Quotations
- Demonstrations
- Colourful pictures
- Group tasks
- Points to remember
- Role play
- Library research
- Mini projects
- Surveys
- Case studies
- Exhibition

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How to write an Inquiry?

- Start with an open ended question or a demonstration. Allow responses and subsequent questions from students
- Involve students to collaborate on designing experiment or process
- Ask students to conduct experiment and or gather data
- Ask to locate, select, organize and present information from a variety of sources
- Allow students to analyze and interpret data
- Identify a problem, plan and carry out investigation for its solution
- Encourage students to identify pattern, report trends and draw inferences
- Allow discussion and information communication etc
- Finally ask the students to draw conclusion

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A Sample Inquiry: Grade IX (Structural Inquiry)

Material: Electric Kettle and white Ceramic Plate

Procedure

1. Come to class with an electric kettle filled with water. Let students wonder!
2. Plug in the cord and switch on the kettle to do its job. Soon steam will begin to escape from the spout.
3. Get a cold, white ceramic plate and hold it up at a safe distance from the spout. Tilt it slightly.
4. Water droplets collect on the plate and soon begin to fall down.

The Water Cycle