

Points for chapter analysis

1. Does the chapter seem to play any role in achieving the goals of science education mentioned in the curriculum document? Which goals are getting addressed through this chapter?
2. Where does the chapter fit in the larger structure of science?
3. Which concepts have been included in the chapter? Are there other concepts related to this topic which are important from the point of view of conceptual understanding but have not been included in the chapter? What could be the criteria for deciding the content?
4. Do you find the chapter appropriate for that class? Please pay attention to the difficulty of the subject matter as well as the language of the chapter.
5. What seem to be the assumptions about the prior knowledge of students? What is expected of them in terms of knowledge before they learn this chapter?
6. What seem to be the assumptions about the socio-economic background of students reading the textbook? Which contexts are getting adequately represented and which are not?
7. Did you notice any technical and/or factual mistakes in the content?
8. Has the topic been developed in a historical way? Does it help students understand the historical evolution of the ideas related to the chapter?
9. Which values are getting promoted through the chapter? What value lessons will students draw from this chapter? Is there any attempt in the chapter to draw attention to general social and environmental concerns?
10. What image of science might students construct after reading the chapter?
11. Are the activities given in the chapter relevant? Is there any activity which seems problematic or which might be difficult to do in the class?
12. What do you think about the presentation of the chapter in terms of diagrams and photographs? Do the diagrams and photographs included in the chapter help understand the content or are they being used to just break the monotonicity of the text and decorate the chapter? If you find a problem with any diagram, please note that down as well.
13. What is the weightage given to the chapter in the exam? What kind of questions are asked from this chapter?
14. What is the nature of questions given at the end of the chapter? Will questions make students think and apply their knowledge in different situations, or test students' recall capacity?
15. Pedagogy:
 - a) What are the opportunities for students to ask questions, share their experiences, argue with each other, test a scientific claim or evaluate evidence for a claim?
 - b) Does the chapter provide students opportunities to engage in hands-on activities?
 - c) Are students encouraged to collect information on relevant issues? Or, must they just memorize the information given in the chapter?
 - d) Does the chapter provide students opportunities to use various scientific methods like doing experiments, analysing data, or using statistics?
 - e) Does the text present multiple positions/perspectives on an issue? Or, does it advocate one viewpoint?
16. Do you feel the need of writing this chapter differently? Why or why not?
17. If you get a chance to change the chapter based on the needs of the students of your school, what changes would you like to make? For example, which issues/concepts will be emphasized, what examples will be included, what will be the pedagogy, how will you assess students' learning etc.