Fundamentals of Studying Science and Technology

Problems to Overcome:
- **Specialized Vocabulary** - learn the special words and phrases.
- **Details** - know exactly what was done, what should be done, and what happened.
- **Background** - some lecturers assume you know more than you do.

SCIENTIFIC TEXTBOOKS AND LECTURES:
Most scientific textbooks and lectures move from simple to complex. Scientific courses build on yesterday’s material.

TEXTBOOKS:
Survey the text paying attention to:
- **Key words** or phrases.
- **Definitions** in bold face or italics.
- **Visual aids**.
Have background - go back and review previous chapter or lecture.
Survey Questions:
1. What methods were used?
2. What were the results?
3. Why?

When reading pay special attention to:
1. **Cause/effect relationships**
2. **Sequences**
3. **Conclusions**
4. **Lists** of actions and conclusions

To Aid Understanding:
1. Try outlining
2. Define key words
3. Make up hypothetical questions

SCIENTIFIC AND TRADE JOURNALS:
Most scientific articles are organized by the **Scientific Method Research Report**.

Research Report
1. **Statement of facts**
2. **Problem to be solved**
3. **Hypothesis** (possible answer)
4. How researcher plans to prove hypothesis
5. **Results of experiment**
6. Conclusion

**Technical Article**

1. Synopsis of article
2. Discussion of problem
3. How can it be solved?
4. Description of work to be done
5. Description of results
6. Conclusion

**To survey a journal article do the following:**

1. Carefully read the title and synopsis.
2. Thoroughly read the facts and hypothesis.
3. Read the topic sentences of work done.
4. Read the conclusion thoroughly.

**While reading:**

1. Try to follow the author’s logic
2. Note details
3. Note each step
4. Evaluate author’s conclusion
5. Formulate your own conclusions

**To review article:**

Write your own summary. Include:

1. the hypothesis or problem.
2. how the problem was tested or solved.
3. the conclusion.

**Emphasis necessary for Scientific Literature:**

1. Details
2. Logic