

# Comprehending Difficult Science/Math Texts

Whether you are in school, at DMS, or at thanksgiving, someone is going to say some shit that is possibly stupid or possibly genius. Usually, we ask for evidence when we receive bewildering information that contradicts our expectations; however, you rarely ever receive information in good faith. Your interlocutor will likely give you a book or series of articles that you don't have the background to comprehend or critique; it's important to remember that \*\*\*they also\*\*\* do not comprehend it, but they are hoping that they'll be able to convince you that they know what they are talking about through sheer intimidation and confidence. Little do they know that you have this trusty guide written by El Kevin del casa-Thompson to help you through the troubling process of reading and comprehending hard shit. Perhaps you'll awaken a new interest in science or mathematics in the process and be able to join a science book club or something.

The example text I will use today is a text I have never read about something I know relatively little about: **Time Space Matter** by Herman Weyl. The book is about Einstein's theories of relativity, their mathematics, and their philosophical significance. We shall struggle together to comprehend the first chapter and hopefully you will be more confident in the future when you are provided difficult to understand material. We also welcome questions on talk. [dallasmakerspace.org](http://dallasmakerspace.org) or at our weekly Sunday Science Committee meetings at 2:30P.M. CST.

## Step-by-step guide

The Steps:

1. Preparation for First Reading
  - a. **Your Tools**
  - b. **What Do You Want to Get Out of This Material?**
  - c. **Create A List of Key Terms, A List of Equations/Formulas, And A List of Figures**
  - d. **Read The Front Cover**
  - e. **Read The Back Cover**
  - f. **Read The Table of Contents**
  - g. **Lookup the Author and Year of Publication**
  - h. **Skim The Amazon Reviews**
  - i. **Build Mindmap that Reflects Your Hypothesis**
  - j. **Read the Introduction**
  - k. **Update Mindmap to Reflect Your Ultimate Hypothesis**
2. The First Reading
  - a. **Look At the Figures**
    - i. **Take Notes**
  - b. **Look At the Equations/Formulas**
    - i. **Take Notes**
  - c. **Read the First and Last Paragraphs of the Chapter**
    - i. **Take Notes**
  - d. **Read the First and Last Paragraphs of each Section**
    - i. **Take Notes**
  - e. **Combine Notes and Update Mindmap to Reflect New Hypothesis**
  - f. **Read the Chapter from Beginning to End (No Stopping or Rereading)**
  - g. **Update Mindmap**
3. Preparation for Second Reading
  - a. **Take A Look at Your List of Terms**
  - b. **Take A Look at Your List of Figures**
  - c. **Take A Look at Your List of Equations/Formulas**
    - i. **Correspondences between Terms in Equation and Term List**
    - ii. **Ask why each operation exists at a split? Answer as many as possible**
  - d. **Forum Time, Baby**
  - e. **Update that Mindmap**
4. The Second Reading
  - a. **Read the Chapter from Beginning to End**
    - i. **Stop and make note of anything that still doesn't make complete sense.**
      1. Can be anything small, even a small phrase or word
5. Preparation for Third Reading
  - a. **Take A Look at Your List of Terms**
    - i. **Define them on your own**
  - b. **Take A Look at Your List of Figures**
    - i. **Describe them on your own**
  - c. **Take A Look at Your List of Equations/Formulas**
    - i. **Describe the Terms and each split in the tree**
6. The Third Reading
  - a. **Read the Chapter from Beginning to End**
    - i. **Reading should be smooth sailing.**
      1. If not, then do as you did in the second reading.



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