



READING IN MATHEMATICS

Disciplinary Literacy is defined as the confluence of content knowledge, experiences, and skills merged with the ability to read, write, listen, speak, think critically and perform in a way that is meaningful within the context of a given field.



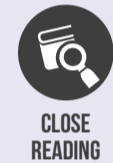
What makes learning mathematics and comprehending mathematics texts challenging is the fact that they are concept and idea dense, and they also require attention to many unique features within the texts. Mathematics texts do not just involve reading word problems but require translation and decoding of innumerable symbols that take up very little space but still carry a great deal of meaning. In addition, students must constantly use visual strategies to make meaning of charts and graphs that are also dense.

- GRAPHS
- CHARTS
- WORD PROBLEMS
- MATHEMATICAL SYMBOLS
- EQUATIONS
- QUESTIONS
- EXERCISES



DISTINCTIVE FEATURES

- Texts are typically concept and idea dense
- Function words ('the', 'a', 'of') and symbols (+, <, %) have specific meaning
- Every word and symbol matters
- Numbers may be interpretable without unit labels (meters)
- Many technical words contain Latin or Greek roots and have specialised meaning, such as 'trigonometry'
- Many visual representations



CLOSE READING



SYNTHESISING

DEMANDS AND STRATEGIES

- Make meaning from every word, symbol, and their relations
- Intensive reading and rereading to analyse details
- Get more than just the 'gist'; read closely and carefully
- Identify all parts of words and their meaning
- Divide attention across multiple representations of content (e.g. words and equations)
- Switch strategies when reading charts, graphs, equations etc.
- Use mathematically-specific text features to understand the meaning
- Focus on what is actually in the text; authorship is less of a concern



MAKING CONNECTIONS



ASKING QUESTIONS



SUMMARISING

CULTURAL CAPITAL

Alongside reading mathematical texts, wider reading around mathematics can enable students to gain a wider and deeper knowledge of the subject:

- Use reading as a way to make connections and understand real world issues
- Summarise and synthesise ideas.

- NEWS ARTICLES
- MATHEMATICAL ARTICLES
- BIOGRAPHIES
- BLOGS



DISCIPLINARY LITERACY

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