


# Too many stories, not enough facts? Free tips and resources to boost your child's knowledge and reading comprehension skills

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Reading comprehension is complex.  
Teaching kids evidence-based  
comprehension strategies helps.

But it's not enough (e.g. Catts & Kahmi, 2017).



Kids also need to learn – and to organise  
– knowledge about:

- words;
- different kinds of reading (e.g. stories and explanations); and
- the world.

## Kids struggle with reading comprehension for lots of reasons, including limited prior knowledge

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Reading comprehension involves lots of different kinds of brain tasks. We need to dig out meaning from what we read and then form a “model” that holds it together in our minds (RAND Reading Study Group, 2002).

Multiple factors – alone or in combination – explain why many kids struggle with reading comprehension:

- weaknesses in decoding;
- working memory limitations;
- developmental language disorders;
- problems with language reasoning;
- difficulties with executive functioning, e.g. attention;
- vocabulary deficits; and
- prior knowledge (e.g. Cutting & Scarborough, 2006).

We've talked about many of these before.

## But what do we mean by “prior knowledge”?

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To understand what you read, you need to know more than just the words and what each means. For example, consider this excerpt from a Wikipedia article on American Football strategies; a topic I know very little about:

“Despite the multi-receiver sets, the spread option is a run-first scheme that requires a quarterback that is comfortable carrying the ball, a mobile offensive line that can effectively pull and trap, and receivers that can hold their blocks. Its essence is misdirection.”

I know what each word in this quote means. But I have no idea what some of the words mean in context (e.g. “run-first, “pull and trap”). Nor do I know exactly what the words mean together because I don’t know much about Gridiron. I can get a rough idea by drawing on my scant knowledge of American football (from movies), and by drawing on my knowledge of other football codes, such as Rugby League and Aussie Rules. But I lack the background knowledge to understand the simple passage fully.

So to understand what you are reading, you need knowledge about what is being discussed or read. This is called several names, including “prior knowledge”, “background knowledge” or “domain knowledge”.

## **Why is background knowledge important for reading comprehension?**

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We’ve known for ages that:

- struggling readers tend to have less developed content knowledge and greater difficulties using knowledge to build mental models of what they read (e.g. Bransford et al., 1981; Oakhill, 1983);
- readers with more knowledge on a topic outperform others on reading-comprehension and memory tasks (e.g. Recht & Leslie, 1989);
- readers with prior knowledge out-perform readers who have better reading comprehension skills but little background knowledge in the tested topic (e.g. Schneider et al., 1989);
- having some knowledge of a topic in a passage is positively associated with correctly answering questions about the passage (Compton et al., 2013);
- struggling readers with poor background knowledge have difficulty recalling a passage’s main ideas, but when given background knowledge can often do so (Miller & Keenan, 2009); and
- without well-connected knowledge, students have difficulty making inferences (e.g. Kendeou & van der Broek, 2005; McNamara & Magliano, 2009).

## **How does knowledge help?**

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Prior knowledge:

- speeds up basic comprehension and leaves working memory free to make connections between new and previously learned information;
- helps readers to make sense of word combinations that have ambiguous meanings. Knowing, for example, that “I slipped off the bank and made a huge splash” is about falling off a riverbank, and not a saving and lending institution;

- helps with inferencing, e.g. making sense of: “The explorers huddled in their tent, 20 kilometres away from the South Pole”, is easier to understand if you know it’s very cold in Antarctica; and
- helps older students to understand metaphor, idiom, irony, and other higher level language uses, e.g. “Victory is sweet”, “Don’t count your chickens” or “Donald Trump really loves the mainstream media”.

In other words, having a vast store of quickly available, previously acquired knowledge enables the mind to take in new information in less time and with less effort and to link it to existing knowledge (Hirsch, 2003).

## Why is background knowledge a problem?

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Controversy alert!

Some researchers have found that kids, especially in the early years of school, spend too little time reading non-fiction, information-based texts (e.g. Danilow et al., 2013; Palinscae & Duke, 2004). Other researchers think that some teachers focus too much, for too long, on comprehension strategies and generic skills like critical thinking, and not enough time on imparting knowledge about the world (e.g. Catts & Kahmi, 2017).

Needless to say, not everyone agrees!

What we do know is that, as readers develop, they need more advanced reading strategies to cope with the curriculum, especially for specialised areas of the curriculum like history, science and maths (e.g. Shanahan & Shanahan, 2008 and 2012).

## How can we improve a child’s knowledge? Free resources and tips

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Here are several evidence-based suggestions and resources, many of which are completely free:

- Read/listen to more information/non-fiction texts. This will help children learn words and concepts needed to understand the news, social media, and books aimed at the general public. (My kids are big fans of Horrible Histories, for example, which has given them (amongst other things) a surprisingly solid understanding of the history and major personalities of the Roman Empire and Kings and Queens of England – especially the revolting bits.)
- Read fiction that is set in real places or time periods, e.g. “The Hole in the Dike”.
- Use various media, e.g. listening to podcasts, watching YouTube videos or movies about a topic as well as reading about it (e.g. Kendeou et al., 2008). For example, use interactive online resources such as:
- Use read-alouds in class until Year 8 (Chall et al., 1996).
- Explicitly teach content-related vocabulary. Here’s a free tool to teach a child new words. Here’s another resource from the Florida Center for Reading Research.
- Morphemic awareness training, which may be more useful in some areas (e.g. science) than others (e.g. history).

- Semantic feature analysis (e.g. Bos & Anders, 1990), e.g. for a free template, see [Reading Rockets](#).
- Discussion about texts, which have been shown to increase comprehension (Gersten et al., 2001).
- Close Reading of texts with repeated readings of complex short texts (e.g. Fisher & Frey, 2014).
- Using Frameworks or Schema to help kids to assimilate new information more quickly, e.g.:
  - Story structure maps, like [this free one](#), have been shown to improve reading comprehension (Perfetti et al., 2005).
  - Graphic organisers for story mapping, expository texts and concept mapping (e.g. Gersten et al., 2001). See several free ones from the [Florida Center for Reading Research](#).
  - Knowledge Organisers. I used these to summarise my notes at school and uni and love them! You can read more about [knowledge organisers here](#).
- Teach “signal words” to help determine the structure of a text, for example, words like:
  - first, second, next, last, while, during, after, before, then, until, immediately and meanwhile, signal a time (or temporal) structure, like a procedure;
  - either/or, neither/nor, compared with, likewise, similarly, yet, differ, different and however, signal a compare/contrast relationship;
  - because, so, thus, therefore, if/then, for this reason, accordingly and as a result, signal a cause and effect relationship;
  - in order to, problem, solution, steps, may be due, solve, result and leads to, signal a problem and solution text; and
  - is like, by way of illustration, including, for instance and as [big] as a, signal a description.
- Put down our devices, and [get out and explore the world together](#).

## Some examples of full programs that integrate reading and knowledge content instruction

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### Clinical bottom line

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To improve a child’s reading comprehension skills, evidence-based training in decoding, work attack, [reading fluency](#), [comprehension strategies](#) and [vocabulary instruction](#) is essential. But so is systematic knowledge-building. In this article, we’ve listed a number of resources to help parents and teachers help children to increase their knowledge of the world around them.

### Principal sources:

1. Elleman, A.M. & Compton, D.L. (2017). Beyond Comprehension Strategy Instruction: What’s Next? *Language, Speech, and Hearing Services in Schools*, 48, 84-91.

2. Hirsch, Jr., E.D. (2003). Reading Comprehension Requires Knowledge – of Words and the World, American Educator, Spring, 10-46.

Image: <http://tinyurl.com/y9fpt6bg>



**Hi there, I'm David Kinnane.**

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Principal Speech Pathologist, Banter Speech & Language

Our talented team of certified practising speech pathologists provide unhurried, personalised and evidence-based speech pathology care to children and adults in the Inner West of Sydney and beyond, both in our clinic and via telehealth.

**What do you think about when you think about speech pathology?**

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**Ask Us Anything: 17 things our readers and followers really want to know about speech pathology (but were too shy to ask)!**

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**Language therapy works. But can we make it better?**

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**Stuttering: what do we mean by 'recovery'?**

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**Lifting the lid on speech therapy: How we assess and treat children with unclear speech – and why.**

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**Too many children can't read. We know what to do. But how should we do it?**

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**I want to help my late talker to speak, but I'm stuck at home. What can I do?**

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