

Information learned by rote (nonsense syllables and meaningless word pairs) cannot be anchored to major elements in cognitive structure and hence form a minimum linkage within it. Unless materials learned by rote are restudied repeatedly to achieve overlearning ... they cannot be recalled several hours or several days after learning.

Information that is learned meaningfully (associated with subsumers and cognitive structure) can usually be recalled for weeks or months after acquisition.

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Mapping to develop reading and writing skills

For many years, experts in reading comprehension have advocated methodology consistent with mapping. Reading comprehension depends upon activating prior knowledge about text, fitting what is in the text to what students already know about the subject of a text. Effective readers set their purpose and make predictions before they read. As they read, they employ strategies including predicting, visualizing, summarizing and questioning. After reading, effective readers paraphrase, check predictions, answer questions and re-check text to refine their interpretations. Effective readers are metacognitive in that they are able to identify and select strategies which aid their comprehension. Mapping can be a valuable tool in building background knowledge and setting purpose for reading. Maps built during and after reading help readers monitor the sense they are making of text and to note important aspects of text.

Semantic mapping has long been recognized as a sound, visual strategy for expanding one's vocabulary because new words are related to concepts and to familiar words. Creating a semantic map with students combines the advantage of total student involvement with brain-compatible learning. The magic of semantic mapping emerges when students see "old" words in a new light, when they see how "new" words relate to "old" words. Since vocabulary instruction is most effective when it is wedded to the learner's prior knowledge, teachers have good reason to emphasize mapping when students are expected to learn new vocabulary. For this very reason, experts in English-as-a-second-language instruction have recently emphasized mapping as an important instructional technique.

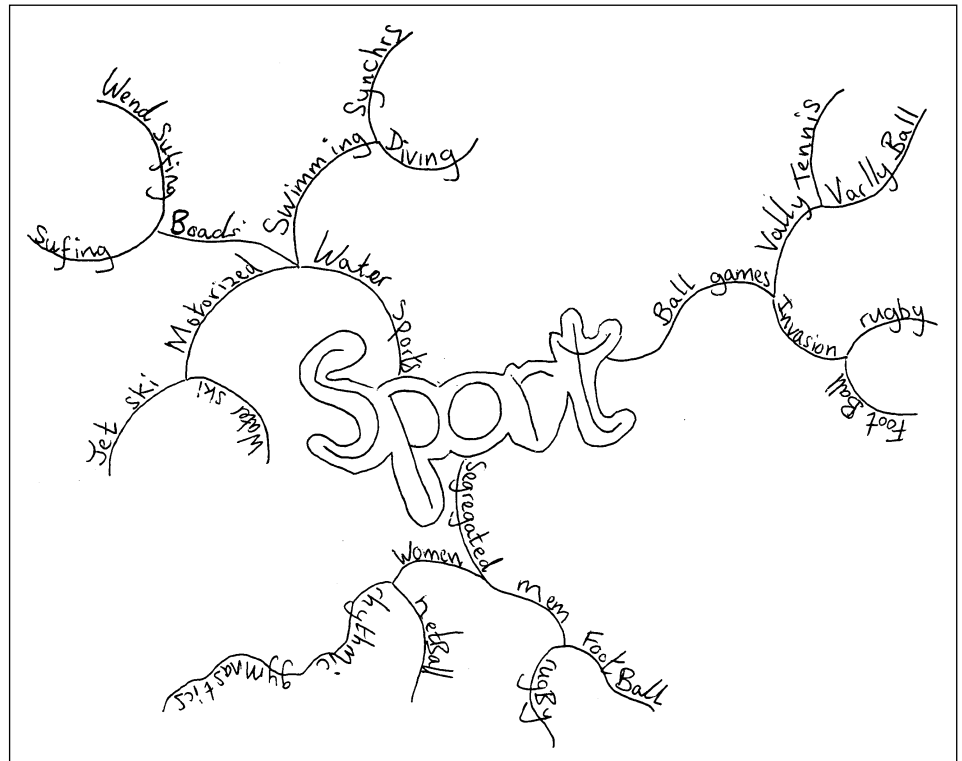
Mapping can also be employed as a pre-writing strategy and to facilitate for oral presentations. Effective writing depends upon planning and building or activating background knowledge during pre-writing, keeping the flow throughout drafting and revising for clarity, organization, vocabulary and sentence patterns as well as matters of spelling, punctuation and grammar knowledge. Students who build maps before they write set themselves up for success in drafting and revision. They quickly recognize the need for further information related to their purpose and audience. Insights developed throughout the writing process result in revisions to original maps, a testament to the link between writing and learning. Similarly, maps help students prepare and present orally. Maps formatted on cards, charts or overhead transparencies facilitate the comprehension of listeners in the audience.

Not all students are able to identify the main organizing principles for an essay or project. Therefore, it can be useful to discuss the assignment with the group as a pre-writing activity:

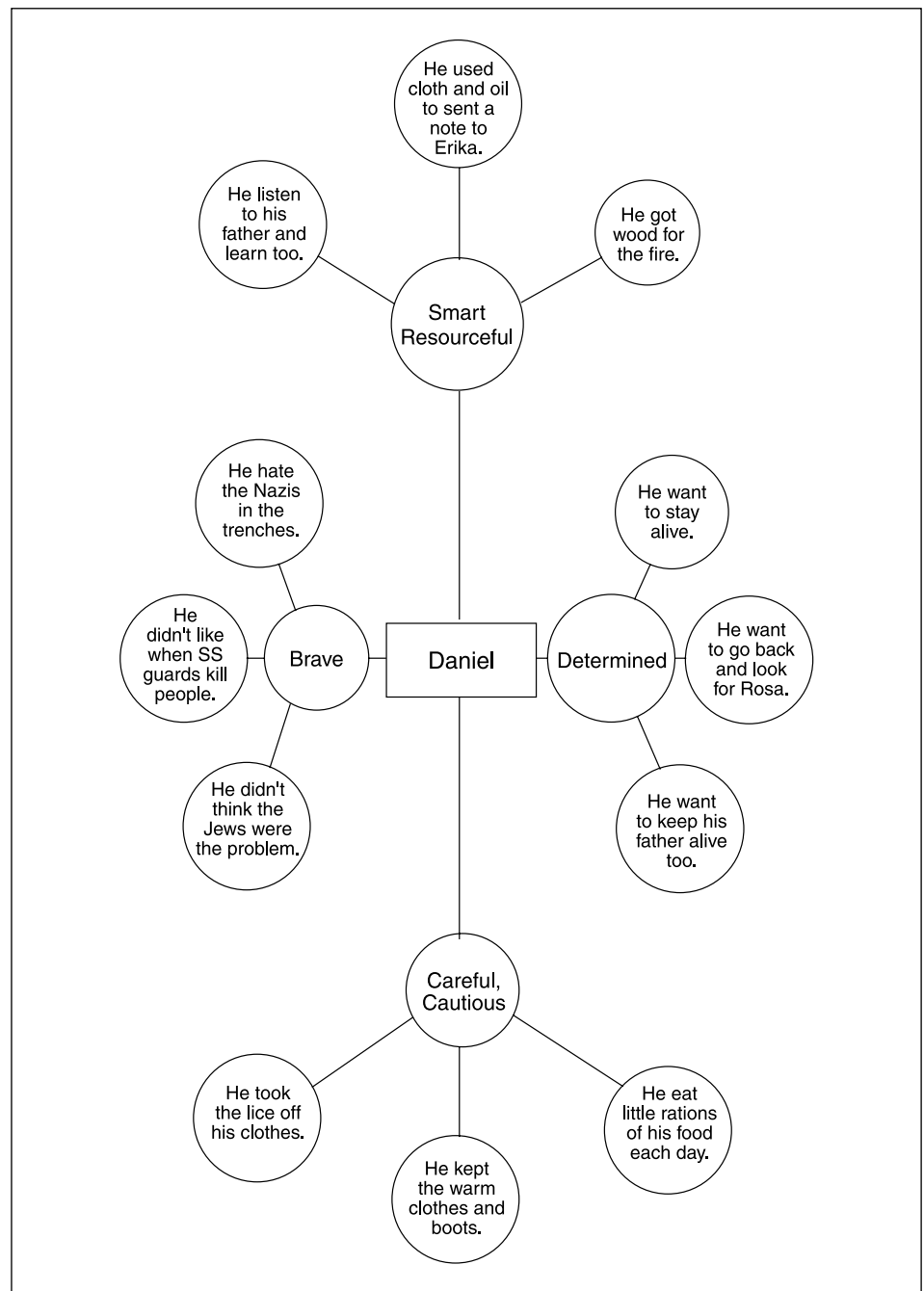
1. What is your purpose? Your topic? Your writing or presentational format? Place this at the centre of the map.
2. Who is your audience?

3. What are the main branches of your map? You could provide a template for students with these branches already present with the challenge for students to create sub-branches. Ideally, students should independently determine the branches and sub-branches for their writing presentational task.

The following map was created by a grade 8 student who struggled with his writing. Look at the way he organized his knowledge about sport. Examine the vocabulary he has used. Look at the spellings he has attempted. The map illustrates the difference that mapping can make to an individual who has had difficulty in organizing his thoughts – both in terms of his ability to make sense of the information but also the differences it made to his feelings about himself as a learner.



Another example on page 22 is provided by a junior high E.S.L. student. Note how the student has used a map to plan and compose a character sketch. The character's name is in the centre of the map. The main branches focus on character traits. The sub-branches focus on details from the story to illustrate the character's traits.



Maps are a perfect summary of the meaning made of a subject. Additionally, as described earlier in this chapter, maps offer vital visual hooks for recall. All the aspects of recall so beloved of memory experts can be found in maps – the strong images, the color, the humor, the associations, the variety of size, contrast and texture – but they are placed within an organized network of meaning.

Note-making and note-taking

For writers, the contrast between linear text and maps is significant. Being based on the organizing structure of the topic itself, maps are created “out of