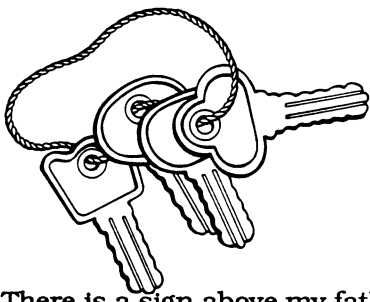


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## Thinking is the Key

### Introduction

There is a sign above my father's desk that reads: ENGAGE MIND BEFORE PUTTING MOUTH IN GEAR! As a retired farmer, adept at engine repair, the quote represents an important part of his personal philosophy. He refers to it often, especially when he is challenged by his nonstop talking daughter who is forever taking one foot out of her mouth to make room for the other!

Consequently, my fascination with the human mind, how it works, why it works, and how to make it work better began early. A career in education has provided a fertile ground for continued exploration. It's easy to believe that thinking is some magical, mysterious process locked away in the corners of the mind, waiting for the right key. Sometimes it feels like the magic is right at my fingertips. I'm just too dumb to see it. At other times, the magic is exchanged for logic, dissected by years of empirical research and supported by one pedagogy after another. Unlike a carefully sequenced, smooth running engine, the mind is unpredictable in its thinking. It plays fascinating yet frustrating tricks on what it perceives, learns and chooses to remember. Partly truth, partly fiction, magical or logical—how can we not be amazed and challenged at the prospect of engaging this miraculous machine?



### Thinking about Thinking

We all do it—thinking that is. It's when we start thinking about thinking that the question of magic versus logic begins to haunt us. The adult experts in education have buried the definition of thinking in a never ending stream of jargon. Thinking is: intellectual, physical, emotional, collaborative, holistic, logical, creative, divergent, convergent, sequential, random, analytical, left brain, right brain, abstract, concrete, visual, auditory, kinaesthetic, etc. Ask the child experts and they will tell you thinking is hard, easy, fun, boring, sad and sometimes scary! If we explore the meaning of the jargon, we soon realise many of the words are near synonyms. The language of thinking changes as the various bandwagons in education roll through the research. It's no wonder there is cynicism among those educators challenged to teach students how to think. Teachers need to explore the process of thinking until they discover a language that is comfortable; one that fits their personal learning style, teaching style, year level and subject area. After all, thinking is THE most intimate and private thing we humans do. Consequently, how it is taught and the way it is applied deserves the most personal and individualised approach.



### Life Long Thinkers

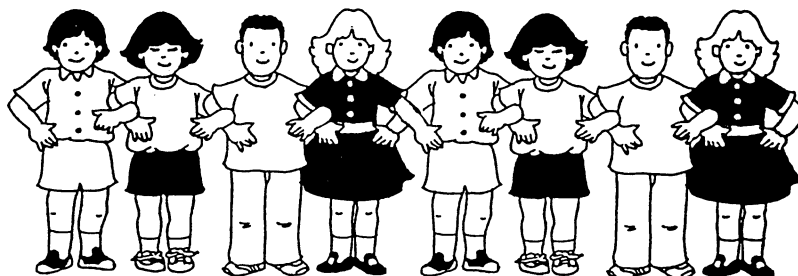
Teaching is more than helping a group of students make it through one year of school. It is more than preparing them for next year. Good teachers prepare students for LIFE. To be more exact, life in the 21st century. An important part of that challenge is teaching students how to improve their thinking skills. Many of the problems and demands of adult life that await today's students can be successfully handled and even solved if they know how to apply appropriate thinking. There may be some magic in understanding the thinking process, but there isn't much magic in making it happen. It takes modelling, hard work and lots of practice—by teachers AND students. Teachers can't do it all. But they do have the unique opportunity to model effective thinking habits and to create daily opportunities for students to learn and practise effective thinking techniques. The result produces life long learners who are more than good students. They are life long thinkers.

# Chapter 1

## The Question Connection: A Chain Reaction

Every good scientist knows that for every action there is usually a reaction. So it is with questions, especially those that do not have right or wrong answers. One good question can start a fascinating chain reaction in the human brain; a reaction that stimulates the production of more ideas, then more questions, then more ideas, then more questions, etc.

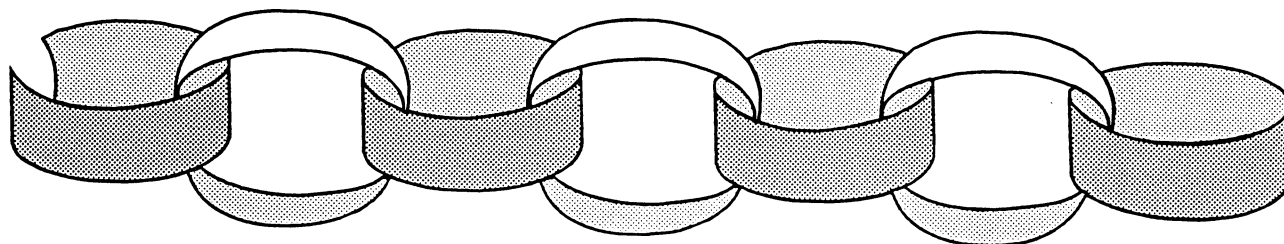
The chain is made of powerful links, each unique, yet dependent on the other. The links may symbolise many of the LIFE SUPPORT SKILLS that children need. These links include effective communication, a positive self-concept, an emotional commitment to a passionate cause and intellectual curiosity.



Spaced between each of these important links is a powerful connector, **Questions**. The QUESTION CONNECTION means the difference between low level and high level thinking, a weak or strong self esteem, a shallow or deep appreciation of complicated issues, and an insecure or confident attitude about working with others. One of the fascinating symbols of the chain is the DOUBLE power of each link. One link can be a catalyst in the creation of another. Once the new link is formed, the link that was the catalyst becomes a strong bridge connecting those on either side.



For example, questions can teach effective communication which in turn stimulate more questions which enhance a positive self-concept which in turn stimulate more questions which promote intellectual curiosity which in turn stimulate more questions which...And so it goes, link by link, skill by skill, the chain grows as teachers and parents understand its power and relationship to a child's ability to live successfully in the 21st century.



## Why do YOU ask questions?

The use of questions in teaching is a common practice. According to Kerry (1982), a teacher asks about 1000 questions per week. What purposes do these questions serve?

- To determine what students know and don't know.
- To attract students' attention.
- To provide a review of material and content already learned.
- To motivate students to participate and learn.
- To prepare students for what is to be learned.
- To engage students in discussion.
- To give students the opportunity to "look good" in front of their classmates.
- To check for comprehension and level of understanding.
- To embarrass a student who is not paying attention.
- To develop critical and creative thinking skills.
- To practice life-long learning skills.
- To have fun learning!
- To teach students to ask their own questions.

What other purposes might you add?

