



# Informing Parents

Parent Information Newsletter: Term 2 ♦ Week 5 ♦ Tuesday, 22<sup>nd</sup> May 2007

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## Higher Order Thinking Skills at Narrabri West

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### Introduction:

At Narrabri West we are introducing new learning styles to our classrooms. You may have heard your children referring to such activities as '6 Hats', 'Multiple Intelligences' and 'Bloom's Grids'. These are three of a number of strategies we are implementing that are designed to develop the thinking skills of students and provide them with more relevant and engaging learning opportunities. Our approach to these is innovative and puts Narrabri West at the forefront of teaching practice.

The stimulus for this development has been our involvement in the Australian Government Quality Teaching Indigenous Project (AGQTIP).

This 'Informing Parents' newsletter will provide you with information on AGQTIP and also explain some of these learning styles, all of which come under the broad heading of 'Higher Order Thinking Skills'.

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### Narrabri West & AGQTIP:

Narrabri West was invited to participate in this program in 2006 as the representative of New England Region. 12 schools from across NSW are involved. This is a program aimed at supporting teachers of Aboriginal students. The target group for this activity is teachers in schools with Aboriginal student populations of 10-20%. Narrabri West was invited to participate as our school falls into this target group and has successfully implemented new programs and strategies previously.

We are using this project as a means of providing all students in the school with learning opportunities that will increase their engagement and will utilise the particular skills and learning styles best suited to their abilities. This is particularly the case with our indigenous students, as we incorporate learning styles into our curriculum that are specifically designed to increase their engagement in learning. This is being achieved through providing local and specific culturally significant aspects to all units of study in

the classroom and learning styles that suit individual needs.

Teachers at Narrabri West are developing their skills and learning throughout the course of the project. The resources we are creating are being developed for all classrooms within the school and the learning teachers are undertaking and the processes used are school wide.

AGQTIP is providing funding of \$20,000 per year for 4 years to fund our project. We are using these funds to:

- purchase resources specific to our project;
- provide professional learning opportunities for staff;
- provide learning experiences for students;
- gain access to educational experts;
- provide time for staff to work together on project planning and implementation; and
- involve our local indigenous community.

AGQTIP also provides us with an 'academic partner' to work with for the duration of the project. Our partner is Mrs Tracey Simpson, who is the Associate Head of Teacher Education at Charles Sturt University (Dubbo Campus). Tracey has been a valuable addition to our team at Narrabri West.

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### Why are thinking skills important?

*"He who learns but does  
not think is lost."  
(Chinese proverb)*

Students need to be able to think creatively, critically and analytically to solve problems in original and interesting ways, to challenge decisions and to develop new ideas. We believe that students can be taught to think. We know that learning and thinking involves more than simply gathering, memorising and regurgitating facts and information. We believe that this involves the whole school developing a thinking culture, by talking about thinking strategies and skills and by using these to solve problems, develop ideas and think in different ways. It is also about equipping students with the critical and creative thinking skills that they will need for an ever-changing future.

We believe that each student is 'smart' in their own unique way and that this can be developed further by discussing, learning, using and building on a range of thinking skills within the classroom environment. Our curriculum programs are built around experiences that will allow students to think within and beyond their own 'smart'.

### What are thinking skills?

In addition to helping us think clearly, thinking skills help us to critically and creatively collect information to effectively solve problems. As a result of learning thinking skills, students will also become aware of decision making processes. Improved thinking encourages students to look at a variety of ideas, search to greater depth, practise more critical decision making, challenge accepted ideas, approach tasks in decisive ways and search for misunderstandings, while keeping the aims of the task clearly in mind.

Creating a culture of thinking requires specific action by teachers and students alike. An essential element in developing this culture is the explicit teaching of thinking skills. Three techniques used at Narrabri West are 'Bloom's Taxonomy', 'Multiple Intelligences' and the 'Six Thinking Hats.'

*"Think left and think right  
and think low and think high.  
Oh, the things you can think up if  
only you try!"*

Dr Seuss, from  
*'Oh, the Things You Can Think!'*

### Bloom's Taxonomy

Bloom's Taxonomy (devised by Benjamin Bloom) is one of the most commonly used models for the development of higher order thinking. When we use Bloom's Taxonomy as a planning framework we can plan for student thinking at all levels. Bloom's Taxonomy utilises the following skills which are applicable to any aspect of learning:

- Knowing
- Understanding
- Applying
- Analysing
- Creating
- Evaluating

This six-level of thinking processes is one of the most commonly used planning models used across all levels of schooling and in all areas of the curriculum. It is a model that allows teachers to plan a variety of questions or tasks of different levels of difficulty, so that all children may

choose or be allocated work at which they are likely to succeed, but that also will require reasonable effort.

Bloom's Taxonomy comprises the three 'lower' levels of Knowing, Understanding and Applying, along with what are usually said to be the 'higher order thinking' levels of Analysing, Creating and Evaluating. All students need to develop upper level skills - but it is important that more able children have many opportunities to work at tasks that are more demanding. It is a matter of finding the right mix of the six levels for each child, to ensure that learning is thought-provoking, challenging and engaging.

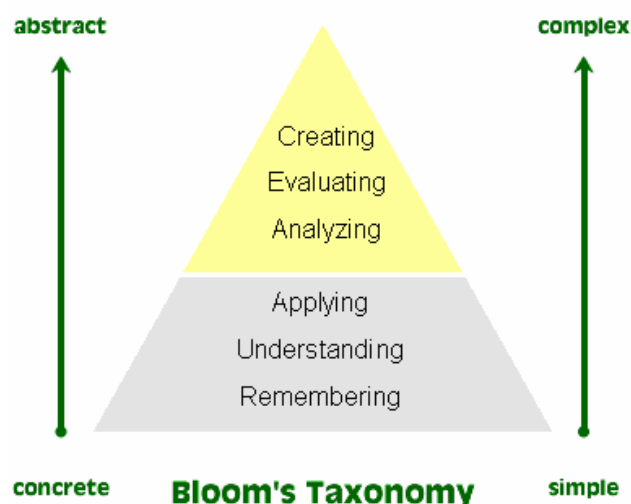
Following is an example of how Bloom's Taxonomy can be applied to everyday classroom reading. The simple story of Goldilocks and the Three Bears is used for this exercise. Examples of questions to show the type of thinking for each level of thinking are included.

<p><b>Knowing: the recall of specific information</b></p> <p>Who was Goldilocks? Where did she live? With whom? What did her mother tell her not to do?</p>
<p><b>Understanding: an understanding of what was read</b></p> <p>This story was about _____. (Topic) The story tells us _____. (Main Idea) Why didn't her mother want her to go to the forest? What did Goldilocks look like? What kind of girl was she?</p>
<p><b>Applying: the converting of abstract content to concrete situations</b></p> <p>How were the bears like real people? Why did Goldilocks go into the little house? Write a sign that should be placed near the edge of the forest. Draw a picture of what the bear's house looked like. Draw a map showing Goldilocks house, the path in the forest, the bear's house, etc. Show through action how Goldilocks sat in the chairs, ate the porridge, etc.</p>
<p><b>Analysing: the comparison and contrast of the content to personal experiences</b></p> <p>How did each bear react to what Goldilocks did? How would you react? Compare Goldilocks to any friend. Do you know any animals (pets) that act human? When did Goldilocks leave her real world for fantasy? How do you know?</p>
<p><b>Creating: the organisation of thoughts, ideas, and information from the content</b></p> <p>List the events of the story in sequence. Point out the importance of time sequence words by asking: What happened after Goldilocks ate the Baby Bear's porridge? What happened before Goldilocks went into the forest? What is the first thing she did when she went into the house?</p>

Draw a cartoon or stories about bears. Do they all act like humans?  
 Do you know any other stories about little girls or boys who escaped from danger?  
 Make a puppet out of one of the characters. Using the puppet, act out his/her part in the story.  
 Make a diorama of the bear's house and the forest.

**Evaluating: the judgment and evaluation of characters, actions, outcome, etc., for personal reflection and understanding**

Why were the bears angry with Goldilocks?  
 Why was Goldilocks happy to get home?  
 What do you think she learned by going into that house?  
 Do you think she will listen to her mother's warnings in the future? Why?  
 Do parents have more experience and background than their children?  
 Would you have gone in the bear's house? Why or why not?  
 Do you think this really happened to Goldilocks? Why?  
 Why would a grown-up write this story for children to read?



**Multiple Intelligences**

*"It's not how smart you are that matters, what really counts is how you are smart."*  
 ~ Howard Gardner

Research by Howard Gardner proposed that there are many forms of intelligence – ways in which we know, understand and learn – not just one. While some students are smart with words, and some are smart with people or nature, others have mathematical, physical, or musical talents. Gardner's Multiple Intelligences offers a framework to cater for students' individual intelligences. Gardner identified the following intelligences or 'smarts':

**Word Smart: ability to use words and language**

These learners have highly developed auditory skills and are generally elegant speakers. They think in words rather than pictures.

**Visual Smart: ability to perceive the visual**

These learners tend to think in pictures and need to create vivid mental images to retain information. They enjoy looking at maps, charts, pictures, videos, and movies.

**Math Smart: ability to use reason, logic and numbers**

These learners think conceptually in logical and numerical patterns making connections between pieces of information. Always curious about the world around them, these learners ask lots of questions and like to do experiments.

**Body Smart: ability to control body movements and handle objects skilfully**

These learners express themselves through movement. They have a good sense of balance and eye-hand co-ordination. (e.g. ball play, balancing beams). Through interacting with the space around them, they are able to remember and process information.

**Sound Smart: ability to produce and appreciate music**

These musically inclined learners think in sounds, rhythms and patterns. They immediately respond to music either appreciating or criticising what they hear. Many of these learners are extremely sensitive to environmental sounds (e.g. crickets, bells, dripping taps).

**Nature Smart: ability to care for and value the natural environment**

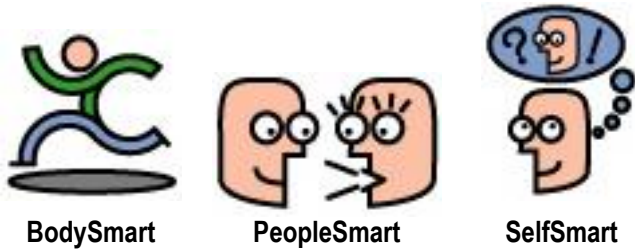
These learners are able to recognise, appreciate and understand the flora and fauna of the natural world. They are good at listening, watching, touching and feeling.

**People Smart: ability to relate and understand others.**

These learners try to see things from other people's point of view in order to understand how they think and feel. They often have an uncanny ability to sense feelings, intentions and motivations. They use both verbal (e.g. speaking) and non-verbal language (e.g. eye contact, body language) to open communication channels with others.

**Self Smart: ability to self-reflect and be aware of one's inner state of being.**

These learners try to understand their inner feelings, dreams, relationships with others and strengths and weaknesses.



BodySmart

PeopleSmart

SelfSmart

$$6 \times 3 =$$

$$+ 12 - 5 = 7$$

MathSmart

## 8 KINDS OF SMART



SoundSmart



NatureSmart



WordSmart







VisualSmart

### Six Thinking Hats



Edward De Bono is a pioneer in the field of teaching and thinking in education. His 'Six Thinking Hats' method is a framework for thinking, requiring students and teachers to extend their way of thinking about a topic by wearing a range of six different 'thinking hats', with each type being represented by a colour.

Students use the 'Six Thinking Hats' to:

- Discuss topics
- Solve problems
- Explore alternatives
- Reach decisions
- Research, organise and write reports
- Brainstorming

<p><b>Black Hat</b></p> 	<p>Bad points. Caution. Judgement. Assessment. Is this true? Will it work? What are the weaknesses? What is wrong with it?</p>	<ul style="list-style-type: none"> <li>■ Will it work?</li> <li>■ Does it fit?</li> <li>■ What are the dangers and the problems?</li> </ul>
<p><b>Green Hat</b></p> 	<p>Creativity. Different ideas. New ideas. Suggestions and proposals. What are some possible ways to work this out? What are some other ways to solve the problem?</p>	<p>Key questions should focus on:</p> <ul style="list-style-type: none"> <li>■ Exploration of the ideas</li> <li>■ Proposals and suggestions</li> <li>■ Alternatives</li> <li>■ New ideas</li> <li>■ Provocations</li> </ul>
<p><b>White Hat</b></p> 	<p>Information. Questions. What information do we have? What information do we need to get?</p>	<ul style="list-style-type: none"> <li>■ What information do we have?</li> <li>■ What information is missing?</li> <li>■ How do we get the information we need?</li> </ul>
<p><b>Blue Hat</b></p> 	<p>Organisation of thinking. Thinking about thinking. What have we done so far? What do we do next?</p>	<ul style="list-style-type: none"> <li>■ What sort of thinking is needed?</li> <li>■ Where are we now?</li> <li>■ What is the next step?</li> <li>■ Where have we been?</li> </ul>



Hat	Explanation	Key Questions
<p><b>Red Hat</b></p> 	<p>Emotions. Intuition, feelings and hunches. How do I feel about this right now?</p>	<ul style="list-style-type: none"> <li>■ What do you like about the idea?</li> <li>■ How do you feel about this?</li> <li>■ What don't you like about this?</li> </ul>
<p><b>Yellow Hat</b></p> 	<p>Good points. Why is this worth doing? How will it help us? Why can it be done? Why will it work?</p>	<ul style="list-style-type: none"> <li>■ What are the benefits?</li> <li>■ Why should it work?</li> </ul>

**What is the purpose of developing higher order thinking skills?**

*Students learn to reflect on their thinking and to recognise that different thinking is required in different learning situations.*