Language for Verbal Reasoning and Abstract Thinking

In order to problem solve, comprehend and reason children need to have developed abstract thinking. Abstract thinking and verbal reasoning skills need to be built upon secure concrete experiences as well as opportunities to **play and talk together with adults** where the adult models their own internal thought process.

How does verbal reasoning and abstract thinking develop?

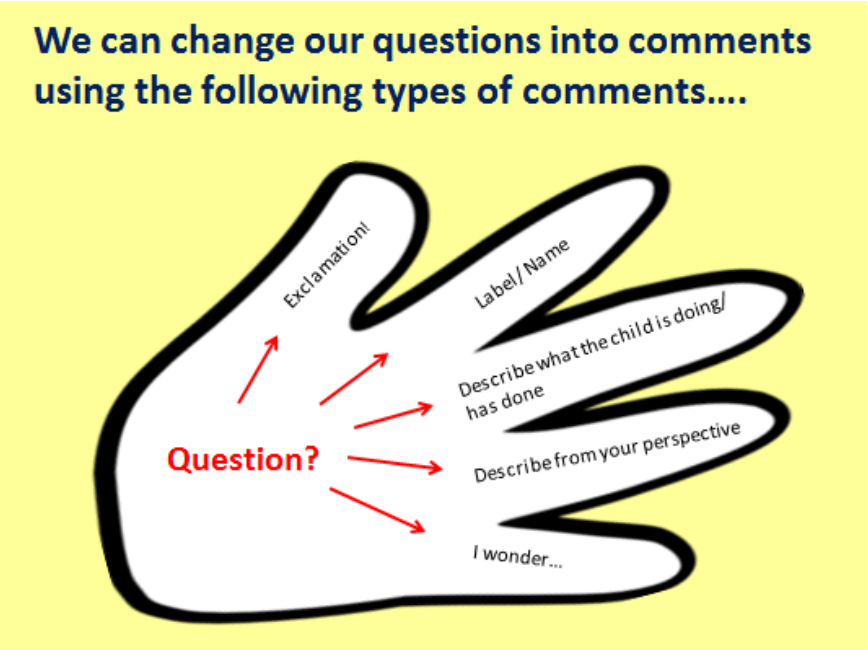
We often make judgements about children's verbal reasoning and abstract thinking through the choices that they make, how they interact with others, things that they say and their responses to questions that they are asked. Children's verbal reasoning and abstract thinking is promoted through adults modelling and explaining their *own* decisions and thoughts.

Making Comments to Develop New Language

When children are developing new knowledge about a new topic or concept, or they are being introduced to new vocabulary, comments are more useful than questions. When you **pause and wait** following a comment, this also provides children with the opportunity to make their own statements.

When making comments, the hand graphic below is a useful prompt on the five types of comments which we can make to help transfer our questions into comments:

1) exclamation
2) label/ name
3) describe what the child is doing/ has done
4) describe from your perspective
5) I wonder…



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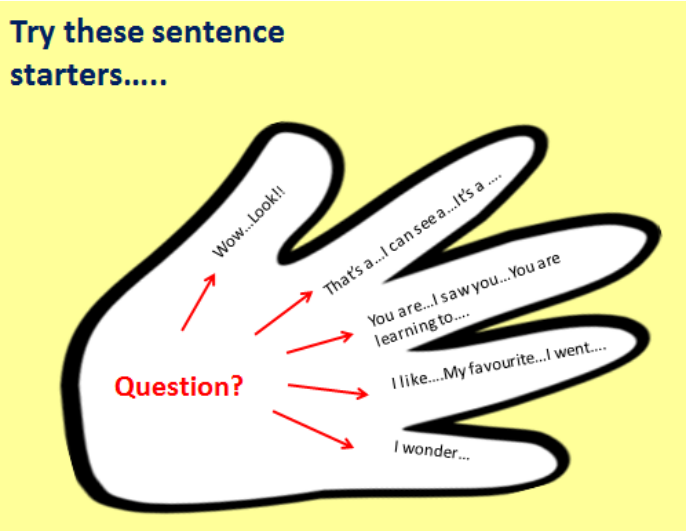
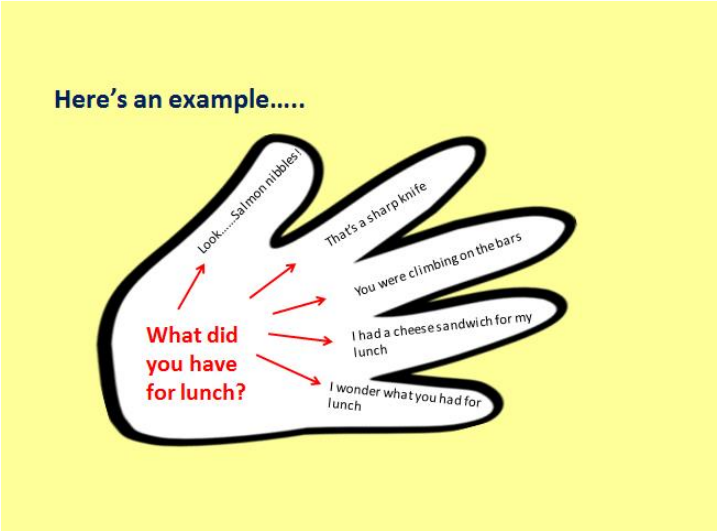
	Sentence Starters	Example
1) exclamation	"Wow…" "Look…"	*"Look Salmon nibbles."*
2) label/ name	"That's a…" "I can see a…" "It's a…"	"That's a sharp knife."
3) describe what the child is doing/ has done	"You are…" "I saw you…" "You are learning to…" "I like how you…"	"You were climbing on the bars."
4) describe from your perspective	"I like…" "My favourite…" "I went…"	"I had a cheese sandwich for my lunch."
5) I wonder…	"I wonder…"	"I wonder what you had for lunch…"





For further information:

- Words Up Key Messages
- Making Comments

Verbal reasoning and abstract thinking – trial and error

Verbal reasoning and abstract thinking also develops through children's trial and error where children can make errors and adults support children through developmentally appropriate questions and comments. For example:

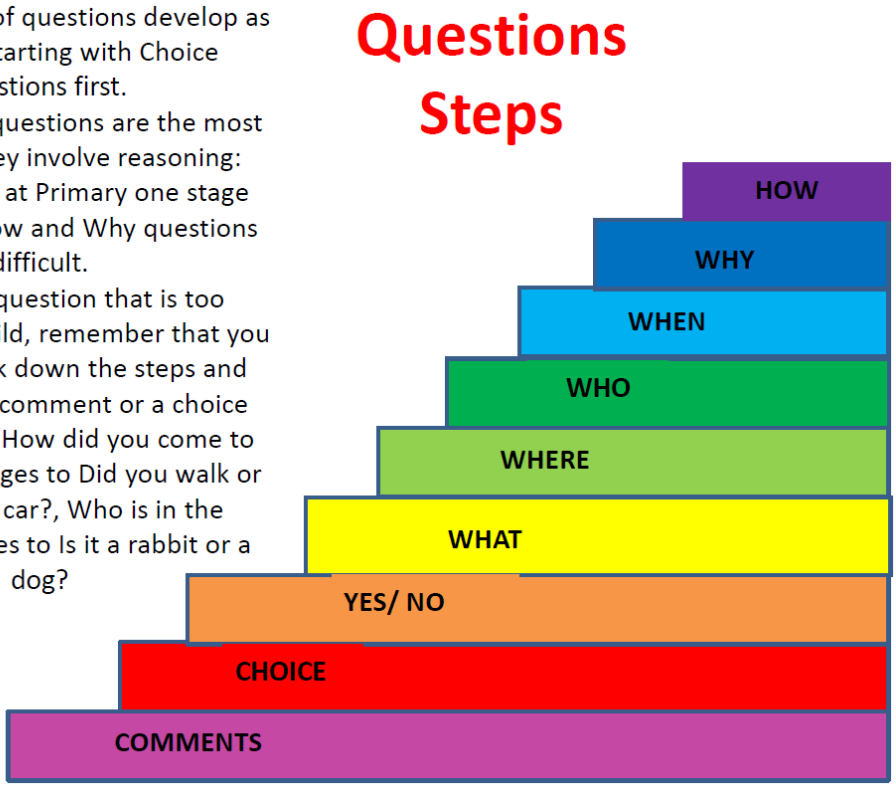
1. If the child makes a prediction from the story which is incorrect, the adult could take the opportunity to model their own reasoning and thinking behind an alternative prediction:
   e.g. *'I think that the surprise present is a cat because the story said that he could hear a meow coming from inside the box'.*

   Or, if developmentally appropriate, the adult could ask the child why they made that prediction:
   e.g. *'What made you think there was a cake in the box?'*

2. Two children disagree on a point of view which could lead to an argument. The adult could take the opportunity to model the reasoning and thinking behind the alternative decisions:
   e.g. *'Sally thinks that the funniest part of the story is when Billy falls over because he gets covered in mud, but John thinks that the funniest part of the story is when Billy dresses up in a silly hat because he looks ridiculous. It's okay to have different opinions because there isn't one right or wrong answer'.*

   Or, if developmentally appropriate, the adult could ask the child why they came to their conclusions and encourage them to consider each other's perspective:
   e.g. *'Why did you think that bit was funniest? You both have different ideas and that's okay because there isn't one right or wrong answer.'*

Understanding of questions develop as a concept starting with Choice questions first.
How and Why questions are the most difficult as they involve reasoning: some children at Primary one stage will still find How and Why questions difficult.
If you ask a question that is too difficult for a child, remember that you can come back down the steps and change it to a comment or a choice question. (e.g. How did you come to nursery?...changes to Did you walk or come in the car?, Who is in the story?...changes to Is it a rabbit or a dog?



For Further Information:

- Question Steps Guidance

Moving from concrete to abstract thinking – Blanks Language Scheme

It is important to consider that abstract thinking is developmental in nature. The Blanks Language Scheme, created by Blank, Rose and Berlin (1978), is a structure which takes into consideration the language demands placed upon children within the learning environment. There are four levels increasing in complexity from concrete to abstract thinking.

Using Blanks Language Scheme Levels

		Descriptor	Using Blanks Questions	Blanks through Interactions
CONCRETE	Level 1	**Level 1:** ➢ is the most concrete level ➢ focuses on the whole object ➢ focuses on what the child can see ➢ focuses on objects in the 'here and now' or the immediate past.	When questioning, it is recommended that: ❖ the majority of your questions are pitched at the Blanks Language Level the child/ young person comprehends. ❖ provide exposure to questions that are pitched at the other levels of Blanks Language (above and below the Blanks Language Level(s) the child/ young person comprehends) to provide opportunities to move within and between concrete and abstract questions.	When interacting with children, it is recommended that adults: ❖ make comments about their own verbal reasoning and thinking, e.g. *'I decided to… because…'* ❖ make comments on their observations on the decisions made by others (including real people and fictional characters) e.g. *'I think they did… because…'*
CONCRETE	Level 2	**Level 2:** ➢ still refers directly to an object but is specific on part of an object ➢ moves away from the most concrete questions ➢ is still about the 'here and now'.		
ABSTRACT	Level 3	**Level 3:** ➢ moves away from concrete perception to abstract thought ➢ talks about the 'here and now' as well as things in the future ➢ begins to think about ideas from another person's perspective ➢ can tap into the context of the child's pre-existing knowledge ➢ can require a child to predict what happens next.		
ABSTRACT	Level 4	**Level 4:** ➢ requires thinking about abstract concepts, drawing on knowledge and experiences not specifically related to the 'here and now' ➢ requires higher level problem solving and explanation.		

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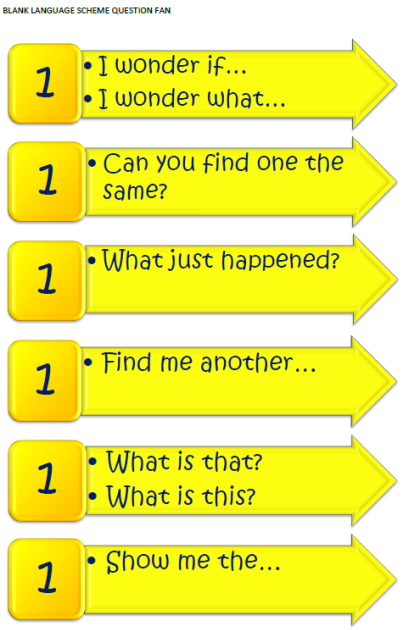
The **Blanks Language Scheme Question Fans** can be used to support developmentally appropriate questioning. Some examples of the skills which can be developed through using the question fans are:

- justifying opinions
- making conclusions
- making predictions
- organising information
- problem solving
- recalling information.



The question fans can be used across all areas of learning. Some examples of where these may be useful both indoors and outdoors at school and at home:

- analysing the writer's craft within a text
- categorising objects/events
- having a debate
- having a restorative conversation
- identifying strategies within team games
- learning conversations
- reading comprehension
- researching key points/ key figures in history
- science/ technology experiments
- solving a problem in numeracy and mathematics.

For More Information:

- **Asking the Right Questions at the Right Time – Blog Page**
- **Asking the Right Questions at the Right Time – Training PowerPoint**
- **Blanks Language Scheme Overview**
- **Blanks Language Scheme Question Fans**