

## Learning / Discussion Tool: Asking Good “Thinking” Questions

Teacher: *BKD* DATE: *11/5/05* Class: *9DMaths*

### “Asking more good questions?”

Provide each group (4) students the 15 cut up questions from below (see sheet - cut up in advance & mix up & envelope for students).

**Task:** Ask them to group the questions below into three different groups of 5 questions (hopefully ending up with the groups below – don’t tell them what the groups are). The first 5 mins of sorting was done in silence and then with conversation. Have each group explain their decision to whole class (sit in ring discussion) i.e. explain why they grouped them that way.

Then for their “Burke’s Backyard” Measurement Project (3 weeks class and homework – open ended and flexible work on mensuration – perimeters, areas, volumes, ratios ) they note examples of different questions they ask each other, parents or teacher on the questions record sheet ( half page that fits in journal). Explain marking system – process questions and fact questions worth one mark whilst thinking questions are worth two marks.

After correction the record sheet is stuck in their journal and their “new understandings” or comments added nearby.

### **Process Questions:**

How many questions do we need to do?  
Do we do it in the front or back of our book?  
Where are the questions in the book?  
How long until the bell?  
Do we need to show our working?

### **Fact Questions: (ones that have right / wrong answers)**

Is 50 % the same as one half?  
What is the formula for simple interest?  
Does 2.057 equal 2 or 3 when rounded off?  
Is this answer correct?  
What does 25% of 200 equal?

### **Thinking Questions:(ones that promote discussion)**

How does this problem relate to the examples we did before?  
Could you explain it another way?  
Can you give examples to show what more than 100% means?  
How can I check to see if the answer is reasonable and makes sense?  
Have I finished what the question is asking for?

**How many questions do we need to do?**

**Do we do it in the front or back of our book?**

**Where are the questions in the book?**

**How long until the bell?**

**Do we need to show our working?**

**Is 50 % the same as one half?**

**What is the formula for simple interest?**

**Does 2.057 equal 2 or 3 when rounded off?**

**Is this answer correct?**

**What does 25% of 200 equal?**

**How does this problem relate to the examples we did before?**

**Could you explain it another way?**

**Can you give examples to show what more than 100% means?**

**How can I check to see if the answer is reasonable and makes sense?**

**Have I finished what the question is asking for?**

## Student Comments

### **“Asking more good questions?”**

*Student comments were that -*

- 1. the “process questions” were silly questions, ones you should know if you listen to the teacher or follow the instructions*
- 2. the “fact questions” were all about one answer*
- 3. the “thinking questions” made you go further and extend yourself, they make you discuss things, they help you learn more*

## Teacher Journal

### **What is my intention? What do I want to achieve?**

I wanted students to work co-operatively to build an understanding of questioning skills from a student point of view.

### **What was my role?**

To conduct an effective discussion and lead them to their definitions of types of questions. I continue to reinforce their questioning skills in almost every class.

### **What feelings and senses surround the event?**

The silent first five minutes of sorting seemed create some eagerness to really discuss their decisions. They built up ideas that they needed to get out! Their discussions, when allowed to talk, were very much on task.

### **What was I thinking? What was I feeling?**

Their descriptions of why they grouped questions were impressive.

### **What was the outcome?**

In the class work (3 weeks of project work on measurement) that followed students recorded questions (that they asked each other or parents at home) of each type knowing that the results would be assessed in terms of their ability to put them in the right category and more for thinking questions

- students often stopped halfway through a question saying no that is a dumb question
- they proudly drew attention to any thinking questions they had asked.

### **What do I think the students got out of the event?**

Students are asking better questions (thinking) on a more regular basis. They have drawn the activity in other discussions and regularly comment on these in general class work.