ELEMENT 3.4

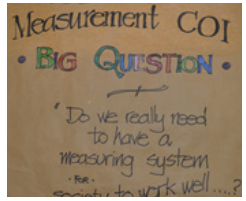
Domain 3 - Develop Expert Mathematics Learners

Element 3.4 - Promote dialogue as a means of learning

The following suggestions for practice are extracts from the 'Transforming Tasks' module on the Leading Learning resource:

Strategy From Tell to Ask

Technique **Use dialogue:** Ask students to interact and build meaning through learning conversations.

Level	Before	After
Primary	The teacher asks: • Why do we measure things? • What things do we measure? • What do we measure with?	The teacher asks: **Do we really need to have a measuring system?**  Community of Inquiry(COI)/Philosophy for Children/(P4C) discussion. Listen to and respond to each other's ideas/questions/wonderings. Possible prompt questions to promote discussion: (Use only if needed) • What's a measuring system? • Is one type of measurement more important than another? • What form of measurement could we live without/did we live without? Why change? • Could we estimate measurements in cooking? Would we still need a measuring system to do that? COI process can be found online eg http://museumvictoria.com.au/education/community-of-inquiry/
Secondary	Teacher: "I've noticed that some people are trying to add fractions by adding the numerators, then adding the denominators." $\frac{b}{5} + \frac{5b}{10} = \frac{6b}{15}$ This does not lead to the correct answer. The way to add fractions is: Start by finding the lowest common denominator.....	What do you think? Does: $\frac{b}{5} + \frac{5b}{10} = \frac{6b}{15}$ Discuss your thinking with a partner. Think about these questions: 1. Do you think that $\frac{6b}{15}$ is more or less than $\frac{5b}{10}$? Would you expect that? 2. Could you test this for different values of b? If possible, discuss your ideas with another pair who thinks differently to you. 3. Share your ideas with the class. Has anyone changed their mind about $\frac{6b}{15}$ being the solution? Ask someone who has changed their mind to share their thinking about why they did that. What are other possible solutions? How could we test the accuracy of our ideas?

How do you think the technique Use dialogue might support *Element 3.4 - Promote dialogue as a means of learning?*

There are many ways to articulate this relationship. One response to this question has been provided on the next page.

ELEMENT 3.4

Domain 3 - Develop Expert Mathematics Learners

Element 3.4 - Promote dialogue as a means of learning

How does the technique Use dialogue support *Element 3.4 - Promote dialogue as a means of learning?*

This one is obvious. 'Using dialogue' really should 'Promote dialogue as a means of learning'! However, we need to be careful to support purposeful dialogue. We can do this through using processes that support focused learning dialogue. The examples here use 'Community of Inquiry' and 'Think, pair, share'

Examples of other processes include:

- Paired Conversation
- Short interviews: Working in pairs, students have a fixed amount of time to interview each other (Perspective questions or connections questions work well for this)
- Five whys: In pairs or small groups use the 'five whys' to interrogate a mathematical process

The teacher can add value to activities in which students are using dialogue. Examples of this include modelling and encouraging:

- use of paraphrasing
- articulating what you have heard from others
- 'piggybacking' on others' comments to extend an idea
- use of clarifying questions.