

## **The account of a lesson with reference to the plan and in particular the response of students**

### *Introduction to Secondary School Teaching Task 3 – Planning to Teach*

I observed a lesson with a set 3 (lower middle) year 11 group. The topic was Standard Index Form, and the lesson objectives were to enable the pupils to switch easily between ordinary form to standard form and for them to be able to solve problems with the four operations (+, -, x, /) for numbers in standard form.

Initially the teacher performed a recap on a previous introductory lesson, and followed by doing an example of changing standard form to ordinary form on the board before giving 10 questions for the class to complete in their books. The group of pupils I was watching had clearly understood the basics ( $10^4 = 10000$ ,  $10^{-2} = .01$ , etc), but one had some trouble linking this with simplifying numbers such as  $3.2 \times 10^3$ . The pupils were allowed to discuss the questions with their neighbours, so this pupil soon had the question explained to him by the person next to him. He seemed to understand after that, since he didn't need any help with the rest. After 5 minutes the teacher asked the class to suggest answers, and he would wait until nearly everybody in the class had their hand raised before choosing someone. If someone got it wrong he asked another pupil to explain why, and then showed clearly how to do it on the board. Then he did a similar set of questions converting numbers in ordinary form to standard form. They had 5 minutes to solve 15 questions, then he went through them again with the class. There were only a few minor mistakes in the answers my group had.

He then introduced addition of numbers in standard form. He showed an example on the board where he changed each number to ordinary form, performed the operation and then converted back. The pupils I was observing didn't have any trouble with this, though by the nature of the method many people in the class made an error in adding the two numbers when they had very different magnitudes. There wasn't much time left, so after a set of questions, he chose one bright student to read out his answers to the class, and he checked that most people got them right as he went. He worked through the harder ones on the board. This meant that most people could understand the method even if it took them a bit longer than others to answer the questions. There wasn't enough time left to do much more than mention multiplication, and there were no questions on division at all. Unfortunately this meant that, while some of the brighter pupils would begin to understand how multiplication worked, most of them would be left confused. He did one worked example for the pupils to copy, and since he didn't allow any time for pupils to try any more on their own it is hard to assess how much the pupils picked up. I think most of the class were fairly confident of their ability to switch between standard and ordinary form, and the majority were able to do addition sums with them easily enough. In terms of achieving objectives, I think the teacher expected to be able to fit more into the lesson, but realises that the pupils will need some more time to work on standard form before they are completely confident with problems in all four operations. I think the teacher had a fairly good idea of what the pupils had learnt, and the group I observed understood how standard form worked even if they had only scratched the surface of more complicated questions. I believe they would have been capable of working out how to do multiplication and division questions themselves if set for homework.