## Lawler Education

Application of Number
Motor Vehicle Mechanics

## Stock Control

## Andy Burns

## stock Conerol

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Introducing Algebra 2: Specialising and Generalising
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## Tutor Notes Session One

## Starter

The students will probably be unaware of the need for stock control. We suggest that you stress that the role of a business person is to manage stock carefully and to make profits for their business. Students may be aware of the old refrain 'stock is as good as money'. This is rubbish. Stock ties up money; it means there is less liquidity within the business. We suggest you explain liquidity as having money that you can use in a number of areas. By this we mean having flexibility within the business. If too much money is sitting in stock, then it can hamper the business. The students need to understand that liquidity is a measure of the ease of converting something into cash. If you have $£ 5000$ worth of paint cans, it may take years to sell them and get the money back.

This is our justification to ensure they can add without the use of an electronic device. In the scenario that follows they will need to add manually.

## Main Activity

Using the powerpoint display for this session, talk through the need for stock control as a means of management control. The types of tyre shown on the powerpoint are real brands. Ask questions like: How many Continental tyres are in stock ?
How many Autogrip are in stock ?
You may need to show them the traditional method of writing the addition, viz:

$+18$

Be aware that some level $1 / 2$ assessors do insist on seeing the carried ten written on the calculation. We know of one student who, when asked to add 39 and 5 , wrote 44 and was failed because he did not 'show' the carried 10.

Work through the worksheets S1W1/S1W1b (1b is differentiated) with students

## Plenary

Ask students to complete S1W2, this is to get them mentally adding numbers and completing a form.
$\qquad$ ....


Stock control means keeping count of the number of items we have for sale, in our garage. Take tyres for example, we sell about 100 per month. That is less than 2000 a year.

So it would be stupid to order 4000 tyres, we would not sell all of them. That means it is important to add stock and we do not always have a calculator, so it is vital to be able to do it by hand.


There are 3 store rooms in our garage. These 3 tickets show the number of tyres in each store. How many tyres are there altogether? Is there enough in storage for one month ?

If there are not enough tyres for one month, how many will the garage need to buy in? If we are short, we will need the same number of tyres in each storage room, how many will that be ?

$\qquad$


Mike has written them out as a sum


42
39
$+24$

## Add them up for him

Mike needs about 150 tyres every month because this is how many he sells. Does he have enough ?

If not, how many is he short ?

Here is a challenge for you. If he is short, he will need to split his order for more tyres into the same number of each type. How many type 1 tyres will he need?


## Starter

Discuss why it is essential to be able to estimate accurately and use the powerpoint slide show.
It is worth discussing the spread between the least possible and the highest possible answer when rounding. For instance if you have a value of 20 i.e. it has been rounded to the nearest 10, the least the original value could be is 15 and the highest is 24 since both would round to 20 .

## Main Activity

Use the estimating powerpoint to explain rounding off. Colleagues without powerpoint are reminded that we have supplied the same slide show in Open Office which is an open source programme and can therefore be used in lieu of powerpoint, quite legally. It is advisable to seek the permission of management before downloading any software.

## Plenary

Ask the students to work through the worksheets. In worksheet 1 , we are looking for the ability to round the figure so 36 will round to 40,14 to 10 and so on. In question 2 , they need to realise that the lowest possible number of tyres is 450, since this will round to 500. Similarly the highest possible number is 549 . This may need some explaining on your part.

## Name

$\qquad$


Motor vehicle repairs garages also often run used car lots like the one shown in the photo. Think about it; it makes good sense for small car businesses.
If they can sell about ten used cars per month at a profit of about $£ 1000$ per car, that brings in an extra $£ 10000$ profit per year and that is well worth having.
So they need to sell between 5 cars and 14 cars a month for the sales to round to 10 cars per month.

What is the lowest and highest profit for each of the sales amounts below, if each sale is worth $£ 1000$ profit per car ?


| Sales per month (to nearest 10) | Lowest | Highest | Lowest Profit | Highest Profit |
| :--- | :--- | :--- | :--- | :--- |
| 20 cars |  |  |  |  |
| 10 cars |  |  |  |  |
| 30 cars |  |  |  |  |
| 70 cars |  |  |  |  |
| 40 cars |  |  |  |  |
| 80 cars |  |  |  |  |
| 50 cars |  |  |  |  |
| 20 cars |  |  |  |  |
| 60 cars |  |  |  |  |
| 90 cars |  |  |  |  |

Session Three Worksheet 1b
Name $\qquad$

Just in Time means parts arrive just when they are needed. This takes planning.

Fran needed a part for a carb to do a job on Friday, it takes three days to arrive, including the day of order.


1 When does Fran need to order the part for the carb by ?

2 Add up the times on these job sheets.


