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Internalizing the Concept With the Aid of Technology

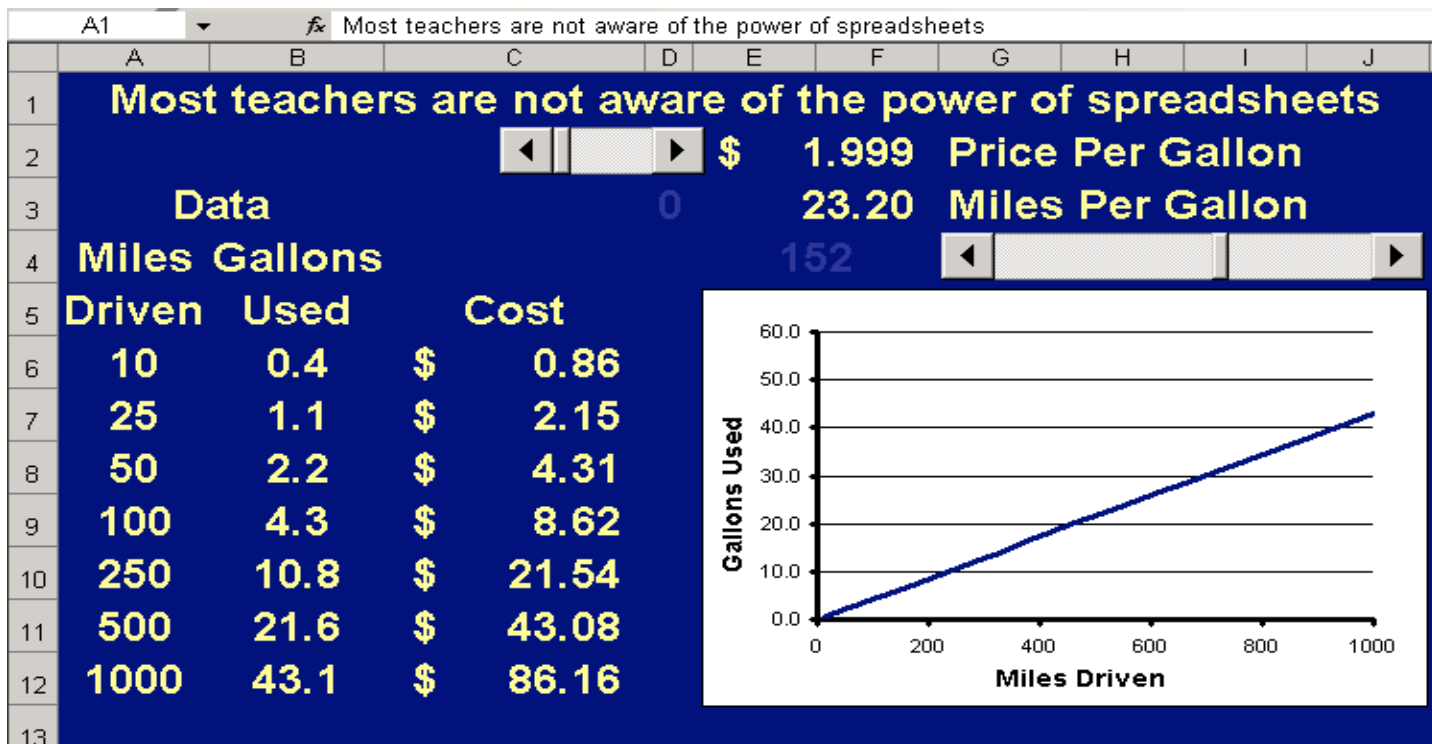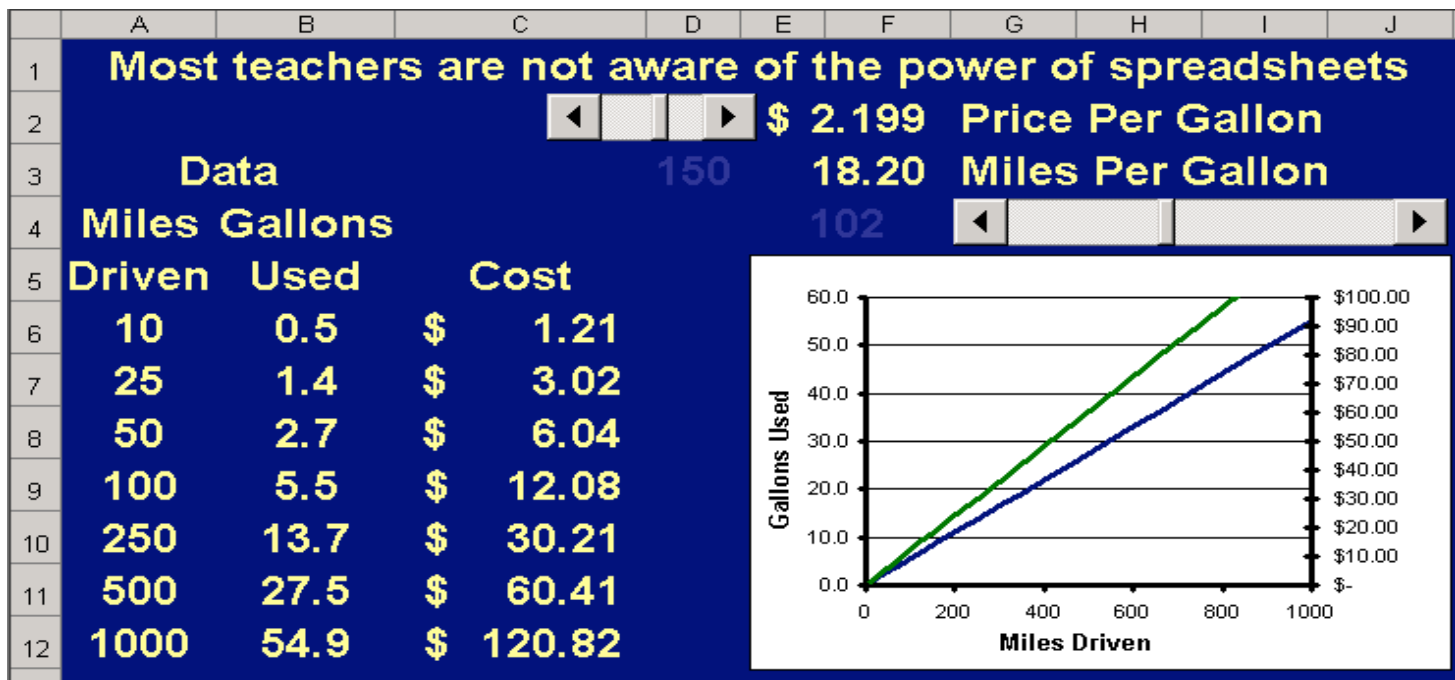| **Bloom's Taxonomy**	SYNTHESIS	Student originates, integrates, and combines ideas into a product, plan, or proposal that is new to him or her.	Create Design Hypothesize Invent Develop

If we can get students to use the knowledge we've taught them to create something, a spreadsheet, then they have managed to learn the material "deeply" enough to apply it creatively - they have internalized it.

Either,
   have students create a spreadsheet to perform a task they have just "learned"
or
   provide students with a screenshot of a spreadsheet and have them create it.

To obtain a copy of the Excel file used in this presentation,
simply email the presenter with a request for the file.

You may download additional Excel files the presenter has created from
http://www.waketech.edu/~rlkimbal/TTT

and you may find other examples from a colleague at
http://www.waketech.edu/~ljwillif

Screenshot 1

	A	B	C	D	E	F	G	H	I	J
1	**Most teachers are not aware of the power of spreadsheets**									
2			◄ ▶		$ 2.199		Price Per Gallon			
3	Data			150		18.20	Miles Per Gallon			
4	Miles	Gallons		102		◄				▶
5	Driven	Used	Cost							
6	10	0.5	$ 1.21							
7	25	1.4	$ 3.02							
8	50	2.7	$ 6.04							
9	100	5.5	$ 12.08							
10	250	13.7	$ 30.21							
11	500	27.5	$ 60.41							
12	1000	54.9	$ 120.82							

Chart: Gallons Used (left axis 0.0–60.0) and Cost ($- to $100.00 right axis) vs Miles Driven (0–1000).

Screenshot 2

A1 ▾ fx Most teachers are not aware of the power of spreadsheets

	A	B	C	D	E	F	G	H	I	J
1	**Most teachers are not aware of the power of spreadsheets**									
2			◄ ▶	$		1.999	Price Per Gallon			
3	Data			0		23.20	Miles Per Gallon			
4	Miles	Gallons		152		◄				▶
5	Driven	Used	Cost							
6	10	0.4	$ 0.86							
7	25	1.1	$ 2.15							
8	50	2.2	$ 4.31							
9	100	4.3	$ 8.62							
10	250	10.8	$ 21.54							
11	500	21.6	$ 43.08							
12	1000	43.1	$ 86.16							
13										

Chart: Gallons Used (0.0–60.0) vs Miles Driven (0–1000).

Screenshot 3

This spreadsheet multiplies two polynomials together.

$(3x + -5)(2x + 3) = 6x^2 - 1x - 15$ | -1 | -15

$(2x + -3)^2 = 4x^2 - 12x + 9$ | -12 | 9