Differentiating for Learning in STEM Teaching

Observing use of quadrants in the classroom

PACE quadrant

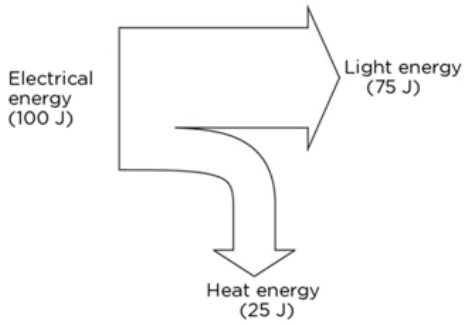
Practice	Apply	Correct	Extend
Double my number using cubes.	Solve the word problem on your table. Do it using a different method.	Double muddle! Correct my mistakes.	Investigate! Gold coins are doubling in the pirate chest.

PACE self-assessment tool

I think	LO: To add doubles to 20.		My teacher thinks
		**Understand it!** Read a number sentence and know what the symbols mean. + - =	
	2+2=4	**Write it!** Use numbers and symbols to record my work.	
		**Choose it!**  Choose a strategy to find the answer. 	
		**Recall it!** Use the number facts I know to find an answer.	
		**Prove it!** Prove that I am correct by using a different method.	
P A C E			

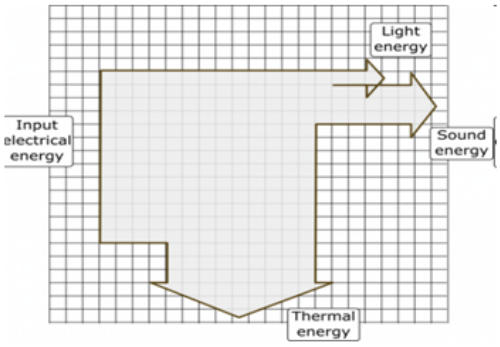
Sankey diagram quadrant

1. Identify the input, useful and wasted energy in this Sankey diagram.



2. Explain how to calculate percentage efficiency of this motor.
A petrol motor uses 1200J of chemical energy. It transfers 860J to kinetic energy and 340J is wasted as light and heat.

3. Use the Sankey Diagram to calculate the percentage efficiency of an iPod. Every grid here is equal to 10 Joules (J) of energy.



4. Draw your own Sankey diagram to represent the energy transfers in this appliance

Input energy: 120J
Useful output energy: 50J
Wasted output energy: 70J