Maths Week

Peter is a chef and uses maths on a regular basis. He has to make the correct amount of profit, so he uses maths to closely monitor his food cost, gross profit, staffing percentage and overheads. He also uses it for portion control and to ensure he orders enough food to cover his



expected sales. Most importantly, he uses it to accurately scale up or down the recipe.

The table below illustrates the ingredients, their cost and quantities needed to bake **8 portions** of a sponge cake. Peter wants to bake a sponge cake for 128 customers. Fill in the missing quantities and cost for 128 portions. Count the cost for 8 and 128 portions. Use the space at the bottom of the page for calculations.

SPON	GE CAKE (8 PORT	SPONGE CAKE (128 PORTIONS)		
Ingredients	Quantity	Cost in £	Quantity	Cost in £
Self– rising flour	200g	0.5		
Caster sugar	200g	0.8		
Eggs	6	2		
	Total cost:		Total cost:	



Patricia's dream is to be able to run comfortably the 4 miles distance. She asked Mark, the fitness instructor, to help her to achieve her goal. He wrote her an eight-week running programme that you can see below.

Can you answer a few questions that will help Patricia to understand her new running routine?

Q .1. How many days a week am I not doing any exercises? Answer:\_\_\_\_\_

Q.2. Do I walk every Saturday? Answer:\_\_\_\_\_

OR ALL

H

Q.3. How many kilometres will I jog during the next 8 weeks? Answer:\_\_\_\_\_

Q. 4. When is my first run scheduled for and how far will I run that day? Answer:\_\_\_\_\_\_

Q.5. How many miles will I run in total before I go for my first 4 miles run? Answer:\_\_\_\_\_\_

Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	Rest	1 mile (jog)	Rest	1 mile (jog)	Rest	30 minute (walk)	1 mile (jog)
2	Rest	1 mile (jog)	Rest	1 mile (jog)	Rest	30 minute (walk)	1.5 miles (jog)
3	Rest	1.5 miles (jog)	Rest	1 mile (run)	Rest	40 minute (walk)	1 mile (run)
4	Rest	2 miles (jog)	Rest	2 miles (jog)	Rest	40 minute (walk)	1.5 miles (run)
5	Rest	2 miles (jog)	Rest	2.5 miles (jog)	Rest	50 minute (walk)	2 miles (run)
6	Rest	3 miles (jog)	Rest	2.5 miles (run)	Rest	50 minute (walk)	3 miles (run)
7	Rest	4 miles (jog)	Rest	3.5 miles (run)	Rest	60 minute (walk)	3.5 miles (run)
8	Rest	4 miles (jog)	Rest	3.5 miles (run)	Rest	Rest	4 miles (run)





Hair stylists use fractions to mix colour formulas for clients. In order to make each formula special, they mix colour tones together in 2 oz formulations to create unique looks.

Maria wants to get a warm, buttery blond colour.

To get the desired shade the hairdresser has to mix 1 oz of dark golden blond, 1/2 oz of dark neutral blond, and 1/2 oz of light golden blond.

Task #1. Knowing that 1oz is 30 ml, convert the given quantities to millilitres.



## Task #2.

Each jar contains 60 ml of colour formula. Colour the amount that the hairdresser is going to use to colour Mary's hair.



Dark golden blond

Dark neutral blond

Light golden blond



Chris is a plumber, he owns his own plumbing business called "Magical Pipes". He is just about to bill one of his customers. As he is a little bit busy at the moment, maybe you can finish off the invoice for him?







Fiona is a mechanic. On Monday Sinead brought her car to get the oil level checked in Fiona's garage. The dipstick read full, there was 4 litres of oil in it. Next Monday she came back as the oil was leaking. Fiona checked the oil again, and there was just a quarter of the oil left.



Question 1. How many litres of oil did she lose? Calculations:

Answer:\_\_\_\_\_

<u>Question 2.</u> How many litres/millilitres was the car losing per day? Calculations:

Answer:\_\_\_\_\_



Ethan's team has just designed an electric car called "Innocens" that comes with two battery options:

OPTION 1: The regular—"Innocens 100" - has a one-charge range of 125 miles. This means you could travel 125 miles on a single charge. The car costs £22,000.



OPTION 2: The longer-range—" Innocens 200" - has a one-charge range of 150 miles. This means you could drive 150 miles without the need to re-charge the car. This car is more expensive, it costs £26,000.



**Innocens 200** 



Here is Elisabeth's **daily** driving schedule:

Morning: HOME—SHOP 1 — SHOP 2 — GYM — HOME

Evening: HOME — PARENTS — FRIEND — HOME



Remember, Elisabeth only wants to charge her car once a week. Will the cheaper car, the *Innocens 100*, suit her or will she need to buy the *Innocens 200*?

Calculations: \_\_\_\_\_

Answer:



## DATA ANALYST ACTIVITY

Print out the <u>Interest Survey</u> sheet (page 2) Hand them out. Allow few minutes to fill them in and then collect them.

Together, organise collected data.

You can use pictograms, multiple bar charts or pie charts. Analyse them together. Ask the pupils how would they improve the survey? What would they change? What was the purpose of it? Is every question equally needed?

You can divide them into groups and let them create their own surveys for topics that they are interested in.



## Example

FAVOURITE TYPE OF PET



## Interest Survey

GENDER	•	Male		Fema	ale	Other	
1. What is	s your favo	urite type	e of pet:				
	Dog	Cat H	Hamster	Rabbit	Guinea Pig	Other	
2. What is	s your favo	urite type	e of boo	k:			
	Fantasy	Fiction	Mystery	Comics	Non-Fiction	Other	
3. What is	s your favo	urite phy	rsical act	tivity:			
Hurling	g/ Camogie	Rugby	Cyclin	g Footb	oall Swimmin	g Other	
4. What is	s your favo	urite kinc	d of musi	c:			
	Rock	Rap F	Reggae	Pop	Classical	Other	
5. What c	do you do i	n your sp	oare time	÷;			1
vic	Playing <sub>P</sub> deo games <sup>OU</sup>	aying tdoors	Watching TV	Reading	Socialising	Other	
					•		