MATHS

## ACTIVITY EXAMPLE

## Deloitte

KEY WORDS

Numeracy | number | multiplication | division | percentages | decimals | rates | graphs | savings | budgeting | income | expenditure | financial literacy

## ALSO USEFUL FOR

Business studies | Economics | Accounting | Finance

## PROGRAMME OUTLINE

## 3 POINTS OF CONTACT

- Students go into workplace (x3)


## EXAMPLE

1. First visit: staff introduce themselves to the students and discuss their background to accounting, their careers and how maths is used in the industry. Students are given an overview of the wider company, its employees, offices around the world etc. Then students go on a tour round the office, meeting other staff, hearing about different careers (seeing accounting behind the scenes) and are shown their workstations where they will be accountants for the next two visits.
2. Second and third visits: Students work at their workstations in pairs on the activities.

[^0]MATHS

## Deloitte.

## Budget Template

## Workbook for Fairfield College Students

This workbook is to be completed for our client Sharon.

Sharon works 5 days a week and wants to know how much she can save each week and how long it will take to reach her saving goals.

Student's name $\qquad$ MATHS

## ACTIVITY EXAMPLE

## Part A: Budget

Fill out the below table as you work through the workbook to calculate the total savings Sharon will make each week.

| Item |  | Amount |
| :--- | :--- | :--- |
|  | Income: |  |
| 1 | Salary |  |
|  | Expenses: |  |
| 2 | Rent |  |
| 3 | Power |  |
| 4 | Phone |  |
| 5 | Groceries |  |
| 7 | Insurance - Home |  |
| 8 | Friday Lunch |  |
| 9 | Total Savings |  |
|  | Income minus expenses equals) |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## 1. Salary

Sharon works 30 hours per week and is paid $\$ 15$ per hour.
This week, Sharon not only worked 30 hours, but also worked on Saturday for 5 hours for her normal hourly rate plus one half of her normal hourly rate.

## Calculation box

Total:

## 2. Rent

This month's bill is $\$ 330$
Sharon split this bill evenly between her two house-mates and herself (total three people).
Remember: This budget is for one week. In this month there are four weeks.

## Calculation box

Total:

## 3. Power

This month's bill is $\$ 220$
Because Sharon paid on time last month, she has received a $10 \%$ discount on this month's bill.
Sharon split this bill evenly between her two house-mates and herself (total three people).
Remember: This budget is for one week. In this month there are four weeks.

## Calculation box

Total:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## 1. Phone

This month's bill is $\$ 100$

Because Sharon paid on time last month, she has a received a $10 \%$ discount.
Remember: This budget is for one week. In this month there are four weeks.

## Calculation box

## Total:

## 2. Petrol

Each week Sharon drives 36 km . One litre of petrol takes Sharon 1 km .

Sharon put petrol in her car on the $15^{\text {th }}$ of April, use the below graph to retrieve the cost of petrol on that date.


## Calculation box

Total:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## 3. Groceries

This week, Sharon needs to purchase the below shopping list:
$\left.\begin{array}{|l|l|l|l|}\hline \text { Item } & \text { Cost } & \text { Calculation } & \text { Amount (\$) } \\ \hline \mathbf{5} \text { carrots } & 80 \text { cents each } & & \\ \hline \mathbf{1 0} \text { apples } & \text { Buy four, get one free } \\ 50 \text { cents each }\end{array}\right)$ MATHS

| 6-pack of yoghurt | \$5 each 6-pack |  |  |
| :--- | :--- | :--- | :--- |
| $\mathbf{2} \mathbf{2 L}$ Milk bottles | 1 2L Milk bottle costs \$2.50 |  |  |
| $\mathbf{2 5 0 0 g}$ butter | 100g cost 50 cents each |  |  |
| $\mathbf{1 2}$ eggs | 6 eggs cost \$4 |  |  |
| Total |  |  |  |

## 4. Insurance - home

This month's bill is $\$ 90$.
Sharon split this bill evenly between her two house-mates and herself (total three people).
Remember: This budget is for one week. In this month there are four weeks.

## Calculation box

Total:

## 5. Insurance - car

This month's bill is $\$ 50$.
Because Sharon has not had any issues with her car, she receives a bonus discount of $20 \%$.
Remember: This budget is for one week. In this month there are four weeks.

## Calculation box

Total:

## Deloitte

## ACTIVITY EXAMPLE

## 6. Entertainment - Friday lunch

Every Friday, Sharon pays for lunch and juice for her and her mum.
Lunch costs $\$ 12$ each and juice costs $\$ 4$ each.

## Calculation box

Total:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## Part B: Savings

Sharon would like to save her money to buy different items and activities.
Calculate, based on her savings each week (worked out in Part A), how long it will take to save for each of the below goals Sharon.

There will be decimal places used in part $B$, but round to the nearest whole number.

## New cell phone

Sharon would like to purchase a new cell phone which costs $\$ 700$.
How many weeks would it take to save for the new cell phone?
Remember to use the figure calculated in Part A

## Calculation box

Total weeks Sharon needs to save for:

## New PS4

Sharon would like to purchase a new PS4 which costs \$600
How many weeks would it take to save for the new PS4?
Remember to use the figure calculated in Part A

## Calculation box

Total weeks Sharon needs to save for:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## Trip to Australia

Sharon would like to go on holiday with her friends to Australia for 7 days ( 6 nights). Included in the cost of going to Australia is accommodation, food, other necessities and a trip to the three main theme parks.

Flights
Sharon will book tickets to Australia with Air New Zealand. Tickets one-way cost $\$ 420$. Remember Sharon will need to buy 2 tickets.

## Calculation box

Total:

## Accommodation

Sharon will be sharing one room with her three friends (four people total). The total cost per room per night is $\$ 320$.

Each room will require an additional $10 \%$ deposit per night which they will get back if the room is left in good condition.

Calculate the total cost for Sharon's accommodation including the deposit.
Remember the cost will be split between four people and the trip is for six nights.

Calculation box

Total:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## Food

Sharon will buy groceries for breakfast and lunch as follows:

| Item | Cost (NZD) | Calculation | Amount |
| :--- | :--- | :--- | :--- |
| $\mathbf{5}$ apples | 80 cents each |  |  |
| $\mathbf{6}$ bottles of water | Buy four, get one free <br> $\$ 1.20$ each |  |  |
| Cereal | $\$ 5$ each |  |  |
| $\mathbf{1 L}$ Milk | $\$ 4$ each but it is $50 \%$ off |  |  |
| $\mathbf{2}$ loaves of bread | $\$ 1.50$ each |  |  |
| $\mathbf{6}$ pack of yoghurt | $\$ 5$ each |  |  |
| $\mathbf{3 0 0}$ grams of ham | 100 grams costs \$2.50 |  |  |
| $\mathbf{2}$ bags of lettuce | $\$ 4.50$ each |  |  |
| $\mathbf{5}$ tomatoes | Buy four, get one free $\$ 1.25$ <br> each |  |  |
| Total |  |  |  |

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

Sharon will go out for dinner each night to different eateries which vary in price.

Choose the cheapest option for each night:

| Night one | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option <br> one | Pizza <br> Garlic bread <br> Soft drink | $\$ 4$ <br> S4 |  |  |  |
| Option <br> two | Pasta | $\$ 13$ |  |  |  |


| Night two | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option <br> one | 3 tacos <br> 2 soft drinks | $\$ 2$ each <br> $\$ 4$ each |  |  |  |
| Option <br> two | Nachos | $\$ 30$ |  |  |  |


| Night <br> three | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option <br> one | Burger <br> French fries <br> Soft drink | $\$ 12$ <br> $\$ 8$ |  |  |  |
|  | $\$ 4$ |  |  |  |  |
| Option <br> two | Wrap <br> Soft drink | $\$ 4$ | $\$ 18$ |  |  |

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

| Night five | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option <br> one | Chicken stir <br> fry | $\$ 12$ |  |  |  |
| Option <br> two | Slaw salad <br> and chicken | $\$ 10$ |  |  |  |


| Night six | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option <br> one | Meatball sub <br> Soft drink <br> Cookie | $\$ 12$ <br> $\$ 4$ <br> $\$ 1$ |  |  |  |
| Option <br> two | Corn fritter <br> Salad <br> Soft drink | $\$ 10$ <br> $\$ 7$ <br> \$4 |  |  |  |

## Deloitte.

For more on SSEP see:
www.smartnz.nz

## ACTIVITY EXAMPLE

Add the total cost of breakfast, lunch and dinner in the below table (remember to only include the cheapest option):

|  | Amount |
| :--- | :--- |
| Groceries |  |
| Night one |  |
| Night two |  |
| Night three |  |
| Night four |  |
| Night five |  |
| Night six |  |
| Total |  |

## Theme Parks

There are three main theme parks that Sharon wants to visit with her friends. Movie world, Wet and Wild and Dream World.

Each theme park costs $\$ 90$.
Sharon will also need to catch a bus to each theme park which costs $\$ 5$ one way ( 6 bus trips total).

Calculate the total cost of going to the theme parks.

## Calculation box

Total:

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

## Total cost of Australia

Calculate how long it will take Sharon to save for the trip?
Remember to use the figure calculated in Part A

| Calculation box | Amount |
| :--- | :--- |
| Flights |  |
| Accommodation |  |
| Food |  |
| Theme parks |  |
| Total |  |

## Calculation box

Total weeks Sharon needs to save for:

## Deloitte.

 MATHS
## ACTIVITY EXAMPLE

## Part A: Answers

| Item | Income: | Amount (\$) |
| :--- | :--- | :--- |
|  | Salary | 562.50 |
| 1 | Expenses: |  |
|  | Rent | 27.50 |
| 2 | Power | 16.50 |
| 3 | Groceries | 22.50 |
| 4 | Insurance - Home | 54 |
| 5 | Insurance - Car | 148.50 |
| 6 | Friday Lunch | 7.50 |
| 7 | Total Savings |  |
| (Income minus expenses equals) | 32 |  |
| 9 |  | $\$ 244$ |
|  |  |  |

Salary

## Calculation box

( 30 hours $\times \$ 15$ ) + ( $\$ 15 \times 1.5) \times 5$ hours)
Total: \$562.50

## Deloitte

 MATHSRent
Calculation box
(\$330/3) /4
Total: \$27.50

Power

## Calculation box

(\$220 x 0.9)/ 3)/ 4
Total: $\$ 16.50$

Phone

## Calculation box

( $\$ 100 \times 0.9$ )/ 4
Total: \$22.50

Petrol
Calculation box
36kms x $\$ 1.50$
Total: \$54

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

Groceries

| Item | Cost | Calculation | Amount (\$) |
| :---: | :---: | :---: | :---: |
| 5 carrots | 80 cents each | \$.80 x 5 | 4 |
| 10 apples | Buy four, get one free ( 50 cents each) | \$.50×8 | 4 |
| 2 bags of lettuce | \$4.50 each | \$4.50 x 2 | 9 |
| 6 bananas | \$1 each | \$1 $\times 6$ | 6 |
| 1 bag of potatoes | \$10 each | \$10x 1 | 10 |
| 5 kumara | \$1.20 each | \$1.20 x 5 | 6 |
| 1 pack of tomatoes | Was \$5 but it is 50\% off | \$5 x 50\% | 2.5 |
| 2 loaves of bread | Buy one, get one free (\$1 each) | \$1 $\times 2-\$ 1$ | 1 |
| 800 grams of mince | 100 grams costs \$3 | \$3x(800/100) | 24 |
| 200 grams of fish | 100 grams costs \$5 | \$5 x (200/100) | 10 |
| 900 grams of chicken | 100 grams costs \$4 | \$4x (900/100) | 34 |
| 2 bottles of water | \$3 each | \$ $3 \times 2$ | 6 |
| 5 cans of non- perishable food | Buy four, get one free (\$1 each) | \$ $4 \times 1$ | 4 |
| 1 bag of pasta | \$2 each | \$2 | 2 |
| 1 bag of rice | Was \$2 but it is 50\% off | \$2 x 50\% | 1 |
| 1 bag of flour | \$4 per bag but it is 50\% off | \$4 x 50\% | 2 |
| 6-pack of yoghurt | \$5 each 6 pack | \$5 | 5 |
| 2 2L Milk bottles | 12 L Milk bottle costs \$ 2.50 | \$2.50 x 2 | 5 |
| 2500 g butter | 500g costs \$2.50 | \$2.50 x 2 | 5 |
| 12 eggs | 6 eggs costs \$4 | \$4 x (12/6) | 8 |
| Total |  |  | \$148.50 |

Insurance - home

## Calculation box

(\$90/3) / 4
Total: \$7.50

## Deloitte

 MATHSCalculation box
(\$50x.8) / 4
Total: 10

Entertainment - Friday lunch
Calculation box
$(\$ 12 \times 2)+(\$ 4 \times 2)$
Total: \$32

## Deloitte

 MATHS
## Part B: Answers

There will be decimal places used in part $B$, but round to the nearest whole number.
New cell phone

## Calculation box

\$700 / \$244 = 2.8 (rounded up)
Total weeks Sharon needs to save for: 3
New PS4

## Calculation box

$\$ 600 / \$ 244=2.4$ (rounded up)
Total weeks Sharon needs to save for: 3

## Trip to Australia

## Flights

## Calculation box

$\$ 420 \times 2$
Total: \$840

## Accommodation

## Calculation box

Total: 528

## Deloitte.

## ACTIVITY EXAMPLE

Food

| Item | Cost (NZD) | Calculation | Amount |
| :--- | :--- | :--- | :--- |
| $\mathbf{5}$ apples | 80 cents each | $.80 \times 5$ | 4 |
| $\mathbf{6}$ bottles of water | Buy four, get one free $(\$ 1.20$ each) | $(\$ 1.20 \times 4)+\$ 1.20$ | 6 |
| Cereal | $\$ 5$ each | $\$ 5$ | 5 |
| 1L Milk | $\$ 4$ each but it is $50 \%$ off | $\$ 4 \times 50 \%$ | $\mathbf{2}$ |
| 2 loaves of bread | $\$ 1.50$ each | $\$ 1.50 \times 2$ | 3 |
| 6-pack of yoghurt | $\$ 5$ each | $\$ 5$ | 5 |
| 300 grams of ham | 100 grams costs $\$ 2.50$ | $\$ 2.50 \times(300 / 100)$ | 7.50 |
| $\mathbf{2}$ bags of lettuce | $\$ 4.50$ each | $\$ 4.50 \times 2$ | 9 |
| $\mathbf{5}$ tomatoes | Buy four, get one free $(\$ 1.25$ each) | $\$ 1.25 \times 4$ | 5 |
| Total |  |  | 46.50 |


| Night one | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option one | Pizza <br> Garlic bread <br> Soft drink | $\$ 10$ | $\$ 4$ | $10+4+4$ | 18 |
|  |  |  |  |  |  |
| Option two | Pasta | $\$ 13$ |  | 13 | $\checkmark$ |


| Night two | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option one | 3 tacos <br> 2 soft drinks | $\$ 2$ each <br> $\$ 4$ each | $(\$ 2 \times 3)+(\$ 4 \times 2)$ | 14 | $\checkmark$ |
| Option two | Nachos | $\$ 30$ |  | 30 |  |

$\left.\begin{array}{|l|l|l|l|l|l|}\hline \text { Night three } & \text { Food item/s } & \text { Cost } & \text { Calculation } & \text { Amount } & \begin{array}{l}\text { Tick the } \\ \text { cheapest }\end{array} \\ \hline \text { Option one } & \begin{array}{l}\text { Burger } \\ \text { French fries } \\ \text { Soft drink }\end{array} & \begin{array}{l}\$ 12 \\ \$ 8\end{array} & 12+8+4 \\ \$ 4\end{array}\right)$

## Deloitte

 MATHS
## ACTIVITY EXAMPLE

| Night four | Food item/s | Cost | Calculation | Amount | Tick the <br> cheapest |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Option one | Steak <br> Salad | $\$ 28$ <br> $\$ 4$ | $28+4$ | 32 |  |
| Option two | Pizza <br> Garlic bread <br> Soft drink | $\$ 10$ <br> $\$ 4$ <br> $\$ 4$ | $10+4+4$ | 18 | $\checkmark$ |
| Night five | Food item $/ \mathbf{s}$ | Cost | Calculation | Amount | Tick the <br> cheapest |
| Option one | Chicken stir fry | $\$ 12$ |  | 12 |  |
| Option two | Slaw salad and <br> chicken | $\$ 10$ |  | 10 | $\checkmark$ |

Theme Parks

## Calculation box

(\$90 $\times 3$ ) (\$5 x 6)
Total: 300

## Deloitte

 MATHS
## Total cost of Australia

| Calculation box | Amount (\$) |
| :--- | :--- |
| Flights | 840 |
| Accommodation | 528 |
| Food | 140.50 |
| Theme parks | 300 |
| Total | $1,808.50$ |

## Calculation box

$1,808.50 / 242=7.4$ (round up)
Total weeks Sharon needs to save for: 8

## Deloitte


[^0]:    DISCLAIMER: SSEP Activity examples have been created by the school and employer accredited to fit the curriculum and student body of a particular cohort. The purpose of the SSEP activity example is not to be prescriptive, but to provide and share ideas between SSEP schools and employer partners. Any SSEP activities should be designed or adapted according to the individual requirements and capabilities of the teacher, employer and student participants. Smart Waikato Trust has made every effort to ensure information in this document is correct at time of publishing. Neither Smart Waikato Trust nor the creators of this example assume liability and hereby

