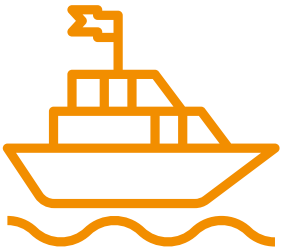
Family holiday

Family Maths Toolkit

Talk about

It's a great experience when all the family can go on holiday and have fun but what is the financial cost?

Everyone enjoys different activities and everyone has a different budget. Which of these appeals to your family? Maybe something else would appeal. What influences your choices?



A cruise

- All food included
- Cabins sleep 2 (or 2 plus 2 children)
- A different place each day
- Excursions extra
- All entertainment and activities on board free

Camping/caravan

- Self-catering
- Beautiful locations
- Some activities extra; walking and swimming free
- Everyone must help with jobs
- Toilet and shower block
- Possibly need car on days out

Luxury hotel

- All meals included
- Luxury swimming pool and spa
- Excursions extra
- Golf course
- Choice of country or city break

Bed and breakfast

- Cheaper accommodation than a hotel
- Flexibility of where to eat lunch and dinner
- Usually only 2 per room
- Choice of country or city break

Activity park

- Log cabin accommodation – sleeps up to 8
- Extensive choice of activities – some free
- Can cycle around park
- Choice of self-catering or on-site restaurants

3-star hotel – half board

- Breakfast and dinner included
- No extra facilities/activities included
- Cheaper accommodation than a luxury hotel
- Choice of country or city break

Registered charity no: 1145669

Family holiday

Family Maths Toolkit

Imagine

Once the family has agreed which holiday would best meet their requirements, research to find the location you would like and possible costs. **Use or copy the Budget Planner on the next page if it helps to organise your thinking.** How could you save money on your trip?

Once you have an estimated total, discuss whether it is a reasonable or a dream aspiration. How would this be financed?

If each family member paid an equal share, what would each of you pay? If adults in the family paid 75% of the total, how could the children save for their contribution?

Family comments:

Child comments:

Curriculum Link

- Develop the use of formal mathematical knowledge to interpret and solve problems, including in financial contexts
- Key vocabulary – budget, influences, decisions, included, extra, self-catering, estimate, finance, equal share, contribution

National Numeracy
Getting on with numbers

Registered charity no: 1145669

Family holiday

Family Maths Toolkit

What are my expenses?

Description	Quantity	Unit costs	Total line cost for the family	Notes
Travel (Including to/from airport or cruise terminal if needed) • Car + parking • Taxi • Train • Bus • Flights				
Accommodation • Cruise • Hotel or B&B • Camping/caravan • Log cabin • Self-catering apartment/cottage				Check for special offers. Sharing rooms?
Food and drink • Self-catering • Eating out • Drinks	How many meals?			Estimate.
Excursions/activities • Physical activities • Museums • Cinema/theatre • Theme parks • Other days out				
Shopping • Souvenirs				Allocate a budget and try to stick to it.
Extras (Such as travel insurance, airport tax, supplementary charges, etc)				Read the small print!
Emergencies				

Registered charity no: 1145669

Mountain bike: Spend or save?

Family Maths Toolkit

Talk about

All your friends have mountain bikes and have invited you to go biking with them in the holidays. You have seen this model advertised and would really like it. How would you either save for it or buy it immediately?

Possible options:

Buy now:

- Buy with cash – 5% reduction for cash payment
- Buy on credit card at 19% compound interest APR – take as long as you like
- Buy on 2-year credit plan with 28% simple interest added in total (£12.26 a month payment)

Save up:

- Save £20 a month in a bank account and gain 2.5% a year compound interest
- Save £25 minimum a month in a bank account, with no withdrawals for a year, and gain 3.75% a year compound interest
- Save £15 a month and your parents offer to add 15% when you reach £200

Without working out the maths, which do you think would be the best option? Which do you think would be the worst? Is it just the overall cost that influences your decision, or do things like the amount of time and how much money you already have make a difference too? What do your family think – do you agree with each other?

Look on page 3 for more information about simple and compound interest!

National Numeracy
Getting on with numbers

Registered charity no: 1145669

Mountain bike: Spend or save?

Family Maths Toolkit

Work out the maths of the options you think are best and worst (or all of them if you like!) – does this change your opinion on which options are worthwhile?

Think about how much you need or want the bike. Perhaps a cheaper model would be just as good? Do you want it immediately or can you wait? Consider what income you have (e.g.. pocket money, presents, jobs) and what else you pay for with that money. How long would it take you to save up for the bike?

Apply to real life

Consider something you would really like and research the best ways to either save or pay for it.

Family comments:

Child comments:

Curriculum Link

- Solve problems involving simple and compound interest
- Key vocabulary – price, gain, reduction, buy/sell, spend, pay, budget, expenses, total, amount, simple interest, compound interest, credit

National Numeracy
Getting on with numbers

Registered charity no: 1145669

Mountain bike: Spend or save?

Family Maths Toolkit

About Interest

- Interest is the cost of borrowing money. The borrower pays a fee to the lender for the loan. If you borrow money, you pay interest to the organisation who lends the money to you. If you save money, the organisation you have savings with will pay interest to you.
- Simple interest is generally a fixed percentage of the amount that was originally borrowed or saved.
- Compound interest is a percentage based not just on the amount that was originally borrowed or saved but also on the accumulated interest already added.
- APR is the annual percentage rate – this can be divided by12 to give the monthly percentage interest.
- Sometimes DPR is calculated (daily percentage rate) – this is the APR divided by 365.

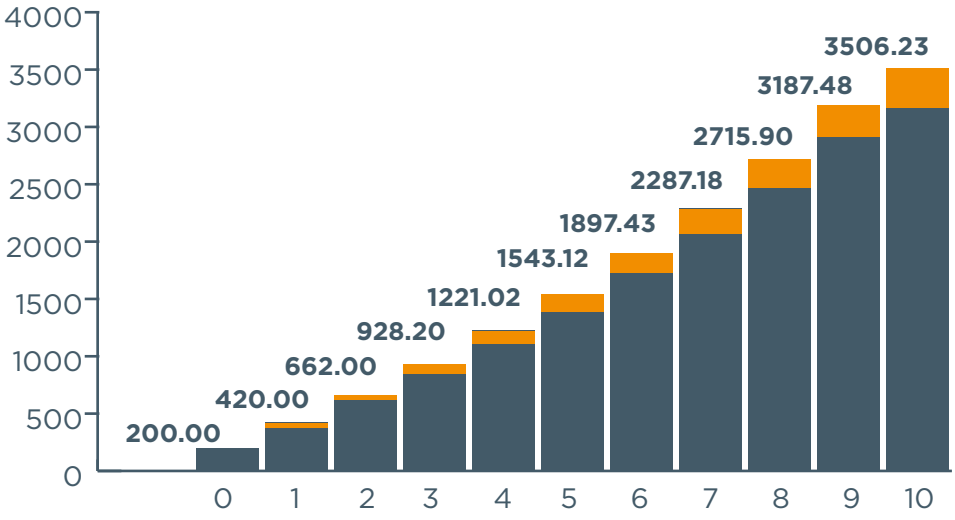
To calculate simple interest:

Work out the interest for one period, and multiply by the number of periods.
This gives the amount of interest you'll add to the original amount.

To calculate compound interest:

Work out the interest for the first period, add it on to the original amount, and then calculate the interest for the next period based on the new total amount, continuing until the end of the payment period.

Example of compound interest:



In the first year, £200 would accrue £20 interest.

At the end of the first year, you would have £220 and save a further £200 = £420.

This would earn £42 interest = £462. Then you'd save another £200 = £662, and so on.

National Numeracy
Getting on with numbers

Registered charity no: 1145669

The student's challenge

Family Maths Toolkit

Talk about

The National Student Money Survey (2019) found that average monthly outgoings for university students in 2019 were £807. For many students, their loan is not enough to cover this, so they need to budget!

The survey showed that, on average, 11.5% of students' total monthly spend went on food & groceries. On top of this, 4.25% was spent on takeaways and 6% on going out (which may include both food and drink).

How do you think your percentages would compare with the average? Think about where you might choose to get takeaway food or go out for an evening and estimate the costs for a month. Would this still leave you enough for your food shopping?

Imagine

Imagine you've spent a lot of money on nights out and now you've only got £10 a week left to spend on food for the last 3 weeks of term.

What would you choose to buy this week? What about the next two weeks? Here are some ideas for things you might buy:

Buttery spread: **85p**	Loaf of white bread: **59p**	Jar of instant coffee (100g): **£1.89**	Milk 2 pints: **80p**
Tin of mushrooms: **90p**	Chicken breast fillets (300g): **£1.80**	Carton of soft cheese: **49p**	Long grain rice (1kg): **£1.20**
Tin of chopped tomatoes (400g): **35p** (or 4 for **£1.30** offer)	Baked beans: **30p**	1 bulb of garlic: **25p**	Pack of 6 free range eggs: **89p**
1 pepper: **42p**	Bag of spinach: **£1.03**	Onions: **10p** each (or pack of 3 for **85p**)	Carrots: **5p** each
Box of porridge (1kg): **£1.10**	Orange juice (1L): **85p**	Apples: **35p** each (or bag of 5 for **£1.60**)	

Items such as porridge and coffee would last more than one week – is it worth spending more on them this week, and then adjusting your budget for next week?

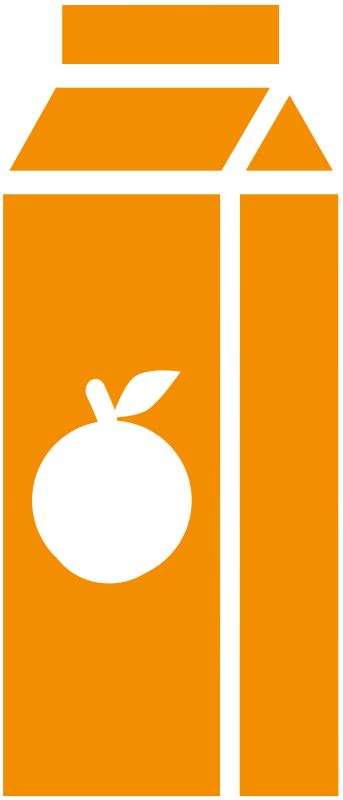
Registered charity no: 1145669

The student's challenge

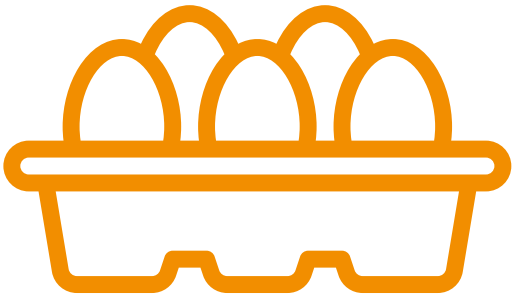
Family Maths Toolkit

Apply to real life

Draw up your own list and look in shops or online to find a total for your choices. How could you save money? As well as special offers and student discounts, you could consider buying the shop's own brands, bulk buying, freezing unused portions, and shopping around for the best prices



Tip: Having a weekly budget, making a shopping list and sticking to it can help you save money!



Family comments:

Child comments:

Curriculum Link

- Develop the use of formal mathematical knowledge to interpret and solve problems, including in financial contexts
- Key vocabulary – budget, total, bulk buying, special offers, discount

National Numeracy
Getting on with numbers

Registered charity no: 1145669