GCSE to Core Maths

Year 11 to Year 12 Bridging Work

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Core Maths is all about using the maths skills you learned at GCSE and applying them to real-world situations. These bridging activities are based on two of the weekly practical tasks which have been set as fun maths tasks for the lower school. You will now use them as a springboard to revise key GCSE methods and to start communicating mathematically.

The activities have been broken down into tasks. We suggest one task a week.

Task 1a: Fundraising Cake Sale

Complete the MyMaths 'Best Buys' lesson and homework task.

Username is ralphallen, password is reciprocal.

Calculate the total cost of the ingredients needed to make these chocolate cupcakes.

Optional: Make!

Make a batch of these cupcakes (or another favourite recipe).

Think about what other maths is involved in following a recipe.

Revise units of mass and volume.

Task 1b: Fundraising Cake Sale

Plan a cake sale for year 11 Prom!

Prepare a budget plan, detailing:

- total costs (number of cakes, ingredients, cases, advertising, etc)
- selling price
- expected profit

Optional: Research

Read some of these articles about fundraising on the excellent money saving expert website:

- £10m pledge
- Christmas Gifts
- Best charity giving websites

Task 1c: Fundraising Cake Sale

Complete the MyMaths 'Change as a Percentage' lesson and homework task.

Calculate the expected percentage profit of this cake sale. Make best-case and worst-case calculations (eg all the cakes sell, only half do)

Task to be submitted

Produce a 1-page report to support an application to the Finance Officer for a fundraising loan.

Give a breakdown of how much money you want to borrow, demonstrate you'll be able to repay it and persuade that it's a good idea!

Task 2a: Exercise Challenge

Complete the BBC Bitesize 'Units of Measure' lessons and test. Key ones for Core Maths are : Length(1), Area & Vol (2), Speed(3), Unit Pricing(6), Converting (7).

Measure the height of 1 step and count them to calculate the height of your staircase.

Optional: Research

Find out what 'Fermi' estimates are and why they're called this.

Investigate some Fermi problems.

Revise units of length.

Task 2b: Exercise Challenge

Estimate how many times a day you climb your stairs. What would be a reasonable daily challenge?

Complete the MyMaths 'Estimating' lesson and homework tasks. Estimate how long it would take to climb Ben Nevis's height on your stairs.

Optional: Do!

Complete the Ben Nevis challenge on your stairs!

Can you do it in a week?

How much longer would Mount Everest take?

Task 2c: Exercise Challenge
Task to be submitted

Produce a double-page magazine fitness article on the 'Ben Nevis' home challenge.

Give clear calculations, inspire your reader – you could include calorie calculations too!

Optional: Do more!

You can view all of the practical maths tasks here!

Choose another one and investigate the maths involved.