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Note: Slides from all workshops will be shared
after the evening.

Mathematics in S3

Miss Mackenzie

**Please Note: Our website is currently being updated with this year's timelines
and resources.**



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Session Aims

We aim to cover the following this evening:

- Curriculum and Pathways
- Events and Challenges
- Support

Please Note: Our website is currently being updated with this year's timelines and resources.

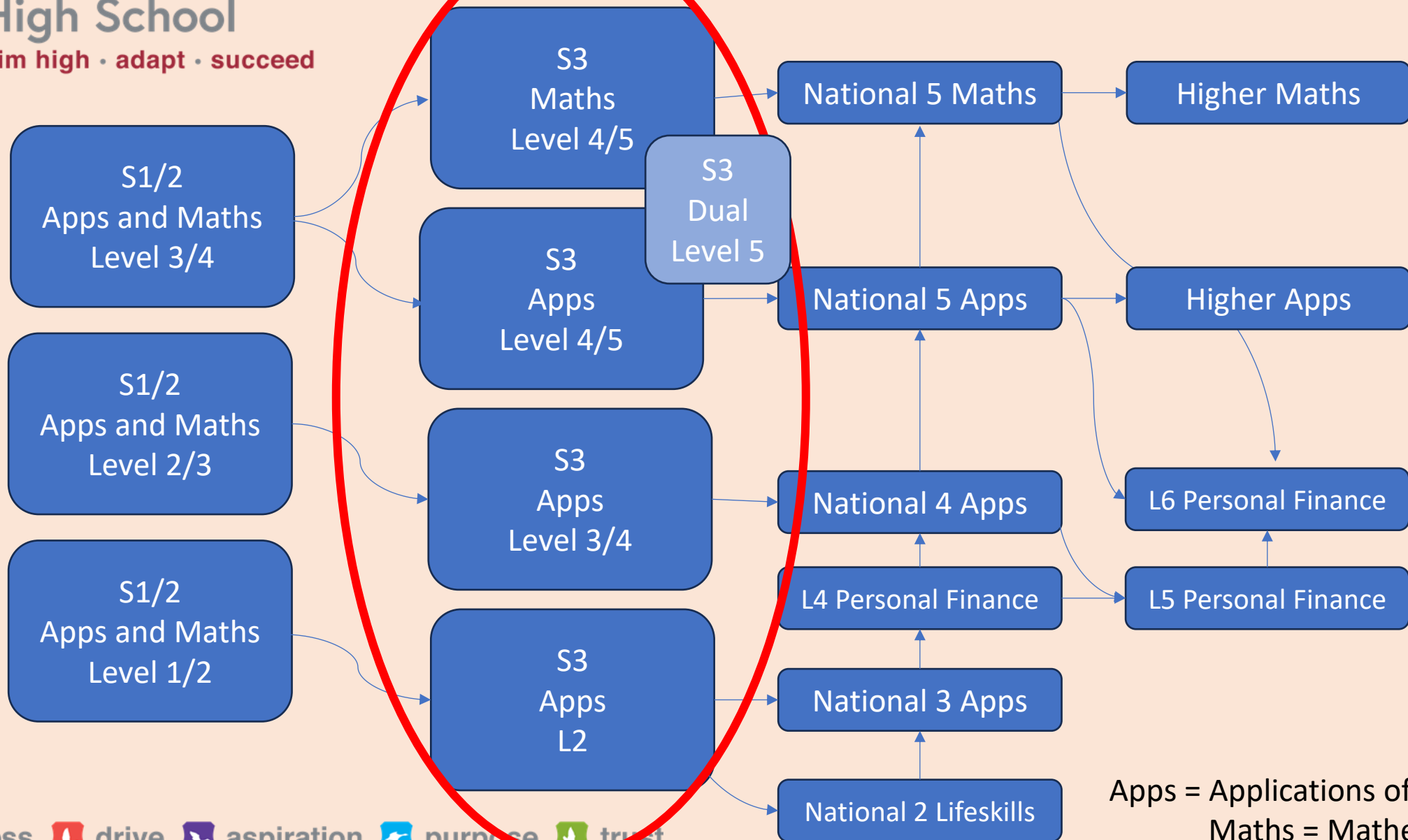


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Our Pathways



Apps = Applications of Maths
Maths = Mathematics



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Applications of Maths and Maths

- Our S1-2 curriculum prepares learners to study any of our pathways. In S3, they will specialise into one pathway. We now offer National 5 and Higher in two maths pathways:
 - Applications of Mathematics
 - Managing finances
 - Analysing statistics, data and probability
 - Working with geometry and measures
 - All questions are based in a context where learners need to decide what operations and skills they need to use to solve the problem.
 - Higher Apps includes computer work to extend on financial and statistical analysis. We use Excel and R Studio to do this.
 - Mathematics
 - Applying skills with algebra, geometry, trigonometry and (some statistics only at N5).
 - Using and understanding patterns and relationships.
 - Questions are more abstract.
 - Compulsory for some (but not all) STEM subjects.



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Applications of Maths vs Maths

Time for you to decide – are the questions N5 Maths or Apps?
Put your answer on your whiteboard.

1. Evaluate $2\frac{1}{6} \div \frac{8}{9}$.

Give your answer in its simplest form.

**N5
MATHS**

1. A lake had a volume of 14 730 000 litres.

Due to decreasing rainfall the volume of the lake is expected to decrease by 2.8% annually.

Calculate the expected volume of the lake after 3 years.

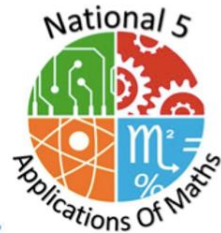
Give your answer to 3 significant figures.



The votes in a school for a class representative were split as follows

- $\frac{2}{5}$ for Sam
- $\frac{4}{9}$ for Ashley
- the remaining votes were for Lesley.

Calculate the fraction of votes that were for Lesley.



1. A caravan was bought for £20,000.

It depreciated by 11% in the first year.

It then depreciated by a further 6% each year over the next two years.

Calculate the value of the caravan three years after it was bought.

**N5
MATHS**



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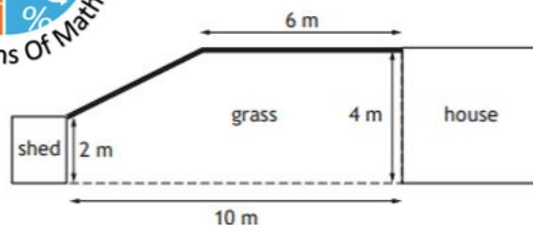
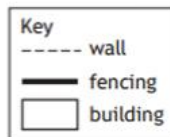
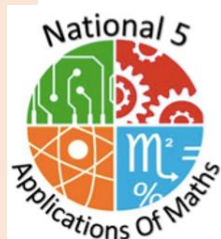
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Applications of Maths vs Maths

Time for you to decide – are the questions N5 Maths or Apps?
Put your answer on your whiteboard.

A property developer has the garden plans for a new housing project.



The fencing is at a right angle to the house.

The wall is at a right angle to the house and the shed.

Fencing panels are sold in 2 m sections costing £21.40 each.

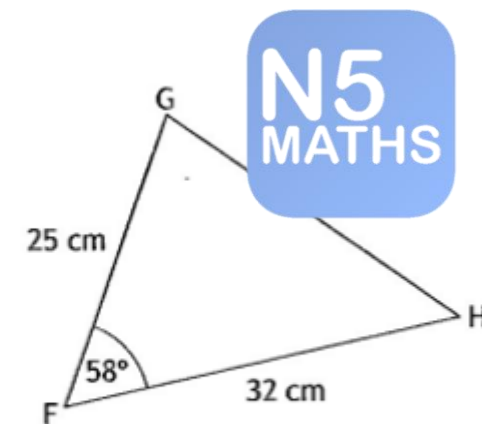
(a) Calculate the minimum cost of buying fencing.

1. Josh earns £9 per hour and works 30 hours a week.
His weekly outgoings are £220 a week.
Josh saves all his remaining money.
He books a holiday costing £566.
He will take £800 spending money with him.
Calculate the minimum number of weeks it will take him to save the total amount.



The diagram shows triangle FGH.

- $FG = 25$ centimetres
- $FH = 32$ centimetres
- Angle $GFH = 58^\circ$



Calculate the area of triangle FGH.

Change the subject of the formula $P = \frac{1}{3}mn - r$ to m .

N5
MATHS



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S3 Apps

L3 -> 4 Pathway

- Miss Hay's and Miss Mackenzie's classes.
- Flexible approach.
- Working on numeracy skills mainly at the beginning of S3. Now moving onto Finance and Statistics.
- Expected to achieve N3/4 Apps in S4.



awareness



drive



aspiration



purpose



trust



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S3 Apps

L4 -> 5 Pathway

- Practicing non-calculator skills since August. They will sit an assessment before October holidays to assess these skills. Skills include:
 - Working with decimals.
 - Fractions and percentages of an amount.
 - Tolerance
 - Calculating averages and rounding.
 - Reading scales and statistical diagrams.
 - Adding and subtracting fractions.
 - Time intervals and difference.
- Regular homework being set as revision.
- After the assessment, they will begin to work on the following topics: Pay, Area, Further Statistical Diagrams and Foreign Currency. After this they will complete a calculator assessment (around November).
- Aiming to achieve N5 Apps in S4.



L4 -> 5 Pathway

- Practicing non-calculator skills since August. They will sit an assessment before October holidays to assess these skills. Skills include:
 - Working with decimals.
 - Fractions and percentages of an amount.
 - Time intervals and difference.
 - Straight line (particularly useful for N5).
 - Statistical diagrams.
 - Fraction operations.
- Regular homework being set as revision.
- After the assessment, they will begin to work on the following topics: Trigonometry, Pythagoras and Probability. After this they will complete a calculator assessment (around November).
- Aiming to achieve N5 Apps in S4.





L5 Pathway

- Working on Maths skills since Summer. Skills include:
 - Expanding Brackets
 - Functions
 - Straight Line
 - Fractions
 - Statistics (in both Maths and Apps)
- They will be continuing with Maths skills for the moment and will set an assessment in November/October. They will then move onto learning some of the Apps skills.
- Regular homework will be set as revision to ensure they consolidate skills from both courses.
- Aiming to achieve N5 Apps and N5 Maths in S4.





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Events and Challenges

- We challenge our learners in each topic by extending ideas or providing problem solving questions.
- We also offer a number of events and challenges throughout the year – our stall in the Concourse shows our calendar.
- Your child can join our **new** Maths Challenge Team using the code: **7dujumpy**. On this team, we share information about the different maths challenges, puzzles, any extra events. If the code does not work for your child, please leave their name at our stall in the Concourse this evening or ask your child to speak with their teacher.



UK Maths Trust

Steak	Chicken	Lentils
Portion, fried (100g)	Portion (100g)	Cooked at home (200g)
CO ₂ e 29 g/100g	CO ₂ e 6 g/100g	CO ₂ e 0.9 g/100g
Emissions 4723 gCO ₂ e	Emissions 923 gCO ₂ e	Emissions 151 gCO ₂ e
Water 668 litres	Water 325 litres	Water 179 litres
Fibre 0 g	Fibre 0 g	Fibre 29 g
Calories 242 kcal	Calories 240 kcal	Calories 176 kcal
Protein 30 g	Protein 28 g	Protein 12 g
GGDOT	GGDOT	GGDOT



CRM-Maths Challenges and Events

Main Channels

General

- 0 - S1-3 Maths Club
- 1 - Junior Maths Challenge (UKMT)
- 2 - Intermediate Maths Challenge (UKMT)
- 3 - Senior Maths Challenge (UKMT)
- 4 - UKMT Mentoring Questions
- 5 - Scottish Maths Challenge
- 6 - Maths Puzzles
- 7 - Maths Support
- 8 - Group Events



MATHS COMPETITIONS + EVENTS

Scottish Maths Challenge Round 1 Questions
RELEASED (Open to any S1-6)

Monday 22nd - Sunday 28th
Maths Week Scotland (All S1-2 in class)

Thursday 25th
UKMT Maths Competition and Olympiad for
Girls (Open to S4-6)

SEPT
25

Thursday 9th
UKMT Senior Maths Challenge (Open to S5-6)

Monday 27th
Scottish Maths Challenge Round 1 Questions
DEADLINE (Open to any S1-6)

DATE TBC
Enterprising Maths Edinburgh (select S3-4)

OCT
25

Monday 3rd - Friday 7th Nov
Number Confidence Week

Monday 10th Nov

NOV-



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Support

- Class Teacher
- Teams
- Supported Study

Apps/Maths Supported Study

Need a little extra help with your Apps/Maths studies?
Come along to our Supported Study sessions below to get help with homework, practice essential skills or apply learning to exam questions.

Most weeks there will only be one teacher/room available. Please check with the named teachers where it will be each week. Note that Higher Apps will run in 250 some weeks.

S1-3 Tuesday 15:30 (Mr Lorimer/Miss Mackenzie/ Miss Rose)	N5 Apps Wednesday 15:30 (Miss Hay/Mrs Maxey)	N5 Dual/Maths Wednesday 15:30 (Ms Muir/Miss Price)
Higher Apps Wednesday 15:30 (Miss Hay/Mrs Maxey)	Higher Maths Thursday 15:30 (Mrs Clarke/Mr Mastoridis)	AH Maths Thursday 15:30 (Mr O'Donnell)

0 1 2 3 4 5 6 7 8 9 10 11 12

There may be some weeks where we offer bespoke extra supported study sessions. Specific invites will be sent for these sessions.




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1) Help with consolidating/developing number fluency (regular practice)

- [Education Scotland Parentzone](#)
- [National Numeracy Family Toolkit](#)
- [BBC Bitesize Numeracy](#)
- [Factfreaks](#) 
- Mental maths games/challenge – e.g., on a car journey
- [Kahoot! Multiplication Games](#)

How can you support?

2) Support with getting a [Casio Scientific Calculator](#)

- It is very useful to get one early in secondary to become comfortable with all the functions. If looked after, it will last all of secondary and beyond.

3) Support pupils in accessing/completing any homework on time



4) Speak positively about maths

- It is important for learners to understand that it won't always be easy and will take deep thinking but this is worth it.



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Questions

We thank you for your time this evening.

Our website will be updated shortly, with the timelines and some links.

If you have any questions, please scan the QR code.

