Starter

Level 3 – Core Maths Mathematics in Context

Mr Tanner

Learning objectives:

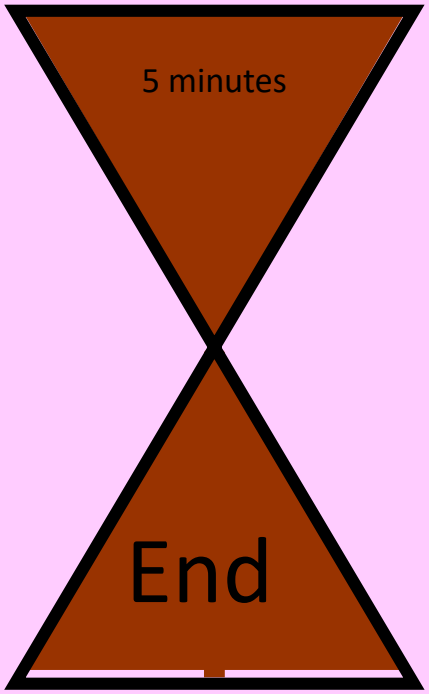
- What is Maths in Context?
- What will I learn?
- How will I learn?

Starter

5 minutes to think and write down:

1. What will I expect of you this year?

2. What do you expect of me?



Learning objectives:

- Admin – sort out books
- Become confident in adding and subtracting

Explanation

Core Expectations for **Every Lesson**

1. Attend lessons on time and in professional attire
2. Be prepared for each lesson by ensuring you bring the appropriate equipment
3. Ensure all work is organised in the appropriate section of your subject folder
4. All deadlines must be met to avoid a 6 week “Risk of Failure” program
5. Respect the classroom, Replace chairs, Rubbish in bins
6. Speak to **ALL** members of the HT community with respect
7. No mobile phones/ear pods to be used in lessons or around the school
8. Starters are to be completed in silence
9. Be proactive and not reactive
10. Expect to work harder than you ever have before

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Explanation

Classroom Expectations – be ready to learn

- Mobile phones away.
- No food or drink, except for water.
- Hats and coats off, hoods down.
- Appropriate mathematics equipment including exercise book and pen, a scientific calculator and geometry set.
- No talking whilst others are talking.
- No use of inappropriate behaviours or language toward others.
- Have fun and learn.

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Explanation

Why Study it?

In the future, you'll need to be able to use maths to:

- calculate how long it will take you to pay off a student loan
- work out if you could own a house
- understand percentage increases in your salary.

Mathematics in Context can also help you predict the wider future:

What will be the impact of global warming,
of oil running out,
of water becoming scare
and the world population hitting 9 billion?

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Who is it for?

Anyone who has passed GCSE mathematics at grade 4 or above but decided not to study A level mathematics.

It will strengthen your maths skills to support other numerate A levels such as psychology, sociology, biology, chemistry, geography, business, accounting and economics or work-related courses such as health and social care or business.

The course can help you move on to university, employment, higher apprenticeships or professional training in a wide range of industry sectors.

It's roughly equivalent in size to half an A level. (Will talk about this later)

If you're planning to study subjects such as Science, Geography, Business, Economics or social sciences at A level, or a vocational qualification, or are planning to take an apprenticeship or move into employment, **Core Maths will be useful to help refine and develop your maths skills**.

Explanation

What will you learn?

The course will help you develop mathematical skills for use in **real life contexts.**

You'll be **applying mathematical solutions** to the kinds of issues tackled by science, business and industry through **problem solving** tasks focusing on:

- Applications of statistics - looking at the kinds of analysis that might be used in subjects such as finance, biology, business and economics, IT and psychology.
- Probability - exploring methods used in the fields of finance, science, artificial intelligence, business, computer science and philosophy.
- Sequences and growth - important for financial mathematics, geography and science issues such as the study of population growth, epidemics, earthquakes and radioactive decay.
- Linear programming - problem solving applied in contexts such as transportation, energy, telecommunications and manufacturing.

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Explanation

How will you learn?

Mathematics in Context is different from GCSE Maths.

During your studies, you'll look at how to use and apply maths in many different situations.

You'll read articles that involve interpreting data and mathematical information, all from relevant and interesting sources.

The content has been carefully selected to support the mathematical needs of a range of AS, A level and BTEC Level 3 qualifications, and to provide a progression from GCSE Mathematics.

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Explanation

How will you be assessed?

The Mathematics in Context qualification is assessed entirely by written exam for which you will take two written papers (next slides)- so there isn't any coursework.

At the end of the one-year course, you'll be awarded a Pearson Edexcel Level 3 Certificate in Mathematics in Context – similar to an AS.

UCAS Points
Grade A = 20 points
Grade B = 16 points
Grade C = 12 points
Grade D = 10 points
Grade E = 6 points

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Explanation

Paper 1: Comprehension

Written examination paper with two sections, A and B, and a source booklet.

The source booklet will detail two real-life contexts. These contexts will be assessed in the written paper, which requires students to comprehend, interpret and analyse the content in order to answer the questions.

Students will need to refer to the source booklet when answering the questions.

The source booklet will be available for centers to download from April for the exams in May/June of that year.

A calculator is allowed.

Assessment duration is 1 hour and 40 minutes. The paper consists of 60 marks.

A formulae sheet is given at the front of the source booklet.

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Paper 2: Applications

Written exam with two sections, A and B, and a source booklet.

Students will need to refer to the source booklet when answering the question.

The four themes will be assessed in the written paper, which requires students to apply their problem-solving skills in order to answer the questions.

A calculator is allowed. The assessment duration is 1 hour and 40 minutes.

The paper consists of 80 marks. A formulae sheet is given at the front of the source booklet

Total mark for both papers: 140

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Letters from employers/Universities

Letter of support for the new Pearson Core Maths Qualification

As an employer, we recognise the following qualification as being fit for purpose and we believe that it will prepare students for the mathematical demands of employment:

Rob Trotter, Director *Brighten Jeffrey James Accountant*

Of these features, we are pleased to see that statistics content of your proposed qualification is up-to-date and relevant to target students, in their everyday lives and in higher education or in work. We also note that the qualification encourages the development of statistical knowledge, skills and understanding needed by students planning to progress to further study or to employment.

Scott Keir, Head of Education and Statistical Literacy *Royal Statistical Society*

The Department of Psychology of Royal Holloway, University of London recognises the following qualification as being fit for purpose and we believe that it will prepare students for the mathematical demands of our undergraduate degree courses:

Prof. Patrick Leman, Head of Psychology *Royal Holloway University*

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Explanation

Sample exam question

8 Mohammed finished university with a student loan of £14 000.

He started work with a salary of £19 000 per year.

After one year, he had a pay rise of £1500.

At the end of each full year of work:

- 9% of his earnings above £16 365 go towards paying off his loan
- interest of 1.5% of the outstanding amount is added to his loan.

How much will Mohammed still owe on his student loan after 2 full years of work?

(5)

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Homework

Revision Sheet

Covering a few of the core topics that is “assumed knowledge” for this course.

All grade 4 or below GCSE topics.

To be completed by _____ – so I can see what areas need a recap.

Videos to the topics are on mathsgenie and corbettmaths – use all available resources.

Any issues – email me: tannert@haileyburyturnford.com

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