

It's likely you are already using several key numeracy skills in your lesson. You just need to make sure they are signposted in your lesson plan to ensure the Inspector can see that you've factored in these important skills.

You will also find the toolkit I am developing for the VeP this term very useful in ensuring you are using the most appropriate method for a topic. In addition to video tutorials there will be links to other useful websites.

Give me five...



## Q&A

### **FIVE** ways to incorporate numeracy into your lessons right now

#### **How can I use Maths in Design & Technology**

Measurements are often needed in Design and Technology and many patterns and constructions are based on spatial ideas and properties of shapes, including symmetry.

- Enlarging or reducing designs (multiplication and ratio)
- Measuring and adapting recipes / plans
- Working out cooking and preparation times
- Calculate costs, rounding your answer to a suitable accuracy
- Use your knowledge of pie charts to design a meal which follows the advice of the 'eatwell plate'.

#### **How can I use Maths in Art?**

- Draw lines accurately and use them to create the illusion of perspective.
- Understand scale and enlargement when creating a copy of a design.
- Use your knowledge of nets to create boxes and containers.
- Use tessellations to fill a space with a repeating pattern.
- Use transformations and symmetry when creating a design or printmaking.

#### **How can I use Maths in ICT?**

- Format number or currency data to the correct number of decimal places.
- Convert between pixels and centimetres when comparing dimensions.
- Work with timings and different speeds in frames per second when animating.
- Create a logo using a graphics package by reflecting and rotating a design.
- Use spreadsheet formulae to calculate the cost of a school field trip.

#### **How can I use Maths in Science?**

Investigations or experiments are likely to require classifying, counting, measuring, calculating, estimating and recording data in tables.

- Explain the stages of the menstrual cycle by referring to a graph of oestrogen and progesterone levels.
- Compare boiling points of gases using your knowledge of negative numbers.
- Equate the numbers of atoms of each element when you balance a chemical equation.
- Estimate in kilograms the amount of household waste that a family produces.
- Calculate the number of units of alcohol in a certain volume of alcoholic drink with a given percentage of alcohol.

# Q&A



## **FIVE** ways to incorporate numeracy into your lessons right now

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### **How can I use Maths in PE?**

- Perform the Harvard step test, calculate your score using a formula and then find your score in a table.
- Plan interval training using the ratio of time spent working to the recovery period.
- Study recovery rates by recording heart rates in beats per minute.
- Calculate cardiac output by multiplying heart rate and stroke volume.
- Perform accurate timekeeping and then rank the results for a run or sprint.

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### **How can I use Maths in English?**

- Explore language we use to express numbers; for example when writing to persuade: “One in three...”, “More than 30 in every hundred..”, “33% believe...”, “66% don’t believe...” etc.
- Sequencing ideas for writing, speaking and listening
- Researching and writing about famous Mathematicians
- Open ended Maths questions which can be marked both for Maths and English
- Investigate opinions of adverts or other pieces of work with peers

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### **How can I use Maths in Humanities?**

- Collect data by counting and measuring
- Use a compound bar chart to answer questions about changing trends in the timber trade.
- Make use of various measurement
- Using co-ordinates, angles, direction, position, scale and ratio
- Understanding the passage of time (time lines)

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### **How can I use Maths in Music and Drama?**

- Music makes significant use of symbolic representation
- Position and direction are used extensively in Music, Dance and Drama
- Tuning and scales can be traced back to Pythagoras who first noticed the ratios of frequency intervals between notes
- Symmetries and patterns also play a role in songs, plays and dances
- Shapes in written music (such as high/low, rising/falling, ascending/descending), have comparisons with pupils’ work on graphs

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### **How can I use Maths in MFL?**

- Compare numerical data about prices, temperatures and distances.
- Carry out and present the results of a survey in the target language
- Learn how to categorise or sort things in the target language
- Answer questions in the target language about ages, times and travel information
- Blast mental Maths game, questions and answers in target language

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### **How can I use Maths in Business Studies?**

- Know how to draw and analyse a break-even graph.
- Use financial information to calculate gross profit, net profit and the margin.
- Calculate missing figures in a cash-flow forecast.
- Analyse a pie chart showing market share.
- Calculate the interest paid on a loan with a given rate of interest.

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### **How can I use Maths in PSHE?**

- Understanding risk
- Interpretation of graphs, charts and tables
- Helping students make reasoned and informed decisions recognising biased data
- Developing financial awareness and capability and application of Maths
- Using primary and secondary data