

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS

<https://www.facebook.com/groups/254963448192823/>

# DESIGN AND TECHNOLOGY MATHS TIME LINE

KS 3 and 4

FIRST DRAFT



# DESIGN AND TECHNOLOGY – MATHS TIME LINE

## Year 8. In addition to Year 7

Be able to calculate areas.	
To total 'tally' charts, as used in questionnaires and when collecting statistics.	
Be able to produce simple graphs from data collected during lessons	
Be able to draw common geometrical shapes accurately.	
Build on knowledge of weights and measures (E.G. Food Technology)	
Use templates / patterns to accurately mark out and manufacture.	
Use a combination of measuring and marking out skills.	
Be able to control simple 'robotic' devices / components (motors, sensors, switches) through basic programming or the use of control software.	

**FIRST DRAFT**



# DESIGN AND TECHNOLOGY – MATHS TIME LINE

## KS 4. In addition to Years 7, 8 and 9

<b>Arithmetic and Numerical Problem Solving</b> Be able to calculate quantities of materials, costs and sizes. Be able to calculate ratios and percentages. Understand and apply knowledge of fractions. Be able to scale drawings including working drawings. Analyse the results of questionnaires. Calculate areas and volumes.	
<b>Data Handling and Practical Application</b> Be able to presentation data in the form of diagrams, pictograms, bar charts, pie charts, line graphs etc.... Be able to produce frequency tables and use information gathered to help determine solutions to design problems.	
<b>Graphical Presentation</b> Be able to draw a range of graphs from data / statistics. Present data in the form of graphs (See above). Be able to convert information and data from statistical form to graph form and vice versa . To be able to use technical specifications, as supplied by manufacturers, when analysing products, making choices and determining a design.	
<b>Geometry and Trigonometry</b> To determine angular measures, in degrees. To be able to measure and mark out accurately. To be able to use tessellated patterns (E.G. using a template or a pattern in Batch Production). Be able to draw in 2D and 3D, both by hand and using CAD. To be able to present designs in an understandable, standardised form (E.G. scaled working drawings) To be able to calculate the areas and volumes and consequently, the quantity of material required, for the manufacture of a product.	

**FIRST DRAFT**