

Numeracy resources and ideas for practical mathematics

Numeracy resources and ideas

Maths trails

A planned walk around the school grounds or through the local area or park can be a valuable maths experience especially with shape and space, measures and data handling. Equally many parts of the using and applying points in the attainment targets can be covered as well.

Key objectives for shape and measures that could be addressed in this way include:

- Y3: Identify lines of symmetry. Identify right angles. Solve a given problem by organising and interpreting data in simple lists, tables and graphs.
- Y4: Classify polygons. Choose and use appropriate number operations and ways of calculating to solve problems.
- Y5: Recognise parallel and perpendicular lines and properties of rectangles. Understand area and use the formula for the area of a rectangle.
- Y6: Calculate the perimeter and area of simple shapes. Solve a problem by extracting and interpreting information presented in tables, graphs and charts.

Further ideas can be found on the counton website - www.counton.org.

Visits to schools

World of maths provides a visit to school and sets up a circuit of activities. £3 + VAT per student.

www.worldofmaths.co.uk

Football/Sport

- There are many football clubs who have programmes linking football and the National Curriculum - Gillingham have a good programme.
- There are some 'football work books' available at places like WHS which have some good ideas that could be adapted.
- Run the fantasy league with your class
- Use data from sporting events for data handling:
 - Margate football club have excellent spreadsheets on their site www.margatefc.com as does Dover www.dover-athletic.co.uk
 - www.cimt.plymouth.ac.uk/default.htm has a data bank of data from world athletics and Olympics.

Data handling

There are many websites with excellent spreadsheets and ideas to ensure the pupils have access to real data and are able to interpret it. The best activity, in my opinion, is to work on the Kent passport that is supported by censusatschool. There are questionnaires that can be downloaded, discussed and the information gathered. Each pupil can then fill in their data on line. This is included in a county wide data bank but equally the teacher can contact them by e-mail and request all the data for a class so that work can be carried out on the class data only.

Data sources

www.censusatschool.ntu.ac.uk

Results of data collected from school population. Many spread sheet and graphs. (Kent Passport - **www.censusatschool.ntu.ac.uk**)

www.netribution.co.uk/statistics/index.html

Film and television data e.g. top ten films by theme.

www.cimt.plymouth.ac.uk/default.htm

Has a data bank of data from world athletics, Olympics and world population figures.

www.helicon.co.uk/online/datasets/index.htm

The website for the Hutchinson Almanac which contains data on many areas of modern life.

www.dft.gov.uk

The Department of Transport website for statistics concerning all aspects of travel in Great Britain.

www.bbc.co.uk/weather

The BBC's weather website features tables of data as well as graphs of temperature and rainfall.

[www.bbc.co.uk/education/mathsfile/teachers dat.html](http://www.bbc.co.uk/education/mathsfile/teachers_dat.html)

Games, activities and notes for teachers.

www.learnthings.co.uk

Bar charts, line graphs and pie charts.

www.cadburylearningzone.co.uk/maths

Maths in chocolate making

<http://www.standards.dfes.gov.uk>

Interactive graphing program

<http://www.margatefc.com>

<http://www.dover-athletic.co.uk/>

Football statistics!

Beam publications

Tel: 0207 457 5535 or www.beam.co.uk

Excellent publications - all linked with numeracy strategy, to enhance your planning rather than another scheme. The books include practical ideas for addressing objectives and are frequently based on themes - e.g. exploring fractions or on ideas banks e.g. mental strategies for Years 5 and 6. There are many excellent games and puzzle based books e.g. games and activities with dice and also books on developing mental imagery e.g. starting from your head - mental number.

Counton (continuation of maths year 2000)

www.counton.org

A host of useful games, puzzles and information to promote maths as accessible, relevant and enjoyable. They have also produced some good materials on holding maths weeks, activities and a differentiated computer game:

- Maths activity packs - two available at present - operations and fractions - homework ideas, games and investigations from reception to Y6. Can be downloaded or ordered online.
- Maths Mysteries - a project including a video, a CD-ROM and a set of worksheets backed up by teachers' notes. A group of colourful characters takes part in a series of adventures where the work is differentiated. Call 020 7401 4070 to request a pack. Or e-mail <mailto:requests@edcoms.co.uk>

Kent mathematics challenges

A termly challenge sent to all Kent schools or available on the Kent website. A really good way to motivate pupils. Solutions are posted on the website.

Association of teachers of Mathematics

www.atm.org.uk

Many publications (eight days a week - £4.50 is a good book with puzzles and problems which are not lengthy to introduce).

Also free resources www.atm.org.uk including:

- 2 free examples from their interactive CD for white board programs
- Many flash films to illustrate teaching points e.g. polygons and exploring halves
- Investigational ideas.

Bedfordshire numeracy site

www.schools.bedfordshire.gov.uk/numeracy/index.html

Many excellent ideas and resources, the site also includes many links to other valuable websites. Particularly useful resources include:

- Thinking maths - many problem solving ideas to promote discussion and thinking skills.
- Puzzles - many good ideas
- Numeracy across the curriculum.

Purchasing CD ROMs

If you are wanting to purchase programs then MAPE have produced a very useful guide which links CD ROMs to the NNS objectives:

<http://www.mape.org.uk/curriculum/maths/matchingcds.htm>

(MAPE also have some good free resources e.g. try the shape bingo)

Further useful websites

- <http://www.thinks.com/games-puzzles/index.htm> activities that promote thinking skills in mathematics;
- <http://www.granada-learning.com> numerous activities
- www.mathspere.co.uk/ boardgames, calculator work, puzzles
- <http://www.primarygames.co.uk> lots of little activities especially good on a whiteboard
- <http://www.amblesideprimary.com>
- <http://www.primaryresources.co.uk/maths/maths.htm> quite a few good online maths activities here - try the co-ordinator game.
- <http://www.numbergym.co.uk> interactive resources for KS1 and KS2 along with notes for teachers and parents. They are designed to be used on an interactive whiteboard.
- <http://www.funbrain.com/> the mathbrain games are good here, if you can bear the pop up adverts;
- www.tesprimary.com Linked to the TES you need to get the monthly password from the paper but there are many ideas that can be accessed without the password - for example the brainteasers written by Anita Straker.
- www.nrich.maths.org.uk Numerous problem solving activities with new ideas on a theme each month. The older activities can be accessed via a search.
- www.bbc.co.uk numerous activities for all subjects.
- www.caret.cam.ac.uk/puzzling/ thinking skills for 11-19 year olds are the focus for this site created by Caret, Cambridge University's centre

for applied Research in Educational Technologies. The website splits the puzzles between 11-14 and 14-19 so there will be some materials suitable to challenge the more able in KS2.