

Sum-it! maths clubs in Wales



This guide is published for schools in Wales as a bilingual supplement to ContinYou's *Sum-it!* resource pack, which has been published for schools in England. Much of this will be applicable to schools in Wales, as the underlying principles apply throughout the UK.

However, there are some differences in policy, funding, support and practice between the four countries. The elements specific to Wales are summarised here to help you establish and sustain a thriving maths club.

This supplement should therefore be used in conjunction with the resource pack. Remember, too, that there is a lot more information on our website: www.sum-it.org.uk.

ContinYou Cymru operates in Wales and is part of ContinYou, the UK-wide learning charity. As part of its work in out-of-school-hours learning, ContinYou manages Sum-it! maths clubs.

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Sum-it! maths clubs offer young people a great opportunity to rediscover an enthusiasm for maths. They are an ideal way for staff to live in with maths – to experiment with teaching methods, grab children's attention and spread the word that maths can be great fun.

Exactly what does a maths club look like in Wales? This question has been pushed to the forefront by organisations such as mathcymru, which runs an annual Wales Maths Week that hundreds of schools take part in. The activities that schools ran this year give a good flavour of what maths clubs do – these included:

- a maths trail in the school grounds, set up by pupils from Year 2 for younger children
- a school maths party, with pupils eating 'shaped food' and wearing 'maths clothes'
- a 'Fun Maths Day' at a senior special school, with children and parents making hats with a maths theme and playing maths games.

Many schools already run maths revision classes and booster sessions. Sum-it! maths clubs offer much more than this. They encourage innovative and enjoyable approaches to maths which give pupils the chance to try their hand at quizzes, puzzles, challenges, games and computer-based activities. Some clubs work better as drop-in sessions, while others are more formal. Maths clubs bring tangible benefits, in terms of increased confidence in maths, as well as in levels of attainment in maths and other related subjects.

In a major report called *Making mathematics count*, Professor Adrian Smith mentions the failure of the national curriculum to excite and motivate students, their perception of maths as a difficult subject, and their lack of awareness of its relevance. Sum-it! can give schools in Wales a key to help them unlock the interest of pupils and put maths back on the map.

Curriculum links

Maths clubs can directly support the formal curriculum, focusing on key areas that pupils need extra support with, or identifying some of the ways that people use maths in real life, such as when they are buying clothes or CDs, or for composing music. Maths clubs can be a way of motivating students who have been turned off from maths – you could link a maths project to something they are interested in, such as snooker, football or fitness. You can work on improving the maths skills of older students, to help improve their employability, or you could target gifted pupils, perhaps with an inter-year Sudoku competition. Maths skills are used in a range of subjects, including geography, business studies, science, PE and ICT, so maths clubs are an ideal way of broadening the curriculum support you are offering out of school hours – at breakfast or lunch time, or after school.

These are only a few ideas for supporting the curriculum – any maths-related activity can be directly linked to the progress of children towards reaching higher attainment targets.

Show me the money!

The list of funding sources on pages 30–31 of the *Sum-it!* pack indicates which of these apply to England only. The remainder are applicable throughout the UK. Some have specific contacts for Wales that can be traced through appropriate websites. The following funding information applies specifically to Wales.

You can find out about the **Big Lottery**, which includes the Young People's Fund – Wales, on their website www.biglotteryfund.org.uk/programmes/ypfw/ or by ringing them on 0845 410 2030. The **Make it happen** programme provides small grants for projects developed and run by young people – examples include workshop activities and trips to places that young people might not normally visit.

If your maths club has a community element in its activities, it might be eligible for the **UK Villages Community Kitty Awards**, which gives grants of £50-£500 to a wide variety of community projects in rural areas. The website address is: www.ukvillages.co.uk/articles.nsf/content/ukvkitty .

Mathcymru (www.mathcymru.org) offers small grants to over 100 schools and other organisations to support activities celebrating Wales Maths Week, which takes place each year in October.

ContinYou's practical guide *Raising money for out-of-school-hours learning – Wales* is available in booklet form and on our website – www.continyou.org.uk .

Here's how

As part of Wales Maths Week, **Penglais Secondary School** in Aberystwyth ran a huge range of activities. In the week running up to Maths Week, displays appeared around the school, notably one on 'Famous mathematicians', with maths teachers portrayed as fantasy famous mathematicians. A maths raffle quiz was held, with a different mathematical question being asked each day – if your pre-issued raffle ticket matched the answer, you could claim a prize.

In addition to this, each class took part in a small-scale activity during class time, with pupils creating a large Sudoku board, and taking part in maths trails and competitions on maths themes.

All pupils in Year 7 were involved in an event which produced a large-scale Pascal's Triangle, and a representation of the Fibonacci Sequence.

The highlight of the week was a 24 game competition that involved the whole school. The best sixteen pupils were picked from each year group, with the judging done by pupils from Years 12 and 13. There were in-year semi-finals, followed by cross-year finals, eventually producing a winner from Year 8.

Pupils from Year 12 visited Old College for the mathcymru lecture 'The enigmatic world of codes and code breaking' and a Sudoku competition, which included a final with new forms of Sudoku using pictures or colours.

Links to national initiatives and strategies

This chart, giving information about initiatives in Wales, can be used alongside the one on pages 18–19 of the Sum-it! pack.

Initiative	Overview of this initiative	Maths clubs could complement this by:
The learning country: a paving document www.wales.gov.uk/subieducationtraining/content/PDF/learningcountry-e.pdf	Education targets to 2010 include improving pupils' attainments in the core subjects at Key Stages 2 and 3, and increasing the percentage of 15 year olds achieving GCSE A* to C grades or equivalent in maths.	<ul style="list-style-type: none"> linking maths club activity with curriculum targets at Key Stage and GCSE levels
Basic Skills Strategy – 'Words Talk – Numbers Count' www.basic-skills-wales.org/bsastrategy/en/about_us/news/press_release_basic_skills_agency_to_launch_major_welsh_numeracy_campaign.cfm	This major campaign to promote numeracy skills for children, young people and adults in Wales will be spearheaded by a series of television, radio, press and media advertisements. The bilingual campaign will be launched at the end of January 2006. It will run for four weeks and be supplemented by a wide range of activities, including free packs for parents, and self-help packs for adults who struggle with maths.	<ul style="list-style-type: none"> linking club activity with the campaign encouraging parents to get involved in maths and numeracy asking pupils in the maths club to design an information leaflet to send home to parents about the self-help pack
Phase 3 Numeracy Campaign www.basic-skills-wales.org/bsastrategy/en/resources/promotions/key_stage_3_numeracy_campaign.cfm	This campaign from Basic Skills Agency Wales aims to raise awareness of the importance of numeracy, focusing on pupils at Key Stage 3. It includes TV promotion with BBC Wales, a CD-ROM, a competition, numeracy boxes and materials for pupils.	<ul style="list-style-type: none"> encouraging a positive attitude to maths amongst Key Stage 3 pupils using the numeracy boxes and the interactive CD-ROM within an out-of-school-hours setting with target pupils
Mathcymru www.mathcymru.org	The mathcymru project focuses on mathematics for pupils at Key Stages 2 and 3. It also has the broader aim of making maths accessible and enjoyable for people of all ages. It has developed materials, and has organised roadshows, interactive workshops, competitions and activities. Mathcymru also co-ordinates the annual Wales Maths Week event.	<ul style="list-style-type: none"> taking part in the annual Wales Maths Week utilising good practice and ideas from those schools participating in workshops and using mathcymru resources such as the Maths Challenge Kit – to download visit http://public.techniquet.org/mathcymru/english/zip
Key Skills Support Programme Cymru www.dysg.org.uk/kssp/	This programme supports teachers and managers in schools and colleges in Wales in promoting key skills, including that of the 'application of number'.	<ul style="list-style-type: none"> enabling older pupils to gain key skills qualifications
Community Focused Schools www.learning.wales.gov.uk/pdfs/c3403-community-focused-schools-e.pdf www.learning.wales.gov.uk/pdfs/community-focused-schools-grant-e.pdf	The guidance document (WAG circular 34/03) outlines the programme for schools to provide a range of services and activities beyond the school day, to help meet the needs of pupils, parents and the wider community. The consultation document sets out the proposed arrangements for grants for community focused schools.	<ul style="list-style-type: none"> providing out-of-school-hours maths clubs as part of a well managed community focused schools programme providing a stimulus for setting up adult numeracy sessions or courses within the school
A fair future for our children www.wales.gov.uk/organicabinet/content/CabMeetings/papers/CAB(04-05)07anxa.pdf	This document sets out a wide-ranging strategy for cutting child poverty by half, making sure that disadvantaged children are not left out of activities.	<ul style="list-style-type: none"> providing positive activities before or after school linking maths activities to combating financial problems such as debt

Find out more: www.sum-it.org.uk

Other initiatives

Depending on how your club is structured, who your target audience is, and the area in which your school is based, your maths club can easily play a part in achieving the aims of other initiatives as well. These might include:

Children First

(www.childrenfirst.wales.gov.uk) – this WAG programme aims to transform the management and delivery of social services to children.

Cymorth – The Children and Youth Support Fund

(www.wales.gov.uk/subchildren/content/cymorth-e.htm) – this offers funding for the development of local partnerships, bringing together early education, childcare, play, training, family support and health.

Race Equality Scheme

(www.wales.gov.uk/themesraceequality/index.htm) – this incorporates strategies for developing inclusion and raising standards for children from minority ethnic groups.

Here's how

Tonypandy Comprehensive School in Rhondda runs a lunchtime maths club for brighter students from Year 7. The club is very popular, attracting around twenty students to each session.

Last year Karen Crothers, Head of Maths, ran the club on her own, using the games she got when she joined ContinYou's Sum-it! network, as well as lateral thinking puzzles that she downloaded from the internet. She said that parents

were very interested: 'A lot of them say: "Oh, it's all changed since I was at school" – but they are very supportive and help out.'

Karen admits that the first year was a bit chaotic. This year, instead of leaving all the games out for the students to choose from, she is taking a more structured approach. Each session is planned and will have a theme, with smaller groups working on the same puzzle or playing the same game. She will also have the support of another member of staff.

Here's how

Snooker is being used to help improve maths and science skills among pupils at a Swansea primary school. Young people at **Ysgol Lon Las** have swapped the chalkboard for green baize for ten weeks of lessons at their after-school club.

As pupils practise scoring, and learn how to work out the angles and the speed of shots, they see how maths can help them, and they learn at the same time as having fun. Headteacher Dyfrig Ellis pointed out that boys who would not usually stay on for extra tuition have signed up for the trial. 'If I sold it as an after-school maths club or literacy club, it would not wash,' he said.

The weekly School Super Snooker programme involves pupils aged 9 and 10. The Welsh-medium lessons, including learning and discussing shot-making techniques, also give pupils the chance to develop their vocabulary and social interaction.

Mr Ellis said: 'For the pilot, we have chosen ten boys in Year 5 who are moderate achievers – pupils who just need that little extra push. There are a lot of educational opportunities and because it's snooker they will come.' Next term he hopes to enrol girls on the course.

Achieve Now, the local company behind the programme, hopes it will be rolled out across the country. Managing Director John Davies said: 'As they work through the book, they are asked to complete particular activities. These are based on playing snooker but are focused on their Key Stage 2 work at school. It's a way of encouraging the kids to see that what they are learning in the classroom can be applied in lots of different ways.'

The company has also produced a version based on pool, and it is developing football and fitness programmes. Pupils taking part in the project say it's more fun learning around a snooker table than in the classroom.