



Money to help make a difference in maths

What would you do if you had a thousand pounds to spend on communicating maths? Would you concentrate on fractions, geometry, or on another aspect of the subject? Would you focus on one specific age group? Or would you try to start a project that would benefit your whole school? It's time to start planning how such a grant could make a difference to mathematical thinking and learning in Wales. The Welsh Assembly Government is again funding a grant scheme through mathcymru to encourage innovative thinking in the classroom.

Start thinking now, and once your idea is developed apply for your mathcymru grant at www.mathcymru.org. The closing date for applications is June 8 and you will be notified of the result before the end of the summer term.

Inside you'll find news of some of the projects that have been funded during the current year.

Arian tuag at wneud gwahaniaeth mewn mathemateg

Beth fydddech chi'n ei wneud petai gennych fil o bunnau i'w gwario ar gyflwyno mathemateg? Fydddech chi'n canolbwyntio ar ffracsïynau, geometreg neu agwedd arbennig arall o'r pwnc? Fydddech chi'n dewis rhoi sylw i un grŵp oedran? Neu a fydddech chi'n ceisio sefydlu prosiect a fyddai o fudd i'ch ysgol gyfan?

Y mae nawr yn amser i ddechrau meddwl unwaith yn rhagor sut y gallai grant o'r fath wneud gwahaniaeth i'r ffordd yr ydym yn meddwl am fathemateg ac yn addysgu'r pwnc yng Nghymru. Eto eleni, mae Llywodraeth Cynulliad Cymru yn cyllido cynllun grantiau trwy mathcymru i ysgogi meddwl yn flaengar ac yn arloesol yn yr ystafell ddosbarth.

Rhowch eich dychymyg ar waith nawr, a chyn gynted ag y bydd eich syniad yn barod, cyflwynwch gais am eich grant mathcymru trwy www.mathcymru.org. Y dyddiad cau ar gyfer ceisiadau yw 8 Mehefin ac fe gewch wybod y canlyniad cyn diwedd tymor yr haf.

Y tu mewn fe welwch newyddion am rai o'r prosiectau a dderbyniodd gefnogaeth ariannol llynedd.



Maths never tasted so good!

Children at Ysgol Rhiwfawr in the Swansea Valley cooked up a tasty maths lesson during Wales Maths Week. They used their weighing and measuring skills to prepare an assortment of cakes, biscuits and treats one morning. During the afternoon they tested their money-handling skills when the goodies were put on sale. (full report inside)

Cael blas ar Fathemateg!

Cafodd plant Ysgol Rhiwfawr yng Nghwm Tawe flas arbennig ar wers fathemateg yn ystod Wythnos Fathemateg Cymru. Un bore, buon nhw'n defnyddio eu sgiliau mesur a phwyso i goginio pob math o gacennau, bisgedi a phethau blasus eraill. Wedyn, yn y prynhawn, rhoddwyd eu sgiliau trin arian ar waith wrth i'r danteithion fynd ar werth. (adroddiad llawn y tu mewn)

Round and round

"Round and Round" will be the theme for Wales Maths Week in Autumn 2008. This gives plenty of scope for puzzles, problems and activities for children of all ages.

There will be a mathcymru photo competition, judged on how well the photograph interprets the "Round and Round" theme. Teachers and pupils can begin to focus on the subject over the summer.

There will be a podcast competition for older pupils.

For full details of how to enter visit www.mathcymru.org

Cylch o gylch

"Cylch o gylch" fydd thema Wythnos Fathemateg Cymru yn yr hydref 2008. Gall thema o'r fath awgrymu digonedd o bosau, problemau a gweithgareddau i blant o bob oedran.

Bydd yna gystadleuaeth ffotograffau mathcymru, a gaiff ei beirniadu ar ba mor dda y bydd y llun yn dehongli'r thema. Gall athrawon a disgyblion ddechrau canolbwyntio ar y pwnc yn ystod yr haf.

Bydd yna gystadleuaeth podlediad i ddisgyblion hŷn.

Am fanylion llawn ynglŷn â sut i gystadlu ewch i www.mathcymru.org

Inside:

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Blowing in the wind.
Figure it out - poster puzzle.

Y tu mewn:

Derbyniwch y cynnig o DPP am ddim!
Dysgu mathemateg yn y parc.
Palu i lwyddo.
Chwifio yn y gwynt.
Datrysych - pos poster.

What are these children doing?
Turn the page to find out!



Beth mae'r plant hyn yn ei wneud?
Trowch i'r dudalen nesaf i gael gweld!

The answer is blowing in the wind... Mae'r ateb yn y gwynt...

Children from Ysgol Trewen, Newcastle Emlyn, have been getting up close to wind turbines as part of their mathcymru project. During their project on energy they monitored use of electrical energy in school and compared the cost with that of a wind-produced supply.



Teacher Graham Jones says the data collected enabled the pupils to become familiar with advanced number concepts such as mode, median and mean. After a field visit to a local wind farm, pupils were able to apply their existing knowledge about measurement, shape and space to the physical features of a wind turbine, including rotational symmetry, intersections and network paths.

The children also had visits from the West Wales Eco Centre, as well as a visit to the Centre for Alternative Technology. The project was taken into the wider school community with a home-school link questionnaire on environmental awareness and life style choices regarding energy use.

The mathcymru project is also supporting the school's ESDGC work. Eco School targets are linked to the data gathered about energy efficiency, and pupils in Ysgol Trewen's partner school in Nepal have received photographs and worksheets regarding the project enabling all the pupils to study the issues associated with energy use within their respective communities.

cymesuredd cylchdro, croestoriadau a llwybrau rhwydwaith. Cafodd y plant ymweliad hefyd gan Eco-ganolfan Gorllewin Cymru a thaith i Ganolfan y Dechnoleg Amgen. Cafodd y prosiect ei ledu i gymuned ehangach yr ysgol drwy gynnal holiadur cyswllt cartref-ysgol yn ymwneud ag ymwybyddiaeth o'r amgylchedd a dewisiadau pobl o ran eu ffordd o fyw mewn perthynas â defnyddio egni.

Mae'r prosiect mathcymru yn cefnogi gwaith yr ysgol mewn Addysg ar gyfer Datblygiad Cynaliadwy a Dinasyddiaeth Fydeang hefyd. Mae targedau Eco-ysgol wedi eu cysylltu â'r data a gasglwyd ynglŷn ag effeithlonrwydd egni. Derbyniodd ysgol yn Nepal, sy'n bartner i Ysgol Trewen, luniau a thafleuni gwaith ynghylch y prosiect fel y gall yr holl ddisgyblion astudio materion yn ymwneud â defnyddio egni o fewn eu cymunedau eu hunain.



All Aboard the Numberline Pawb ar y Llinell Rif

Children at Ystruth Primary School in Blaenau Gwent have been busy with new resources, thanks to the mathcymru grants scheme.

Teachers at the Blaina school chose to focus on early years pupils as they designed a numberline in the playground.

Teacher Brian Winstanley says: "The children loved it; whether working alone, in pairs, or small groups, they thoroughly enjoyed playing their "new" games outdoors, whatever the weather... searching, collecting, matching, timing, and generally having great fun but learning at the same time".

Older children joined in, too. Junior school pupils worked with the younger children on a maths trail adventure based around the new resources.



Future plans involve parents visiting the school to try out the equipment.

Bu plant Ysgol Gynradd Ystruth ym Mlaenau Gwent wrthi'n brysur yn defnyddio eu hadnoddau newydd, diolch i gynllun grantiau mathcymru. Dewisodd athrawon yr ysgol yn Blaina ganolbwyntio ar ddisgyblion y Blynyddoedd Cynnar, gan ddylunio llinell rif ar yr iard.



Dyweddodd un o'r athrawon, Brian Winstanley: "Roedd y plant wedi gwirioni ar y llinell, boed nhw'n gweithio fel unigolion, yn barau, neu'n grwpiau bach. Roedd pawb yn mwynhau chwarae eu gemau "newydd" yn yr awyr iach, ym mhob tywydd ... yn chwilio, casglu, cyfatebu, amseru, ac yn cael yr hwyl rhyfeddaf, gan ddysgu ar yr un pryd". Cymerodd y plant hyn ran hefyd. Gweithiodd plant yr ysgol iau gyda'r plant ifanc ar lwybr antur mathemateg o amgylch yr adnoddau newydd.

Ymysg y cynlluniau ar gyfer y dyfodol mae gwahoddiad i'r rhieni ymweld â'r ysgol i roi cynnig ar y cyfarpar.

Digging for maths success! Palu i lwyddo mewn mathemateg!

Growing your own vegetables involves all kinds of skills, including measuring, weighing and analysing data. For their mathcymru project, children from Ysgol Morfa Rhianedd in Llandudno have been involved right from the planning stage of starting a vegetable garden. They measured out the plots for the vegetable beds, even before the frames arrived. The project is a cross-curriculum one, looking at the health and financial benefits of growing vegetables, in addition to giving practical maths experience.



Os ydych am dyfu eich planhigion eich hun, rhaid wrth bob math o sgiliau, gan gynnwys gallu mesur, pwyso a dadansoddi data. Mae plant Ysgol Morfa Rhianedd yn Llandudno wedi bod yn rhan o'u prosiect mathcymru i greu gardd lysiau i'r ysgol o'r cychwyn cyntaf, gan gynnwys y gwaith cynllunio. Cafodd y tir ei fesur ar gyfer y gwelyau llysiau, hyd yn oed cyn i'r fframiau gyrraedd.

Mae'n brosiect trawsgwricwlaidd oherwydd, yn ogystal ag edrych ar fanteision ariannol tyfu llysiau a'r lles i iechyd, mae'n rhoi profiad o fathemateg ymarferol.

Gaining confidence in maths Ennill hyder mewn mathemateg

Teachers at Ysgol Gymraeg Rhiwfawr say pupils are showing a marked improvement in mental maths and practical skills following their mathcymru project.

The school is a small one in a rural setting in the upper end of the Swansea Valley close to the Brecon Beacons National Park. There are no shops or other public amenities nearby where children can practice money handling or other everyday maths skills, so staff were keen to offer opportunities for them to gain confidence in maths.

Teacher Lynne Briar says they wanted to raise pupils awareness: "We wanted them to realise that maths is an integral part of their everyday lives, that the mathematical skills they are taught in the classroom will be vital to them throughout their lives".

All the pupils went out into the playground and the village to follow a maths trail, looking for angles, shapes and patterns; measuring heights and lengths, and reading a timetable on a post box.

There were also sessions in school with construction kits, and practical maths activities.

A day of cookery was also arranged. (see front page). The school now runs a weekly maths club offering more practical activities to engage the children.



Dywed athrawon Ysgol Gymraeg Rhiwfawr fod gwaith mathemateg pen a sgiliau ymarferol eu disgyblion wedi gwella'n sylweddol o ganlyniad i'w prosiect mathcymru.

Mae'r ysgol yn un fach mewn ardal wledig ym mhen uchaf Cwm Tawe, ar gyrion Parc Cenedlaethol Bannau Brycheiniog. Nid oes siopau na chyfleusterau cyhoeddus eraill wrth law lle gallai'r plant ymarfer eu sgiliau trin arian neu sgiliau mathemateg eraill o ddydd i ddydd. Felly roedd y staff yn awyddus i gynnig cyfleoedd i'r disgyblion ennill hyder mewn mathemateg.

Dywed un o'r athrawon, Lynne Briar, mai'r nod oedd cynyddu ymwybyddiaeth y disgyblion: "Roedden ni'n awyddus iddyn nhw sylweddoli bod mathemateg yn rhan annatod o'u bywyd bob dydd, ac y bydd y sgiliau mathemateg sy'n cael eu dysgu yn y dosbarth yn hanfodol iddyn nhw ar hyd eu hoes".

Aeth y plant i gyd allan i iard yr ysgol ac i'r pentref, gan ddilyn llwybr mathemateg yn chwilio am onglau a siapiau, yn mesur uchderau a hydoedd, ac yn darllen amserlen ar flwch postio.

Roedd yna hefyd sesiynau yn yr ysgol gyda chitiau adeiladu a gweithgareddau mathemateg ymarferol.

Cynhaliwyd diwrnod coginio hefyd (gweler y dudalen flaen).

Nawr mae'r ysgol yn cynnal clwb mathemateg wythnosol sy'n cynnig rhagor o weithgareddau ymarferol i ddal diddordeb y plant.

Maths in the Park

Staff and governors at Trallwng Infants School took maths outside, and even out of the playground as part of their project!

A parent-governor prepared a maths trail around Ynysangharad Park, which was adapted to suit children of different ages. All the classes visited the park, taking their teddy bears with them. The trails included number work, shape, patterns and measuring, with follow-up work for the classroom.

Teacher Kay Workman says it was a great success: "The children recorded their work and took photographs. They got such a lot out of it and had a brilliant time."

Parents and grandparents visited the school to take part in a maths workshop, to show them how maths is taught at Trallwng Infants School. They had the opportunity to play games with their children, use various resources and ask questions. Mrs Workman says the parents were very supportive and full of enthusiasm to help their children.

A number of Maths Games Bags have been made up for early years children to take home, to encourage parents to play games with them.

Mathemateg yn y Parc

Aeth staff a llywodraethwyr Ysgol Babanod Trallwng ym Mhontypridd â mathemateg i'r awyr iach, a hyd yn oed y tu hwnt i iard yr ysgol, fel rhan o'u prosiect!

Roedd rhiant-lywodraethwr wedi paratoi llwybr Mathemateg o gwmpas Parc Ynys Angharad, gan ei wneud yn addas ar gyfer plant o wahanol oedrannau. Cafodd pob dosbarth ymweld â'r parc, gyda pawb yn cario eu tedi gyda nhw. Roedd y llwybrau'n cynnwys gwaith rhif, siâp, patrymau a mesur, ac roedd gwaith pellach wedi ei drefnu i'w wneud yn yr ystafell ddosbarth.

Dywedodd un athrawes, Kay Workman, ei fod yn llwyddiant mawr: "Bu'r plant yn cofnodi eu gwaith ac yn tynnu ffotograffau. Cawson nhw lawer o fudd o'r profiad, yn ogystal ag amser gwych".

Daeth rhieni a theuluoedd i ymweld â'r ysgol i gymryd rhan mewn Gweithdy Mathemateg, i weld sut mae mathemateg yn cael ei addysgu yn Ysgol Babanod Trallwng. Cafodd pawb gyfle i chwarae gemau gyda'u plant, defnyddio gwahanol adnoddau a gofyn cwestiynau. Roedd y rhieni'n gefnogol iawn ac yn llawn brwdfrydedd i helpu eu plant, meddai Mrs Workman.

Mae nifer o Fagiau Gemau Mathemateg wedi eu paratoi, er mwyn i blant y Blynyddoedd Cynnar fynd â nhw adref i annog eu rhieni i chwarae'r gemau gyda nhw.

Don't miss maths activities from Techniquest

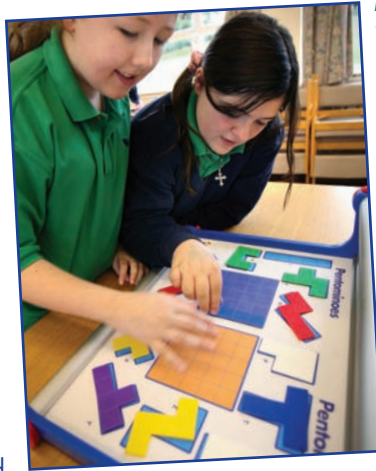
Cofiwch am weithgareddau mathemateg Techniquest

Mama Mia Maths – available to visit your school now, and at Techniquest in Cardiff Bay October 7 - 10.

Visit our restaurant and see how maths can be related to everyday life even a visit to the pizzeria. The show includes fractions, number patterns and sequences, time and relations, calculations with money, counting, symmetry and pattern.

Toddler Day at Techniquest Cardiff Bay, October 6. The theme of the day is Maths at the start of Wales Maths Week.

Maths Kits – hire one to use in your school. Set up a hands-on mini exhibition in your own school with this suite of maths puzzles and games. The 11 exhibits are easy to use, pack neatly onto a trolley and are designed to be used in any school space. Each exhibit comes with extensive teacher notes highlighting curriculum links, solutions and further problems, as well as lesson plans for follow-up work in class.



Mathemateg Mama Mia – ar gael i ymweld â'ch ysgol chi nawr, ac yn Techniquest ym Mae Caerdydd, Hydref 7-10.

Dewch am dro i'n bwyty i gael gweld sut y gellir cysylltu mathemateg â phethau dydd i ddydd, hyd yn oed mewn pizzeria. Mae'r sioe yn cynnwys ffracsionau, patrymau rhif a dilyniannau, amser a pherthynas, gwaith cyfrifo wrth drin arian, cyfrif, cymesuredd a phatrymau.

Diwrnod Plant Bach yn Techniquest Bae Caerdydd, Hydref 6. Thema'r diwrnod fydd mathemateg ar ddechrau Wythnos Fathemateg Cymru.

Citiau Mathemateg – llogwch un i'w ddefnyddio yn eich ysgol. Gallwch ddefnyddio'r pecyn hwn o bosau a gemau mathemateg i sefydlu arddangosfa ymarferol fechan yn eich ysgol eich hun. Mae'r 11 eitem yn hawdd i'w defnyddio, yn pacio'n hwylus ar droli, ac wedi eu cynllunio ar gyfer unrhyw le sydd ar gael yn yr ysgol. I gyd-fynd â phob eitem mae nodiadau cynhwysfawr i'r athrawon, yn nodi cysylltiadau â'r cwricwlwm, atebion a phoblemau pellach, yn ogystal â chynlluniau gwersi a gwaith dilynol ar gyfer yr ystafell ddosbarth.

Free CPD

mathcymru is arranging **free** Continuing Professional Development (CPD) for year 6 & 7 teachers in the new school year. Sara Longbottom, the mathcymru/NRICH Officer at Techniquest is now looking for schools who want to take part.

The focus is on the transition phase between primary and secondary education. mathcymru wants primary schools and secondary schools to work together on this project.

Communication between the schools and Sara is essential; the relevant maths advisors will also be kept within the loop.

The work gets underway in September with a conference for participating schools, where teachers are introduced to the NRICH website. Over the following weeks, each school will receive a visit from Sara where she uses NRICH materials in the classroom. There will be two more conferences and further rounds of visits for all schools taking part in this CPD.

Provisional dates for the conferences are 26 September 2008, 30 January 2009 and 1 May 2009.

Professional bursary funding to attend these conferences can be applied for from the General Teaching Council of Wales at www.gtcw.org.uk. If you need assistance with this or have any other questions, please contact Sara on sara@techniquest.org

Since October 2007, Sara has met many of the Wales Maths Advisors and has been working with them to bring NRICH to more maths teachers around Wales. Already groups of teachers from Wrexham, the Vale of Glamorgan, Anglesey, Carmarthenshire and Ceredigion have received brief taster sessions using NRICH materials. Dates are booked later in the year for other areas, is your area included? Check with your Maths Advisor.

DPP am ddim

Mae mathcymru yn trefnu Datblygiad Proffesiynol Parhaus (DPP) **am ddim** i athrawon blynyddoedd 6 a 7 yn y flwyddyn ysgol newydd.

Ar hyn o bryd mae Sara Longbottom, Swyddog mathcymru/NRICH yn Techniquest, yn chwilio am ysgolion a hoffai gymryd rhan.

Bydd y pwyslais ar y cyfnod pontio rhwng addysg gynradd ac uwchradd. Hoffai mathcymru weld ysgolion cynradd ac ysgolion uwchradd yn cydweithio ar y prosiect hwn. Bydd cadw cyswllt rhwng yr ysgolion a Sara yn hanfodol, a dylid cadw cyswllt gyda'r ymgynghorwyr mathemateg perthnasol hefyd.

Bydd y gwaith yn dechrau ym mis Medi gyda cynhadledd i'r holl ysgolion sy'n cymryd rhan, gan roi cyfle i gyflwyno'r athrawon i wefan NRICH. Yn ystod yr wythnosau ar ôl hynny, bydd Sara yn ymweld â phob un o'r ysgolion, er mwyn defnyddio adnoddau NRICH yn yr ystafell ddosbarth. Cynhelir dwy gynhadledd arall, ynghyd â chyfnodau pellach o ymweld â phob ysgol fydd yn cymryd rhan yn y DPP hwn.

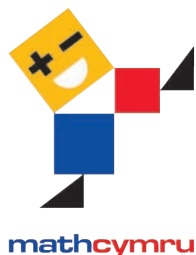
Dyddiadau dros dro ar gyfer y cynadleddau yw 26 Medi 2008, 30 Ionawr 2009 ac 1 Mai 2009.

Gellir cyflwyno ceisiadau am gefnogaeth ariannol i fynychu'r cynadleddau o'r Bwrsari Datblygiad Proffesiynol dan nawdd Gyngor Addysgu Cyffredinol Cymru, trwy www.gtcw.org.uk. Os hoffech gymorth â hyn neu os oes gennych unrhyw gwestiynau eraill, mae croeso i chi gysylltu â Sara trwy e-bostio sara@techniquest.org

Oddi ar fis Hydref 2007, mae Sara wedi cwrdd â llawer o Ymgynghorwyr Mathemateg ac wedi cydweithio â nhw i ddod ag NRICH i fwy o athrawon ledled Cymru. Eisoes mae grwpiau o athrawon o Wrecsam, Bro Morgannwg, Ynys Môn, Sir Gaerfyrddin a Cheredigion wedi derbyn sesiynau rhagflas byrion o ddefnyddio adnoddau NRICH. Trefnir dyddiadau ar gyfer ardaloedd eraill yn ddiweddarach yn y flwyddyn. Ydy'ch ardal chi wedi ei chynnwys? Holwch eich Ymgynghorydd Mathemateg.

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