Are you Hungary for mathematics?

Ten lucky Norfolk teachers spent a week in Budapest, Hungary. Our brief was to look at mathematics teaching in Hungarian schools.

We visited a variety of schools to observe lessons and, through an interpreter, held conversations with the children and their teachers. We learnt about the Hungarian Education System and their National mathematics programme.

In our free time we had the opportunity to absorb ourselves into Hungarian culture through a variety of activities! We will always remember the warm welcomes, the wonderful architecture and the cultural diversity of the people.

We saw a wide variety of mathematical lessons, ranging from kindergarten to elementary schools. Direct teaching, high pupil involvement and practical resources were a key feature of each lesson. Already some of the Hungarian ideas are weaving their way across Norfolk!

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48

The Hungarian challenge

Can you continue the sequence?

1
11
21
1211
111221

Can you
- convince yourself?
- convince a friend?
- convince an enemy?

Can you count in Hungarian?

nulla	0	hat	6
egy	1	het	7
ketto	2	nylok	8
harom	3	kilenc	9
negy	4	tiz	10
ot	5		

Resources used in Hungarian classrooms

Here are some of our favourite resources we saw being used in the mathematics lessons. Why not try out some of the ideas - they were all very successful in helping to engage and motivate the children we saw.

True and False Stick

A lollipop stick, with TRUE written on one side and FALSE on the other and one for each child. In response to statements made by the teacher, children respond accordingly.

Blue Dice

The parents of each child are expected to provide this dice (50 forints = 15p). The dice contains red and blue counters, which are used frequently in lessons for sorting, counting and playing games.

Matchboxes

These matchboxes were seen in many classrooms. Children make them with great care and use them to store items such as counting sticks, digit cards and number beans.

Toblerone Box

A good way to use chocolate boxes when empty! A number line is wrapped around to show sequential counting. For example, this toblerone box was used to count in 3s.

Cloth Number Line

Five red and five white strips of material are sewn together, alternatively to each strip, which is marked into ten sections to produce a number line 0 - 100. This is placed on the floor and enables children to play various games.

Teacher's Board

Every classroom visited made good use of the teacher's board. These boards are green and magnetic, with flaps each end, which can be opened out during the lesson to reveal prepared work.

open

closed

How do they do it in Hungary?

Styles of Teaching

The whole of the lesson is led by the teacher. While there are many opportunities for the children to interact, the teachers controls the lesson from the front. Children either work individually or in pairs. During the lesson, between 7 and 10 short activities are used which maintains good pace and concentration. Very little differentiation was observed!

Structure of the Day

Lessons start at 8 am, and each one lasts for 45 minutes, with a 15 minute break between each lesson. The school finishes between 12.00 and 1.30 pm. Children who require extra support are encouraged to attend lessons in the afternoon. After school care is offered to working parents free of charge!

Hungarian School System

There are 3 types of schools: kindergarten (ages 3-7); elementary (ages 7-11); gymnasium (ages 11-16). Some elementary and gymnasium schools specialise in specific subjects.Competition for a place at these schools is high.

Kindergarten

Parents are given the choice of sending their children to kindergarten on a full time basis. Many parents of the schools we visited preferred to keep their children at home, using the kindergarten infrequently.

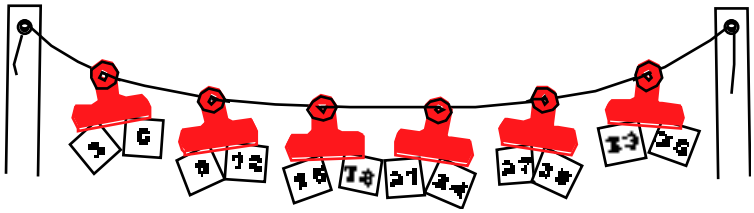
Children's Enthusiasm for Mathematics

All the children we observed were enthusiastic and eager to participate. They obviously enjoyed their lessons and wanted to learn.

Classroom Environment

All the classrooms were arranged in the same way. Children sat in rows facing the front of the class, either on their own or in pairs. There was very little evidence of display, but each classroom had a large green magnetic board, which was used constantly in the lesson. Children had their own individual resources available in front of them.

Meanwhile in Norfolk...



Norfolk Number Line Project

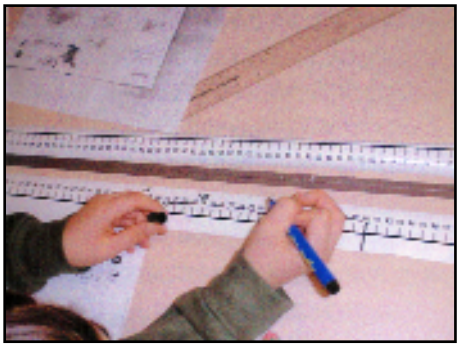
A piece of work completed by Claire Chambers from Lingwood Junior School, has been 'adopted' as our logo for the project.

Number lines can provide a very powerful visual and dynamic model of the number system and of calculating methods.

The teachers who visited Hungary are part of a Norfolk working party looking at using number lines to support calculation. The aim is to produce guidance to support teachers in school, which will available next year.

School Improvement Module

We are offering a school improvement module which will disseminate research undertaken by a group of Norfolk teachers, led by the Norfolk Maths Team, into the theory and practice of reading and learning mathematics, using number lines throughout the primary years.



Tom counting on to 90 degrees.

Pupils at Lingwood Junior School have already begun experimenting with some of the number lines and ideas from Hungary.

2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132,

A number line challenge!

Take 3 consecutive numbers, add them together and record on a number line of your choice!

What do you notice about the totals? Can you explain why?

The trip to Hungary was paid for by DfES as part of the Teachers' International Professional Development (TIPD) programme. Funding is made available to each LEA to fund places each year (Norfolk gets 30 places). We have used these to support projects, initiatives and working groups. The trips support the building and bonding of teams, provide common experiences for learning and debate as well as firing enthusiasm and a commitment to further development. This leaflet illustrates some of the best practice this programme promotes.
For further information on TIPD please contact Fred Corbett, Room 057 County Hall, Martineau Lane, Norwich NR1 2DL. Tel 01603 224383

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