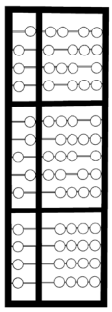
TASK CENTRE PROJECT

CONSULTANTS' NEWSLETTER

NO. 9 SEPTEMBER 1996

Greetings once again from Task Centre Administration. We hope you are continuing to enjoy your association with the Task Centre Project. We are most definitely enjoying our part and are buoyed by the on-going response of teachers who are making the materials and collected wisdom an integral part of their classroom work. Thank you once again for your part in encouraging and supporting this mathematics education initiative.

Interesting Figures



As of the end of August 675 schools in Australia had become clients in some way and many of these have ordered on more than one occasion. That is better than 1 in 20 Australian schools. In total, worldwide, we have placed more than 75,000 tasks and the overseas component of that is also growing. We have some 55 overseas clients to date, but this figure is deceptive. Many of those clients are district offices purchasing for several schools, so there are at least twice that number of overseas schools involved in our project.

Interesting Initiatives

As you read this Charles and I will be preparing to travel to Little Rock, Arkansas, where the school district has invited us to spend a week training key staff from every Elementary and Middle school in the district. That is 43 schools in total. We are honoured to be leading this recognition of Australian educational expertise, and are very aware that our flagship has been constructed by the devoted labour of hundreds of top Australian teachers over more than a decade and a half. We hope to do justice to the expertise of our colleagues in our efforts to share this collected wisdom of classroom practice. If our previous trips overseas are any indication, we will also be in a position to learn from others and bring new insights to Australia.

On the home front the number of people able to offer the Task Centre Project workshops in either a freelance capacity or as part of their advisory role in a district has expanded considerably. We now have 91 consultants across the country.

Although this appears to be a large number, Sue Davis sometimes feels like she has had to ring every one of them in order to match a consultant to a school's preferred date. Thanks Sue - it is no small task to keep your finger on the pulse of a country full of workshops!

Much of this growth has come through the insight of Queensland Education Department districts which have arranged training programs with us for all their mathematics advisers. We are very pleased to be judged worthy in this way and look forward to supporting and being supported.

In a different direction, Rhonda Eggerling, Mathematics Adviser at Geebung School Support Centre in Brisbane, has arranged funding through National Aboriginal and Torres Strait Islander Education Program (Metropolitan East Region) to develop a Queensland Task Centre Project for Aboriginal Students. A clear vision for the project has been developed and trailing has begun. We will keep you informed.

New Tasks

The following tasks have recently been added to the catalogue:

1 Final Eight
- chance and data

3 Doug's Tablecloth
- 2d space, fractions, measurement

4 Window Frames
- number

5 Make A Snake
- pattern and algebra

6 Counter Escape
- chance and data

65 Shape Algebra
- algebra, 2d space

77 Tricube Constructions A
- 3d space

90 Tricube Constructions B
- 3d space

101 Pyramid Puzzle
- 3d space, number, algebra, history of mathematics

137 Training For Maths
- number

144 Pascal's Triangle In Asia
- number, history of mathematics

195 Stop At 4
- number

196 The Maltese Cross
- 2d space, measurement

197 Chocolate Chip Cookies
- chance and data

198 What's In The Bag
- chance and data

In addition the following tasks have been replaced:

46 Folds and Parts by Duelling Dice
- chance and data

47 Creases by Red & Black Card Game
- chance and data

Both of these replaced tasks will eventually reappear as extensions of Doug's Tablecloth. Also,

109 Code Breaker has been replaced by Number Game
- number

New Prices

Due to changes in the cost of raw materials, the project will have to increase its prices from January 1st 1997. It is expected that the cost of a kit of 100 tasks will rise to $1100 (Australian) with consequent changes in other products and overseas prices. Orders received before December 31st will be honoured at current prices.

'Three Lives Of A Task'

In recent work with teachers the phrase 'Three Lives Of A Task' has emerged as a curriculum planning signpost. Teachers have discovered that many tasks can be adapted to three main purposes:
- an activity for two students, as on the card
- a whole class activity
- an extended investigation for an individual or small group

Additional Overseas Action

In March I spent a day teaching in Inveralmond Community School outside Edinburgh to demonstrate some of the uses of the tasks they had already bought. The staff were very excited by the students' responses. I also visited Oban High School on the West Coast of Scotland which had purchased a kit based on its success 'down the road' at Lochgilphead High School.

In April, a small session on the project was presented at the 23,000 strong conference of the National Council of Teachers of Mathematics in San Diego. This was part of a very successful showcase of Australian mathematics education.

In May, Michelle Selinger, Chief UK consultant for the project, delivered the introductory workshop to Thorne Grammar School, near Doncaster, in England. Andy Martin, the Head of Department was thrilled. He commented that there were some 16 other schools in

the area which were watching to see how the task centre use developed. We look forward to hearing how things develop at Thorne in their new academic year.

In June, Marj Horne and Ulla Öberg presented a day and a half session on task centres at a conference in Sweden. Marj is from the Australian Catholic University and is a consultant for the project. Ulla has established a task centre based on project materials at her university in Malmö. Marj comments:

We had about 22 people in a workshop for five 75 minute sessions. We did most of the basic workshop followed by the algebra replacement unit. One of the committee who was a 10-12 teacher came to the first part of the algebra workshop. I gave her group the Jumping Kangaroos. Two hours later, still working on the same problem, she was convinced of the depth of mathematics and the access the task gave to the iceberg as well as the motivational aspects - after all she stuck at it for that time and cut short her coffee break considerably. The people involved in the workshop were all really happy.

Replacement Units

This concept of introducing or extending task use by replacing three weeks of the regular curriculum with a balance of hands-on activities, class lessons and extended investigations has proved very popular since its introduction at the end of '95. Almost 200 units have been sold and many workshops have been run based on the concept.

Pattern and Algebra units for each of Upper Primary and Lower Secondary are currently available and Version 4 of these is in preparation. Draft versions of Replacement Units in Computation and Chance & Data are in preparation and trial. They will be available by the end of the year. A half day workshop for the Replacement Unit has also been developed and successfully used with a number of schools. On the basis of these trials, the attached notes are provided for running a typical half day workshop on the Replacement Unit. Please read them now and contact us if you have any queries.

Other models for integrating task use are also being developed.

Working With The Web Page

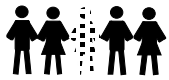
The project has become conscious that as more is learnt about particular tasks it will not necessarily be in a position to publish that information in print form. So, in conjunction with Andy Wain who manages the Problem Solving Task Centre Page at URL:

http://www.srl.rmit.edu.au/mav/PSTC/index.html

there will soon be a section in which both the project and you can publish new learning about tasks themselves and ways of making use of them. Hopefully this will be up and running by the end of the term, so check it out.

The following question was placed on the mailing list by students of Eltham Primary School and indicates something of the potential of this medium for encouraging students to discuss problems over the telephone lines. Their contact teacher is Roslyn Shannon. The school did not have its own Internet connection at this time so Roslyn asked a friend at another school to upload the information. The children were so excited by the idea that some decided to go to Cyber Cafe to see if they could find their message. The task Lining Up is one from the Task Centre Project.

LINING UP
We are trying to find a way to work out how many children altogether if you were in the middle and you know what position you had, eg: Third in line.



What did we do

We got people to stand up in a line and someone else to try and work out where they should stand. They did that by counting to their position from each end. Then if they needed to put or take people out they would. Last of all, they would check again to make sure.

What we found out

We found out that with any number we could multiply it by 2 then take away 1 and then you should get the right combination.

eg: 20th in line.
(20 multiplied by 2) - 1 = 39

TABLE

Position	Number of children
3rd	5
15th	29
25th	49
72nd	143

What to do if you know how many children there are, to find your position.

$p = (c - 1)/2$

p = place
c = children

eg: c = 25

(25-1) /2 =12

12----------you----------12

[I know p = (c - 1)/2 is not a correct transformation of the first formula, but the last line indicates that the class may have actually been trying to find the number of children on 'either side of you', rather than your position in the order.

Isn't this very lack of clarity an example of a way into electronic discussion between this school and others on the Internet?]

Class Lesson Clusters

Several schools have requested the availability of enough concrete materials to run a whole class lesson.

Accordingly, a selection of the more popular of these is being prepared. Each will be presented as a package of 15 sets of task materials (enough for 30 students) plus extensive teacher support notes and photocopiable masters. The notes will show how several lessons can be built around the use of the materials. Prices will vary considerably depending on the cost of materials.

The first Class Lesson Clusters will be:

CL 1: Four Cube Houses
CL 2: Shape Algebra
CL 3: Painted Cubes
CL 4: Tower Of Hanoi
CL 5: Dominoes
CL 6: Tricubes

Clearly many tasks can easily be given this 'life' within a school by adapting equipment which is already available. Therefore the only Class Lesson Clusters which will be prepared are those where the equipment is highly specific or difficult for a school to obtain.

In summary, the Task Centre Project is active and growing. It seems that teachers are finding its many aspects to be a timely support. We know we have you to thank for much of that success.

Keep up the good work and keep in touch.

for Charles Lovitt and Doug Williams