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Welcome to **ATTACK!** a two-page occasional publication. Most of **ATTACK!** will be concerned with the holistic curriculum which, if acted on, is a fundamental way to undermine the present undemocratic education system. Don't be discouraged if opportunities to teach holistically are limited, do your best, be a guardian, and act as a witness to this culturally significant and inspiring way of teaching and learning. **ATTACK!** is a partner to <https://networkkonnet.wordpress.com>

Attack! 80 Developmental in action: a senior room of a two-teacher school (1987) – the holistic before the fall Part 3

A number of children collecting chestnuts from a tree in the school grounds gave impetus to a mathematics topic. Using ideas in *Will Gulliver's Suit Fit? Mathematical Problem-solving With Children* by Dora Whittaker, three or four children developed the topic: 'The Great Chestnut Hunt', and undertook a wide variety of activities. Some were teacher-suggested. Activity spawned activity as the children became more involved.

The children worked by themselves and in small groups. They discussed, compared, argued, and reasoned. They presented oral reports, graphs, tables of data and, at times, some fairly creative calculations. Children were encouraged to provide explanations for their conclusions and results.

Questions which were answered included:

- Which chestnut has the largest girth? Length? Weight?
- What is the average weight of your ten biggest?
- How many strikes can your conker survive?
- What is the average strike rate for five conkers?
- How many metres can you throw your conker? With and without string attached?
- How high is the chestnut tree?

This last question led to many activities and methods – the set square method, scout method (a new one to me), shadow method, angle meter method. Averages using the different methods were found, then tall trees were searched out for some distance around the school.

The topic lasted for about a week and a half. Children worked with varying degrees of intensity, and most were involved in other mathematics activity during this time. In the class, at any one time, there will usually be individual children working on activities from different curriculum areas.

For example, 11.15 a.m., Thursday:

The teacher-introduced activity was concluding a social studies unit.

However, four girls are working on electronic activities – one pair putting together a diode radio, and the other soldering a maze (designed and supplied by S. Brown, science adviser, Canterbury).

Three boys and a girl are outside carving a recycled totara post.

One boy is graphing data after testing the flexibility of wood.

One girl is writing a caption for a tree identification sheet.

Five children are doing social studies caption activities.

Two are reading.

One is doing a mathematics activity.

Two are learning spelling, testing one another.



Two are on the computer.

One is writing.

11.15 a.m., Friday (next day):

Two f. 2 boys are trying to work out the volume of dirt taken from a hole.

One s. 3 boy is reading a journal article about borer after using the index and finding it himself. Before reading it he tells me 'They're a nuisance. I think you probably get rid of them by putting special ointment in their holes.'

Two s. 4 girls are making boats out of leaves and sailing them along the drain. 'You could nearly see how fast the wind was going. We were trying to measure it by timing the boat – something whacked it and it sank.'

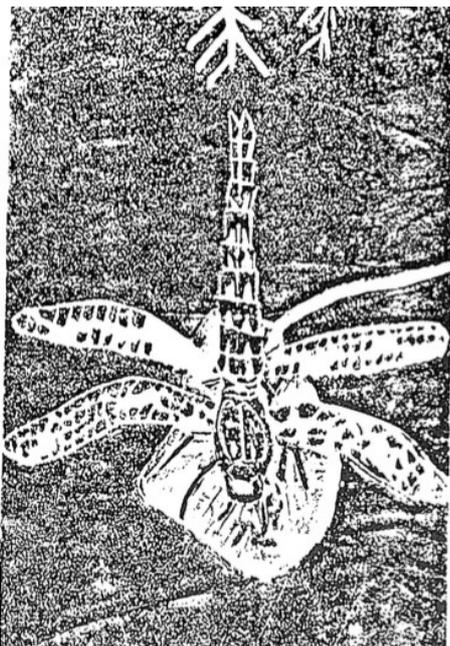
One f. 2 girl is outside carving a snail in clay.

Two f. 1 girls, one s. 4 boy, and two s. 3 girls are making up identification charts of collected leaves. One is labelling with questions, inviting others to identify native or introduced species. Two are comparing leaves with book examples, one is preparing questions asking others to identify tree leaves from a selection which includes blackberry, and so on, and one is doing an observational drawing to put beside the actual leaf. One s. 3 girl is outside doing an observational drawing of a mamaku (tree fern).

Two f. 2 girls are reading through Library Review magazines prior to making a National Library request.

Two f. 2 boys are weighing cubes of wood (rimu, oregon, and so on) and recording data. They are discussing the error margin in weights, and what +1 means. They are frustrated with the scales being used.

A f. 1 boy and a s. 4 boy are preparing a tree data-base on the computer.



One s. 3 boy is reading a journal article about making paper. (He later made some.)

Two s. 3 boys and one f. 2 boy have been using a magnifying glass to examine the grain of wood, but have gone off on a tangent and are now putting glasses together and discussing binocular effects. (Later they obtained convex and concave lenses from a kit and spent some time experimenting.)

I had found it difficult in the past to accept this tangential, apparently 'off-task' behaviour. However, I am now deeply committed to flexibility in programmes and tolerance of this kind of children's thinking. I see it as essential for the development of exploration and invention. If we believe that initiative, inquisitiveness, originality, and a questioning attitude are important, then we should, as much as possible, build learning experiences around children's needs, purposes, and interests.

I never miss an opportunity to explain to individual parents what I am trying to do for their child and the work their child is involved in and has produced.

I tend to look toward a long term aim which has an attitudinal base.

The more direct teaching of curriculum areas, though it doesn't feature in this account, is mutually dependent on and interactive with what might be called the choice programme, though everything that happens has choice inherent. Problem-based mathematics is a feature of my teaching; as are the structured science investigations; the 'feeling for' approach in social studies challenges children cognitively and affectively; and a contextual motivation for writing is regularly provided; the independent reading in the choice programme provides opportunities for individual attention; and art and craft is delivered in art terms and acted on as a key means of communication and expression.

Continued in Part 4

