



# Starting an after school maths club

Visit us at: [www.ru.ac.za/sanc](http://www.ru.ac.za/sanc)

ADDRESSING THE NEEDS OF INDIVIDUAL LEARNERS AND PLANTING THE SEEDS FOR A CONFIDENT MATHEMATICAL FUTURE.

Clubs can provide learners with a space where they can "ask their own questions, produce their own mathematics, talk mathematics, explain mathematics and enjoy mathematics!" (Graven, 2011)

## Why maths clubs?

After school Mathematics Clubs are an opportunity for students to learn and enrich their mathematical experiences in ways that are free from curriculum and assessment driven teaching practices.

The maths clubs run by the South African Numeracy Chair Project are focused on Grade 3 and 4 learners, although a club can be set up at any grade level.

The clubs are conceptualised as supportive communities where sense making, active mathematical engagement and participation, and mathematical confidence building are emphasised. Individual, pair and small group interactions with mentors are the dominant practices with few whole class interactions.

These are some of the features of the clubs:

- Voluntary participation during out-of-

school time

- More learner choice over the activities that they work on and engage with

The clubs have been set up in such a way that both the needs of the whole group and that of the individual learners in the club drive the club 'curriculum'. In other words, we work from where the learners are and attempt to develop their learning trajectory from that point.

- The curriculum is a contextual guide for what is nationally expected of learners but individual learner numeracy levels guide content and activities

- Participation based, where participants are active and engaged

- Many interactions are learner led with many one-to-one interactions between mentors and learners.

- The mentor is as much a participant as the learners are

- Assessment is formative and

integrated and is used to guide individual learning experiences for the participants

- Club rules are negotiated which may differ from in-school time rules. See page 2 for example.

## CLUB FOCI

We have found clubs to be useful for:

- Getting boys and girls to mix with each other through collaborative work
- Getting learners to talk to each other and the mentor about their maths thinking.

A club can focus on:

- Maths Recovery
- Extending and challenging beyond potential
- Individualised attention
- Strengthening mathematical dispositions, confidence and trajectories
- Establishing 2nd sites of learning using the "Pay-it-forward" concept

Clubs seem to work best when there are smaller groups of learners – perhaps between 10 and 15 and a mix of levels. Some schools offer clubs for remediation only, whilst others run clubs for extension.



# Club Ethos

These informal learning spaces allow the learners opportunities to actively engage with mathematics and sense making as well as for mathematical confidence building.

*The clubs operate with some basic ground rules:*

- We listen to each other's ideas
- No laughing when people make mistakes
- No hitting, kicking, biting, bullying
- No telling tales

*Learners are free to:*

- Talk about mathematics
- Argue about mathematics
- Explain how something was worked out
- Ask questions
- Make mistakes as learning happens by making and discussing mistakes
- Speak their own language
- Cross things out, be untidy
- HAVE FUN

# FUNDING



All the items that we use in the clubs are provided via funding from the FirstRand Foundation (with the RMB), Anglo American Chairman's fund, the Department of Science and Technology and the National Research Foundation.



# Club Aims

*As mentors in the club, we aim to:*

- help learners think about mathematics
- enjoy mathematics

## Club facilitator boxes and support

We provide support for anyone who wants to run an after school maths club from Grades 2 to 5. Any school who decides to run a club will receive a plastic box containing a number of resources that allow them to get the club up and running. This typically contains:

- Playing cards & dice for use in the club
- Flip file containing starter resources, worksheets and games
- White boards, pens and cloths

### Workshops

Any school who decides to run a club will also be invited to attend regular club workshops run by the South African Numeracy Chair project. These will enable mentors to engage with other people who are running clubs and to share ideas and resources and to potentially pick up new ideas for their clubs.



# PAY IT FORWARD

One concept that works well in the clubs is the 'Pay-It-Forward' concept. Learners are taught a numeracy game using a simple cost effective resource they have been given or have access to in the club (e.g. a pair of dice, a pack of cards).

The idea is that the learners must teach/play this game with at least two other people in their community (siblings, cousins, parents, grandparents, friends etc.) and promise to 'Pay It Forward'. Many of these games are quite simple but critically involve the development of numeracy proficiency. 2nd sites of learning like this are often taken for granted in middle class families where card and dice games are part of children's lives.



Club learners are also encouraged to work with others on the "Fun with Maths" supplement published in Grocott's in 2012. The supplement is available from: <http://www.ru.ac.za/sanc/numeracyresources/grocottssupplement/>



WHAT THE LEARNERS SAY ABOUT CLUBS

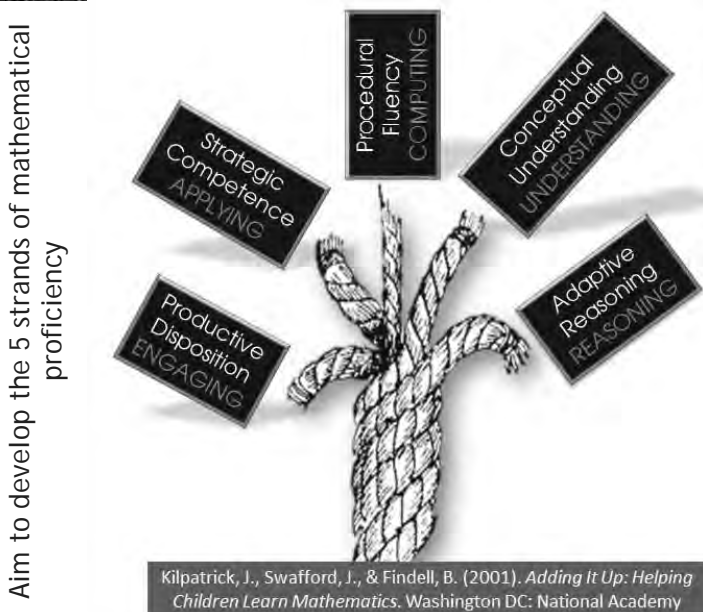
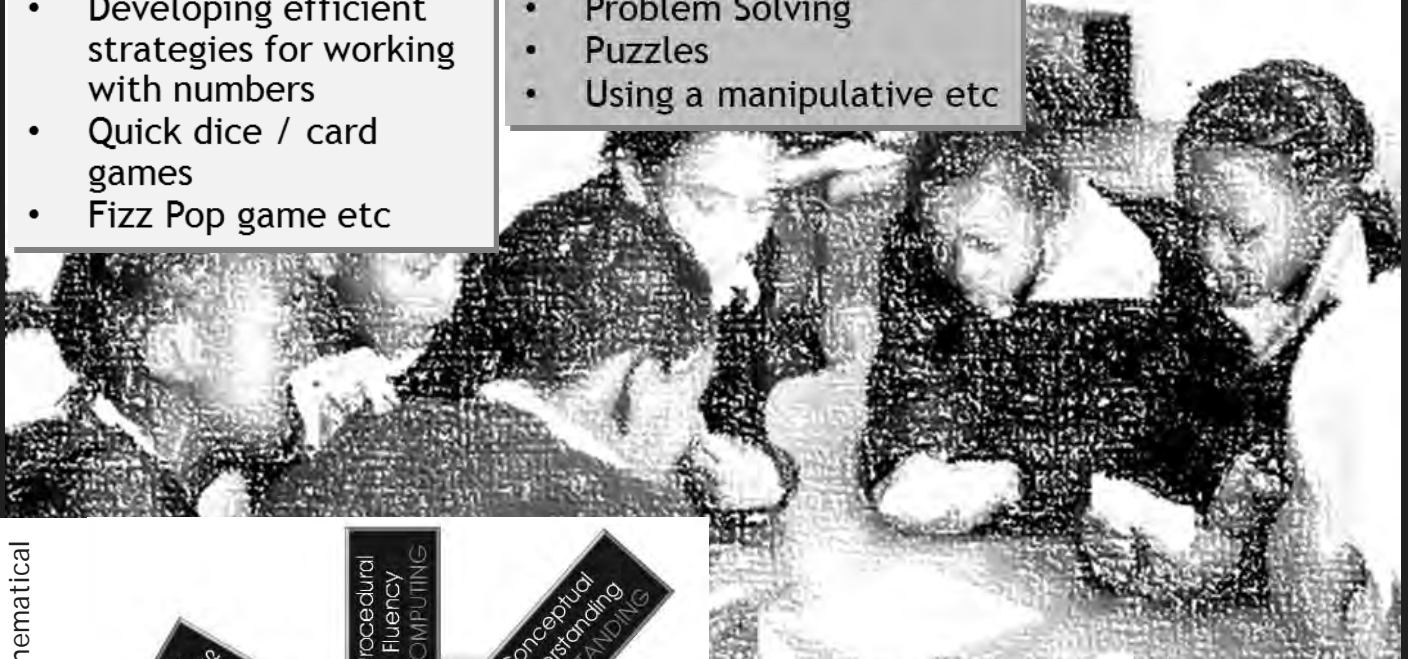


WARM UP

- Mental work:
- Developing efficient strategies for working with numbers
  - Quick dice / card games
  - Fizz Pop game etc

ACTIVITIES

- Group / individual work on:
- Problem Solving
  - Puzzles
  - Using a manipulative etc



WHAT DO WE DO IN CLUBS?





Visit us at: [www.ru.ac.za/sanc](http://www.ru.ac.za/sanc)

# Do you want to start a Maths Club?

## You can pay-it-forward too – start a club!

If you think your learners would benefit from:

- Maths Recovery
- Extending and challenging beyond potential
- Individualised attention
- Strengthening mathematical dispositions, confidence and trajectories

Then, get in touch with us!



What's  
Next?

0533  
689  
7  
SA  
NUMERACY  
CHAIR  
PROJECT

- If necessary, talk to your principal about your idea and get his / her agreement
- Talk to your colleagues and see if they support your idea
- You will also need to get permission from parents and guardians for learners to participate in your club
- Give Debbie a call or drop her an email with your details:
  - ⇒ Your name
  - ⇒ Grade(s) that you teach
  - ⇒ Your school name & location
  - ⇒ Contact details such as email address and phone numbers
- We will then contact you with further details

### Club Co-ordinator

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