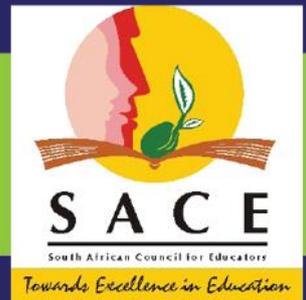**BRAIN**BOOSTERS

learning is child's play

GR 2 SACE TRAINING

Rethinking teaching & learning in Early Childhood Development to significantly impact literacy & numeracy

SACE CPTD POINTS

The BrainBoosters Grade 2 Mathematics LTSM comprises of three 2 ½ hour workshops. Each workshop carries 5 SACE CPTD points. When completing all three workshops, a total of 15 SACE CPTD points is accumulated.

AUDIENCE

This course is suitable for:
- Teachers who are registered with SACE and would like to accumulate CPTD points.
- Teachers who are looking for innovative and easy methods on how to teach Numeracy and Mathematical concepts.
- Heads of Department who would like to refresh their teaching skills and find new teaching methodologies.
- Parents who are looking for tutoring solutions.

OUTCOMES

WORKSHOP 1

1. Educators will extend their knowledge and enhance their teaching practices through an appreciation of the BrainBoosters methodology and approach to the teaching and learning of mathematics in Grade 2.
2. Educators will extend their knowledge of teaching counting in multiples from 0-200 to Grade 2 learners using the innovative BrainBoosters Learning and Teaching Support Materials in the following ways:
   - Count All
   - Count On
   - Count Forwards
   - Count Backwards
   - Ordinal Counting 0-200
3. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers by recognizing, identifying and reading number symbols and number names 0 to 200** using the BrainBoosters Learning and Teaching Support Materials.
4. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers through ordering and comparing of whole numbers up to 99 using smaller than, greater than, more than, less than and equal to, as well as from smallest to greatest, and greatest to smallest at the concrete, semi-abstract and abstract levels** using the BrainBoosters Learning and Teaching Support Materials.
5. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers by recognizing the place value of at least two-digit numbers to 99** using the BrainBoosters Learning and Teaching Support Materials.

6. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers by solving in-context word problems** when using the BrainBoosters' Learning and Teaching Support Materials with the following techniques:
    - Counters (Black Discs)
    - Building Up And Breaking Down Of Numbers
    - Doubling and Halving
    - Number Lines
7. Educators will be able to extend Grade 2 learner's conceptual knowledge of numbers by using the BrainBoosters' LTSM at the concrete, semi-abstract and abstract levels to solve **in-context addition and subtraction problems with answers up to 99 (tens and units)**.
8. Building on learner's acquired knowledge of numbers, educators will be able to extend learner's conceptual knowledge base of **numbers through context-free word sums** at the abstract levels utilizing the BrainBoosters LTSM.
9. Educators will be able to extend Grade 2 learner's conceptual knowledge of numbers by using the BrainBoosters' LTSM to solve word problems in context that involve **repeated addition of numbers in multiples of 2, 3, 4, 5 and 10 to a total of 50**.

WORKSHOP 2

1. Educators will be able to extend learner's conceptual knowledge of numbers by using the BrainBoosters' LTSM to solve practical problems that involves **grouping and sharing of whole numbers up to 20** and with answers that may include remainders.
2. Educators will be able to extend learner's conceptual knowledge of numbers by using the BrainBoosters' LTSM to name **unitary fractions including halves, quarters, thirds and fifths as well as to recognize fractions in diagrammatic form i.e. area and length and set diagrams**.
3. Educators will be able to extend Grade 2 learner's conceptual knowledge of numbers when solving practical problems with the BrainBoosters' LTSM that **involve totals and change to R99 and in Cents up to 90c**.
4. Educators will be able to extend Grade 2 learner's conceptual knowledge of **addition and subtraction problems by using expanded notation as well as building-up/breaking down** as techniques with support of the BrainBoosters' Learning and Teaching Support Materials.
5. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers through number bonds to 20** at the concrete and semi concrete levels using the BrainBoosters LTSM.
6. Educators will be able to re-inforce **addition and subtraction problems with mutli-digit numbers as well as bonds to 20** with Grade 2 learners by using different BrainBoosters board games.
7. Educators will be able to extend Grade 2 learner's conceptual knowledge of **numbers with reference to the 2x; 3x; 4x; 5x and 10x multiplication tables** using the BrainBoosters' LTSM.
8. Educators will be able to re-inforce the **multiplication tables** with Grade 2 learners by using different BrainBoosters board games.
9. Educators will be able to re-inforce learners' **pre-existing of colours** using BrainBoosters' speed matching games.

WORKSHOP 3

1. Educators will be able to re-inforce and extend learners' pre-existing knowledge of **pattern**s using BrainBoosters' pattern LTSM and games.
2. Educators will be able to re-inforce learners' pre-existing knowledge of **2D and 3D shapes** using BrainBoosters' speed matching games and geometrical pattern-LTSM.
3. Educators will be able to re-inforce and extend learners' pre-existing knowledge of **symmetry** using BrainBoosters' symmetry LTSM.
4. Educators will be able to re-inforce and extend learner's pre-existing knowledge of **space and direction** using BrainBoosters' LTSM and board games.
5. Educators will be able to extend learner's mathematical knowledge of **measuring time to measure days of the week, months of the year and how to use a calendar** by utilizing the BrainBoosters LTSM.
6. Educators will be able to establish learners' knowledge of **measuring time to reading analogue time** using the BrainBoosters LTSM.
7. Building on learner's pre-existing knowledge of capacity, educators will be able to extend learners' knowledge to the **measurement of capacity** in non-standard as well as standard measures (liters).
8. Building on learner's pre-existing knowledge of length, educators will be able to extend learners' knowledge to the **measurement of length and distance** in non-standard as well as standard measures (meters).
9. Building on learner's pre-existing knowledge of mass, educators will be able to extend learners' knowledge to the **measurement of mass** in non-standard as well as standard measures - **heavy and light (kilogram)**.
10. Building on learners' pre-existing experience of data handling, educators will be able to extend learner's knowledge on **data handling** through the application of the data handling cycle utilizing BrainBoosters' graph charts.