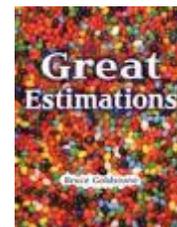# Book Title: Great Estimations

Grade Levels: 2 - 4

Learning Outcomes:

Grade 2

A1: Say the number sequence from 0 to 100 by:

  (a) 2s, 5s and 10s, forward and backward, using starting points that are

      multiples of 2, 5 and 10 respectively

  (b) 10s using starting points from 1 to 9
  (c) 2s starting from 1.

A4: Represent and describe numbers to 100, concretely, pictorially & symbolically

A5: Compare and order numbers up to 100.

A6: Estimate quantities to 100 using referents.

A7: Illustrate, concretely and pictorially, the meaning of place value for numerals to 100.

Grade 3

A1: Say the number sequence forward and backward from 0 to 1000 by:

  (a) 5s, 10s or 100s using any starting point

  (b) 3s using starting points that are multiples of 3

  (c) 4s using starting points that are multiples of 4

  (d) 25s using starting points that are multiples of 25.

A2: Represent and describe numbers to 1000 concretely, pictorially and symbolically

A3: Compare and order numbers to 1000.

A4: Estimate quantities less than 1000 using referents

A5: Illustrate, concretely and pictorially, the meaning of place value for numerals to 1000.

Grade 4

A1: Represent and describe whole numbers to 10 000, pictorially and symbolically.

**A2:** Compare and order numbers to 10 000.

Materials:

- Book: Great Estimations by Bruce Goldstone
- Scanned copy of the cheerio pages 16 and page 17
- Box of cheerios
- Zip ties and twist ties – 11.5"
- Small manila squares – hole punched (for dividers)
- Long Rods to suspend the 50's
- calculator

Lesson Ideas:

Veuillez utiliser la version anglaise du texte puisque seulement une page de ce texte est utilisée.

Day 1

1. Warm-up students for estimating
   - Share learning intention, using the language: estimating, referents
     Le langage pour l'intention d'apprentissage : estimer et référents
   - Practice counting strategies
2. With the children, discuss the cover of the book and explain to the children that they need to think about strategies for estimating the cheerios in the box . Show the cheerio pages 16 and 17.
3. Present the challenge that we want to estimate and then count the cheerios in the box. Work on referents at desks – counts for 10, and counts for 25, 50 and 100. Then, dump out the entire box for an estimate. Students record their estimates in their note books.
4. Begin the count of the box – children to take a small collection to their desks and string on to the zip tie with dividers of colour paper at each ten – 50 per tie. Use a zip to seal it off.

5. At the end of the class, have the children combine their bundles of 50 and together count our total so far – by 10's and then by 50's to compare – use the constant function on the calculator to confirm the count.
6. Wrap up the lesson with a revised estimate in their note books and then a journal entry that notes their methods of counting and how they are doing on their estimating so far.
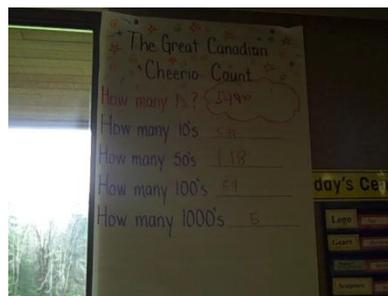
Day 2

1. Continue with counting process until a total is reached.
2. Display the completed 'ties' of cheerios along the rod.
3. Use the collection to practice counting forward by 10s from various starting points and for younger grades, practice counting by 1's through 109.
4. To lead into place value – discuss and post the number of 1's found in the collection, number of 10's, 100s and as an extension the number of 1000s.
5. Notebook entry – Draw a collection of 85 cheerios (grade 2) and 385 (grade 3), noting number of 1s, 10s and for the 3's 100s.