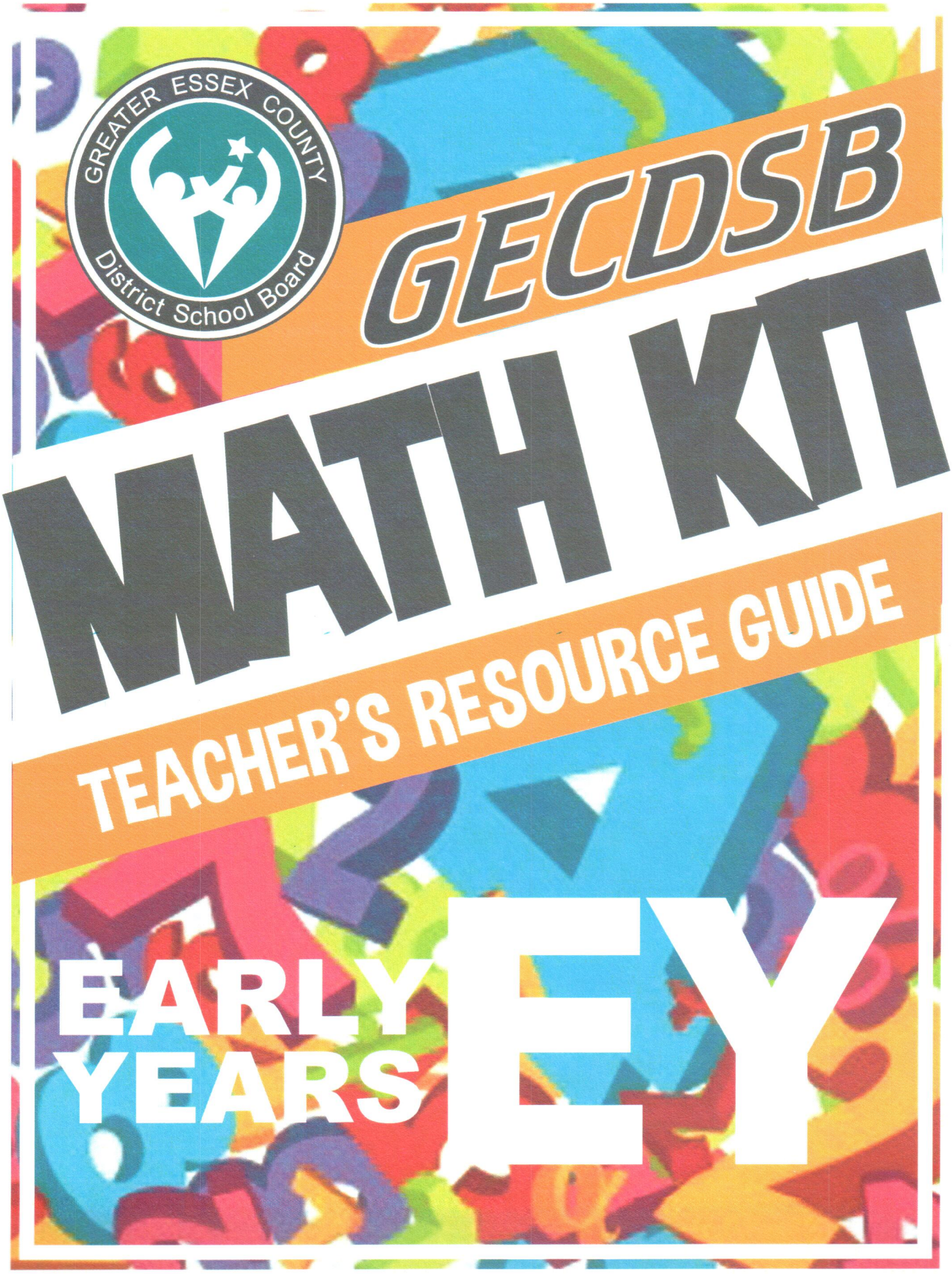

GREATER ESSEX COUNTY
District School Board
GECDSB
MATH KIT
TEACHER'S RESOURCE GUIDE
EARLY YEARS
EY

Why Use Manipulatives?

- ☑ *Make students' thinking visible, so that everyone can see it, talk about it and learn from it;*
- ☑ *Provide a context for developing mathematical concepts;*
- ☑ *Help students explore, think about, and talk about mathematics;*
- ☑ *Help students construct meaning and see patterns and relationships;*
- ☑ *Allow students to more easily test, revise, and confirm their reasoning;*
- ☑ *Help students make connections between concepts and symbols;*
- ☑ *Help students talk about the math, with the result that teachers have a basis for assessing students' understanding and can make programming decisions based on their observations.*

A Guide to Effective Instruction in Mathematics, K – 6, volume 3

Manipulatives are necessary tools for supporting the effective learning of mathematics by all students. These concrete learning tools invite students to explore and represent abstract mathematical ideas in varied, concrete, tactile, and visually rich ways.

Moreover, using a variety of manipulatives helps deepen and extend students' understanding of mathematical concepts. The Ontario Curriculum, grades 1-8, Mathematics, 2005

GECDSB believes in the value of using math manipulatives as part of an effective math program and so math kits have been purchased to support student learning. This resource guide provides details of items within the kits.

Math Kit Supplements

are available to order through Medianet.
Details about these materials, quantities, time, etc. can be found at
www.mediacentre.ca:
kit #41000.

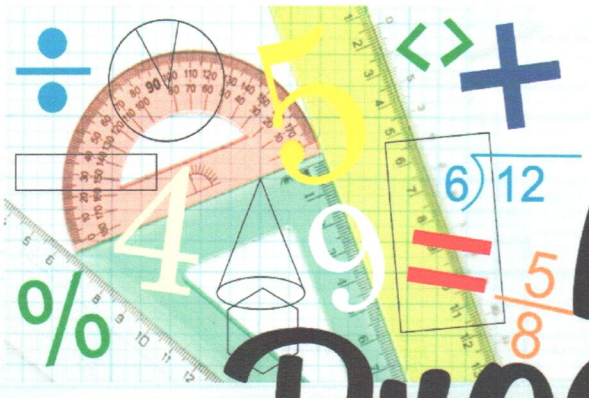
This will allow any teacher to order supplementary materials for a specific content exploration or unit for a time period through the year.

Once a classroom teacher has established a Medianet account, they can request a math kit appropriate for their division. Kits must be returned to the resource center every June for refurbishment. We are reasonable and understanding about some materials going missing when kits are in use. If more than an acceptable amount is missing, the school will be charged for the materials and credit applied when returned.

Questions to extend student learning while using manipulatives include:

"So you used one strategy here, is there another strategy you could use to represent how you could work on this problem?"	**seeking an alternative method**
"What do you think we should do next?"	**posing new challenges**
"Ok, do you want to explain to your partner what you are doing?"	**promoting group interaction**
"Why does this make sense to you?"	**encouraging sense-making**

Source: http://learnteachlead.ca/projects/works-making-space-students-think-mathematically-pdf/



Looking for Math Programs?

MEDIANET has over 4500 digital and DVD titles related to Math!

Check out CBC's **Monster Math Squad** *...and the many lessons from the* **Kahn Academy!**

Make and protect your own math resources!

Make 'N Take Centre
Essex Civic Centre - Basement

24" to 48"
Heavy Duty Lamination

Hundreds of Die-Cuts
Including numbers, geometric shapes, 3-D shapes

24x28" Posters & Enlarging
In-house posters available or send us your PDF to enlarge

Various Paper
(Magnetic, Foam and Felt)

For more information, visit
mediacentre.ca

- ✓ Math Kit Supplements are also available to order through Medianet.
- ✓ Search items available using 41000 as your key word in the search box.
- ✓ Any teacher may order materials for a specific content exploration or unit.

If you would like a Medianet account, please email Dwayne.Teskey@publicboard.ca

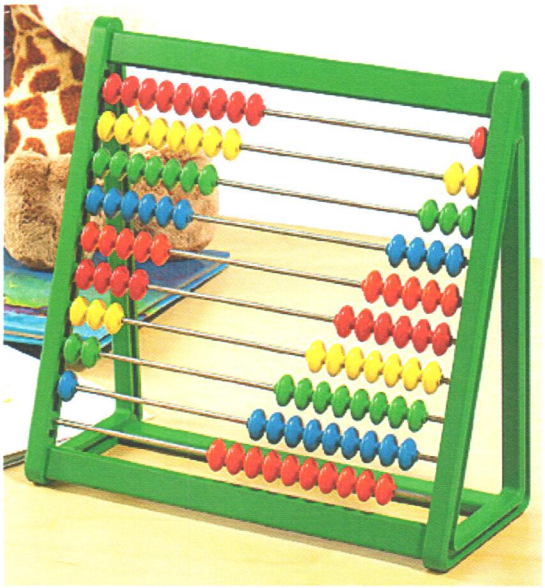
THE EDUCATIONAL MEDIA CENTRE

MON	TUES	WED	THUR	FRI
8:30 to 5:00	8:30 to 5:00	8:30 to 8:00	8:30 to 5:00	8:30 to 4:00

Early Years Math Kit Teacher's Resource Guide
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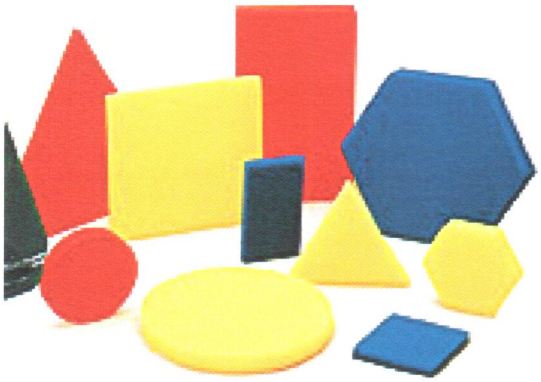
		Page
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Balance		2
Beakers (tri-pour)		2
Bear Counters		2
Counters (2 sided, circle or bean shape)	*Task Card*	3
Counters (square tiles, multi-coloured)		3
Cubes (not connecting)		3
Dice (regular)		4
Dice (soft, large)		4
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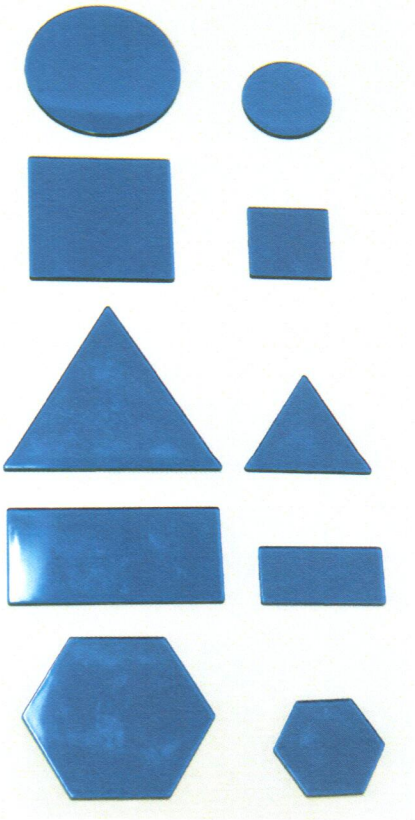
100 Abacus



197 Attribute Blocks - *GIANT*

**pieces SHOULD BE 7-15cm
Set: One THICK + One THIN
of each shape (2 sizes) in
each colour: red, yellow, blue.



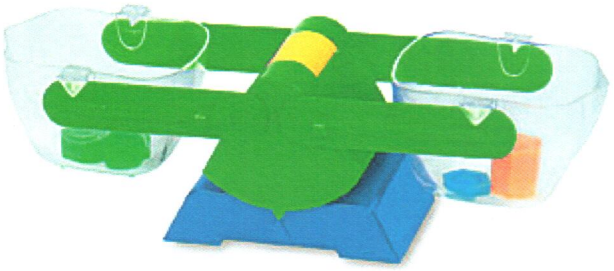


145 – *Overhead* Attribute Blocks (set/30)

**similar to regular sets except: smaller and overhead.
Set: one of each shape above (2 sizes) in each colour:
red, yellow, blue.

199 Balance – bucket style

****KEPT IN CLASSROOM** – request one if none present



(not always this exact model – similar styles of "bucket balance" are used)

---

107 Beakers – Tri-pour (set/6)

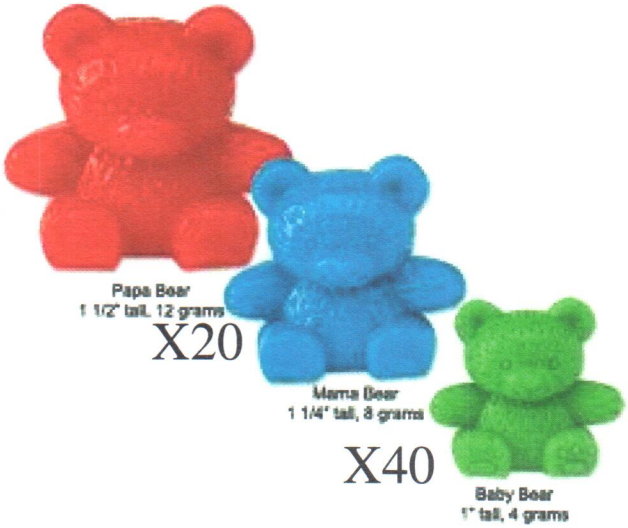


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108 Bear Counters (*set*/80) (various colours)



X20



X20

X40

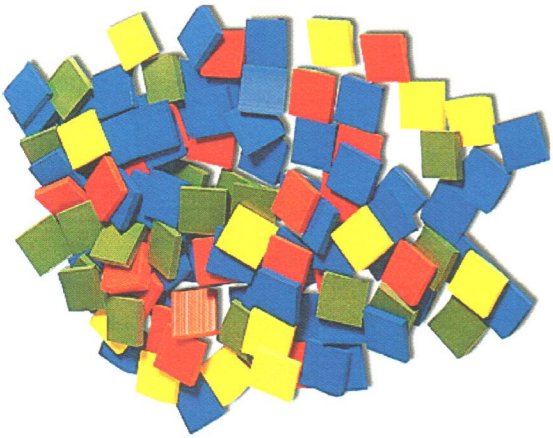
112 Counters (2 colour, circle or bean shape)

**foam or plastic, red/yellow or red/white



---

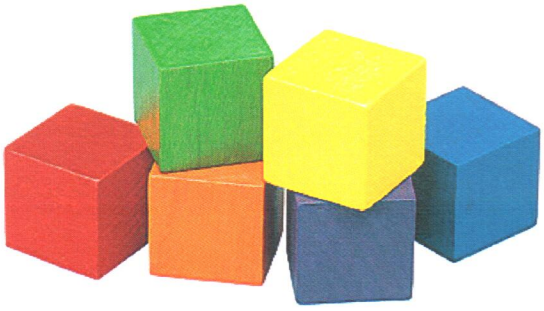
115 Counters (square tiles, multi-coloured but no orange)



---

117 – Cubes – NOT connecting

**plastic or wooden, 2x2x2 cm



121 – Dice (regular)

**dot style only (colours vary)



---

118 – Dice (soft, LARGE, pair of)

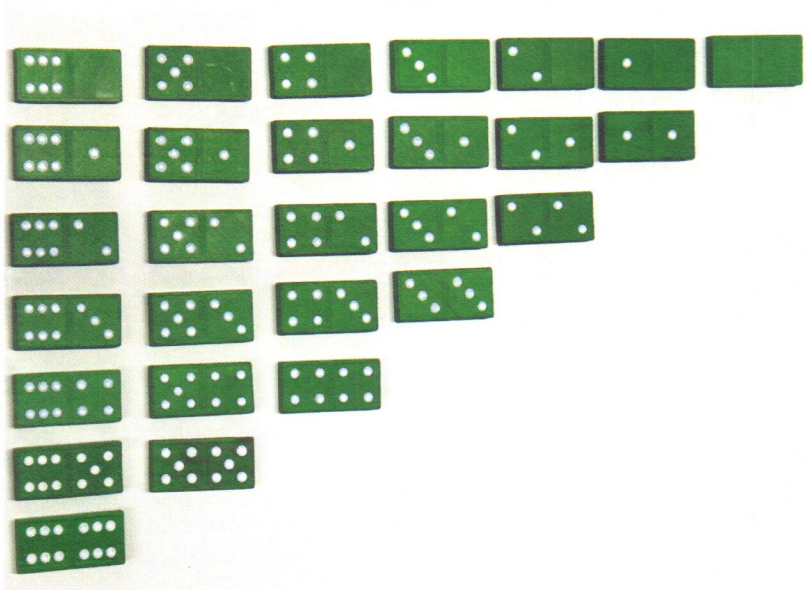
**dot style only (colours vary)



---

122 – Dominoes (set/28)

** "Double Six" type, any colour



123 – Elastics (coloured)

**various colours, small bag



---

131 Geoboards – 5x5 pin

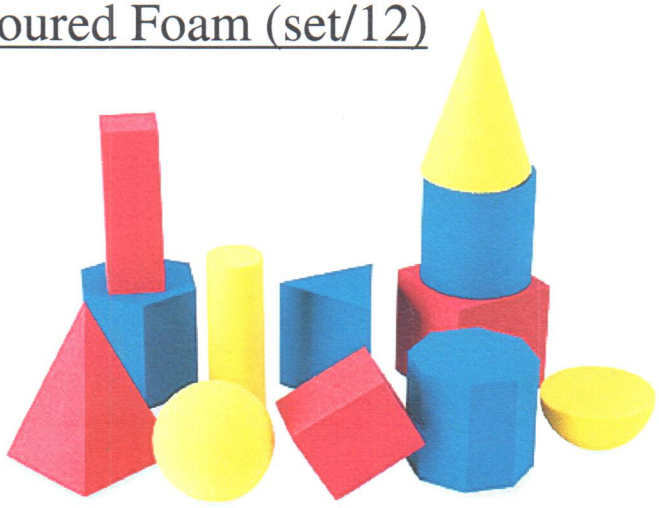
**opaque plastic, various colours



---

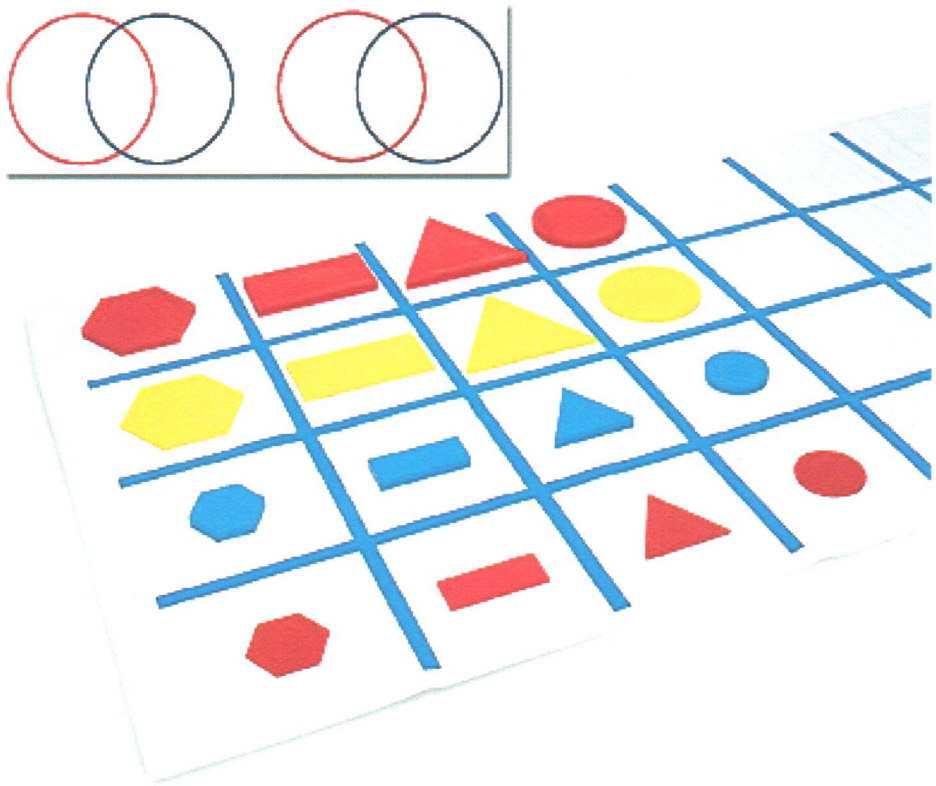
132 Geometric Solids – Coloured Foam (set/12)

** Set: pieces as shown



134 Graph Mat

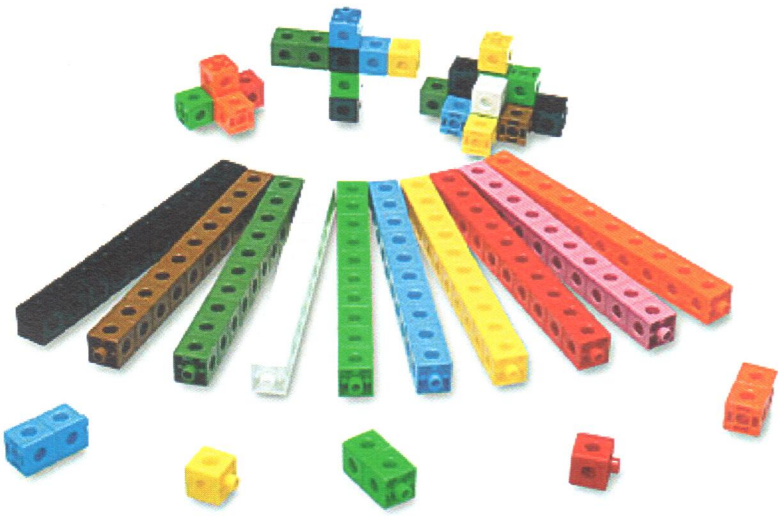
**most are 2 sided (shapes shown from Attribute set)



---

116 – Hex-a-link Connecting Cubes

**variety of colours, must be multi-directional connecting



136 – Links

**plastic, variety of colours



---

137 – Measuring Cups (set/3)

**3 different volumes



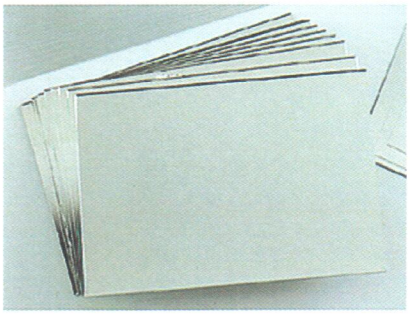
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138 – Measuring Spoons (set/5)



141 - Mirrors

**should be plastic with reasonably clean surface



---

142 – Money Set

**should be Canadian style currency

**Set breakdown (40 bills/120 plastic coins):



x15



x15



x20



x20



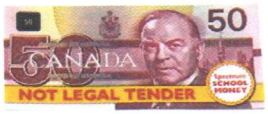
x25



x25



x5



x5



x10



x10



x10

---

198 – Money Tray – HEAVY DUTY

**any similar style, but MUST be heavy plastic



144 – Number Line Mat

**some double sided, various colours, vinyl, walk on durability (some sets are on 2 rolls – check both for a full set: 0-20)



---

152 – Pattern Blocks (set/250)

**can be plastic or wood sets

149 – Overhead Pattern Blocks (set/49)

200 – Pattern Blocks - MAGNETIC (set/200)

Sets contain:

9 OH
50 Reg.
40 MAG.

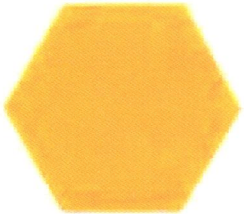


12 OH
50 Reg
40 MAG.



12 OH
50 Reg.
40 MAG.





4 OH
25 Reg.
20 MAG.



6 OH
25 Reg.
20 MAG.



6 OH
50 Reg.
40 MAG.

157 – Sorting Bowls (set/6)

**any similar set of matching bowl/plate type

**should be 6 different colours



---

158 – Sorting Manipulatives

**DIFFERENT types in kits, usually soft rubber material (NO WILD OR SEA ANIMALS)

**hard, plastic Bears are separate item (#108) in EY level kits

**occasionally, substitution of older styles is necessary (ie. Veg.)

Bugs



Dinos



Farm Animals



Fruit

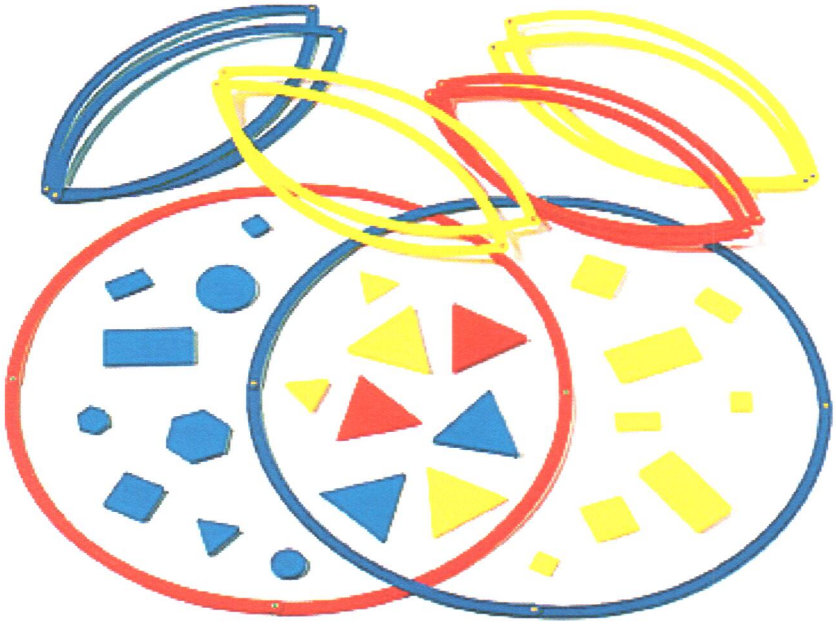


Transportation



159 Sorting Rings

**3 different colours, hinged to fold down
(shapes from Attribute set)



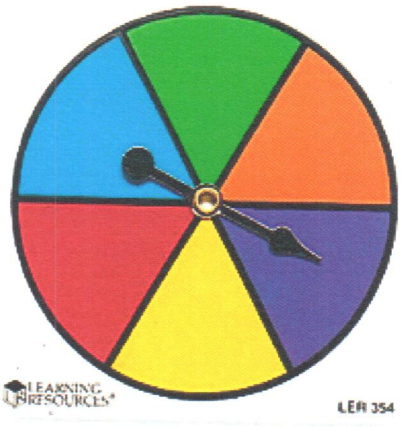
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160 Sorting Tray

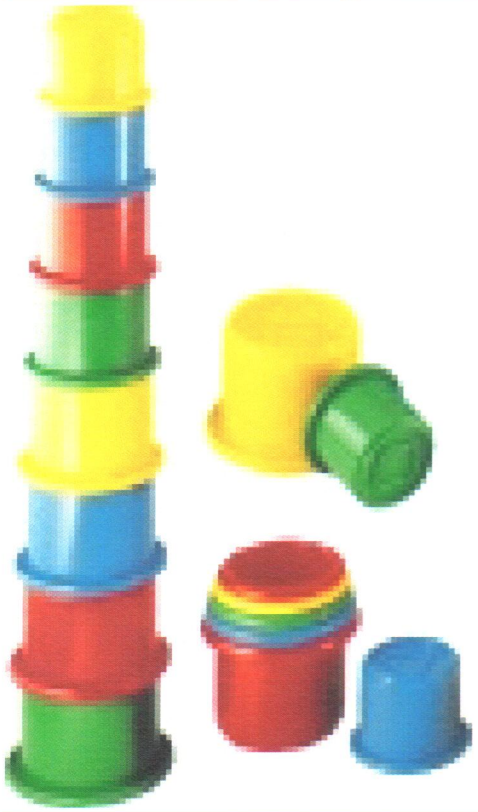
**light plastic – might be rectangular



161 – Spinners - colour



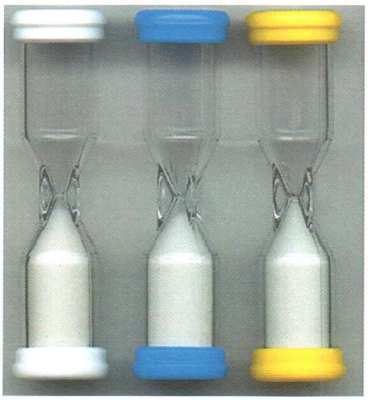
162 – Stacking Pots (nesting, set/6+ cups)



**minimum of 6 cups per set
and same brand for each cup

#164 Timers – sand OR tocker (set/3)

**3 different times





Math Kit Supplements

Below is a list of Math Kit Supplements available to order through Medianet kit #41000.

www.mediacentre.ca

Any teacher may order materials for a specific content exploration or unit.

Abacus
Algebra Ball (inflatable)
Algebra Tiles (sets of 35)
Alge-Tiles:
"x" (set/43)
"y" (set/25)
Manual
Alge-Tiles Magnetic (set/86)
Attribute Blocks -GIANT (set/60)
Attribute Blocks-Regular (set/60)
Base Ten Blocks:
cubes, flats, rods, or units
Base Ten Mats (2 sided)
Base Ten Stamps (set/4)
Beakers (tri-pour, set/6)
Bear Counters (set/80)
Calculators
Caliper Bow
Cards (decks of playing cards)
Counters (2 colour/ 2 sided)
Counters (bingo, multi-coloured, circle, overhead)
Counters (bingo, two-coloured, circle, overhead)
Counters (square tiles, multi-coloured)
Cubes (not connecting)
Cuisenaire Rods (set/74)
Dice (soft, large, pair of)
Dice (money, pair of)
Dice (probability, multi-colour)
Dice (regular, dot)
Dominoes (sets/28)
Explorations with Geometric Solids - Manual
Fraction Ball (inflatable)
Fraction Factory (set/51)
Fraction Ring (set/6)
Fraction Strips (set/51)
Fraction Triangles (set/6 layers)
Frameworks - equilateral triangle
Frameworks - hexagons
Frameworks - rectangle
Frameworks - square
Frameworks - pentagons
Geoboards (overhead, 11x11 pin)
Geoboards (opaque, 5x5 pins)
Geolegs
Geometric Solids (wooden, set/15)
Geometric Solids (colour, foam, set/12)
Geometric Solids (transparent, set/14)
Geometry Ball (inflatable)
Graph mat
Hex-a-link Connecting Cubes
Hundreds Wall Chart
(with number/functions cards set)
Links
Measuring Cups (set/3)
Measuring Spoons (set/5)
Measuring Tapes (soft/cloth)
Miras
Mirrors (small, plastic)
Money Set (40 bills/120 coins)
Money Stamps (coins only, set/6)
Number Line Mat (walk on)
Overhead Alge-Tiles (set/136)
Overhead Attribute Blocks (set/30)
Overhead Base 10 Blocks (set/31)
Overhead Cuisenaire Rods (set/60)
Overhead Fraction Circle (set/6 layers)
Overhead Fraction Square (set/6)
Overhead Pattern Blocks (set/49)
Overhead Pentominoes (set/12)
Overhead Safety Compass
Overhead Shape Recognition (set/9)
Overhead Tangrams (set/7)
Pattern Blocks – MAGNETIC (set/200)
Pattern Blocks (set/250)
Pentominoes (scored, set/12)
Percent/Circular Protractor
Platonics with Polydron - Manual
Pre-Algebra Ball (inflatable)
Proofs of Pythagoras (set/3)
Protractors
Safety Compass
Sorting Bowls (set/6 colours)
Sorting Manipulatives:
-Dinosaurs
-Farm Animals
-Fruit
-Insects
-Transportation
Spinners (transparent)
Spinners (colour)
Stacking Pots (nesting, set/6+)
Tangrams (set/7)
Teach-Timer
Timers (sand or tocker, set/3)
Trundle Wheel
Try-it Pentominoes - Manual