GREATER ESSEX COUNTY District School Board

GECDSB

MATH KIT

TEACHER'S RESOURCE GUIDE

I

INTERMEDIATE

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.

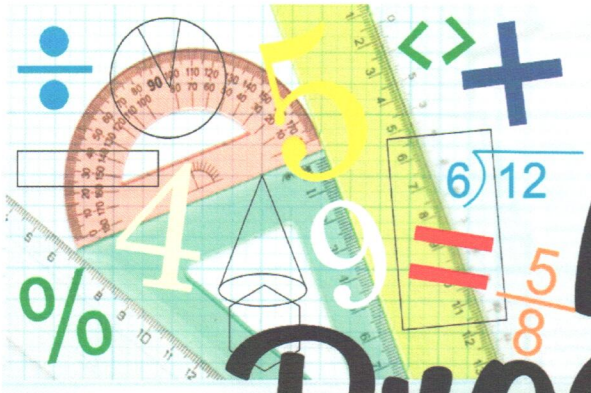
This will allow any teacher to order supplementary materials for a specific content exploration or unit for a time period through the year.

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

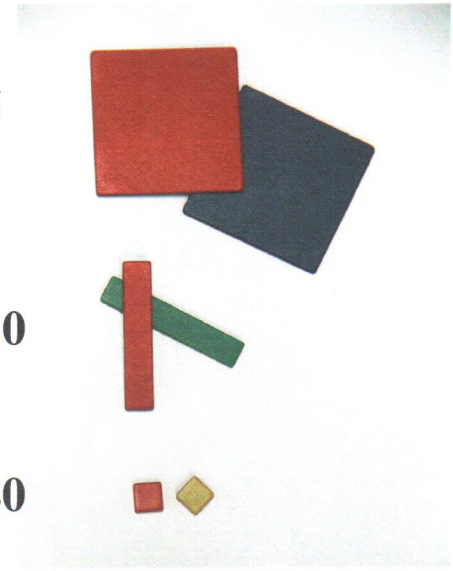
MON	TUES	WED	THUR	FRI
8:30 to 5:00	8:30 to 5:00	8:30 to 8:00	8:30 to 5:00	8:30 to 4:00

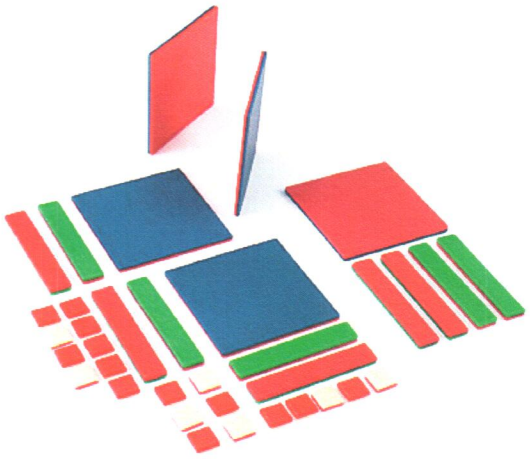
Intermediate Math Kit Teacher's Resource Guide
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#101 - Algebra Tiles

**pieces are 2 colours (back and front)





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114 Counters (overhead, 2 colours, circle)



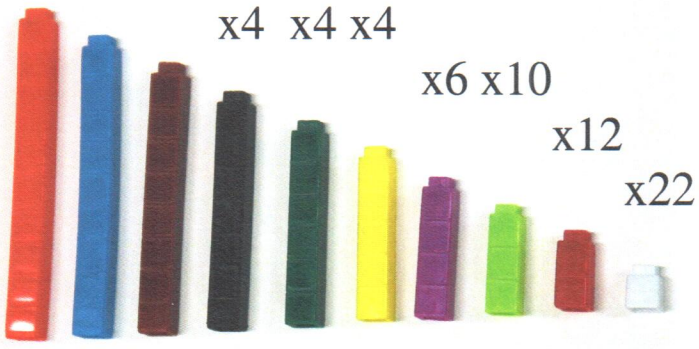
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168 – Cuisenaire Rod Sets (set/74)

192 – *Overhead* Cuisenaire Rods (set/60)

SETS:

Reg. x4 x4 x4 x4 x4 x4 x6 x10 x12 x22



OH x4 x4 x4 x4 x4 x4 x4 x4 x8 x20

121 – Dice (regular)

**any colour, dots only

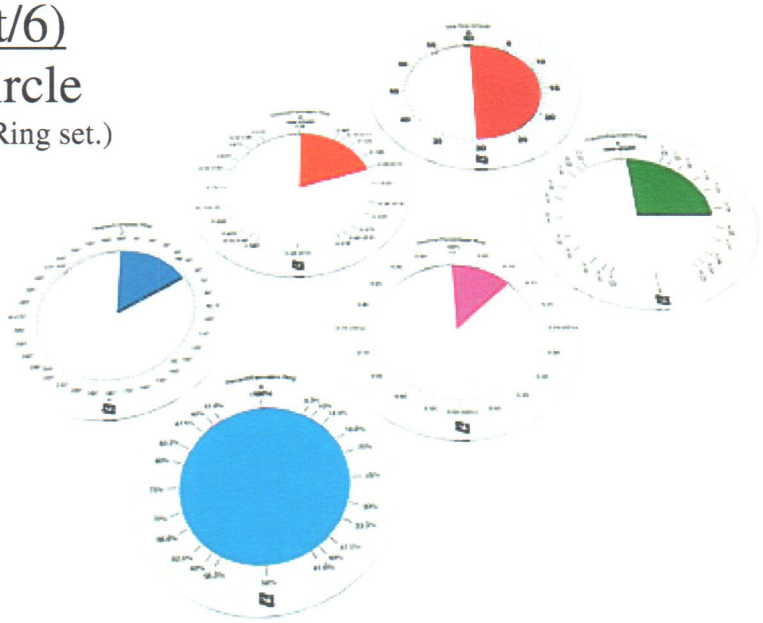


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169 – Fraction Ring (set/6)

**Rings only, Fraction Circle

(pieces in photo are NOT part of Fraction Ring set.)



Frameworks – individual shapes:

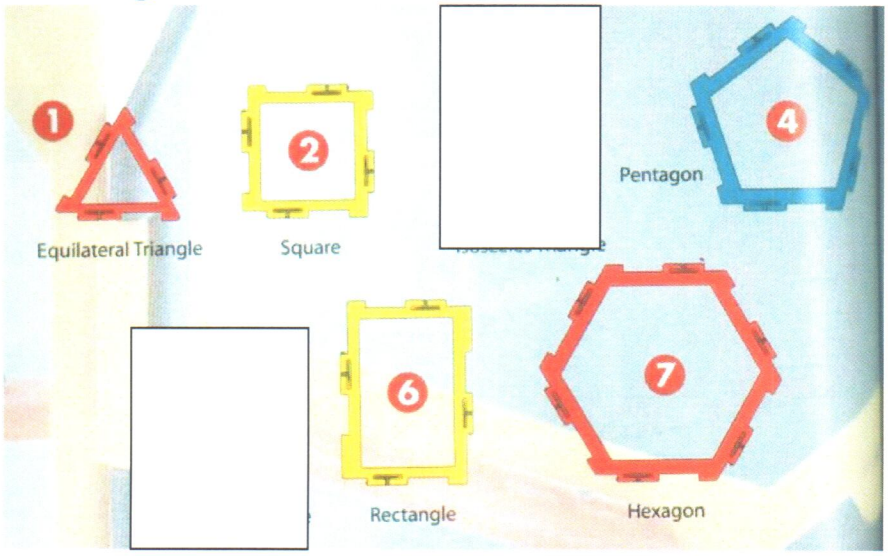
#127 – equilateral triangle

#170 – hexagon

#128 – rectangle

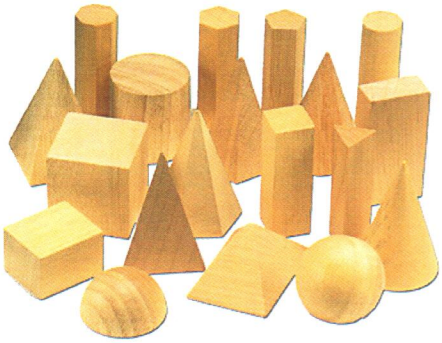
#126 – square

#171 – pentagon

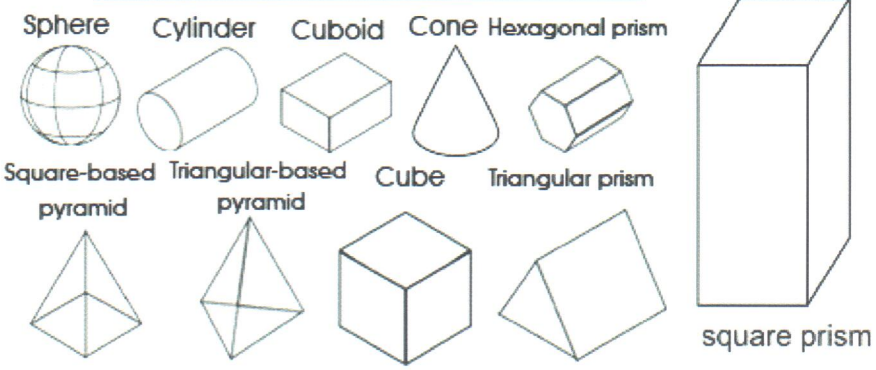


133 Geometric Solids – Wooden (set/15)

**each set may have a few extra shapes NOT on list below,
(some factory sets contain 4 bonus shapes)
shapes should be similar size (fitting in palm) and not painted or decorated



(shape guide - use list below for set contents)



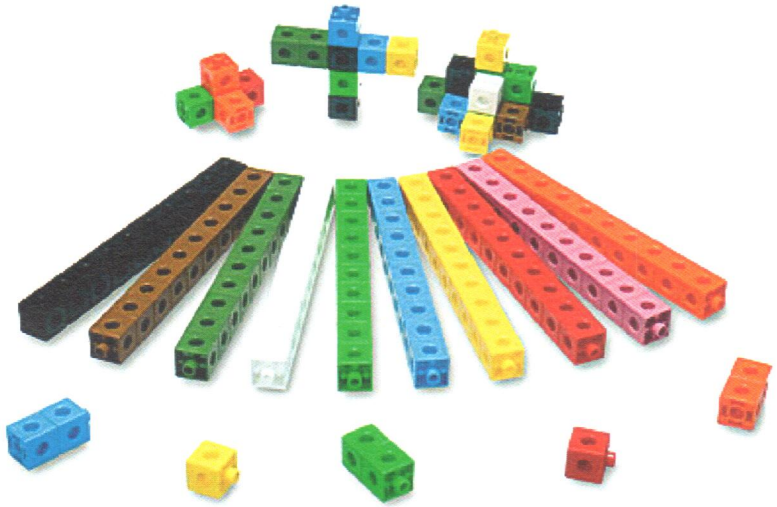
CORE set contains 1 of each:

- Cone
- Cuboid – long
- Cylinder – fat/short
- Hexagonal (6 sided face) Prism
- Pentagonal (5 sided face) Prism
- Square (4 sided face) Prism
- ½ Sphere
- Triangular-based Pyramid
- Cube
- Cuboid - short
- Cylinder – skinny/long
- Octagonal (8 sided face) Prism
- Square Based Pyramid
- Sphere
- Triangular (3 sided face) Prism

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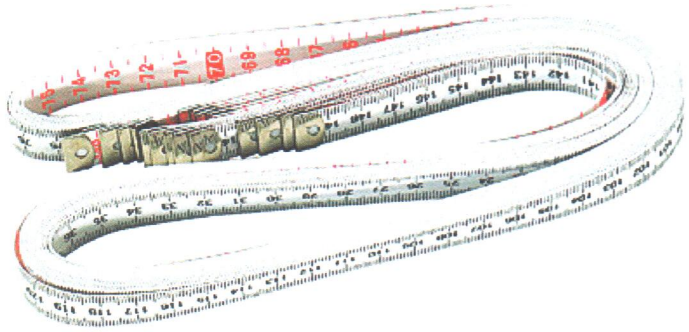
116 – Hex-a-link Connecting Cubes

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



139 – Measuring Tapes

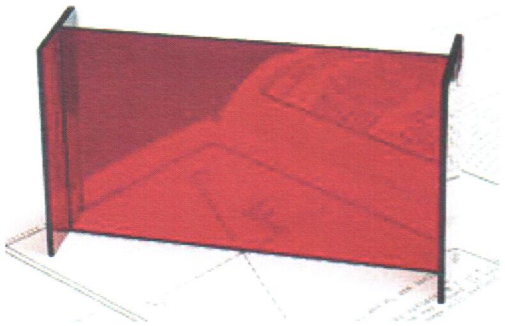
**should be 150 cm long

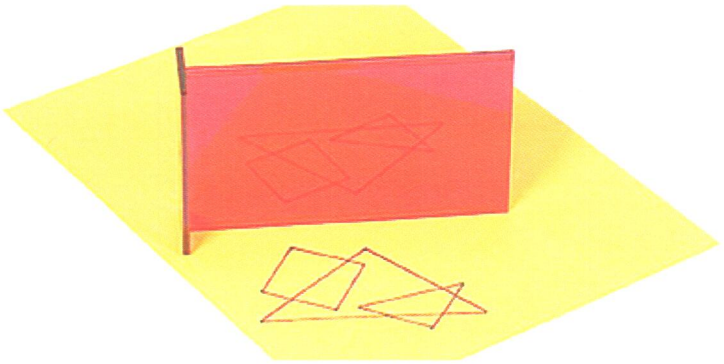


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140 - Miras

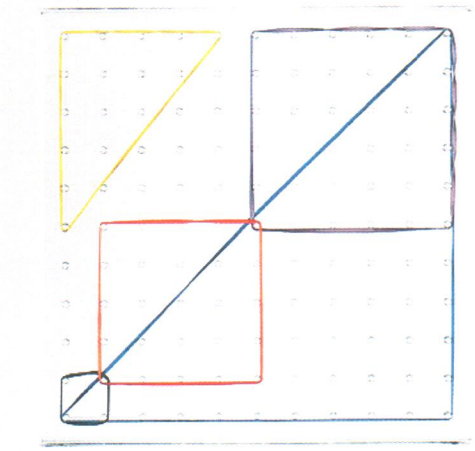
**single or double "T" end is ok





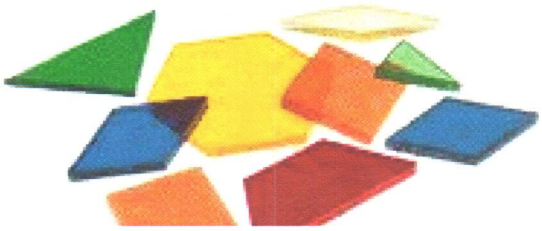
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130 Overhead Geoboards – 11x11 pin



152 – Pattern Blocks (set/250)

**can be plastic or wood



9 OH
50 Reg.

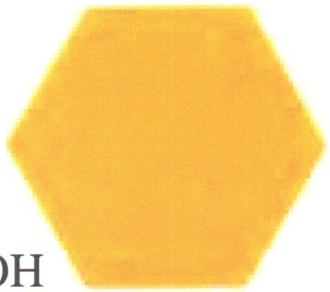


12 OH
50 Reg

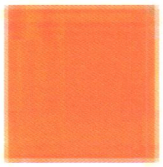


12 OH
50 Reg.





4 OH
25 Reg.



6 OH
25 Reg.



6 OH
50 Reg.

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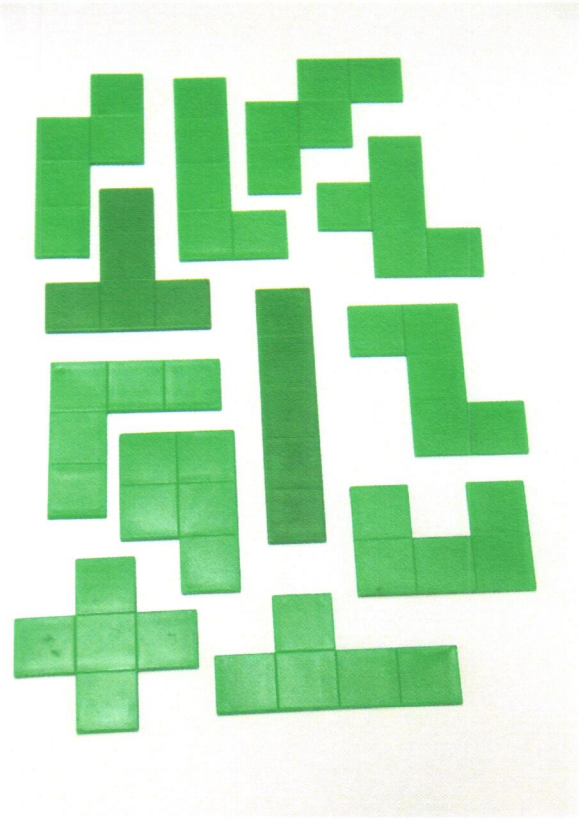
177 – Pentominoes –SCORED/LINES

(sets/12)

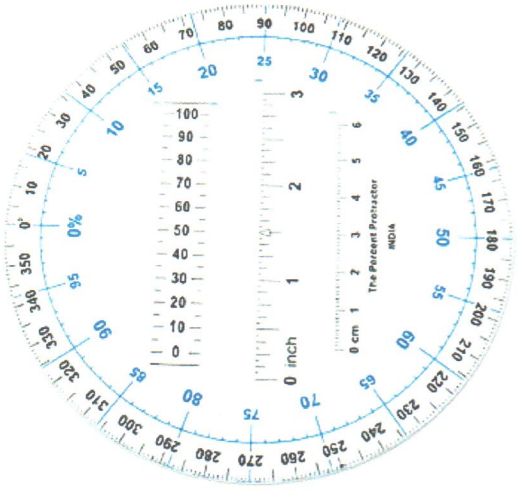
**use of scored is preferred

**one colour per set

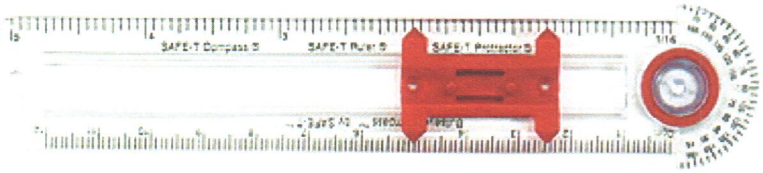
**Set is one of each:



178 – Percent/Circular Protractor



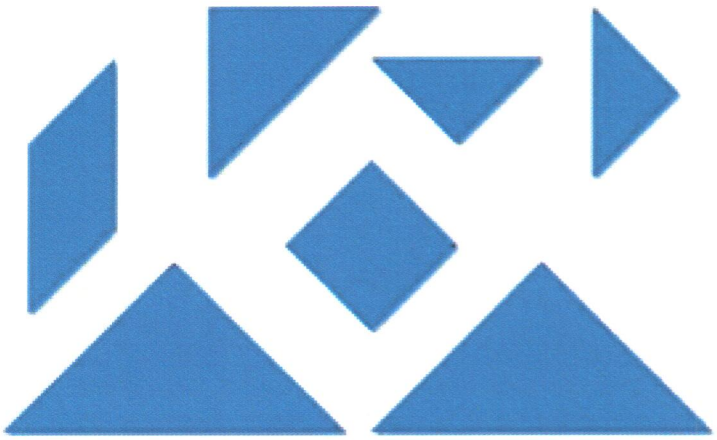
179 Safety Compass – white, plastic



151/163 – Tangrams (combination of OVERHEAD/OPAQUE) (set/7)

**one colour per set

**Set contains:

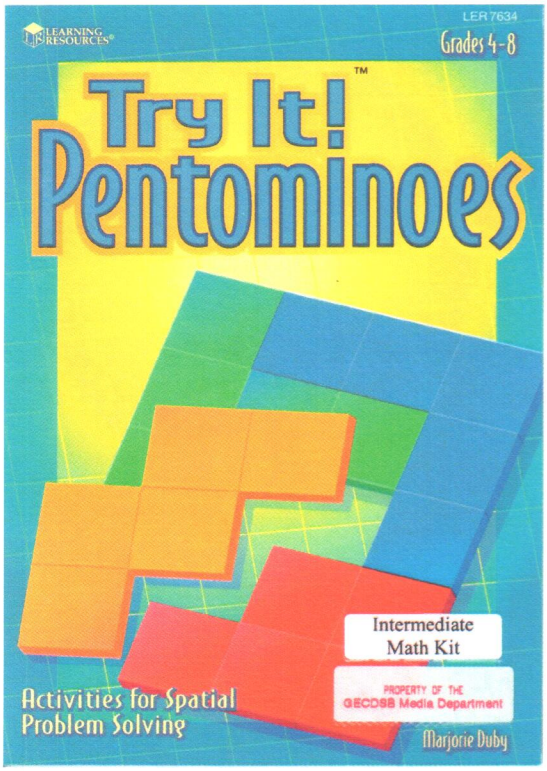


#181 Trundle Wheel

**handle is detachable



#191 – Try-It Pentominoes – manual



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

