

Journey of Discovery in Mathematics Resources



Enthralling, Inspiring, Involving

Please see: www.absolutelyLEARNING.de → English → Mathematics → **Handbooks**

Early childhood into School: The effective learning approach continuum.

Simple geometrically compatible materials which incorporate all that is necessary in the primary and early secondary levels for

- Whole number work inc. +, -, x, ÷
- Probability and Representation
- Shape (partly)
- Measuring and Weighing for early primary
- Investigations (many)

A large selection of open activities including games, challenges, puzzles, investigations are introduced verbally with concrete resources and offer a journey of discovery. The children enjoy researching and experimenting, and having the choice of: learning approach, learning level (mental, concrete, illustrative, written), social grouping and interaction.

The power of the Journey of Discovery in Mathematics Concrete Resources

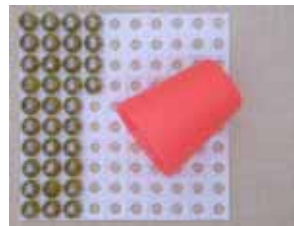
Registered Design

A few examples



How many marbles fill a plastic container?

(including estimation)



Ans. = 34

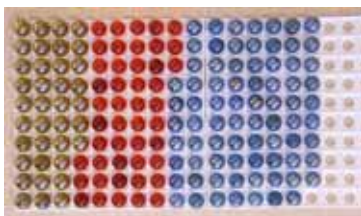
An invitation to count singly or to consider tens. Measuring is not exact.



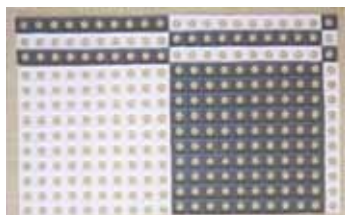
concrete → illustrative → written

Many activities apply- both for addition and subtraction properties

Facilitates initially the appreciation of a quantity, here seven, and eventually the appreciation of the underlying pattern and its use.



$$37 + 46 + 76 = 159$$



$$13 \times 21$$

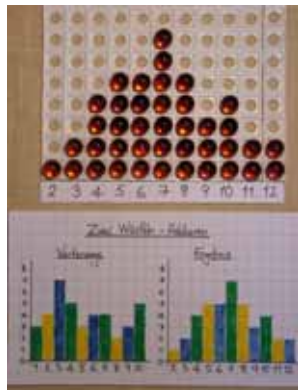
or

$$21 \times 13$$



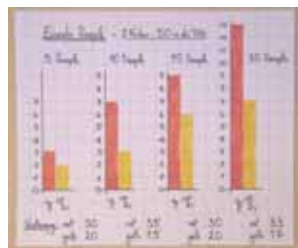
$17 \div 3 = 5 \text{ R. } 2$
(2 variations)

Soon afterwards also
 $17 \div 5 = 3 \text{ R. } 2$



Sum of 2 Dice 1 – 6

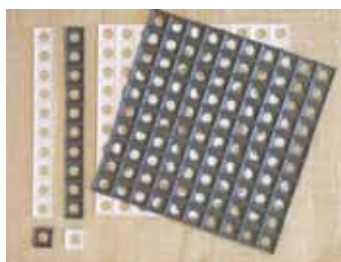
Forecast and Result



Results of a probability sampling experiment

The Journey of Discovery in Mathematics Resources

Registered Design



- **Square 1**
- **Strip 10**
- **Square 100**

Discovery Mats are available in white and grey as two colours are most helpful for many investigations and games.

PVC washable up to 60° C

orange, green, yellow
light blue, clear



Glass Marbles
in many colours washable
(ask about other colours)

Two (sometimes three) colours are most helpful for many investigations and games.



normal size 16 mm

Dice – Dots

1 – 6 four varieties
pink, blue, white, ivory
1 – 6 crooked red
Jumbo – various sizes
1 – 12 Jumbo white
0 – 9 various colours

Jumbo are bigger

For early work in order to avoid the abstract written numbers.

Useful in probability.

Novelty

1 – 6 black (18mm)
weighted with lead
choice of two:
either rolls mostly
a 6 or a 1

Dice Numbers

1 – 4 various colours
(here green)
1 – 12 yellow
1 – 20 blue
1 – 24 Jumbo red
1 – 30 Jumbo black

Very useful in many aspects.

Facilitate a choice of learning level for each child.



Base 10 Dice

Numbers
0 - 9,
00 - 90
000 - 900
0000 - 9000
00 000 - 90 000
000 000 - 900 000

Random production of any number between 0 and 999 999.

Facilitates the process of simplification in speaking and recording numbers.



Marble and Glitter Dice

Limited supply – see Shop

Picture is a guide.



Guidance

Suggested kit for 2 or 3 children

24 x Square 1, 24 x Strip 10, 4 x Square 100
(50% white, 50% grey)

Two colours of Glass Marbles – about 90 of each
12 Dice, e.g. as shown.

Kit for whole class or group

Please enquire. Advice available.

Ages of children, personal preference and use
are important factors.



Wooden cubes – 3 cm

Easy to handle for children.

Can be simply glued together [to make](#)
other shapes.

Initially used with grids:

Square dash 3 cm and Isometric dot 3 cm.

Journey of Discovery in Mathematics Print Resources

A4 Grid Masters with Square dash, Square dot, Square fine line, Isometric dot, Special masters for activities in Handbooks A & B and Probability Plus and many others. Various scales.

Frequently extended. Current full list available per e-mail.

Available under license. Please request details.

Journey of Discovery in Mathematics Progress Development Reference System

Description and details : www.absolutelylearning.de → English → Mathematics → **pdf**

Frequently extended.

Available under license. Please request details.

Note: There are other simple designs of
Journey of Discovery in Mathematics
concrete resources.

These can go into production once a partner has
been found,

e.g. a local authority with interest in inexpensively
equipping the schools for ***Investigative, Intuitive
Learning on a Concrete Basis***

Please note:

Instruction-based material and tasks, such as
textbooks, work books, work sheets, learning
software, DVD are not required.

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