

# 34 math!

The new and revolutionary material for primary mathematics from Finland.

Experimental  
Predictive  
Comprehensive...

Follows the renewal of the Finnish national curriculum

# The Story

The innovative and reputable Finnish educational publisher Edukustannus and the world's leading digital educational solution provider Learnetic are joining forces to create the revolutionary digital math material that is going to spread Finnish PISA success across all countries and nationalities.

We are proudly presenting the new concept in digital and mobile mathematics called

The logo for '34 math!' features the numbers '34' in a stylized, overlapping font. The '3' is orange and red, and the '4' is yellow. To the right of the numbers, the word 'math!' is written in a bold, blue, sans-serif font.

# Functionality



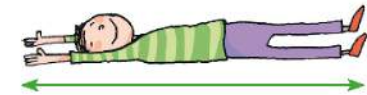
# Learning Through Experience

- Child-centered education
  - We see a child as an architect of his/her own learning
  - An active role in learning
  - A path from concrete to abstract (and back?)
  - Makes it possible for a child to create and preserve his/her own content
- Experimental math
  - The main focus in our teaching method has always been the child's own experiment
  - Not only because of the entertainment aspect
  - We believe that through experience a child gains a better understanding of the new knowledge
  - Helps to retain the information for a longer time
- Everyday math
  - Using real-life examples
  - Reflecting real-life experiences
  - Makes it meaningful!



Kätesi levitettyinä sivuille:

- leveämpi kuin 1 m
- kapeampi kuin 1 m



Pituutesi maaten:

- pidempi kuin 1 m
- lyhyempi kuin 1 m

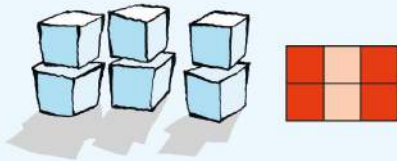


Pituutesi kyykyssä:

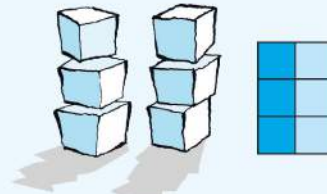
- korkeampi kuin 1 m
- matalampi kuin 1 m

# Versatile Exercises

Kertolaskussa kertojan ja kerrottavan järjestystä voi vaihtaa.  
Vastaus pysyy samana.



$$3 \cdot 2 = 6$$



$$2 \cdot 3 = 6$$

Kotitehtävä

$$7 \cdot 2 = \underline{\quad} \quad 9 \cdot 2 = \underline{\quad}$$

$$5 \cdot 2 = \underline{\quad} \quad 3 \cdot 2 = \underline{\quad}$$

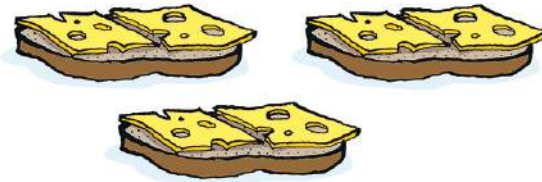
$$2 \cdot 2 = \underline{\quad} \quad 4 \cdot 2 = \underline{\quad}$$

$$0 \cdot 2 = \underline{\quad} \quad 6 \cdot 2 = \underline{\quad}$$

$$10 \cdot 2 = \underline{\quad} \quad 8 \cdot 2 = \underline{\quad}$$

## Koira haudattuna

**1.** Minulla on mukeja, joissa jokaisessa on kaksi korvaa. Kuiskaan jokaiseen korvaan salaisuuden. Kuinka monta kertaa kuiskaan kolmelle mukille? (6)



$$\underline{\quad} \cdot \underline{\quad} = \underline{\quad}$$

# Multiple Methods

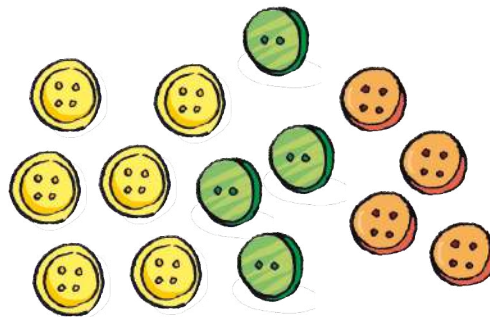
- 321Math! is illustrative, demonstrative, colorful and user friendly
  - Allows diverse approach to the area
  - Demonstrative, touchable, abstract...
- Multi sensitivity
  - Makes it accessible
- We understand that children are individuals
  - Learning modalities: visual, auditory, kinesthetic...
  - 321Math! represents multiple teaching methods: individual, collaborative, project stage
- Teachers are individuals
  - Respecting teachers' autonomy



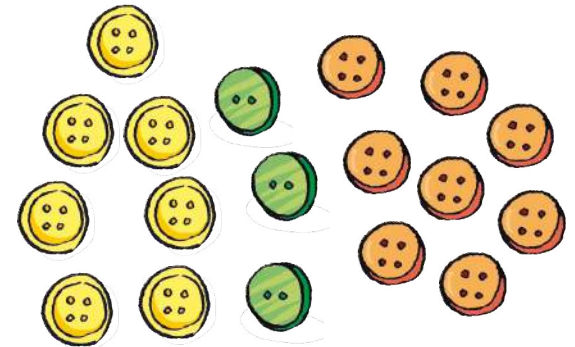


# The Way of Thinking

- Mathematical thinking
  - a way to look at things
- Making it visible
  - numerical way
  - structural way
  - logical way...
- Variety of strategies
  - for addition, subtraction, multiplication, division...



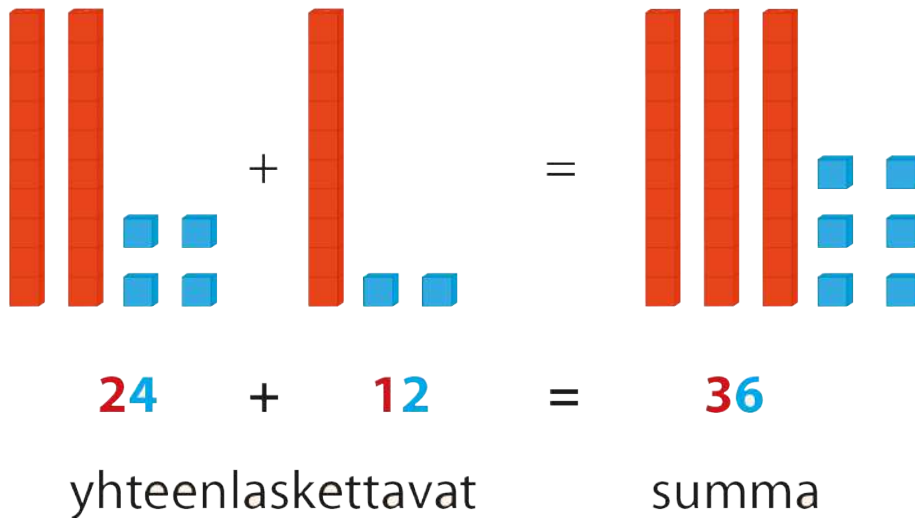
$$\square + \square + \square = \square$$



$$\square + \square + \square = \square$$



# Mathematical Thinking



## Laskutapa

Ajattele esimerkiksi näin:

Lisää ensin kymmenet.  
Lisää sitten loput.

$$24 + 12 = 30 + 6 = 36$$

tai näin:

$$24 + 12 = 34 + 2 = 36$$



# Language of Mathematics

- As a form of communication
  - A child is given an opportunity to use his/her own language and terminology
  - Discuss: How does it work? What is it like? Describe it! Tell me about it!
  - Teacher gives impulse towards more specific terminology (takes time)
- Children learn the language of mathematics only by using it
  - Right time, right context





# Individual Learning Process

Learners Are Individuals

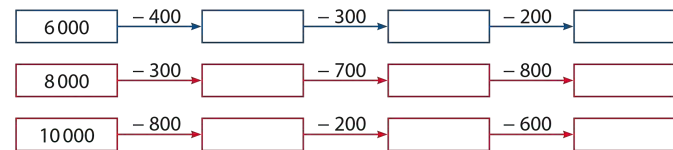
In our material children are constantly challenged with tasks that refer to their own individual skills and knowledge

- Individual learning process
- Personalized learning path
- Equal opportunity to seek one's own potential:

*Could I challenge myself today?*

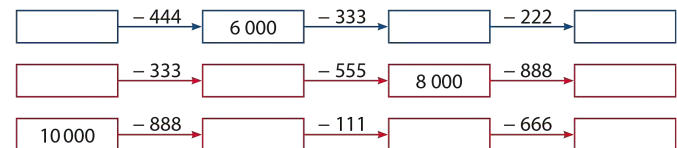
## Kotitehtävä

1. Jatka.



## Kotitehtävä +

1. Täydennä.



# The Joy of Learning



The role of emotions and feelings in learning through experience: Play, try, feel, taste, wonder, comprehend mathematics

Emotions that are related to learning  
It is okay to feel!

A way to cut low school satisfaction among students

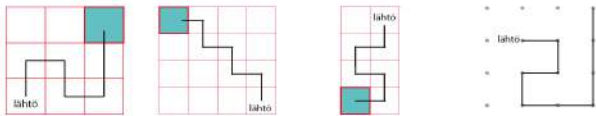


# Based on the New Finnish National Curriculum

- Concrete and palpable math
- Utilize ICT in education
- Increase positive attitude towards mathematics
- Learner's active role in learning process
- Everyday mathematics
- Mathematical thinking
- Multi sensitivity, cooperation

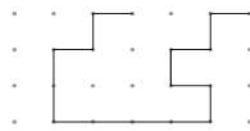
**Lisätehtävä +**

**1. Piirrä nuolilla karttaan merkitty reitti.**




↑ → ↓ → ↑ ↑

**2. Valitse lähtöpiste.**  
Piirrä nuolilla karttaan merkitty reitti.



**3. Tee oma karttatehtäväsi.**  
Piirrä nuolet laatikkoon ja anna parisi piirtää reitti.



↑ → ↓ → ↑ ↑

# Digital and Print

- It is a fully comprehensive, digital material
- Digital content has exactly the same structure as the printed material
- It allows fulfilling all curricular goals
- Contains adaptive exercises that adjust to each pupil's own level
- A balance between formative and summative assessment
- Bridging the gap between informal and formal learning
- Made for PCs, tablets and smartphones
- Can also be used outside of school



# 34 math!

