



# Math for beginners: Making math fun for young children

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Þjónustu- og þekkingarmiðstöð  
fyrir blinda, sjónskerta og daufblinda einstaklinga



## About us ...

- National institute for the blind, visually impaired and deafblind in Iceland
- Benjamín Júlíusson
  - Manager, educational advisors and production, math teacher for 15 years
- Helga Björg Ragnarsdóttir
  - public relations and quality representative, degree in Icelandic and editorship



# What did we do?

- Adapted educational material for math in 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> grade in Iceland
  - The material is based on same books as other pupils are using
- Pupils are working on same project at the same time
- Make the assignments more interesting



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# WHY?



## Before

- Often simpler approach
- We made simple math exercises
- Everything else was in the hand of the teacher
  - Good teacher = good instruction
- Different what pupils got = not equal

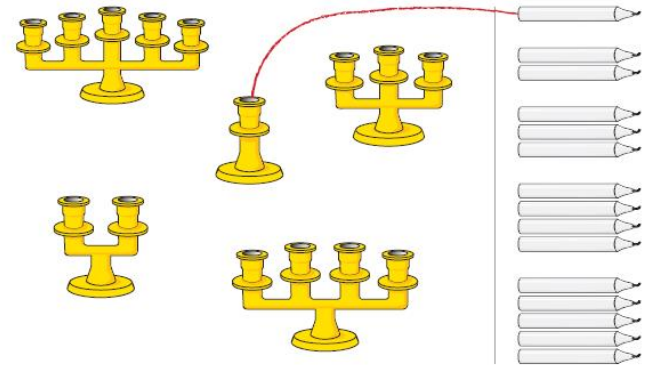


# Is this fair?

☐ Dragðu strik.



☐ Dragðu strik.



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**Samlagning:**

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# Importance of the first years of math

- Very important foundation for everything that comes later in math
- Many concepts are introduced in the first years
- Positive attitude towards math



# Our vision

- Everything at the same place, like a book
- Every chapter in a folder, accessibility
- Sometimes fewer exercises





# What subjects?

- Numbers 0-100
- Counting
- Sorting
- Statistics
- Shapes
- Patterns
- Measurement
- Addition
- Subtraction
- Time
- Area
- Geometry
- Circle
- Polygon



# Diverse ways

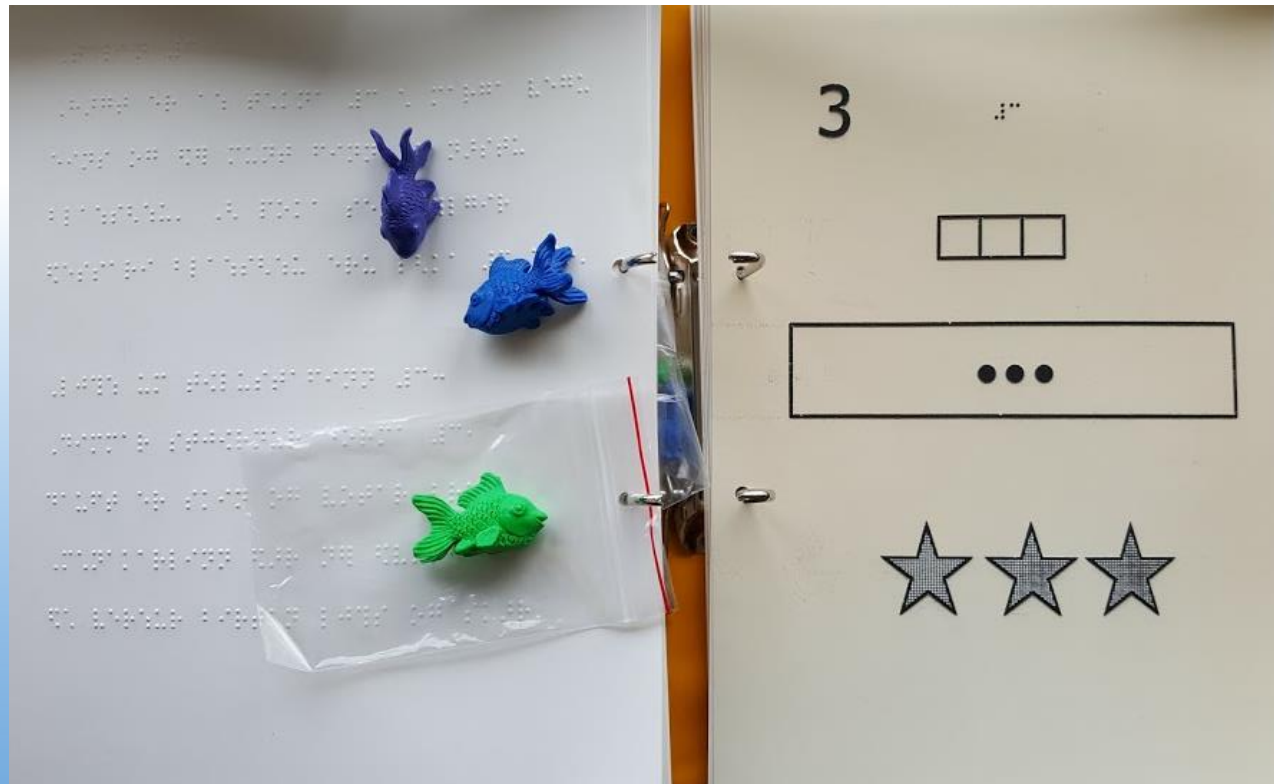
- Braille
- Swell pictures
- Toys
- Board games
- Shapes
- Coins





# How?

- Learning the numbers with toys and swell



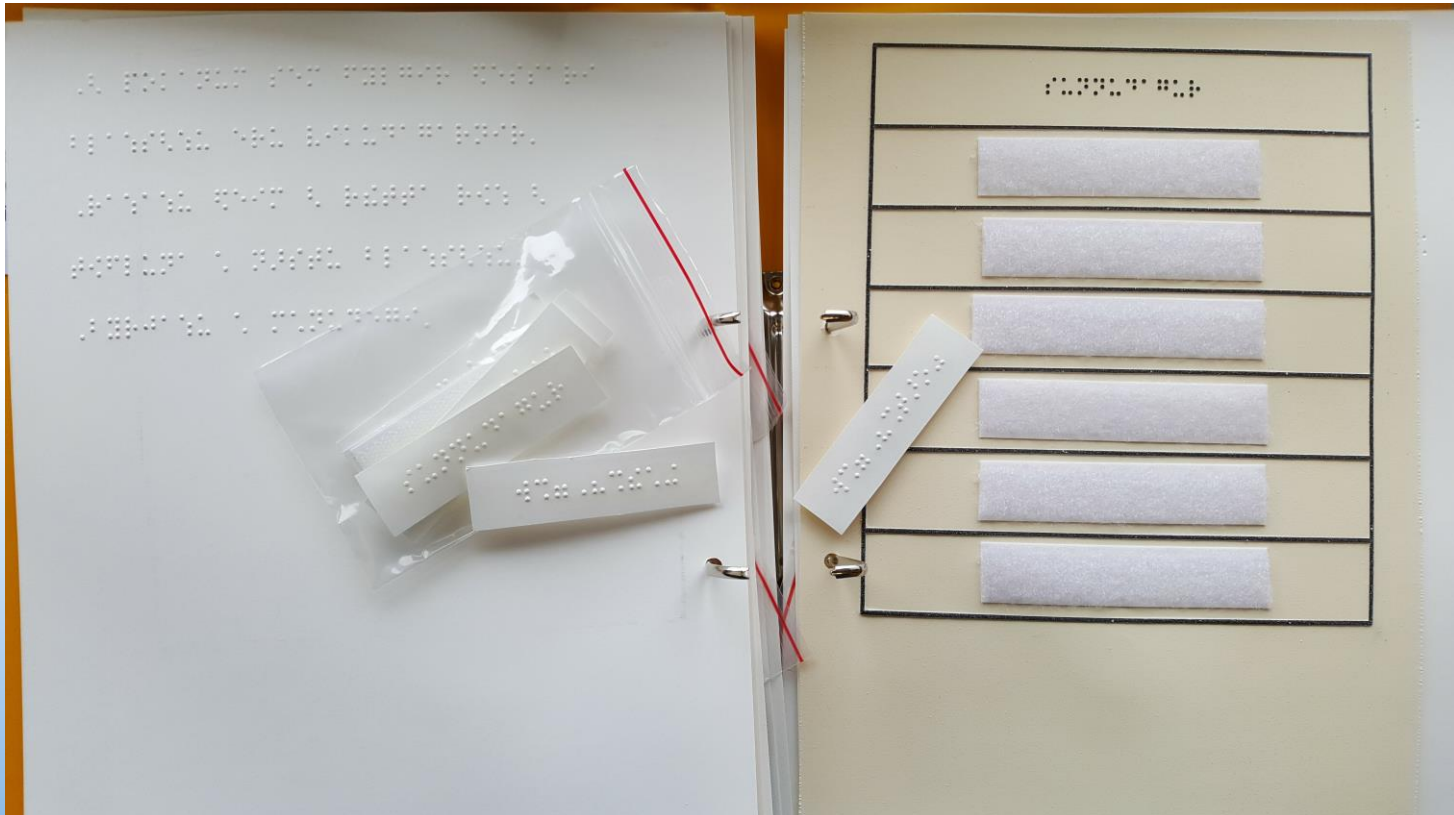


- Arrange people (toys) by size



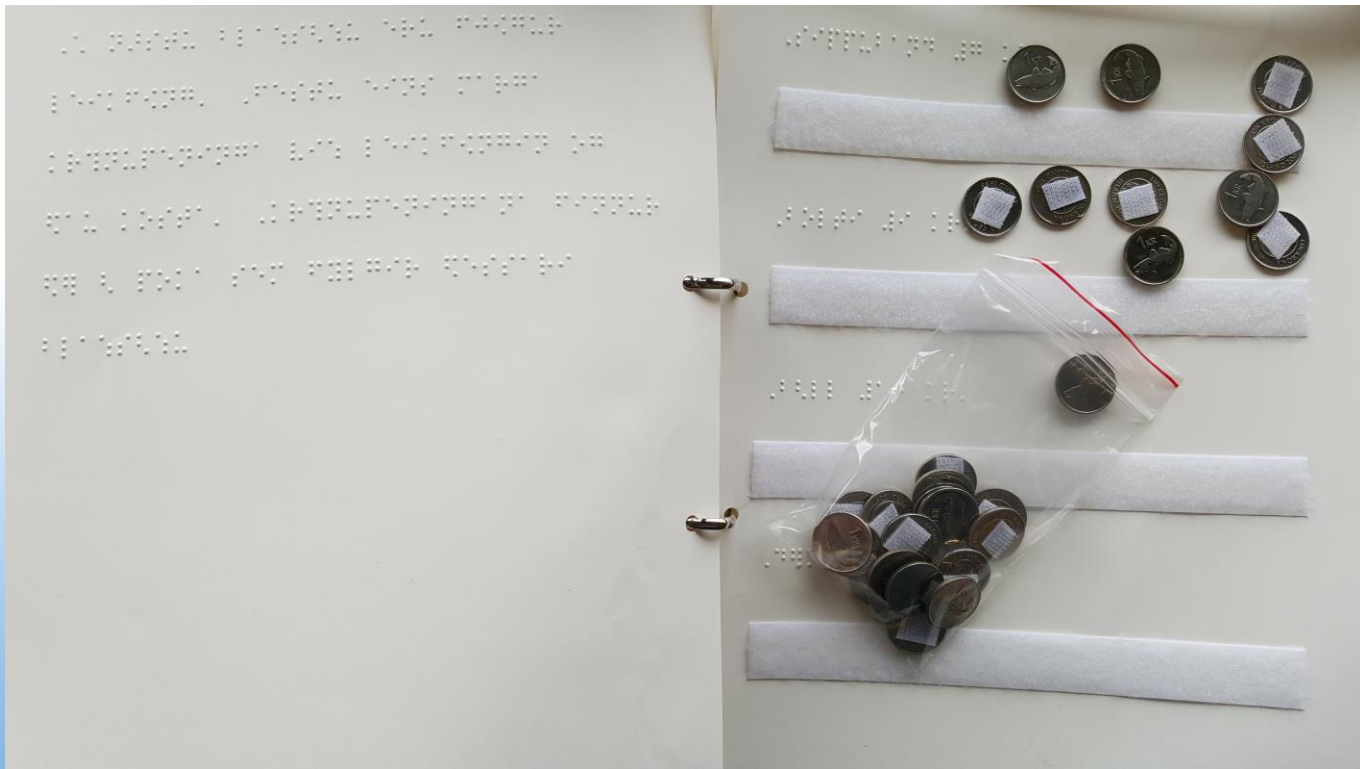


- Arrange days or months, by using braille, swell and interlock tape



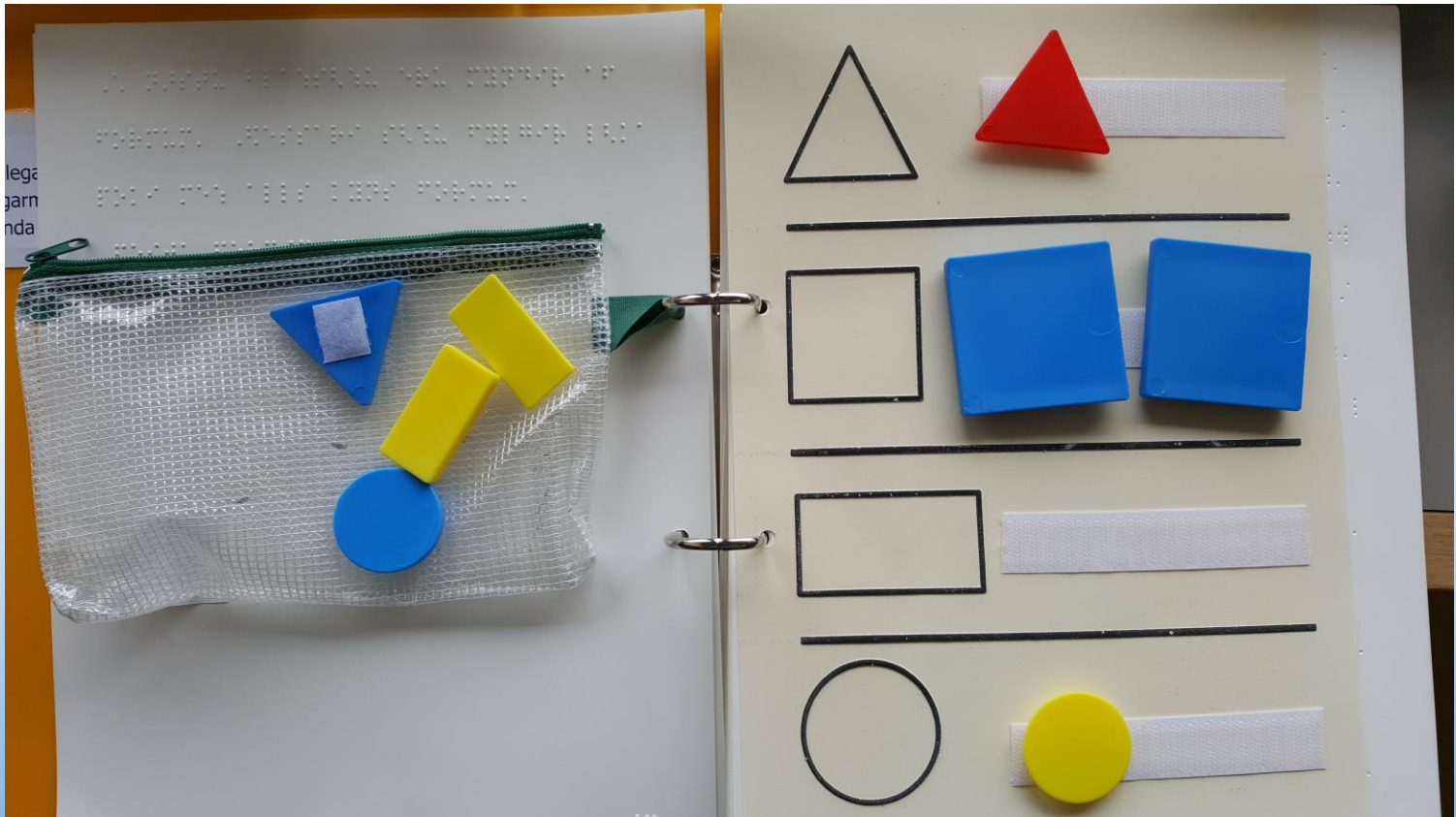


- We used real money for the first exercises. So they could learn how to recognize money.



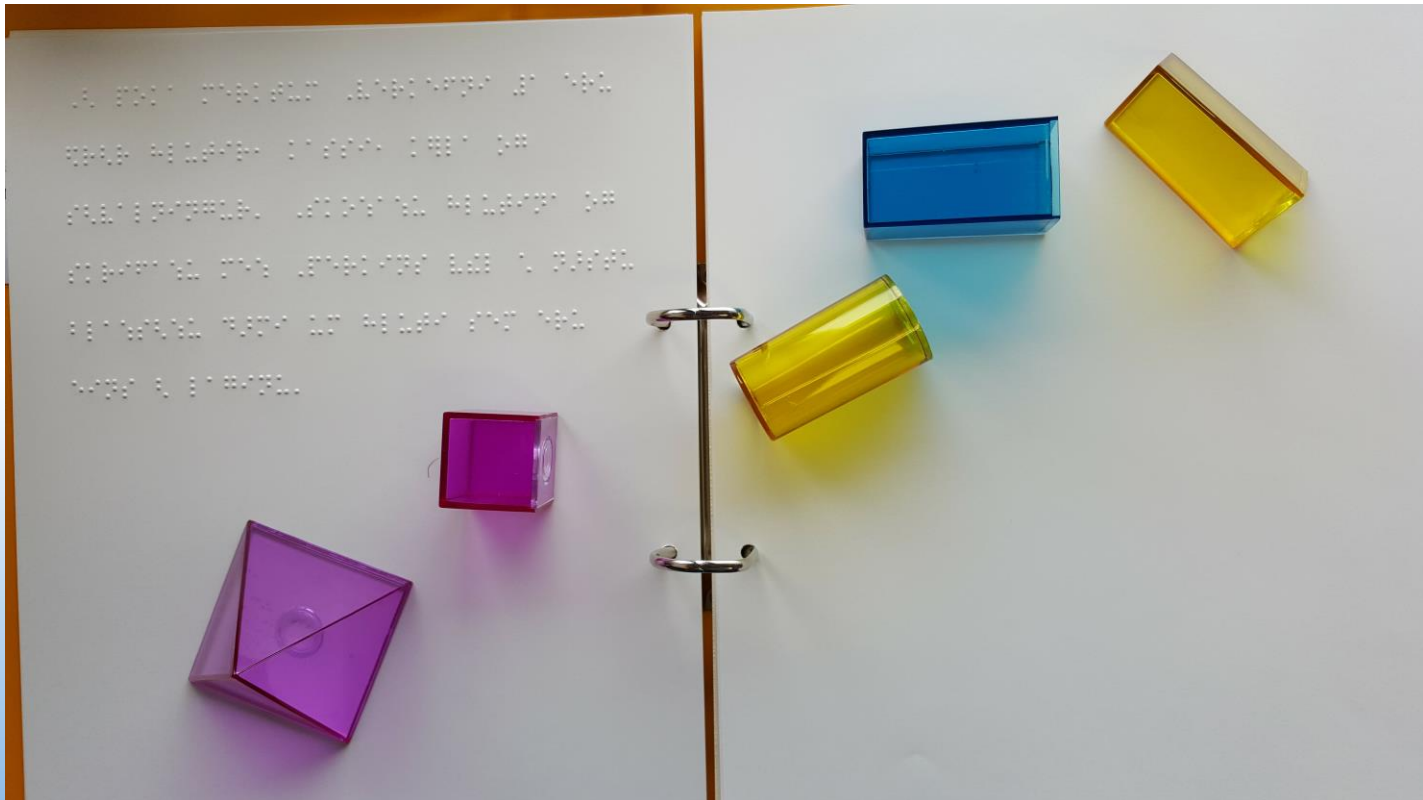


- Learning about forms





- And 3D forms







# 3D printing

- Erasmus project:



- In the future: Make our own objects



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# Gain

- Be part of the class
- Be part of the discussion
- Group excercises and board games



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# Goals

- Comparable
  - Independent
  - More confidence
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- The background of the slide features a light blue gradient that transitions from white at the top to a solid blue bar at the bottom.



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# Arrangement

- 2 persons all the way
  - one blind proof reader
- Simple equipment
  - Braille printer
  - Swell form machine



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- Very few blind children in Iceland, only 3-4 children every ten years
  - Different approach and different situation



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# Result

- Lot of work and time-consuming ... but worth it and a lot of fun
- Positive feedback
- Favorite book



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# Development of the book

- Fewer toys
- More solutions in computer



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# Conclusion

- Very important to have good educational material
- Everybody can do this