



Problem

Young children enter school without a strong foundation in early numeracy skills. More home intervention will help remedy the problem.

Solution

Our solution is an interactive cookbook/storybook that parents complete with their children.

Numeracy and Number Sense

- Recognizing numbers and counting
- Comparing magnitudes
- Addition and subtraction

An Excerpt From Our Storybook:



Now we need to make the owl's tummy. Count out **3** cheerios and line them up at the bottom of the toast between the wings. Then count out **4** more cheerios and line them up above the other cheerios. **3** cheerios plus **4** more cheerios makes **7** cheerios altogether. Can you count all **7** cheerios?

Assessment

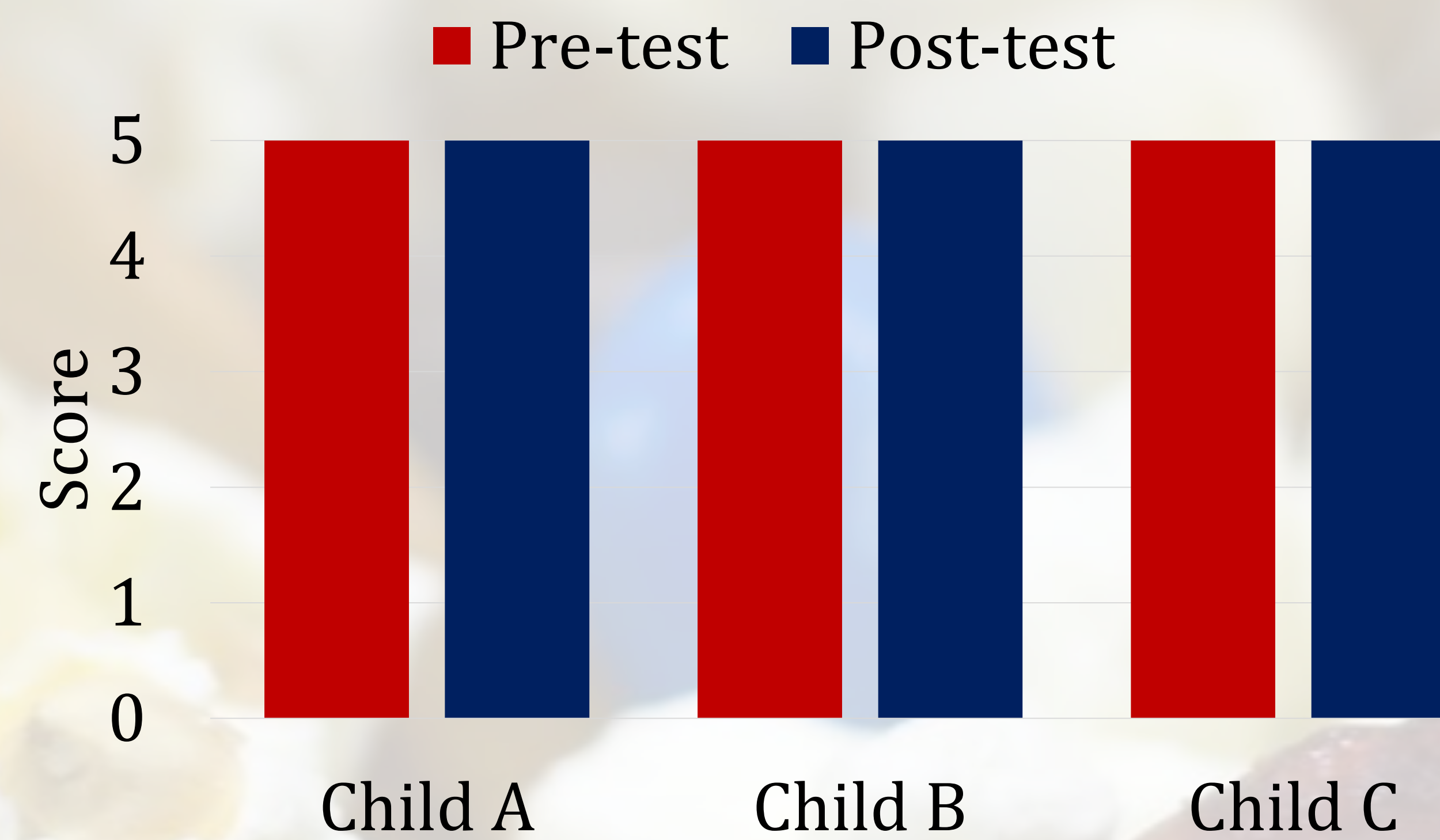
- Parents administer activity/tests at home
- Children ages 4-5
- Pre-tests and post-test given to children
- Tests are 5 questions covering number sense
- Measure accuracy and completion time
- Parent survey for additional feedback

Why We Chose Cooking

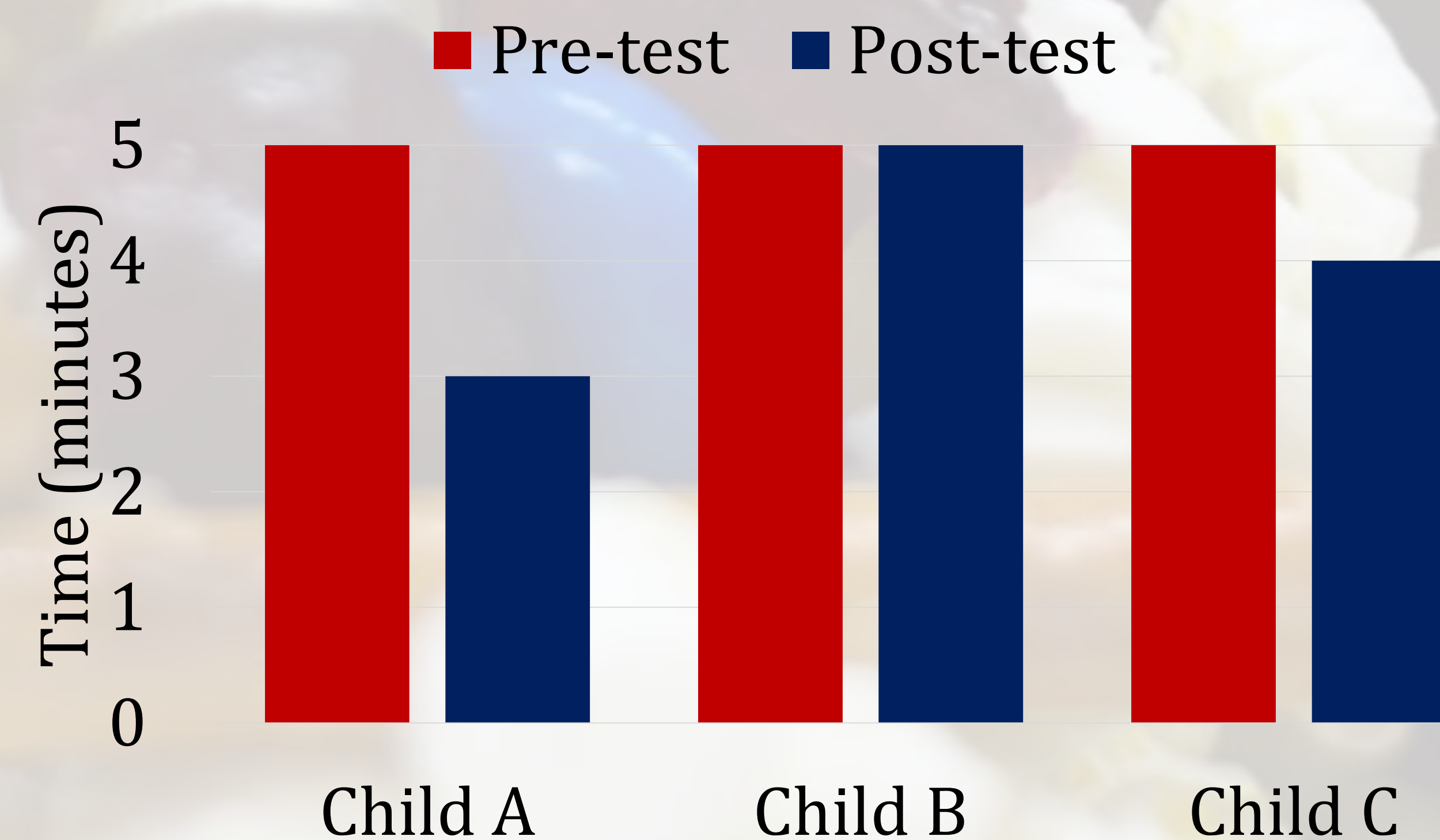
Cooking promotes the development of number sense in a fun, interactive, and engaging way.



Scores for Pre-tests and Post-tests



Times for Pre-tests and Post-tests



Conclusions

- Children received perfect scores on both tests
- Two of the three children completed the post-test faster
- Parents/children enjoyed doing the activity
- Parents would purchase the product
- Product is successful

References

Dyson, N., Jordan, N., & Glutting, J. (2011). A Number Sense Intervention for Low-Income Kindergartners at Risk for Mathematics Difficulties. *Hammill Institute on Disabilities*, 166-178. Retrieved November 5, 2014, from <http://ldx.sagepub.com/content/46/2/166.full.pdf.html>

Siegler, R., & Ramani, G. (2011). Improving Low-Income Children's Number Sense. *Space, Time and Number in the Brain*, 343-354. Retrieved November 5, 2014, from http://psych.stanford.edu/~jlm/pdfs/DehaeneBrannon/5_21_SieglerImprovingNumSense.pdf

Skwarchuk, S. L., Sowinski, C., & LeFevre, J. A. (2014). Formal and informal home learning activities in relation to children's early numeracy and literacy skills: The development of a home numeracy model. *Journal of experimental child psychology*, 121, 63-84.