

PROGRESSION OF DIVISION

FLUENCY IS

1 EFFICIENCY

2 ACCURACY

3 FLEXIBILITY

'I can model division with equal groups

'I can model division with arrays

JOURNEY TO FLUENCY



LEARNED FACTS

$25 \div 5$

UNDERSTANDING THE PROPERTIES
(DIVIDING BY 1; DIVIDING 0 BY A NUMBER; DIVIDING A NUMBER BY ITSELF; IMPOSSIBLE TO DIVIDE BY 0)

$56 \div 7$

FACT FAMILIES

$8 \div 4$ $8 \div 2$ 2×4 4×2

DIVIDING A NUMBER BY ITS HALF

$14 \div 7$

USING MULTIPLICATION TO THINK ABOUT DIVISION

$8 \div 2$ $2 \times ? = 8$

EXPLORING EQUAL GROUPS AND ARRAYS

(DIVIDING UP BY MORE THAN 1)

$12 \div 6$

DIVIDING BY 2

$8 \div 2$

EXPLORING EQUAL GROUPS AND ARRAYS

(DIVIDING UP BY 1)

$6 \div 3$

RESEARCH NOTES

CÖUNTING ALL

repeated subtraction

cöunt by

using related multiplication facts

learned facts

PröPERTIES

SET A GOAL. MAKE A PLAN. ACHIEVE YOUR GOAL!

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- 1 EFFICIENCY
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(NRC; Kilpatrick et al., 2001; NCTM 2000; NCTM, 2014).



RESEARCH NOTES

- 1 EQUAL GROUPS/ARRAYS
LEVEL 1: DIVIDING UP BY 1
LEVEL 2: DIVIDING UP BY MORE THAN 1
- 2 repeated subtraction
- 3 skip counting
- 4 using related multiplication facts
- 5 properties
- 6 learned facts

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About the Dr. Nicki Newton



Dr. Nicki Newton is an education consultant who works with schools and districts around the country and Canada on k-8 math curriculum. She has taught elementary school, middle school, and graduate school. Dr. Nicki has an Ed.M. and an Ed.D from Teachers College Columbia University. She is greatly interested in teaching and learning practices around the world and has researched education in Denmark, Guatemala and India. She has written several books, including being a part of the curriculum team for the new McGraw Hill Reveal Math series. She is currently working on a book about counting.

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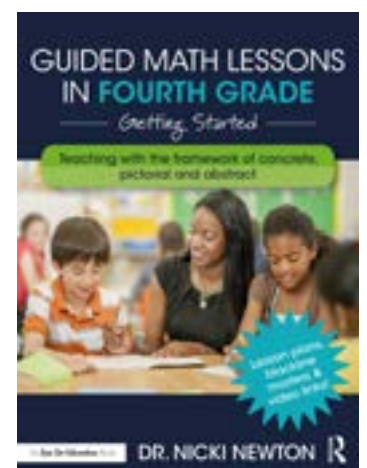
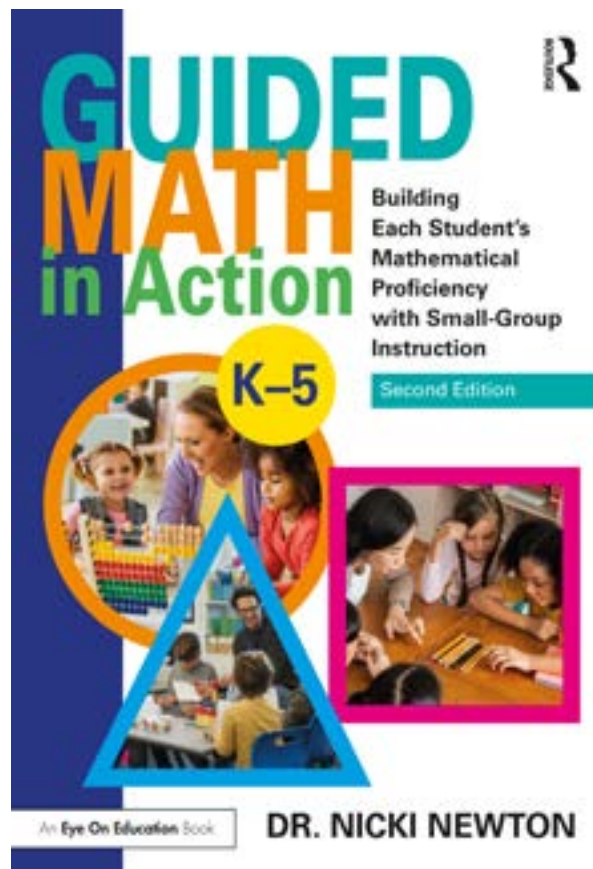
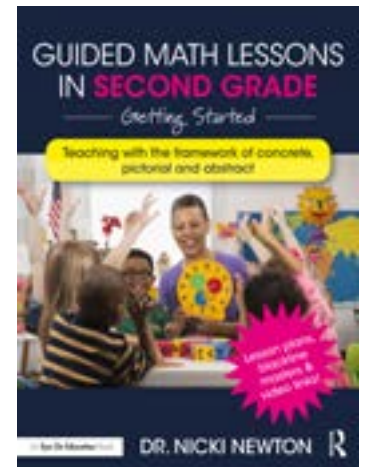
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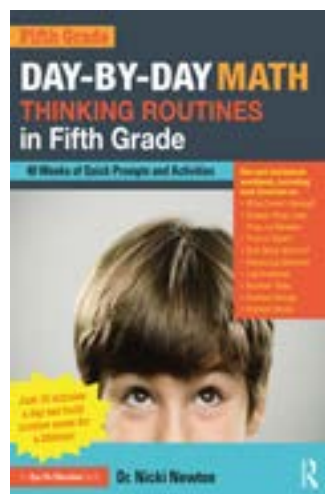
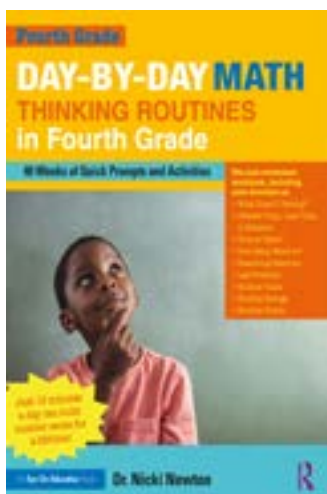
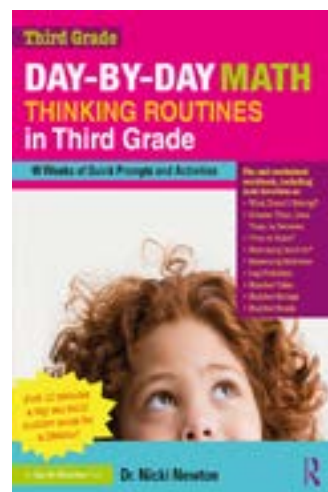
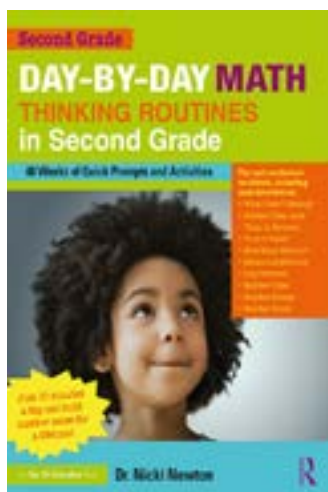
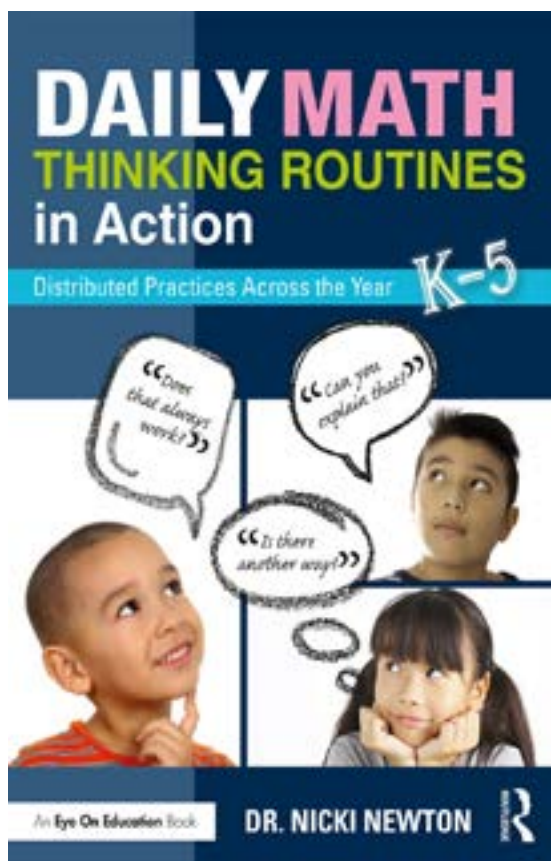
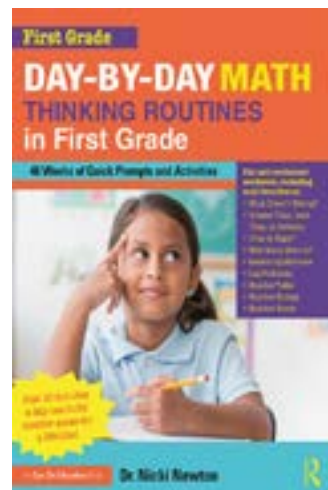
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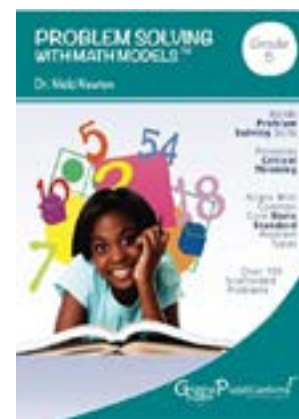
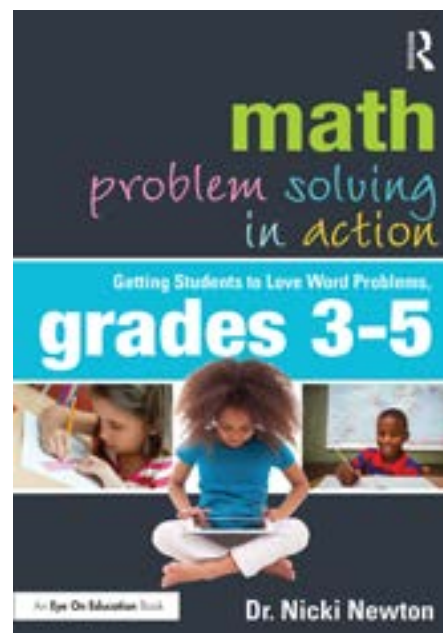
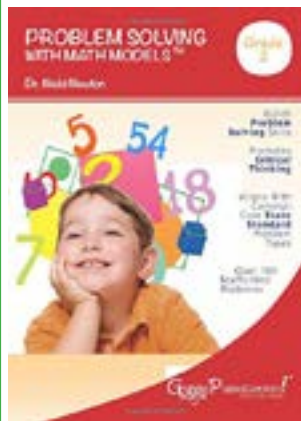
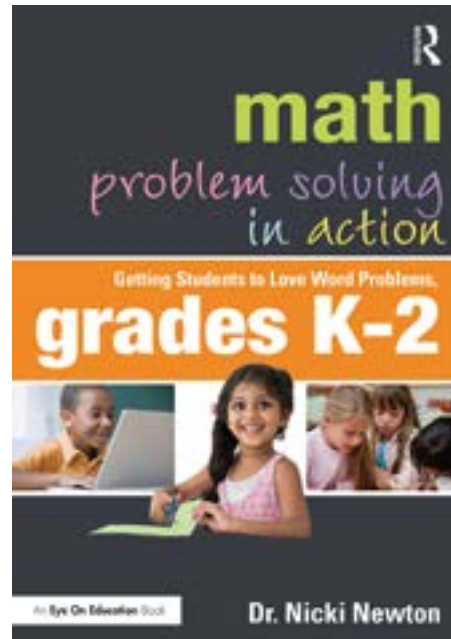


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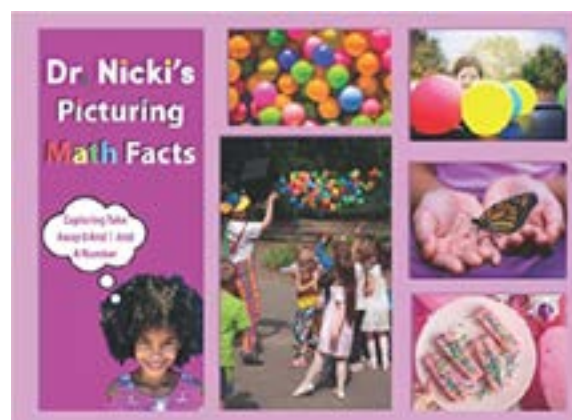
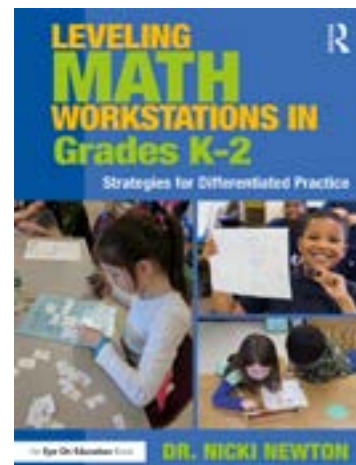
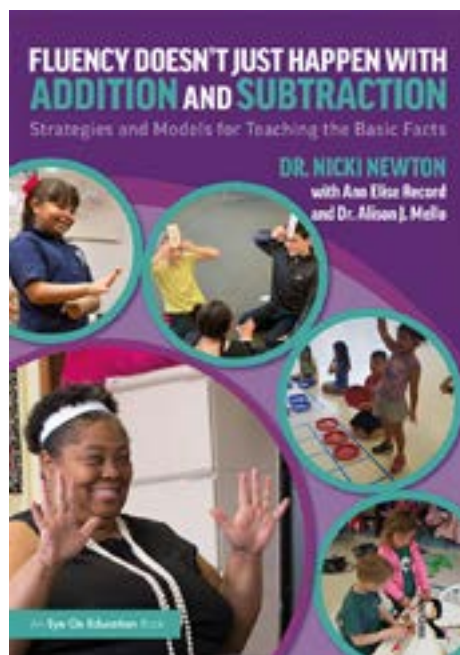
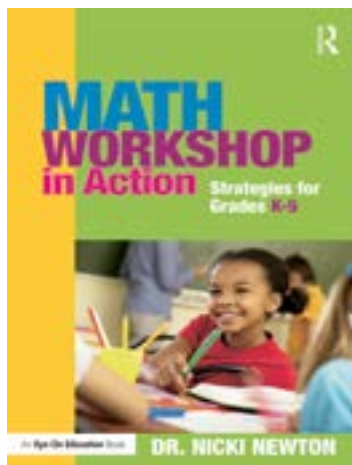
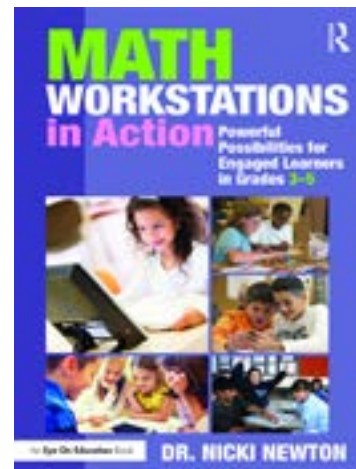
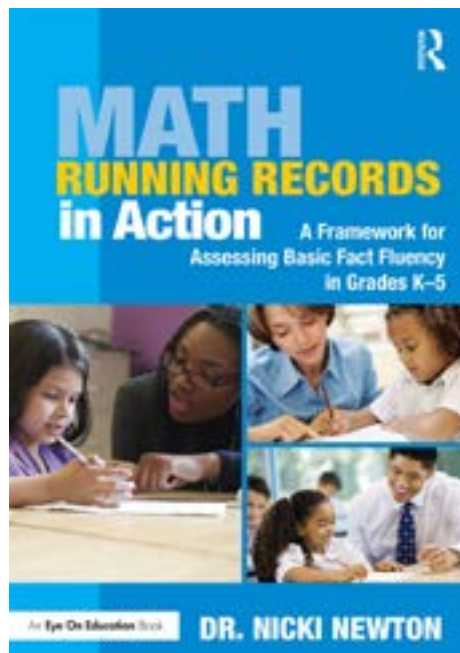
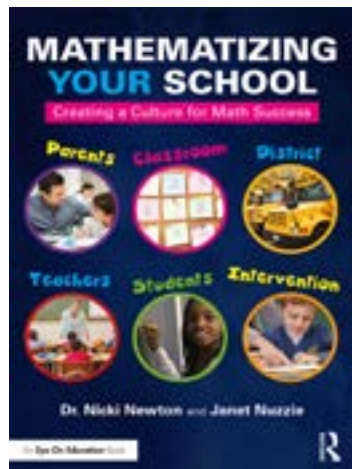
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