

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics)

By Catherine Twomey Fosnot

Download now

Read Online

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot

Bunk Beds and Apple Boxes: Early Number Senseis one of eight units in the *Contexts for Learning Mathematics' Investigating Number Sense, Addition, and Subtraction* (K-3)
This unit begins with the story of a pajama party-a sleepover during which eight children play, moving up and down bunk beds, teasing the babysitter who imagines she is losing and then gaining children!
The unit introduces the arithmetic rack as a powerful model and tool to act out the story. The arithmetic rack is a calculating frame consisting of two rows of ten beads with two sets of fives in each row. (Instructions for creating or buying your own arithmetic racks are included.) The five-structure of this apparatus supports the development of part-whole relations in early number sense. Since five is an amount that can often be perceived as a whole, it can be used to support understanding 6 as 5 + 1, or 4 as 5 - 1. It also supports the strategies of doubles and near doubles, 6 + 7 = 6 + 6 + 1, and making tens, 9 + 6 = 10 + 5. In this unit, children move the beads on the arithmetic rack to illustrate and develop an understanding that eight can be named in many ways, for example as 7 + 1, 5 + 3, or 4 + 4. The unit also includes the game Up and Down the Ladder, and employs the use of quick images (a series of related problems flashed only for seconds) to further develop early number sense.
As the unit progresses, the context shifts to an exploration of apple boxes. Children investigate the number of unique combinations for five apples of two kinds, green and red, and record the combinations for a grocer who is confused about how many arrangements there can be. In contrast to the bunk beds investigation in which children can easily imagine someone going up and down the ladder, now they must exchange. That is, instead of moving a counter to another group, the counter must be removed and replaced. This action is more difficult. The recording sheet for the grocer is designed in such a way that a staircase pattern emerges as one red apple is traded for a green apple each time. Boxes holding various numbers of apples (such as six, seven, eight, nine, and ten) are then explored to examine if the staircase pattern will always occur. Data are also collected on the number of possible arrangements for each box: a box of six apples has five possible arrangements; a box of seven has six arrangements; a

box of ten has nine arrangements. This supports the development of a systematic way of producing all the possible arrangements and produces another inquiry: Can we predict the number of arrangements if we know the size of the box?
The unit ends with the Part-Whole Bingo game. This game can be played throughout the year as a way for children to extend composing and decomposing strategies as they establish equivalence, for example representing 7 as 5 + 2 or as 3 + 4, or even as 2 + 2 + 2 + 1.
To learn more visit http://www.contextsforlearning.com

Download Bunk Beds and Apple Boxes: Early Number Sense (Con ...pdf

Read Online Bunk Beds and Apple Boxes: Early Number Sense (C ...pdf

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics)

By Catherine Twomey Fosnot

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot

Bunk Beds and Apple Boxes: Early Number Senseis one of eight units in the *Contexts for Learning Mathematics' Investigating Number Sense, Addition, and Subtraction* (K-3)
This unit begins with the story of a pajama party-a sleepover during which eight children play, moving up and down bunk beds, teasing the babysitter who imagines she is losing and then gaining children!
The unit introduces the arithmetic rack as a powerful model and tool to act out the story. The arithmetic rack is a calculating frame consisting of two rows of ten beads with two sets of fives in each row. (Instructions for creating or buying your own arithmetic racks are included.) The five-structure of this apparatus supports the development of part-whole relations in early number sense. Since five is an amount that can often be perceived as a whole, it can be used to support understanding 6 as 5 + 1, or 4 as 5 - 1. It also supports the strategies of doubles and near doubles, 6 + 7 = 6 + 6 + 1, and making tens, 9 + 6 = 10 + 5. In this unit, children move the beads on the arithmetic rack to illustrate and develop an understanding that eight can be named in many ways, for example as 7 + 1, 5 + 3, or 4 + 4. The unit also includes the game Up and Down the Ladder, and employs the use of quick images (a series of related problems flashed only for seconds) to further develop early number sense.
As the unit progresses, the context shifts to an exploration of apple boxes. Children investigate the number of unique combinations for five apples of two kinds, green and red, and record the combinations for a grocer who is confused about how many arrangements there can be. In contrast to the bunk beds investigation in which children can easily imagine someone going up and down the ladder, now they must exchange. That is, instead of moving a counter to another group, the counter must be removed and replaced. This action is more difficult. The recording sheet for the grocer is designed in such a way that a staircase pattern emerges as one red apple is traded for a green apple each time. Boxes holding various numbers of apples (such as six, seven, eight, nine, and ten) are then explored to examine if the staircase pattern will always occur. Data are also collected on the number of possible arrangements for each box: a box of six apples has five possible arrangements; a box of seven has six arrangements; a box of ten has nine arrangements. This supports the development of a systematic way of producing all the possible arrangements and produces another inquiry: Can we predict the number of arrangements if we know the size of the box?
The unit ends with the Part-Whole Bingo game. This game can be played throughout the year as a way for children to extend composing and decomposing strategies as they establish equivalence, for example representing 7 as 5 + 2 or as 3 + 4, or even as 2 + 2 + 2 + 1.
To learn more visit http://www.contextsforlearning.com

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot Bibliography

- Sales Rank: #922359 in Books
- Published on: 2008-03-05
- Released on: 2008-03-05

- Original language: English
- Number of items: 1
- Dimensions: 10.90" h x .18" w x 8.50" l, .45 pounds
- Binding: Paperback
- 80 pages

Download Bunk Beds and Apple Boxes: Early Number Sense (Con ...pdf

Read Online Bunk Beds and Apple Boxes: Early Number Sense (C ...pdf

Download and Read Free Online Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot

Editorial Review

About the Author
Catherine Twomey Fosnot is the Founding Director of Mathematics in the City and former Professor of Education at The City College of the City of New York. She has twice received the "best writing" award from AERA's Constructivist SIG and she was the recipient of the "young scholar" award by Educational Communication and Technology Journal. She is the lead author of the Contexts for Learning Mathematics series as well as the Young Mathematicians at Work series.

Users Review

From reader reviews:

Terry Kline:

Book is to be different per grade. Book for children right up until adult are different content. As you may know that book is very important normally. The book Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) ended up being making you to know about other information and of course you can take more information. It is quite advantages for you. The publication Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) is not only giving you far more new information but also to become your friend when you experience bored. You can spend your current spend time to read your guide. Try to make relationship together with the book Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics). You never feel lose out for everything should you read some books.

Anthony Wood:

The actual book Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) will bring that you the new experience of reading the book. The author style to explain the idea is very unique. Should you try to find new book you just read, this book very suited to you. The book Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) is much recommended to you to see. You can also get the e-book from official web site, so you can easier to read the book.

Harrison Colon:

Spent a free the perfect time to be fun activity to accomplish! A lot of people spent their leisure time with their family, or their particular friends. Usually they carrying out activity like watching television, gonna beach, or picnic inside the park. They actually doing same task every week. Do you feel it? Do you wish to something different to fill your own personal free time/ holiday? Could be reading a book could be option to fill your free time/ holiday. The first thing you ask may be what kinds of publication that you should read. If you want to try look for book, may be the e-book untitled Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) can be fine book to read. May be it may be best activity to you.

Martin Norwood:

On this era which is the greater particular person or who has ability in doing something more are more important than other. Do you want to become certainly one of it? It is just simple strategy to have that. What you must do is just spending your time not very much but quite enough to possess a look at some books. One of many books in the top list in your reading list will be Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics). This book which can be qualified as The Hungry Hillsides can get you closer in turning into precious person. By looking way up and review this reserve you can get many advantages.

Download and Read Online Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot #EFQ7UL6A5ZN

Read Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot for online ebook

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot books to read online.

Online Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot ebook PDF download

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot Doc

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot Mobipocket

Bunk Beds and Apple Boxes: Early Number Sense (Contexts for Learning Mathematics) By Catherine Twomey Fosnot EPub