

## Using Books: the Doorbell Rang

Solving problems involving sharing and talking about numbers



**Children often** enjoy sharing a book with an adult and talking about it.

**Adults could** provide suitable books with matching props to act them out. Here we focus on using The Doorbell Rang by Pat Hutchins, which is suitable for reception children.

### The Activity

Read and enjoy The Doorbell Rang a number of times with the group. Acting out the story involves children in sharing a number of cookies between different numbers of people (using salt dough cookies and paper plates).

### Encouraging mathematical thinking and reasoning:

#### Describing

Tell me about this picture (showing children about to take cookies from the plate.) What do you notice? What do you wonder?

Have you ever shared any cookies? Tell me about what happened. How many people were there? Here are 2 (3..) toys. Tell us how you share them out so they all have the same number.

#### Reasoning

What will happen if another person turns up now? Can you explain why you think that? How do Sam and Victoria know that there will be 6/3/2/1 cookies each? Shall we act it out? Have they all got the same? How do you know? Can you prove it? Can you show me?

#### Opening Out

What do you think the children should / might do now? (especially at the last doorbell).

I wonder what would happen if..there were a smaller number of cookies? An odd number of people at the door? Or a number giving remainders? eg 10 shared between 3 or 4.

#### Recording

Would you like to do a drawing/picture to show how Sam and Victoria could share out the cookies fairly? To show how you have shared them?

## The Mathematical Journey

### Counting

- cardinality - the last number tells you how many there are
- counting for a purpose - to see if everyone has the same number

### Comparing

- saying who has more or not as many
- saying which numbers are more or less than others

### Number symbols

- matching numerals to amounts, or recording amounts informally

### Dividing

- sharing practically, using one-to-one and many-to-one
- understanding how 'dealing' results in equal shares and the same number each
- knowing 'halves' mean two equal parts of a whole

### Problem solving

- changing strategies: eg starting again and redistributing
- using adding and subtracting to make it fair

#### Development and Variation

Children could be invited to create their own version of the story, which an adult could scribe for them to illustrate as a group book.

Instead of changing the number of children, you could change the number of cookies to share, and explore which numbers 'work'.

A similar story about pirate panda is presented in Maths Story Time: <https://nrich.maths.org/content/id/9718/Maths%20Story%20Time%20.pdf>

Another activity based on a book is Maisie goes camping <http://nrich.maths.org/13533>

#### Other books which lend themselves to mathematical discussions include:

Jim and the Beanstalk by Raymond Briggs, about measuring the giant for glasses

Mouse Count by Ellen Stoeve Walsh, about a snake collecting mice to eat.

#### Resources

The Doorbell Rang by Pat Hutchins <https://www.youtube.com/watch?v=BXtu90JnDkM>

12 salt dough or playdough biscuits, 12 paper plates

Laminated pictures of biscuits and children from the book to arrange on a magnet board a battery doorbell (a bike bell also works)

A range of materials for children to record

#### The Doorbell Rang by Pat Hutchins



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[nrich.maths.org/early years](https://nrich.maths.org/early years)

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