

Division Lesson – Esio Trot by Roald Dahl

Grade Levels: 4 -5



Learning Outcomes:

Grade 4

A4 Explain the properties of 0 and 1 for multiplication, & the property of 1 for division.

- Explain the property for determining the answer when dividing numbers by one

A7 Demonstrate an understanding of division (1-digit divisor and up to 2-digit dividend) to solve problems by:

- (a) using personal strategies for dividing with and without concrete materials
- (b) estimating quotients
- (c) relating division to multiplication.

- Solve a division problem without a remainder using arrays or base ten materials
- Solve a given division problem with a remainder using arrays or base ten materials
- Solve a given division problem using a personal strategy and record the process
- Create and solve a word problem involving a 1 or 2 digit dividend

Grade 5

A3 Apply mental mathematics strategies and number properties, to determine (RECALL) answers for basic multiplication facts to 81 and related division facts.

- Explain why division by zero is not possible or undefined

A6: Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems.

- Model the division process as equal sharing using base ten blocks and record it symbolically
- Explain that the interpretation of a remainder depends on the context
- Ignore the remainder
- Solve a given division problem in context using personal strategies and record the process

Materials:

- Colour Tiles and Base Ten materials
- Books: Divide and Ride by Stuart Murphy, Esio Trot by Roald Dahl and A Remainder of One by Elinor J. Pinzes
- Professional Resources: Math and Literature (4-6) Rusty Bresser and Teaching Children Mathematics, J. VandeWalle
- Worksheets

Vocabulary:

Division – une division
Dividend – une dividende
Divisor – un diviseur
Quotient – un quotient
Remainder – un reste
Array – un jeton
Base 10 materials – materiel de base dix
Hundreds - centaines
Tens - dizaines
Ones – unites
Expanded form – la forme décomposée
Distributive property – la propriété de la distributivité

Lesson Ideas:

1. Learning Intention:

I can accurately record how I think about dividing larger numbers

2. Distribute Base Ten Blocks for students. Read through the book, 'Esio Trot' up to page 30. (You may want to have read aloud up to page 28 on the days leading up to the division lesson). Pose the problem:

If Mr. Hoppy carried home the 140 tortoises in a basket a few a time, how many trips would it take for him to get all of the tortoises home?

Have students model the situation on their desks with the Base 10 blocks. Encourage lining the blocks up as an array with one side being the number of tortoises per basket.

After a few minutes, share out student work and record symbolically in a way that matches the thinking given – see VandeWalle for examples of this.

3. When appropriate, distribute Division Think Board and have children record several more tortoise carrying problems. Turn and Talk to share ideas prior to debriefing with whole class – what strategy did you use to determine the quotient. How could they record their thinking?
4. Again provide discussion time for examples that have a divisor of 1 and for the grade 5s division of 0.
5. In partners have the children develop their own questions – establishing the number of tortoises and other situations for dividing them up. Keep the meaning of the remainder in the forefront of discussions.
6. Distribute Esio Trot student sheet for independent activity.