

A Dozen Dizzy Dinosaurs

A book about division (equal groups)






Aim

Two different models can be used to represent division: partition (sharing) and quotition (equal groups). *A Dozen Dizzy Dinosaurs* introduces the quotition model for division.

These whole-class activities provide students with the opportunity to:

- listen to a story about division
- use materials and pictures to act out grouping situations
- split a dividend between a different number of divisors
- work with remainders
- relate division to multiplication

Activities

1. Listening to the story
2. Acting out the story
3. Using materials to act out the story
4. Using the teaching tool to act out the story 
5. Writing a story about division
6. Introducing division language
7. Working with different quantities 
8. Working with reminders 
9. Relating division to multiplication

I. Listening to the story

Resources

- *A Dozen Dizzy Dinosaurs*

Activity

Show the cover of *A Dozen Dizzy Dinosaurs* and read the title aloud. Encourage volunteers to predict what they think the story might be about. If necessary, explain that a “dozen” means “twelve”. Read the story without discussion. Read the story again and ask, **What is happening in the story? What do you see in each picture?** Encourage students to explain that the 12 dinosaurs split up into groups. Read pages 6–7 and say, **The twelve dinosaurs made groups of four. How many groups did they make? Twelve dinosaurs in groups of four means there are three groups.** Repeat for each double-page spread of the storybook.

2. Acting out the story

Resources

- *A Dozen Dizzy Dinosaurs*
- CD player with appropriate dance music

Activity

Invite twelve students to stand out the front and act as dinosaurs with the rest of the class sitting. Play the music quietly as you read *A Dozen Dizzy Dinosaurs*. When the dinosaurs in the story move into groups, turn the music up louder, and have the twelve students move into groups and dance to match the story. Repeat with different students acting as the dinosaurs.



3. Using materials to act out the story

Resources

- *A Dozen Dizzy Dinosaurs*
- Support 1 (see attached)
- Base-ten ones blocks – 12 for each student

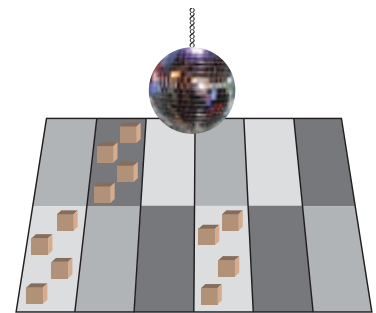
Preparation

Make one copy of Support 1 for each student.

Activity

Distribute the materials. Read pages 4–5 of *A Dozen Dizzy Dinosaurs*. Ask, **How many dinosaurs should be in each group?** Put cubes on your dance floor to make groups of four. Ensure the students place the cubes for any one group within a single segment of the dance floor. Ask, **How many groups of four did you make?** Repeat for each double-page spread of the storybook.

Retain the copies of Support 1 for use in Activity 7 and 8.



4. Using the teaching tool to act out the story



Resources

- *A Dozen Dizzy Dinosaurs*
- *Teaching Tool*

Activity

Make sure all the students can see the *Teaching Tool*. Click and drag twelve dinosaurs onto the border of the work area. Read pages 4–5 of *A Dozen Dizzy Dinosaurs*. Ask, **How many dinosaurs should be in each group?** Invite a student to click and drag the dinosaurs into groups of four. To help emphasise the distinct groups, use the drawing tool to draw around each group of dinosaurs. Ask, **How many groups of four did you make?** Write **12 in groups of 4 is 3** in the white panel at the bottom of the screen. Repeat for each double-page spread of the storybook.



5. Writing a story about division

Resources

- *A Dozen Dizzy Dinosaurs*

Activity

Read *A Dozen Dizzy Dinosaurs* to the students. Discuss how the dinosaurs move into groups. Challenge the students to make up a story where twelve things get into groups of two, three, and four. Provide suggestions such as a store owner arranging items into groups or a gardener planting seedlings into flower beds. The students can write and/or illustrate the story. Afterward, invite a few students to share their story.

6. Introducing division language

Resources

- *A Dozen Dizzy Dinosaurs*

Activity

Read *A Dozen Dizzy Dinosaurs* to the students. Discuss how the dinosaurs move into groups. Say, **On one page the dinosaurs had to make groups of three. This meant there were four groups with three dinosaurs in each group.** Write ***12 in groups of 3 is 4*** on the board. Say, **We can also use "divided by".** Write ***12 divided by 3 is 4*** on the board. Work through the other groupings in the storybook writing each using the phrase "divided by".



7. Working with other quantities



Resources

- *Teaching Tool*
- Copies of Support 1 from Activity 3
- Base-ten ones blocks – 20 for each student

Preparation

If the copies of Support 1 are not available from Activity 3, make one copy of Support 1 (see attached) for each student.

Activity

Make sure all the students can see the *Teaching Tool*. Discuss how the 12 dinosaurs in *A Dozen Dizzy Dinosaurs* made groups of four, three, and so on. Distribute the materials and say, **Imagine there were 18 dinosaurs. Put 18 blocks into groups of two.** Ensure the students place the blocks for any one group within a single segment of the dance floor. Ask, **How many groups of two did you make?** Demonstrate the grouping using the *Teaching Tool*. Say, **Now imagine the dinosaurs moved into groups of three. How many groups will there be?** Have the students move their blocks and demonstrate the grouping with the *Teaching Tool*. Repeat with groups of six and nine. Then repeat with other starting numbers (dividends) such as 10, 15, 16, and 20, and divisors that are factors of those numbers (so that there will be no remainders). Retain the copies of Support 1 for use in Activity 8.

8. Working with remainders



Resources

- *Teaching Tool*
- Copies of Support 1 from Activity 3
- Base-ten ones blocks – 20 for each student

Preparation

If the copies of Support 1 are not available from Activity 7, make one copy of Support 1 (see attached) for each student.

Activity

Make sure all the students can see the *Teaching Tool*. Discuss how the 12 dinosaurs in *A Dozen Dizzy Dinosaurs* made groups of four, three, and so on. Distribute the materials and say, **Imagine there were 13 dinosaurs. Put 13 blocks into groups of two.** Ensure the students place the blocks for any one group within a single segment of the dance floor. Ask, **How many groups of two did you make? Could all the dinosaurs be in a group of two? How many were left over?** Demonstrate the grouping using the *Teaching Tool* and write **13 divided by 2 is 6 with 1 left over** in the white panel at the bottom of the screen. Repeat with other starting numbers (dividends) and divisors involving remainders.



9. Relating division to multiplication

Resources

- *A Dozen Dizzy Dinosaurs*

Activity

Read pages 4–5 of *A Dozen Dizzy Dinosaurs*. Ask, **How many dinosaurs should be in each group?** Read pages 6–7 and ask, **How many groups of four did they make? So twelve divided by four is three. What multiplication fact can you see?** (Three groups of four is twelve.) Write the number sentences shown below and point out that they both describe what is shown on the page. The **12** describes the total number of dinosaurs, the **3** describes the number of groups, and the **4** describes the number in each group.

12 divided by 4 is 3

3 multiplied by 4 is 12

Repeat with the remaining double-page spreads in the storybook. To extend the activity, have the students suggest other multiplication facts they know and say the related division facts.



