Pictures That Count

Teacher		**Class**	Year 2
Subject	Maths	**Topic**	Pictograms and tally charts
Date		**Room**	
Lesson length	60 minutes	**Country**	United Kingdom

Pupils learn to read tallies and pictograms and compare totals. They survey friends about pets and build their own charts.

Curriculum links

- interpret and construct simple pictograms, tally charts, block diagrams and tables [1]
- ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity [1]
- ask and answer questions about totalling and comparing categorical data [1]

Learning objectives

- Students will interpret tally charts and pictograms to find totals and most popular.
- Students will construct simple tally charts, tables, pictograms and block diagrams.
- Students will compare categories to answer totalling and how many more questions.

Success criteria

- I can read a tally and pictogram to say how many.
- I can make a tally table and pictogram for my survey.
- I can say which is most and how many more.

What students already know

Show four upright marks and ask: how many is this and how could we show one more quickly?

Key words

tally	count marks made in fast groups of five [3][4]
pictogram	chart where pictures stand for numbers [5]
key	label that tells what one picture is worth [5]
table	tidy rows and columns that keep numbers in order [1]
block diagram	columns of coloured squares where taller means more [1]

Materials

- Slides 1-4, 7, 9-12 projected
- clipboards
- survey sheet with pet choices
- pencils
- stickers and squared paper
- mini whiteboards and pens

Before the lesson

- Print survey sheet for each pair and Worksheet page 1 for each child
- Test Slides 1-4, 7, 9-12 on the board
- Set out clipboards, pencils, sticker dots and squared paper
- Clear floor space for grouping and push tables back for survey

Created with LessonDino.com · AI lesson planner with checkable sources

- Worksheet page 1 printed

Lesson outline

0–10 min **Starter** 10 min · Whole class

To excite curiosity about data and recall counting favourites.

YOU DO

1. Show Slide 1 Pictures That Count and say the data collector hook.
2. Show Slide 2 Vote! and take a quick hands-up vote for Apples, Bananas, Grapes, Oranges.
3. Show Slide 3 Did you know? and model four sticks up then a gate across to make 5.
4. Count the votes together in fives: 5, 10, 15 [3].

STUDENTS DO

1. Vote for one favourite fruit on Slide 2.
2. Practise drawing the gate of five in the air and count aloud.
3. Say which fruit looks most popular so far.

Say: You are the data collectors. Find out what our class loves and make it into pictures. Look at our vote and choose your favourite fruit. Watch my secret fast-counting trick with four sticks and a gate across.

Ask: How do we show 5 quickly with tallies? (Four upright marks then the fifth gates across [3][4].) · Which fruit has the most votes? (The row with the longest tally, most counts.)

Check understanding: Thumbs up if you can show the gate in the air; if not, model again slowly on the board.

Support: Hold up a large tally formation card showing four posts then the gate to copy. **Stretch:** Say how 7 is a full five plus two extras.

Use: Slides 1-3

10–20 min **Teaching** 10 min · Whole class

To model checking the key and counting tallies and pictograms.

YOU DO

1. Show Slide 4 Key words and chant tally, pictogram and key meanings together.
2. Show Slide 7 Four ways to show and point to tally, pictogram, blocks and table.
3. Model tally for 7 on the board: gate for 5 plus two more.
4. Show Slide 10 Read a pictogram steps and model a row where one picture means 2.

STUDENTS DO

1. Join in counting tallies in fives and pictogram rows in twos.
2. Point to the title and key on Slide 10 steps.
3. Show tally for 7 on mini whiteboards.

Say: A tally counts in fast fives [3][4]. A pictogram uses pictures to show numbers [5]. We always check the key first because it tells what one picture is worth [5]. Then we count and add to find the total.

Worked example: Title: Favourite toys. Key: one circle = 2. Dogs row has 3 circles. Count in twos: 2, 4, 6. So 3 pictures mean 6 toys, because if each picture represents more than one item you multiply [5]. Tally for 7 is: four uprights plus gate = 5, plus 2 more = 7.

Ask: What must we check first on a pictogram? (The key, it tells what each picture stands for [5].) · If one picture = 2, what do 3 pictures mean? (6, counted as 2, 4, 6.) · How do tally marks group to make counting fast? (In fives, four upright then a diagonal gate [3].)

Check understanding: Hold up whiteboards with tally for 7; if many show five uprights, re-model the gate as the fifth mark.

Support: Cover all but one row and pair each symbol card with two cubes to see the twos. **Stretch:** Explain what happens to the total if the key changes from 1 to 2.

Use: Slides 4, 7, 10

20–45 min **Main activity** 25 min · Groups

To collect class data and construct tally charts, tables and pictograms.

YOU DO

1. Show Slide 9 Your task and explain: ask 6 friends best pet, draw tallies in fives, make pictures for each vote.
2. Give out clipboards, survey sheet, pencils, stickers and squared paper.
3. Remind groups to add a title and key and keep icons same size, equally spaced and aligned [6].
4. Circulate, check gates of five [3] and ask totalling questions.

STUDENTS DO

1. Ask six friends and record answers using tally marks in the table.
2. Stick pictures to interpret and construct simple pictograms, tally charts, block diagrams and tables [1].
3. Count each row, sort most to least and tell the group the winner.

Say: Work in pairs. Ask six friends: best pet? Draw one tally for each answer and remember four posts then the gate. Then stick one picture for each vote and colour one block square for each vote. Add a title and a key.

Ask: How many does this tally show? (Count groups as 5, 10 plus extras [3].) · What does your key tell us? (What one picture stands for, e.g. one sticker = 1 vote [5].)

Check understanding: Visit each group to see title, key, correct gates and aligned pictures; fix one row together if spacing or counts are wrong.

Support: Give a table with pictures already drawn for the choices so students only add tallies and stick one symbol per vote. **Stretch:** Groups add a half-symbol challenge by asking the teacher how to show one extra when the key is two.

Use: Slide 9

Created with LessonDino.com · AI lesson planner with checkable sources

45–60 min **Plenary** 15 min · Whole class

To compare totals and answer how many more questions.

YOU DO

1. Show one group's table and pictogram and model counting and sorting categories by quantity [1].
2. Show Slide 11 Think, pair, share: Apples 6, bananas 4. How many more apples?
3. Show Slide 12 Quick quiz and take answers with number fans.
4. Give out Worksheet page 1: Read the chart and say how many chose each pet.

STUDENTS DO

1. Discuss Slide 11 in pairs and show how many more with fingers or fans.
2. Answer Slide 12 quiz: gate means 5, two stars at 2 each = 4, biggest means most.
3. Complete Worksheet page 1 by counting pictures and saying each pet total.

Say: Let us tot up each row and sort biggest to smallest. To find how many more, we count up or take away. Check your answer with cubes if you need to.

Worked example: Apples 6, bananas 4. Count each row. 6 take away 4 = 2. So there are 2 more apples. We asked and answered questions about totalling and comparing categorical data [1].

Ask: Apples 6, bananas 4. How many more apples? (2 more, 6 minus 4.) · One star = 2. Two stars = ? (4, because 2 + 2.) · Which row is most popular and how do you know? (The longest row / tallest blocks, it has the biggest total.)

Check understanding: Collect fans and Worksheet page 1 totals; if key errors remain, re-point to key and recount in twos together.

Support: Give interlocking cubes to build each row total and match them to see the extra. **Stretch:** Make up your own how many more question for another pair to solve.

Use: Slides 11-12; Worksheet page 1

Common mistakes

Mistake	How to spot it	How to fix it
Drawing the fifth tally as another upright line instead of a diagonal gate	Tallies show 5 uprights or 6 for five	Re-model four posts then bar across: four fence posts and then the bar across [4].
Reading 3 symbols as 3 when one picture means 2	Child says 3 when key says picture = 2	Always check the key every time [3]; pair each symbol with two cubes and count in twos.
Ignoring the key so same symbols give wrong total	Same rows give different totals when key changes	Remind the key is everything [3]; all pictograms should have a key [5] and half means half the key value.

Support

- Give a table with pictures already drawn for the choices so students only add tallies and stick one symbol per vote.
- Use formation cards, covered rows and cubes to count in ones, fives and twos.

Stretch

- Groups add a half-symbol challenge by asking the teacher how to show one extra when the key is two.
- Write comparing sentences and make up how many more questions for others.

For the LSE or teaching assistant

Stay with survey groups needing tally formation; help them count gates as 5, 10 and keep stickers aligned with title and key.

Check for understanding

Question	Answer
Gate tally means?	5
One star = 2. Two stars = ?	4
Apples 6, bananas 4. How many more apples?	2 more

Homework

Ask family about favourite fruit and record answers with tallies in fives.

Sources

1. National curriculum in England: mathematics programmes of study · gov.uk · https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study/national-curriculum-in-england-mathematics-programmes-of-study
2. Numeracy Warm Up - Tally Charts & Pictograms · numeracywarmup.co.uk · https://www.numeracywarmup.co.uk/notes/tallycharts.pdf
3. Tally Charts and Pictograms (KS2) | MindBlaze · mindblaze.uk · https://mindblaze.uk/learning-centre/maths/statistics/tally-charts-and-pictograms/
4. Tally Charts & Pictograms — Year 2 Maths Guide | MathCraft · mathcraft.cool · https://mathcraft.cool/maths/tally-charts-pictograms/
5. Pictograms - Maths - Learning with BBC Bitesize · bbc.co.uk · https://www.bbc.co.uk/bitesize/articles/z493hcw
6. Pictograms - KS3 Maths - BBC Bitesize · bbc.co.uk · https://www.bbc.co.uk/bitesize/articles/zjvrdnb
7. Year 2 – Pictograms · halsall.lancs.sch.uk · https://www.halsall.lancs.sch.uk/serve_file/24403969