



Lesson 3: Creating pictograms

Introduction

During this lesson learners will think about the importance of effective data collection. They will consider the benefits of different data collection methods and why, for example, we would use a pictogram to display the data collected. They will record their data collection using a tally chart and use this to make a pictogram on a computer. Learners will explain what their finished pictogram shows by writing a range of statements to describe this.

Learning objectives

To create a pictogram

- I can organise data in a tally chart
- I can use a tally chart to create a pictogram
- I can explain what the pictogram shows

Key vocabulary

Tally chart, data, pictogram, explain, more, less, most, least, more common, least common

Assessment opportunities

Introduction: Assess the learners' understanding of ways that data can be collected

Activity 1: Assess the learners' ability to record data using a tally chart

Activity 2: Assess the learners' ability to use a tally chart to create a pictogram

Activity 3: Assess the learners' ability to explain what a pictogram shows

Plenary: Assess the learners' ability to distinguish between true and false statements relating to a pictogram

Preparation

Subject knowledge:

You will need to have an understanding of how to make a tally chart and how they can be used to create a pictogram. An understanding of the ‘J2Data: Pictogram’ software would be advantageous, but this is supported in the slides.

You will need:

- L3 Slides
- A0 Resource – Large fruit images. To be stuck around the classroom
- A1 Worksheet – Minibeast tally chart
- A1 Handout – Minibeast hunt. Cut up for learners
- A3 Worksheet – What can you tell me?

Outline plan

Please note that the activities are labelled in the top right-hand corner of the slide deck to help you navigate the lesson.

**Timings are rough guides*

<p>Introduction (Slides 2–3)</p> <p>10 mins</p>	<p>Introduction</p> <p>Show slide 2 and introduce the learning objectives.</p> <p>Show slide 3. Tell the learners that today you would like to find out what the class’s favourite fruit is. Ask the learners how we might find out this information. Allow the learners to think, pair, and share their ideas.</p> <p>Note: Learners may remember tally charts and pictograms from previous lessons.</p> <p>Tell the learners you have put cards showing five different pieces of fruit around the classroom, and you would like them to stand next to their favourite from the list: apples, pears, bananas, oranges, and strawberries. Allow the learners time to choose their favourite fruit and stand next to it. If possible, take a photo of the groups scattered around the classroom.</p> <p>Ask the learners ‘What is the <i>most</i> popular fruit?’ ‘How do we know?’</p> <p>Ask them: ‘Which is the <i>least</i> popular fruit?’ ‘How do we know?’</p> <p>Explain that by counting each of the sets of people next to the different fruits we can begin to make comparisons, but that this is tricky as we might lose count or have to count groups of people multiple times.</p> <p>Ask the learners: ‘Is there a better way to do this?’</p> <p>Tell the learners they will make a human pictogram with the data and see which is easier to compare. Lay the fruit cards down in a line and invite the children to sit in lines next to their favourite fruit. This should represent the layout of a pictogram. If possible, take a picture of the learners and show this on the interactive board. Display the image alongside the group</p>
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	<p>photograph taken previously.</p> <p>Ask the learners which picture gives the clearest answer to the two questions: ‘What is the most popular fruit?’ ‘Which is the least popular fruit?’</p> <p>Tell the learners that because of the way the data is displayed in the human pictogram, comparisons can be made more easily.</p>
<p>Activity 1 (Slides 4–6)</p> <p>10 mins</p>	<p>We’re going on a minibeast hunt!</p> <p>Tell the learners that today they are going to gather their own data using a tally chart, then present this in the form of a pictogram, and use this to write some sentences about the data.</p> <p>Show slide 4 and explain that today we will be looking at minibeasts.</p> <p>Note: These images have been chosen as their pictures are already available in ‘J2data’.</p> <p>Depending on time, classes could go on a physical minibeast hunt, use ‘Small World’ minibeasts or cut out the images provided in the handout. (This plan assumes that handouts will be used for this lesson.)</p> <p>Note: If using the handout, you could vary the number of images given to learners based on their mathematical skills..</p> <p>Show slide 5 and ask the learners ‘What have I found?’. Click through the animation and recap the name of each minibeast:</p> <ul style="list-style-type: none"> • Ladybird • Fly • Caterpillar • Snail • Bee <p>Show slide 6. Tell the learners that during this activity they are going to use a tally chart to record how many minibeasts they find. Remind the learners how to do this by clicking through the animation. Remind them that if you get to a multiple of 5, you should draw a line across to create a gate shape. Tell the learners that they will do this with their minibeast cards. Model some ideas for accuracy such as putting the minibeast cards in a pot once they have been added to the tally, or turning minibeasts over. Remind the learners to count up the totals once they have finished their tally. Explain that even though there weren’t any caterpillars found, we should still add the total, as it is important to know that 0 caterpillars were found.</p> <p>Allow learners time to gather their data and complete their tally charts.</p>

<p>Activity 2 (Slides 7–8)</p> <p>10 mins</p>	<p>My own pictogram</p> <p>Remind the learners how to access ‘J2Data: Pictogram’.</p> <p>Show slide 7. Tell the learners that they are going to be taking their data from the tally chart and using this to create a pictogram. Ask the learners ‘Why do you think we are going to do this?’ Explain that pictograms make the data easy to compare as it is more visual.</p> <p>Show slide 8. Watch the screen recording to show the learners how they can create their own pictogram today. Ask the learners “What title would you give this pictogram?” Show the learners that a title can be added at the top. This helps us to show people what the data is about.</p> <p>Allow the learners time to complete their own pictograms based on the data in their tally charts.</p>
<p>Activity 3 (Slides 9–10)</p> <p>10 mins</p>	<p>What can you tell me?</p> <p>Show slide 9, and ask the learners ‘What can you tell me?’ Encourage the learners to give statements about the pictogram such as:</p> <ul style="list-style-type: none"> • This is a pictogram to show how many minibeasts were collected on a minibeast hunt • We looked for ladybirds, bees, snails, caterpillars, and flies. • There were 5 ladybirds found. • There was 1 bee found. • There were 2 snails found. • There were 0 caterpillars found. • There was 1 fly found. • Ladybirds were the most common minibeast found. • Caterpillars were the least common minibeast found. • There were 9 minibeasts found altogether. <p>Show slide 10. Tell the learners they are now going to tell you about the pictograms they have created on the computers. Show the learners the worksheet and allow them time to complete it.</p> <p>Note: Depending on their literacy skills, some learners may need support recording their ideas. Teachers could listen to some learners’ statements rather than asking them to write them down. Some learners could use technology such as voice recorders to record their ideas.</p>
<p>Plenary (Slides 11–15)</p> <p>5 mins</p>	<p>Thumbs up or thumbs down?</p> <p>Show slides 11–15. Read the statements to the learners and ask them to show thumbs up if the statement is correct or thumbs down if it is incorrect.</p> <p>Slide 11: 8 bees were found during the minibeast hunt. (Wrong)</p>

	Slide 12: the same number of flies and ladybirds were found. (Correct) Slide 13: caterpillars were the only minibeasts I did not find today. (Correct) Slide 14: the minibeasts we found the most of were bees. (Correct) Slide 15: We found four birds (Wrong)
Next time (Slides 16-17) 5 mins	Review the 'Assessment' and 'Summary' slides.

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